INTERCONNECT DEVICES, INC.

Product Catalog

Connectors • Test Sockets • Spring Contact Probes

smiths
bringing technology to life

IDI Joins Smiths Interconnect

In April of 2010, Interconnect Devices, Inc. (IDI), joined Smiths Interconnect, a division of a global technology business, Smiths Group plc. IDI is a part of the Connector Technology Group within Smiths Interconnect.

The complementary technologies product offerings, routes to market and critical mass of IDI and the Connectors Technology Group, supported by the global presence and financial resources of Smiths, provides IDI with a strong and stable platform to continue to build a successful future.

As a member of the Smiths family of companies, IDI is committed to maintaining the strong Antares and Synergetix brands, our engineering expertise, products, and commitment to excellent customer service. Our position as an industry-leading producer of spring probe technology is now further supported by the extensive global resources of Smiths Group.

Smiths Interconnect

Smiths Interconnect, (www.smithsinterconnect.com), is a leader in technically differentiated electronic and radio frequency products that connect, protect and control critical systems for the wireless aerospace, telecommunications, defense, industrial, medical and rail markets. Smiths Interconnect is part of Smiths Group, (www.smiths.com), a global leader in applying various advanced technologies for markets in threat and contraband detection, communications, energy, medical devices, and engineered components. Smiths Group employs around 22,000 people in more than 50 countries.

Interconnect Devices, Inc.

Interconnect Devices, Inc. (IDI) (www.idinet.com), is a leading provider of spring contact probe based technologies that includes custom connectors and advanced semiconductor test sockets and spring contact probes. Founded in 1979, Interconnect Devices, Inc. (IDI) was organized to supply spring contact probes for the PCB test industry. IDI quickly established itself as the World's Leader in Spring Contact Probe Technology.

Spring Contact Probe Technology

Spring contact probes provide many design and performance advantages that are proven to deliver consistent, reliable connections over multiple mating cycles. For overall reliability, long life and serviceability, spring loaded contact probes will always outperform stamped metal, elastomer, and wire mesh designs. When these spring contact probes are integrated into IDI's custom interconnect devices, IDI technology can provide you with the best interconnections that your application demands:

- Consistent performance, first stroke, every stroke
- Reliability over the life span of the product
- Million-cycle mechanical lifetimes
- Low, consistent resistance
- High current capacities
- Constant contact when exposed to shock, vibration, and acceleration
- Versatility of mounting and profile
- High performance under extreme conditions
- Extremely high density
- Z Axis compliancy

A Solution For Your Needs

IDI's spring probe technology is easily modified to become the precise solution for your application. Whether you are a large product manufacturer or a start-up company, no application is too big or too small. IDI connectors and interfaces are found in a variety of industries, where performance requirements are stringent, including:

- Medical
- Aerospace
- Military
- Automated Test Equipment
- Automotive
- Telecommunications
- Portable Electronics

IDI smiths

Interconnect Devices, Inc.

IDI Spring Contact Probes

IDI is the world's largest probe manufacturer of spring contact probes for the Automate Test Industry. For over three decades, test engineers have turned to IDI for the most reliable probe designs available, both off-the-shelf and custom connectors.

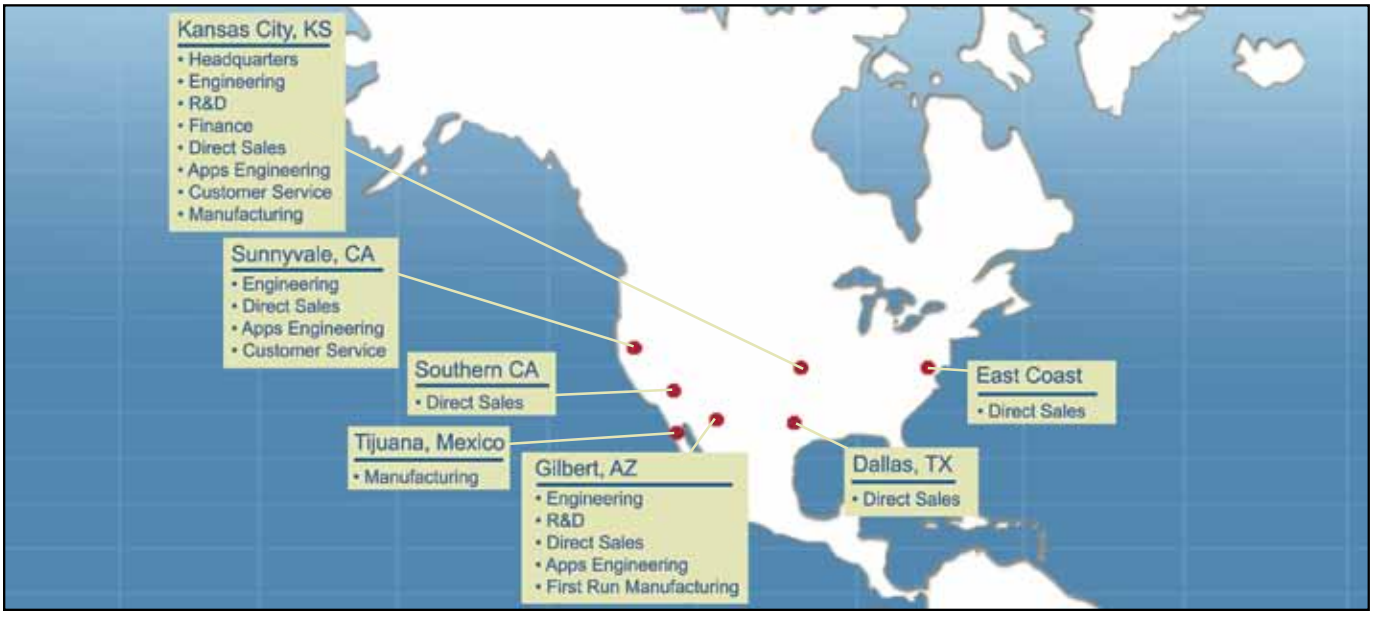
IDI Test Sockets

IDI leads the innovation in the semiconductor test industry today with its Antares and Synergetix brand test socket designs. These semiconductor test sockets were the first to use spring contact probe technology.

IDI Connectors

IDI is known for designing probes for use outside of the test environment in a variety of industries. In the early 1990's, the company began a strategic initiative to identify a variety of new marketplaces where its core competencies could be utilized competitively. IDI expanded its markets to include custom connectors.

IDI's custom connectors can be found in a variety of applications within the test and measurement, military, aerospace, medical, homeland security and industrial markets. IDI's spring contact probe connectors are renowned for their performance in high reliability, fail-safe applications.



Interconnect Devices, Inc. welcomes your e-mail at info@idinet.com

IDI Global Presence

Global Sales

IDI has sales offices located throughout the world. Our customer service departments locations are:

- Kansas City, KS
- Suzhou, China
- Sunnyvale, CA
- Singapore

Our sales and applications engineering locations are:

- Kansas City, KS
- Sunnyvale, CA
- Dallas, TX
- Boston, MA
- Gilbert, AZ
- Southern CA
- Taiwan
- Europe
- France
- Italy
- Malaysia
- Singapore
- Korea
- Philippines
- Germany
- China

Global Engineering

Experts in mechanical, electrical software and thermal engineering, we use the latest tools that are available to develop unique solutions that are based upon real-time, real-world customer requirements. Through the use of a multi-talented engineering staff, we are able to develop solutions for the most stringent of applications. Our engineering offices are located throughout the US and Asia.

Global Manufacturing

IDI is an ISO 9001:2008 certified manufacturer. Our flexible approach to manufacturing and assembly uses the most advanced tools, techniques and Quality Assurance methods that allow us to ramp quickly to meet our customers' needs. Our Kansas City, Tijuana, Mexico and Suzhou, China facilities are equipped with a Class 10,000 clean room, minimizing and controlling contaminants. Our global footprint ensures 24/7 support from numerous locations. Our commitment to "first-cycle, every-cycle reliability" is backed by extensive product testing and evaluation in our Analysis and Validation labs.

Global Analysis and Validation Capabilities

Metallurgical Testing – Kansas City, KS

- Scanning electron microscope (SEM)
- Energy dispersive spectrometer
- Micro-hardness tester

Electrical Performance Testing – Kansas City, KS; Gilbert, AZ; Suzhou, China

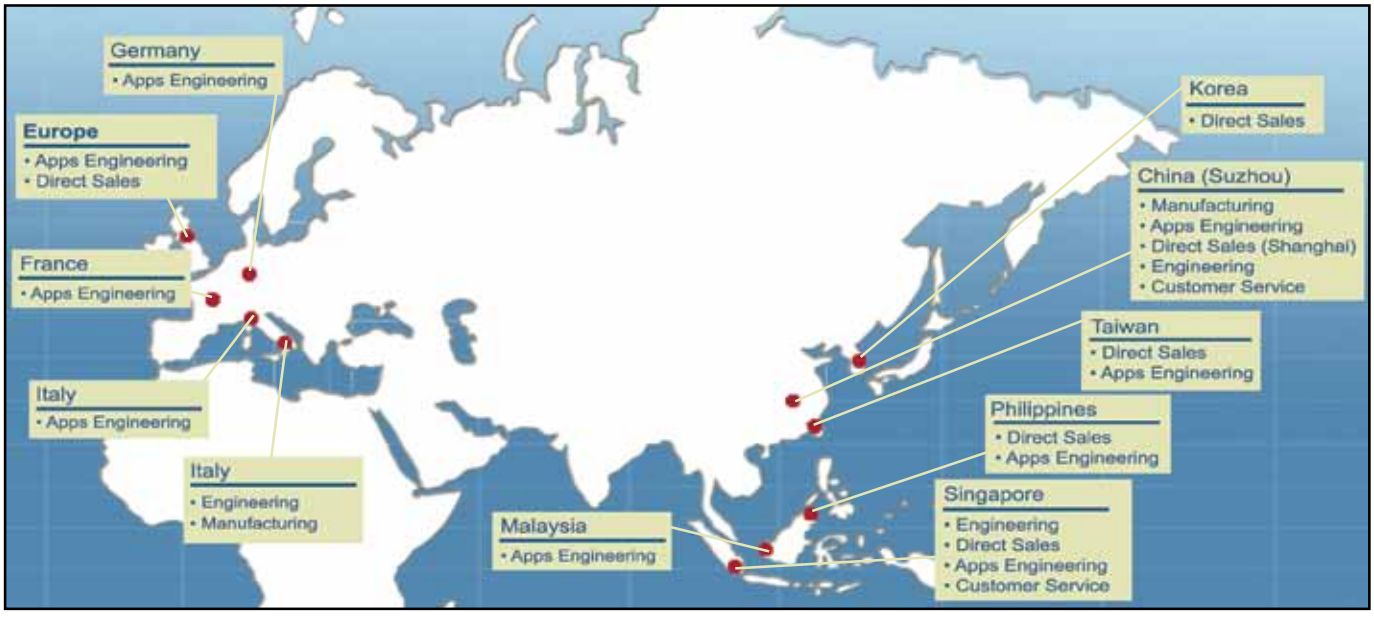
- Six life cycle simulation testers
- Resistance budgeting - R2D2
- High current testing
- Current carrying capacity testing (CCC)

Signal Integrity Testing – Kansas City, KS; Gilbert, AZ

- Network analyzers
- SPICE modeling software
- Time Domain Reflectometry (TDR)

Mechanical Testing – Kansas City, KS

- Real-time x-ray with CT scan capabilities
- Micro-tribometer
- Temperature and humidity chamber
- X-ray fluorescence plating thickness
- 3D non-contract profrilometer
- Several other specialized test systems



OEM Connectors & Probes

Whether it's vibration, shock, rotation, wipe, water, salt, sand, dust, heat or the vacuum of space, you can depend on IDI to deliver products that will withstand adverse conditions and perform on demand. IDI harsh environment probes and connectors offer many other design features including:

- One-piece compression mount connector
- Consistently low resistance < 10 mΩ throughout hundreds of thousands of cycles
- 20 GHz @ -.5db
- High density — .010 (0.25) pitch
- Short signal paths as low as 0.070"
- Blind mate
- Surface mount, through hole mount or cabled termination

IDI custom connectors ensure a reliable, fail-safe connection even in the harshest of environments. At the core of most IDI connectors is the spring contact probe, a connection technology inherently well suited to harsh environments.

Shock and Vibration

Spring contact probes provide a constant force against the mating contact surface, easily absorbing and compensating for movement seen during shock and vibration without contact interruption as defined by MIL-STD-810F.

Water, Salt, Sand and Dust

IDI utilizes various design features for ingress protection to IP68 and MIL-810F on our connectors. And IDI offers the world's first and only Environmentally Sealed Probe (pg. 21) with ingress protection to IP68 and MIL-STD-810F.

Rotation and Wipe

The contact or plunger in the spring contact probe is free to rotate and slide within the housing or barrel of the probe. This inherent design characteristic makes spring probe connectors ideal for bayonet and sliding mate connector designs.

Heat and Vacuum of Space

IDI connectors and probes operate under a wide variety of temperature extremes. Most designs are rated from -55° C to 250° C. Alternate materials allow for even more aggressive temperature extremes.

IDI Spring Probe Connectors

Spring contact probes provide repeatable contact in the field for modular components, reduce costs, and eliminate cabled connections by providing a dependable direct connection in rotating or sliding joints.

Table of Contents

Connectors and Contacts..... 5
Interposers..... 6
Housings..... 7
Mating Halves..... 8
Terminations..... 9
C Series Connectors..... 10
C Series Probes .100 (2.54) centers... 11
101582 .070 (1.78) centers..... 12
101438 .080 (2.03) centers..... 12
100671 .175 (4.45) centers..... 13
101111 .029 (0.75) centers..... 13
101506 .050 (1.27) centers..... 14
101294 .050 (1.27) centers..... 14
100803 .050 (1.27) centers..... 15
101190 .100 (2.54) centers..... 15
100606 .175 (4.45) centers..... 16
100891 .175 (4.45) centers..... 16
100410 .175 (4.45) centers..... 17
101119 .175 (4.45) centers..... 17
101050 .125 (3.18) centers..... 18
101247 .200 (5.08) centers..... 18
101679 .065 (1.40) centers..... 19
100628 .125 (3.18) centers..... 19
101402 .175 (4.45) centers..... 20
100804 .250 (6.35) centers..... 20
101602 .175 (4.45) centers..... 21
101549 .125 (3.18) centers..... 21
Target Contacts 22

Connectors & Contacts

IDI is the world leader in spring contact probe design and the industry's expert in applying spring probes as connector contacts. Embodied in IDI's connector product lines, probes are an enabling technology that fundamentally change the capabilities of the products in which they are incorporated.

Excellent For Blind Mate

IDI connectors featuring spring contact probes are compliant on the surface of their mating half, rather than extending into it as with conventional pin and socket connectors. This grants them their unique blind-mate capabilities.

An IDI connector may be designed to engage at a 90° angle to its target, wiping into position to clear contaminants. Conversely, the IDI connector may be disengaged at that same at any angle, making probe technology the best approach to quick-disconnect applications.

Low Profile, High Compliance Ratio

IDI's advanced spring contact probe technology permits a very high compliance-to-length ratio. This allows IDI to make connectors as compact as 2 mm, while maintaining 0.5 mm of compliance – low profile connectors have never been so practical or forgiving of mating conditions or vibration.

High Frequency

This short signal path, combined with IDI's industry leading expertise, permits remarkable signal integrity for both analog and digital applications.

Speeds of 12 Gb/S and bandwidths of 20 GHz can be achieved with spring probe interposers, and coaxial arrays and contacts can be used to permit excellent isolation.

Low Stable Resistance

Through IDI's decades of probe design experience, our connectors feature several innovations for control of DC performance. Advanced biasing techniques provide excellent stability of contact resistance, even under conditions of heavy shock and vibration. Our connectors can be designed to withstand up to 30 Amps of current.

High Insertion Life

Connectors based on spring contact probes are capable of remarkable longevity. Our probes are driven by helical coil springs, which maintain a constant force of contact over millions of cycles. IDI's plating and materials expertise combined with this engineering, delivers contacts that exceed the highest customer specifications for insertion life.

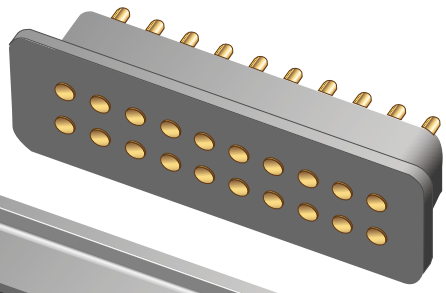
Environmentally Sealed

IDI's application expertise and the durable nature of our contacts, permits us to design connectors with excellent performance in harsh environments. IP68 and Mil810 requirements can be accommodated without sacrificing performance.

Contact IDI today to find out how we can make your interconnection possible.

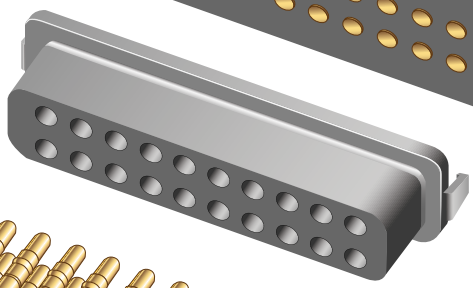
Mating Halves pg. 8

Low profile, low cost, environmentally sealed – flexible target design is one of the many benefits of spring probe technology.



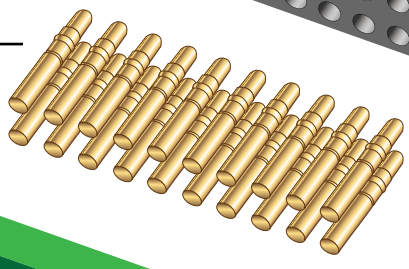
Housings pg. 7

Connector housings accomplish mating, latching, and sealing. They are custom configured to fit precisely the needs of your application.



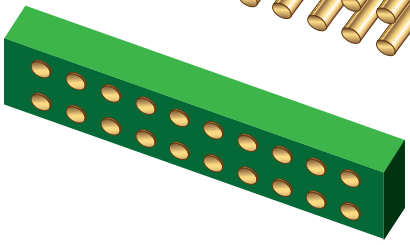
Interposers pg. 6

At the heart of the connector is IDI's core specialty – interposers based primarily on spring contact probes, capable of blind mate, angular engagement and wiping, high insertion life, and outstanding signal integrity.



Terminations pg. 9

IDI offers a wide range of termination options. Our connectors terminate easily to flexible or rigid PCBs via through-hole, surface mount, or solderless compression mount. Cable termination is also an option.



Interposers

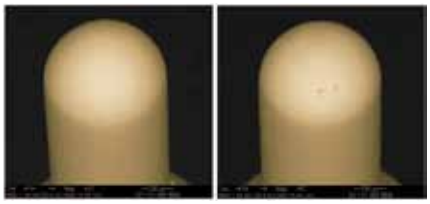
The interposer, or contact array, is the heart of the connector. It is also IDI's specialty – as the world's leading spring contact probe manufacturer we are uniquely positioned to bring the advantages of this contact mechanism to life.

IDI is able to bring our customers the most benefit when providing a total solution, but we can provide our technology at any level. Loose contacts, simple interposers, cabled mating halves, and complex docking solutions are all within our portfolio.

Contact IDI today to find your own unique solution.

Insertion Life

Spring contact probes are driven by helical coil springs. This, combined with IDI's advanced materials and plating expertise, allows us to offer connectors which are capable of hundreds of thousands of insertions. In addition, wiping interconnects can be made to withstand millions of rotations.

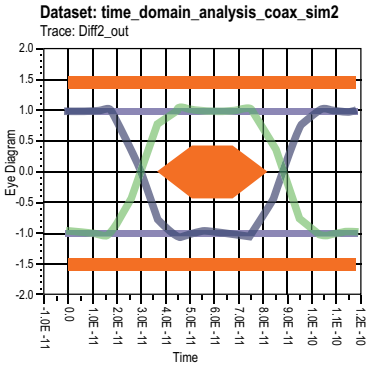


101050 Probe

101050 Probe cycled 50,000 times on a Lifecycle tester

Signal Integrity

Bandwidths of 20 GHz and data rates of 12 Gb/S are possible with simple pin field interposers. This is due to IDI's remarkably short contacts and our expertise in predicting their behavior in application.



Interposers may also be made coaxial through the use of precision-machined insulators and metal interposer bodies. IDI is the inventor of the independent coaxial spring contact probe, featuring a spring-loaded shielding plunger; this may be added to a connector to provide one or more discrete high speed lines.

DC Stability

Through innovative design features such as our patented Eccentric Drill, IDI's interposers maintain low and consistent contact resistance through their long insertion lives.

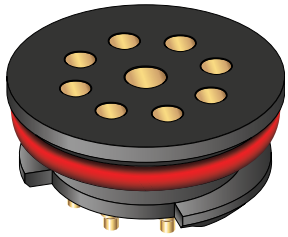
Maintaining peak performance through the required life of the interposer requires a careful selection of biasing features. IDI maintains a staff of dedicated experts who can guide you to the optimal contact engine for your application.

Properly specified interposers can withstand the intense shock and vibration associated with aerospace and military applications, maintaining reliable contact without fail even when launched onboard munitions.

IDI's interposers can be designed to take advantage of spring contact probes' surprising current carrying capacity. Individual contacts are capable of handling as much as 30 Amps in free air; combined with IDI's advanced thermal analysis capabilities, connectors can be designed which can handle substantial amounts of power safely.

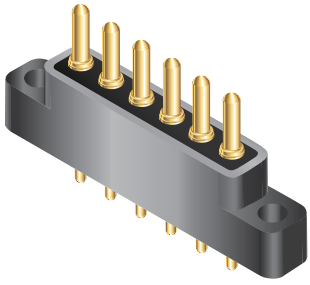
Environmental Sealing

The ruggedness and reliability of spring contact probes make them ideal for applications in harsh environments. IDI's connectors have a wide array of available features which permit sealing to IP68 or Mil standards in either the mated or unmated condition.



Accomplishing a seal while mated is a process of combining gaskets with a latching mechanism reliable enough to prevent ingress, and IDI has several variations on that architecture to draw from.

Creating an unmated seal is more challenging, but IDI is equal to the task. Contacts may be selected which prevent ingress into the housing or even into the spring cavity. IDI's experience is the key to our success – our experts can easily match your requirements to our product line.

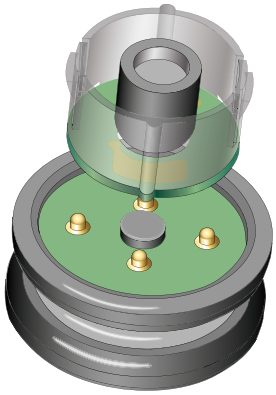


Other Features

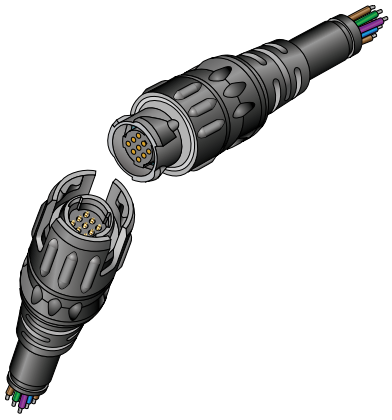
Connectors can be created which feature metal housings for shielding. Special latching designs can be employed to overcome significant engagement or sealing forces. Bayonet designs which wipe the contacts across a field of targets are uniquely possible with spring contact probes.

Quick Disconnect

IDI capitalizes on the unique engagement of spring contact probes with our innovative quick disconnect connector designs.



Magnets may be used to draw the connector into engagement. This, combined with the blind mate characteristic of probes, allows the connector to be disengaged safely and instantly. Magnetic engagement features almost no wear of the engaging surfaces, and may be mated and demated repeatedly with no degradation in performance.



Where magnets are impractical for reasons of engagement force, sealing, or other considerations, IDI can create special latching features which also permit a quick disconnection. These may be designed for a single break or for repeated disengagement, depending on the requirements of the application.

Spring contact probes are a flexible, adaptable contact technology, and IDI has extensive experience in creating solutions to unusual problems.

That design agility often finds its application in the housing of the connector, which provides the alignment and latching functions for the connector.

Special features to accommodate environmental sealing, low-force insertion or quick-disconnect extraction, or a host of other requirements are at your disposal.

Contact IDI to find out more about how we can make your application a success.

Mating Halves

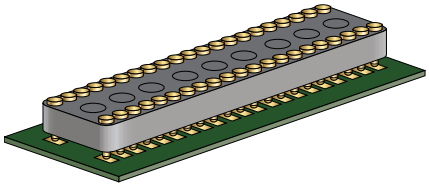
IDI's spring contact probe based connectors have the unique advantage of requiring only a flat pad as their target. This greatly simplifies the design of the complete connector.

The mating halves for our connectors are often customer-created by simply exposing pads on a printed circuit board.

IDI can provide target pins, or can supply a complete mating half which accomplishes alignment and sealing functions.

PCB Mate

Simple gold-plated pads on a printed circuit board are a reliable, easy-to-implement, and very low profile target structure for a spring contact probe based connector; this is also often a nearly zero-cost option for our customers. IDI can provide design guidelines to help our customers easily integrate our mating half into their design.



Target Pins

IDI can construct a plastic mating half for the connector with solid metal pins for target contacts. This allows for an extremely robust and repeatable interconnection, and is often a good way to extend the interconnection into the customer's device in a manner which permits sealing and a short Z-axis transfer. A selection of pins is available from IDI for those customers who wish to create their own mating half.

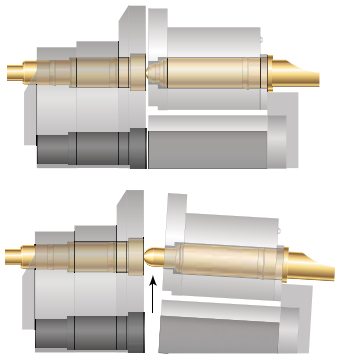
Environmental Sealing

The mating half of the connector can incorporate features which help to protect the customer's device from the ingress of water and other contaminants. IDI has the experience in sealing target pins, and in providing gaskets and design guidelines to make customer applications safe for harsh environments.

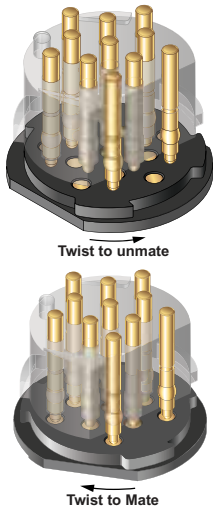
Blind Mate Capability

Spring contact probes contact only the surface of their target; they do not engage into the target in the manner of a pin and socket connector. This permits IDI's connectors to mate at up to a 90° angle. Our connectors can rotate after the fashion of brush contacts for millions of cycles.

Critically, it is difficult to harm a spring probe based connector through mismating, and this makes our connector designs uniquely attractive in blind mate applications.



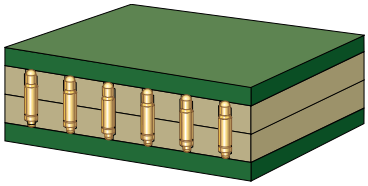
A spring contact probe requires only a flat pad for its target. It will safely mate to that target if its tip strikes within the target's diameter, and that diameter is only limited by the desired pitch of the connector. A probe-based connector is thus very forgiving of X-Y misalignment; and if the probe strikes off the pad, little harm comes to the connector and it may be safely re-engaged.



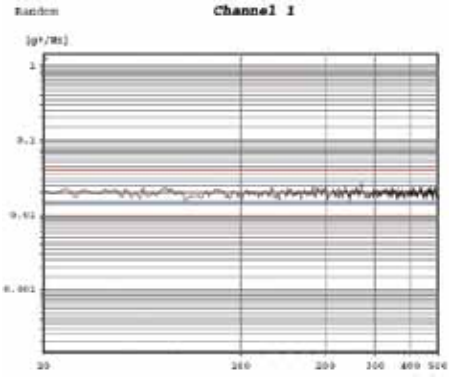
Terminations

Compression Mount

IDI's extensive involvement in the semiconductor test industry provides us with a wellspring of expertise in the creation of spring contact interposers that are compliant from each side.



IDI's compression-mount interposers feature highly developed contact designs. Our contacts, even when used in interposers having thousands of pins, mate faultlessly to their mounting PCB on the first insertion. They retain their excellent electrical characteristics through as much as 58G of shock and 9G RMS of vibration.



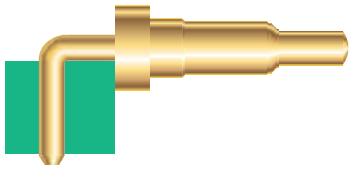
Sample random vibration profile at 3.1GRMS, Y Axis
* Consult factory for detailed reports

IDI's compression mount connectors greatly simplify the manufacturing process, and are often used where space or a path to manufacturing constraints make soldering or cabling prohibitive. By choosing a compression mount contact, users can simply drop the connector into place, assemble the unit, and be assured that all connections will be secure on the first attempt.

PCB Termination

IDI offers two highly refined options for termination by solder to a rigid or flexible printed circuit board. Our thru-hole designs offer a tremendous design flexibility and are ideal for a simple, tooling-free approach to custom connector implementation. IDI's surface mount connectors integrate easily with the modern manufacturing processes, and keep connector profile to a minimum.

Through-hole contacts require no plastic body for the interposer; individual contacts may be populated directly into the PCB and soldered by hand. This is ideal for quick-turn, instantly implemented customized solutions.



Our surface mount contacts are supported by a plastic interposer body. IDI's expertise in press fitting and insert molding contacts guarantees the user a reliable, trouble-free interposer.

Cable Termination

When termination to cable is desired, IDI offers crimp tails and solder tails for its contacts. IDI is well equipped to supply cabling to meet customer requirements as well.

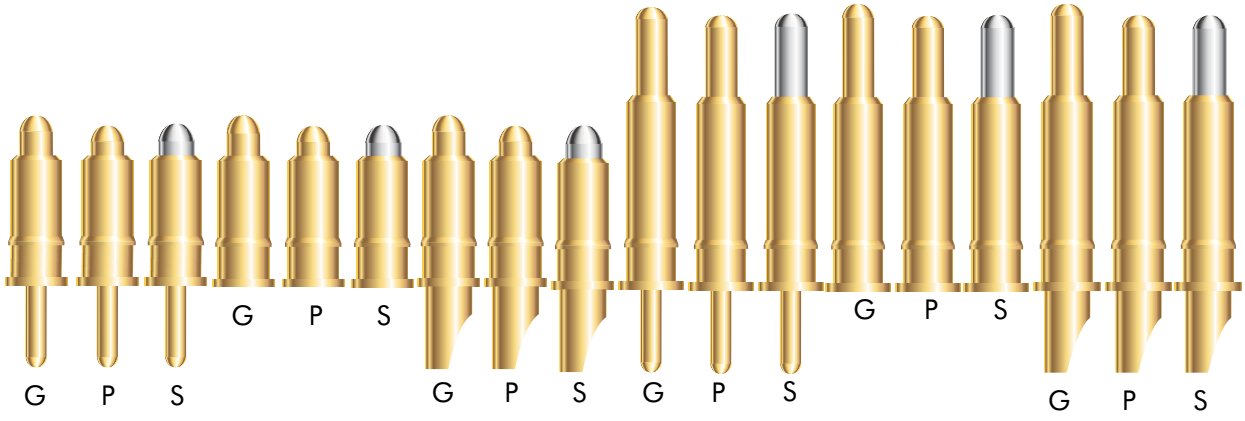
IDI offers termination options that are designed to preserve the many unique advantages of our connectors.

Our highly reliable compression mount technology offers a solderless solution that you can count on; our PCB termination options are refined to ensure manufacturability and keep our profile low; and our cabling options are robust and adaptable.

C Series Connectors

IDI's C Series Connectors ensure a reliable, rugged connection in the harshest environments. Based on our C Series Probe technology, they provide:

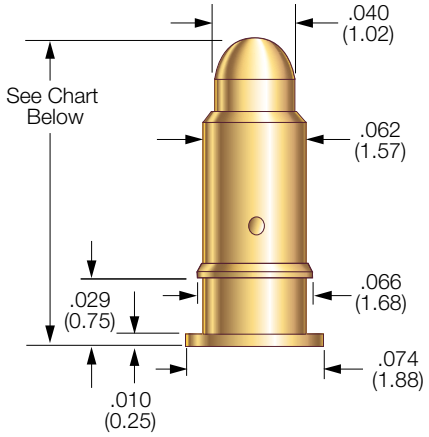
- Standard pins offered in custom configurations to meet your applications exact footprint
- 0.100 (2.54) pitch
- Ground, Power & Signal options
- 6mm & 4mm lengths
- Up to 10 amps current rating
- Contact resistance < 10 mΩ typical
- Great for RF, high speed and mixed signal connectors
- Consistently low resistance through tens of thousands of connections
- Ground contacts mate first, break last to support hot swap applications.
- Power contacts probe design supports increased current carrying capacity
- Surface mount, thru hole and solder cup termination options
- Consistent performance throughout broad temperature ranges
- Blind mates
- Superior continuity in high shock and vibration environments
- Minimal insertion and return loss for signals up to 10 GHz
- Resistance to dust and a range of chemicals
- Ingress protection under the most stringent requirements
- Direction connections for rotating or sliding joints



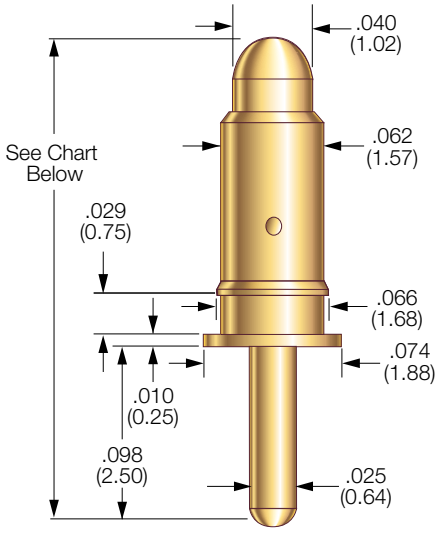
C-Series Examples

.100 centers C Series Probes

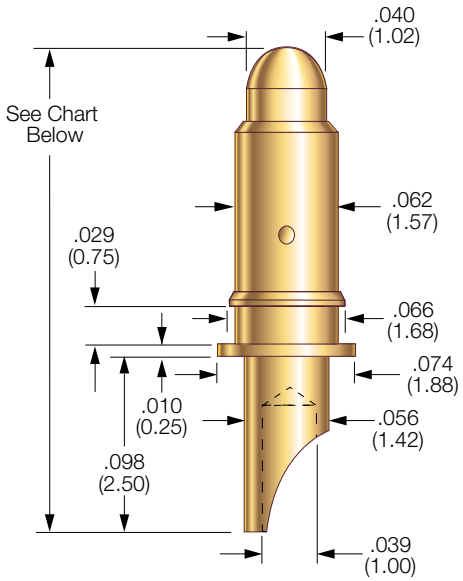
Surface Mount



Thru Hole Mount



Solder Cup



Probe Specifications

Minimum Centers: .100 (2.54)

Current Rating:
CG Series: 10 amps continuous
CP Series: 10 amps continuous
CS Series: .5 amp continuous
(Individual probe in free air @ ambient temperature)

Typical Resistances:
CG Series: < 10 mΩ
CP Series: < 10 mΩ
CS Series: < 60 mΩ

Spring Force:
3.1 oz. (88g) @ working travel for 4mm compressed length series
2.9 oz. (82g) @ working travel for 6mm compressed length series

Materials

Barrel: Brass, gold plated

Spring: Stainless steel

Plunger:
CG Series: Brass, gold plated
CP Series: Brass, gold plated
CS Series: Brass, Duralloy™ plated

Special Features:
CG Series: Bias plunger design
CP Series: Bias plunger design
CS Series: Standard design

Recommendations:
Mounting hole: .064/.065 (1.62/1.65)
Pad size for Surface Mount: .085 (2.20)
Wire gage for Solder Cup: 20 gage max.
Drill size for Thru Hole Tail: .035 (0.89)

Overall Length

Series	Surface Mount	Thru Hole	Solder Cup
CG-2.5-4	.197 (5.00)	.295 (7.50)	.295 (7.50)
CG-2.5-6	.335 (8.50)	.433 (11.00)	.433 (11.00)
CP-2.5-4	.185 (4.70)	.283 (7.20)	.283 (7.20)
CP-2.5-6	.315 (8.00)	.413 (10.50)	.413 (10.50)
CS-2.5-4	.185 (4.70)	.283 (7.20)	.283 (7.20)
CS-2.5-6	.315 (8.00)	.413 (10.50)	.413 (10.50)

Travel

Series	Working Travel	Maximum Travel
CG-2.5-4	.039 (1.00)	.039 (1.00)
CG-2.5-6	.098 (2.50)	.098 (2.50)
CP-2.5-4	.028 (0.71)	.028 (0.71)
CP-2.5-6	.079 (2.00)	.079 (2.00)
CS-2.5-4	.028 (0.71)	.028 (0.71)
CS-2.5-6	.079 (2.00)	.079 (2.00)

How to Order

CS	2.5	4	SM
Series	Pitch (mm)	Compressed Length (mm)	Termination

Series:
CG: Ground Connector Probe
CP: Power Connector Probe
CS: Signal Connector Probe

4: 4 mm
6: 6 mm

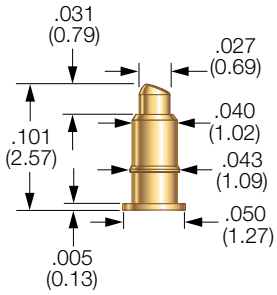
SM: Surface Mount
TH: Thru Hole
SC: Solder Cup

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

101582 Probe



Probe Specifications

Minimum Centers: .070 (1.78)
.050 (1.27) staggered rows
Current Rating: 20 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 1.7 oz. (48g) @ .030 (0.76) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .030 (0.76)
Working Travel: .030 (0.76)

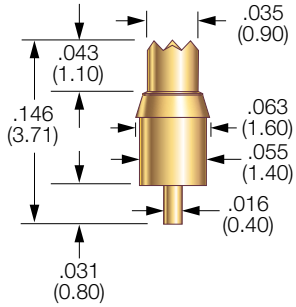
Materials

Barrel: Brass, gold plated
Spring: Stainless steel
Plungers: Beryllium copper, gold plated

How to Order

101582-000

101438 Probe



Probe Specifications

Minimum Centers: .080 (2.03)
Current Rating: 1 amp continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 3.5 oz. (99g) @ .020 (0.51) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .039 (0.99)
Working Travel: .020 (0.51)

Materials

Barrel: Brass, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated

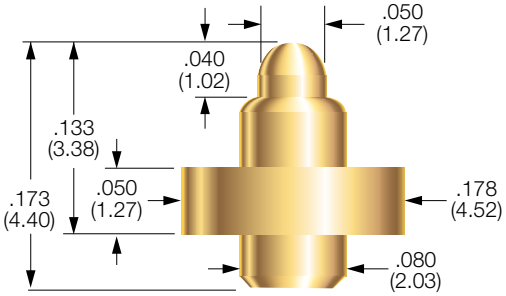
How to Order

101438-000

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

100671 Probe



Probe Specifications

Minimum Centers: .175 (4.45)
Current Rating: 3 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 5.1 oz. (145g) @ .027 (0.69) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .040 (1.02)*
Working Travel: .027 (0.69)

Materials

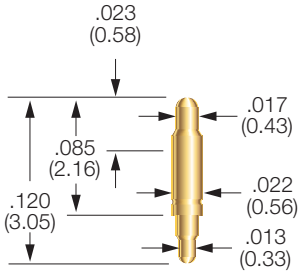
Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated

* not recommended for use at maximum travel

How to Order

100671-000

101111 Probe



Probe Specifications

Minimum Centers: .029 (0.75)
Current Rating: 6 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 1.5 oz. (43g) @ .022 (0.55) travel
Typical Resistance: < 50 mΩ
Maximum Travel: .025 (0.58)
Working Travel: .022 (0.55)

Materials

Barrel: Phosphor bronze, gold plated
Spring: Music wire, gold plated
Plunger: Phosphor bronze, gold plated

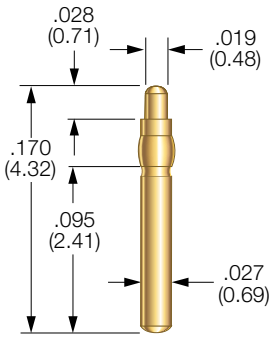
How to Order

101111-008

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

101506



Probe Specifications

Minimum Centers: .050 (1.27)
Current Rating: 5 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 1.38 oz. (39g) @ .020 (0.51) travel
Typical Resistance: < 20 mΩ
Maximum Travel: .028 (0.71)
Working Travel: .020 (0.51)

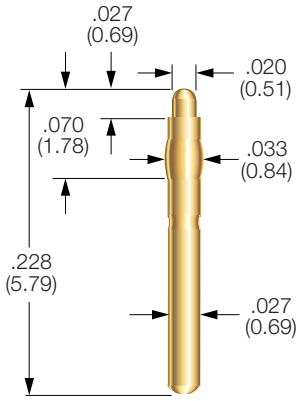
Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated

How to Order

101506-000

101294 Probe



Probe Specifications

Minimum Centers: .050 (1.27)
Current Rating: 5 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 0.9 oz. (26g) @ .020 (0.51) travel
Typical Resistance: < 20 mΩ
Maximum Travel: .027 (0.69)
Working Travel: .020 (0.51)

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated

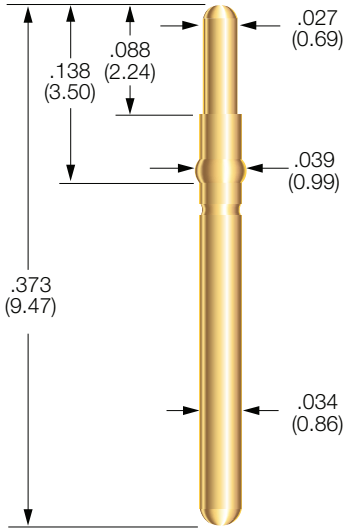
How to Order

101294-000

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

100803 Probe



Probe Specifications

Minimum Centers: .050 (1.27)
Current Rating: 5 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 1.2 oz. (34g) @ .050 (1.27) travel
Typical Resistance: < 50 mΩ
Maximum Travel: .060 (1.52)
Working Travel: .050 (1.27)

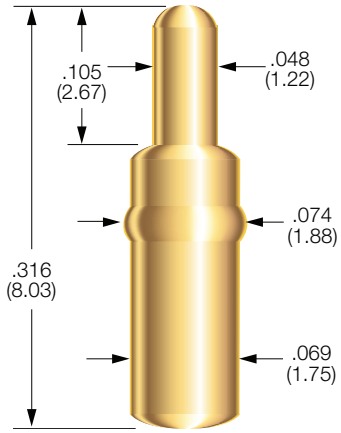
Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated

How to Order

100803-011

101190 Probe



Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating: 15 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 2.6 oz. (74g) @ .067 (1.70) travel
Typical Resistance: < 6 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .067 (1.70)

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel
Plungers: Beryllium copper, gold plated

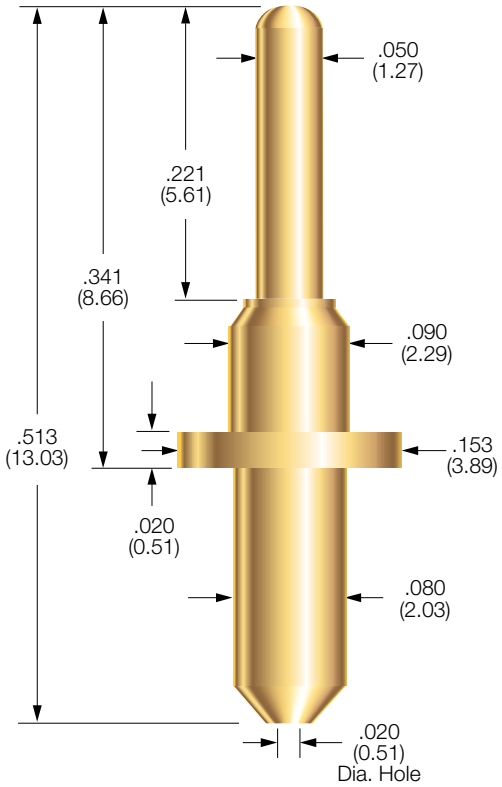
How to Order

101190-002

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

100606 Probe



Probe Specifications

Minimum Centers: .175 (4.45)
Current Rating: 15 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 6.2 oz. (176g) @ .060 (1.52) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .090 (2.29)
Working Travel: .060 (1.52)

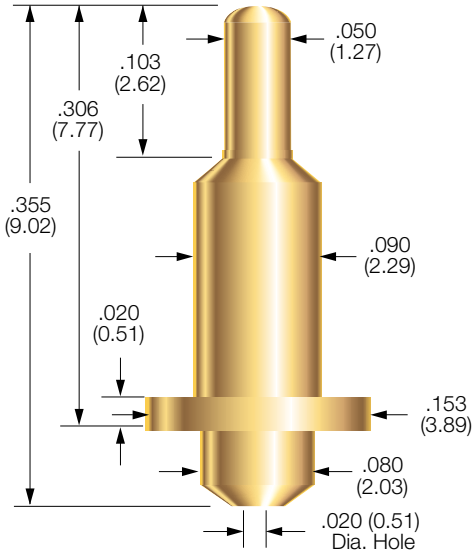
Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, passivated
Plunger: Beryllium copper, gold plated
Bias Ball: Stainless steel

How to Order

100606-000

100891 Probe



Probe Specifications

Minimum Centers: .175 (4.45)
Current Rating: 15 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 9.0 oz. (256g) @ .067 (1.70) travel
Typical Resistance: < 5 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .067 (1.70)

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated

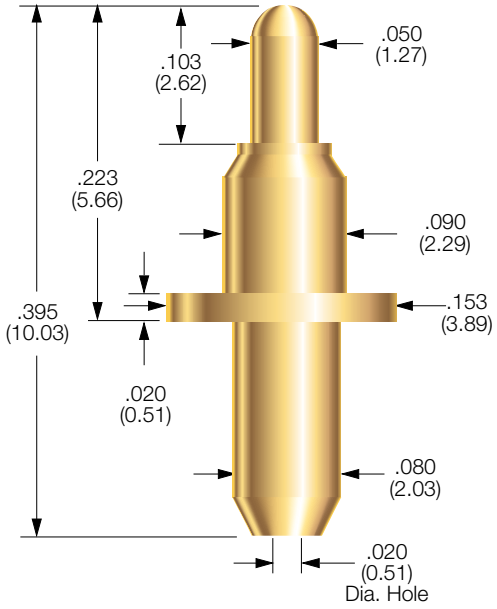
How to Order

100891-002

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

100410 Probe



Probe Specifications

Minimum Centers: .175 (4.45)
Current Rating: 15 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 6.2 oz. (176g) @ .060 (1.52) travel
Typical Resistance: < 5 mΩ
Maximum Travel: .090 (2.29)
Working Travel: .060 (1.52)

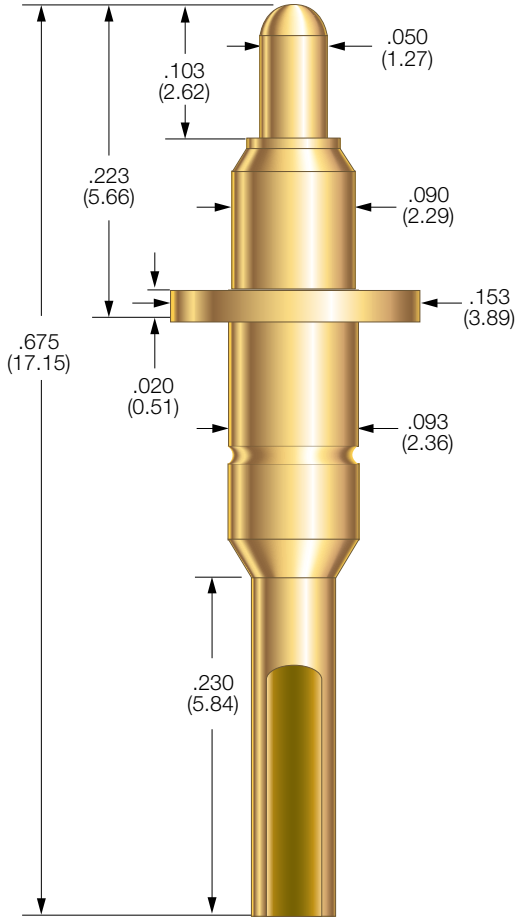
Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel
Plunger: Beryllium copper, gold plated
Bias Ball: Stainless steel

How to Order

100410-005

101119 Probe



Probe Specifications

Minimum Centers: .175 (4.45)
Current Rating: 15 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 6.2 oz. (176g) @ .060 (1.52) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .090 (2.29)
Working Travel: .060 (1.52)

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel
Plunger: Beryllium copper, gold plated
Bias Ball: Stainless steel
Receptacle: Nickel/silver, gold plated

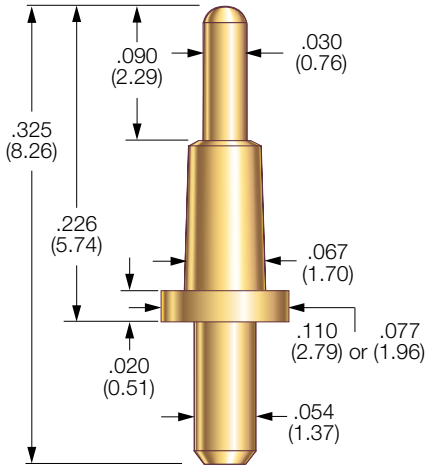
How to Order

101119-001

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

101050 Probe



Probe Specifications

Minimum Centers: .125 (3.18)
Current Rating: 10 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 2.3 oz. (65g) @ .060 (1.52) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .090 (2.29)
Working Travel: .060 (1.52)

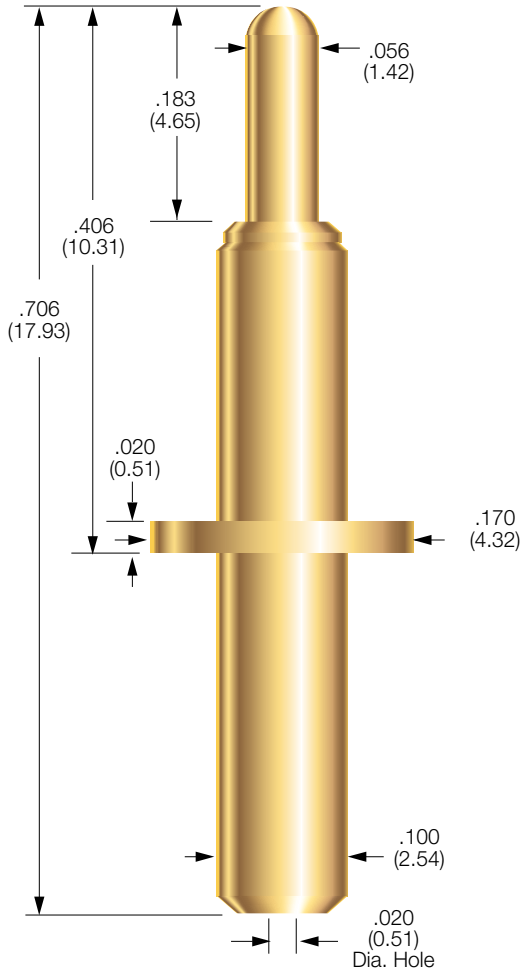
Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, passivated
Plunger: Beryllium copper, gold plated
Ball: Stainless steel, gold plated

How to Order

101050-003 for .110 dia. flange
101050-005 for .077 dia. flange

101247 Probe



Probe Specifications

Minimum Centers: .200 (5.08)
Current Rating: 20 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 11.7 oz. (256g) @ .147 (3.73) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .180 (4.57)
Working Travel: .147 (3.73)

Materials

Barrel: Brass, gold plated
Spring: Stainless steel, passivated
Plunger: Beryllium copper, gold plated

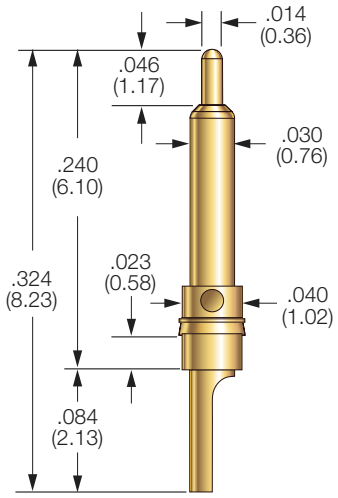
How to Order

101247-001

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

101679 Probe



Probe Specifications

Minimum Centers: .055 (1.40)
Current Rating: 3 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 1.3 oz. (37g) @ .023 (0.58) travel
Typical Resistance: < 25 mΩ
Maximum Travel: .023 (0.58)
Working Travel: .023 (0.58)

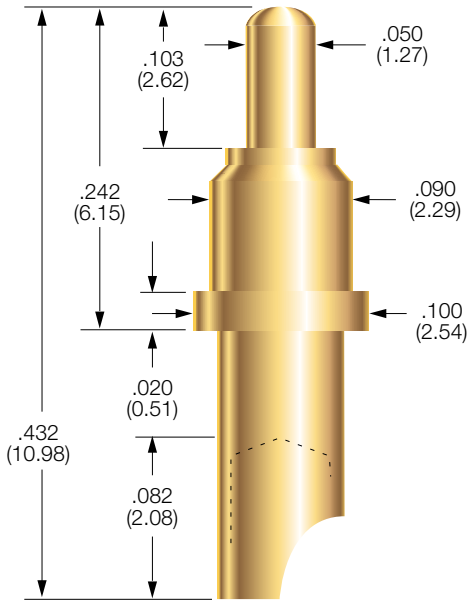
Materials

Barrel: Brass, gold plated
Spring: Stainless steel
Plunger: Brass, gold plated

How to Order

101679-000

101628 Probe



Probe Specifications

Minimum Centers: .125 (3.18)
Current Rating: 25 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 5.3 oz. (150g) @ .040 (1.02) travel
Typical Resistance: < 5 mΩ
Maximum Travel: .040 (1.02)
Working Travel: .040 (1.02)

Materials

Barrel: Brass, gold plated
Spring: Music wire, nickel plated
Plunger: Beryllium copper, gold plated
Ball: Stainless steel

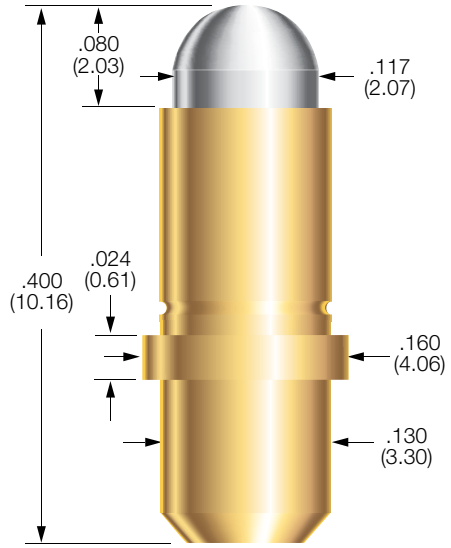
How to Order

101628-000

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

101402 Probe



Probe Specifications

Minimum Centers: .175 (4.45)
Current Rating: 20 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 9.7 oz. (275g) @ .050 (1.27) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .080 (2.03)
Working Travel: .050 (1.27)

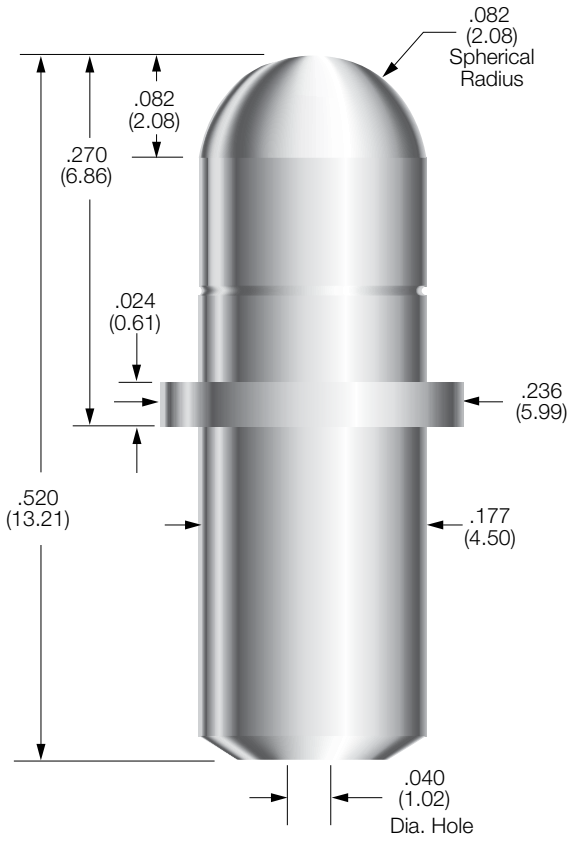
Materials

Barrel: Nickel silver, gold plated
Spring: Stainless steel, passivated
Plunger: Brass, Duralloy™

How to Order

101402-000

100804 Probe



Probe Specifications

Minimum Centers: .250 (6.35)
Current Rating: 30 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 8.9 oz. (252g) @ .054 (1.37) travel
Typical Resistance: < 5 mΩ
Maximum Travel: .082 (2.08)
Working Travel: .054 (1.37)

Materials

Barrel: Brass, Duralloy™ plated
Spring: Stainless steel, passivated
Plunger: Brass, Duralloy™ plated

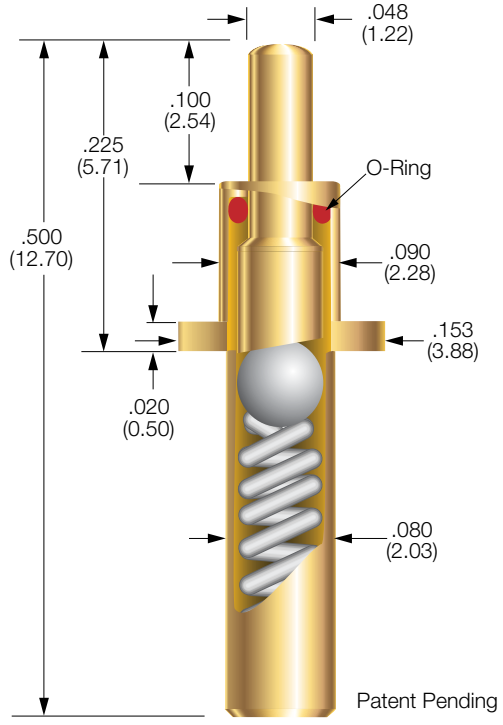
How to Order

100804-002

Specifications subject to change without notice. Dimensions in inches (millimeters)

Battery and Connector Probes

101602 Environmentally Sealed Probe



Probe Specifications

Minimum Centers: .175 (4.44)
Current Rating: 10 amps with 80° C rise
(Individual probe in free air @ ambient temperature)
Typical Resistance: < 10 mΩ
Spring Force: 6.7 oz. (190 g) @ .070 (1.77) travel
Maximum Travel: .100 (2.54)
Working Travel: .070 (1.77)

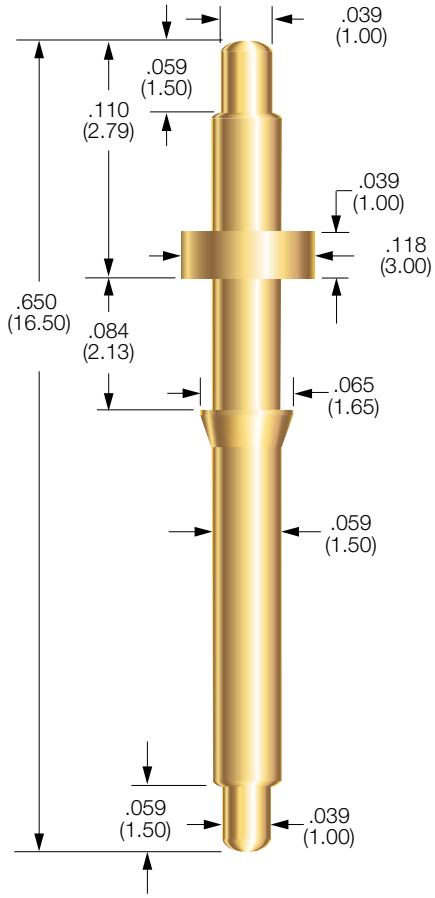
Materials

Barrel: Nickel silver, gold plated
Plunger: Full-hard beryllium copper, gold plated
Spring: Stainless steel
Bias Ball: Stainless steel
O-ring: Silicone
Cap & Plug: Stainless steel, gold plated

How to Order

101602-000

101549 Probe



Probe Specifications

Minimum Centers: .125 (3.18)
Current Rating: 3 amps with 80° C rise
(Individual probe in free air @ ambient temperature)
Typical Resistance: < 50 mΩ
Spring Force: 3.5 oz. (100 g) @ .039 (1.00) travel, each end
Maximum Travel: .059 (1.50) travel, each end
Working Travel: .039 (1.00) travel, each end

Materials

Barrel: Nickel silver, gold plated
Plunger: Full-hard beryllium copper, gold plated
Spring: Stainless steel

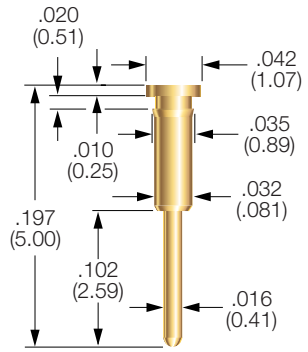
How to Order

101549-000

Specifications subject to change without notice. Dimensions in inches (millimeters)

Target Contact

PI-5328



Pin Specifications

Mounting Hole: .034 (0.86)

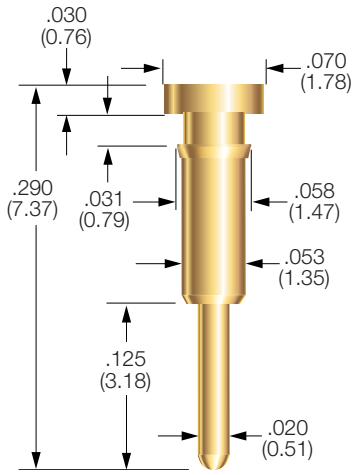
Materials

Material: Brass
Plating: Gold over nickel

How to Order

PI-5328

PI-5329



Pin Specifications

Mounting Hole: .057 (1.45)

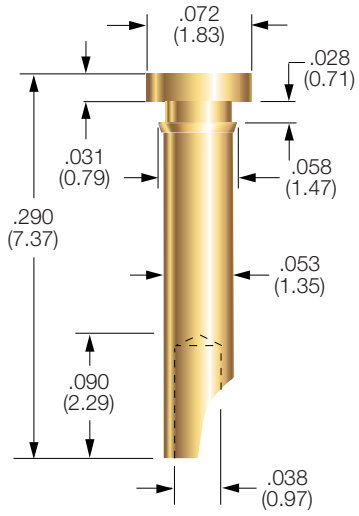
Materials

Material: Brass
Plating: Gold over nickel

How to Order

PI-5329

PI-5327



Pin Specifications

Mounting Hole: .057 (1.45)

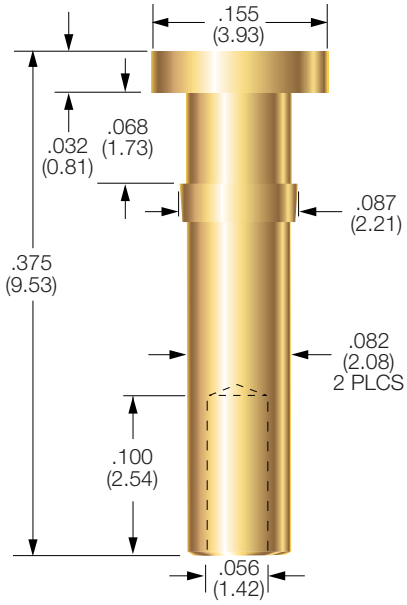
Materials

Material: Brass
Plating: Gold over nickel

How to Order

PI-5327

PI-5330



Pin Specifications

Mounting Hole: .084 (2.15)

Materials

Material: Brass
Plating: Gold over nickel

How to Order

PI-5330

Specifications subject to change without notice. Dimensions in inches (millimeters)

High Performance Test Sockets

IDI provides a variety of high-performance test sockets and lids to meet virtually any lab, system level or ATE requirement for analog, power and logic devices.

All of our products share the same standard features such as best-in-class materials, field replaceable interconnects and unsurpassed quality in design and manufacturing. IDI test sockets and lids are custom designed and manufactured to meet your specific application.

We work closely with you to fully understand your needs. Our engineers time and time again have proven the ability to rapidly develop comprehensive solutions that far exceed your expectations and continually outperform other competitive products.

Synergetix Brand Test Sockets

Synergetix brand test sockets have utilized IDI's three piece probe design. This innovation allowed the base resistance to be dramatically reduced and more importantly, introduced a truly consistent spring probe design that is considered to be the industry standard.

IDI has continued our innovations throughout the years by introducing many new test socket designs in our Synergetix brand including the Dyno test socket for QFN devices, the Offset Kelvin Socket for 0.5mm QFN devices and Wafer Level CSP sockets.

Antares Brand Test Sockets

In 2009, IDI acquired the Antares brand test sockets. Antares has offered test socket solutions for over 25 years. Antares brand test sockets offer some of the most complex designs including PoP test sockets, impedance controlled test sockets, elastomer test sockets and thermal management solutions as well as conventional test sockets. The design process used for Antares and Synergetix brand test sockets, is automated from a computer aided design process that includes 3D electrical and mechanical modeling. Our engineers are well versed in mechanical and thermal FEA and signal integrity simulation.

IDI has Sales and Application Engineering support located throughout US, Asia and Europe, providing 24/7 service and support.

Semiconductor Table of Contents

	Page
Family Sockets	24
Standard Sockets	26
Standard Lids	27
Dyno™ Test Socket for QFN Devices	28
Pop Test Sockets	30
Wafer-Level CSP Test Sockets	31
Model and Analysis Tools	32
Cleaning and Maintenance	33
Homogeneous Probes	34
Kelvin Probes	35
Test Socket Probes	36

Family Sockets

Applying standard designs to IDI sockets and lids allows for expedited design and delivery of our products. By utilizing design templates, socket and lid drawings for specific packages can be quickly completed and the components procured allowing for improved delivery cycles. Applying the IDI family standards will allow designs to have the same dimensioning features and overall look among multiple packages.

Peripheral Family Sockets

Peripheral family standard sockets include an alignment ring. Designing the socket with an alignment ring allows replacement of the alignment features without replacing the entire socket.

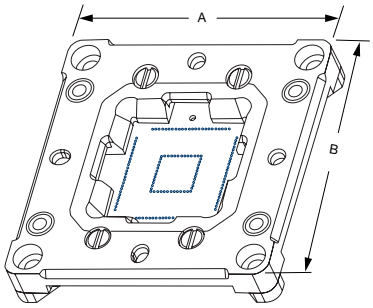
- Sockets are configurable with any portfolio spring pin, at any pitch.
- Socket frames are made from aluminium, thus eliminating or reducing the amount of bowing that occurs in high pin count socket applications.
- Sockets are designed with the maximum component clearance and are top mounted for easy removal. Bottom mount is available upon request.

Array Family Sockets

Array standard family sockets can be configured with either a floating base or non-floating base design.

- Sockets are configurable with any portfolio spring pin, at any pitch.
- Socket frames are made from aluminum, thus eliminating or reducing the amount of bowing that occurs in high pin count socket applications.
- Sockets are designed with maximum component clearance and are top mount for easy removal. Bottom mount is available upon request.

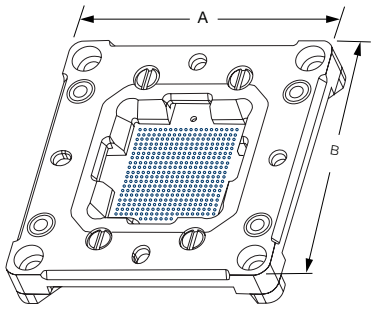
Peripheral Family Sockets



Family Series - Device Side				
Family	Min	Max*	DIM A	DIM B
1	3mm	6mm	29.50 (1.16)	29.50 (1.16)
2	6mm	10mm	34.00 (1.34)	34.00 (1.34)
3	10mm	17mm	39.50 (1.55)	39.50 (1.55)

* not inclusive

Array Family Sockets



Family Series - Device Side				
Family	Min	Max*	DIM A	DIM B
1	3mm	6mm	29.50 (1.16)	29.50 (1.16)
2	6mm	10mm	34.00 (1.34)	34.00 (1.34)
3	10mm	17mm	39.50 (1.55)	39.50 (1.55)
4	17mm	25mm	48.00 (1.89)	48.00 (1.89)
5	25mm	32mm	55.00 (2.16)	55.00 (2.16)
6	32mm	40mm	65.00 (2.56)	65.00 (2.56)
7	40mm	50mm	75.00 (2.95)	75.00 (2.95)

* not inclusive

Specifications subject to change without notice. Dimensions in millimeters (inches)

Family Lids and Footprints

IDI offers two styles of lids for our family sockets, clamping and clamshell. Each family socket has a footprint drawing available on-line for immediate download.

Family Socket Lids

- Lids are top mounted to allow more component clearance surrounding the socket.
- Top mounted lid frames include clearance holes, allowing the sockets to be installed and removed from the PCB without removing the lid.
- Standard lids are configurable, thus allowing the addition of heatsinks and fans to existing designs.
- Lids are adjustable to cover a wide range of package thicknesses.
- Lever is optional.

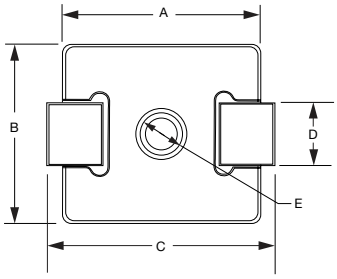
Family Socket Footprints

- Family socket footprints are available for download on our web site:

  www.idinet.com/arrayfp.aspx

  www.idinet.com/peripheralfp.aspx

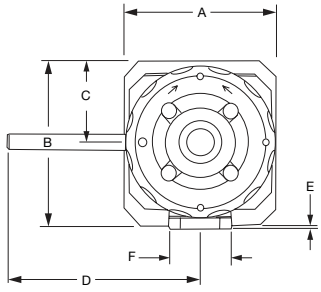
Clamping Family Lids



Clamping Family Lids				
Family	Min	Max*	DIM A	DIM B
1	3mm	6mm	33.00 (1.29)	29.50 (1.16)
2	6mm	10mm	37.50 (1.47)	34.00 (1.34)
3	10mm	17mm	43.00 (1.55)	39.50 (1.55)

* not inclusive

Clamshell Family Lids



Clamshell Family Lids				
Family	Min	Max*	DIM A	DIM B
1	3mm	6mm	29.50 (1.16)	32.80 (1.29)
2	6mm	10mm	34.00 (1.34)	37.30 (1.49)
3	10mm	17mm	39.50 (1.55)	42.80 (1.68)
4	17mm	25mm	48.00 (1.89)	51.85 (2.041)
5	25mm	32mm	55.00 (2.16)	59.35 (2.33)
6	32mm	40mm	65.00 (2.56)	69.00 (2.71)
7	40mm	50mm	75.00 (2.95)	79.00 (3.11)

* not inclusive

Specifications subject to change without notice. Dimensions in millimeters (inches)

Standard Sockets

IDI is the leading manufacturer of High Performance Test Sockets used for virtually any package and for wafer level CSP test. Socket designs utilize our IDI's proprietary spring probe and/or the patent pending Dyno™ contact technology. IDI test sockets are ideal for lead free device test and provides high cycle life, consistent contact resistance, and bandwidths greater than 10 GHz.

For over three decades, IDI has led the industry in innovation. This assures you that when you purchase an IDI test socket, you are using the most advanced interconnect available for semiconductor test. Our design approach is application specific to optimize the performance, reliability and cost effectiveness.

CSP, BGA and LGA Test Sockets

IDI's high performance CSP, BGA and LGA test sockets offer high bandwidths, consistently low resistance and low inductance for your high performance testing requirements. We employ spring probes and other alternate contact technologies in a fixed or a floating nest test socket design that best meets the requirements of your specific test application.

Package on Package Test Socket

Our PoP test sockets for years have been providing reliable solutions for both manual and automated testing of package-on-package (PoP) devices. The unique ability of our PoP test sockets to accurately and simultaneously align both the upper and lower device leads increases the versatility and lowers the cost of test.

Impedance Controlled Test Sockets

IDI brings new innovative solutions to IC testing using spring probes. Our high performance and impedance controlled test sockets have a true controlled impedance which achieves a high bandwidth performance (27GHz @ -1dB) that high speed applications and RF require.

Wafer Level CSP Test Interposers

IDI is changing the face of wafer level chip scale testing as more companies move towards bare die testing. Our interposers are being used in vertical probe test applications at a much lower cost, with a faster delivery cycle than the typical probe card solutions. IDI's interposers utilizes spring probe technology allowing for high cycle life, stable performance, reduced testing downtime and the ease of maintenance.

QFN Test Sockets Dyno™

IDI's innovative new leadless device test solution is the patented Dyno Test Socket. The Dyno utilizes a monolithic contact that boasts of a mechanical life in excess of 500,000 cycles and requires minimal cleaning. The typical resistance is less than 20 mΩ against both matte tin and NiPdAu. There is minimal board scrubbing, yet a slight wiping action on the device side for penetration of any contaminants and oxides on the device. The Dyno footprint is compatible with most all competitive offset designs.

Multi-Site Test Sockets

Our Multi-Site test sockets include strip test sockets, wafer level test sockets and multiple position, singulated device test sockets. Our multi-site test sockets are available with interchangeable inserts and a large socket frame for the ultimate in adaptability.

QFN Kelvin Test Sockets

IDI's has developed an innovative and robust contact technology for making Kelvin contact to 0.5mm pitch QFNs. The contact uses a tip that is angled to one side and flat. Two such contacts placed in opposition will touch the pad within 0.125mm. The tip is offset making the probe diameter a robust 0.39mm which allows the load board pad pitch to remain at 0.5mm.

Standard Lids

For handler setup or hand test, a manual lid is often required as part of the test hardware set. We have refined our own standard offerings so that with each socket you can receive a lid that is designed for your specific application from one of five standard lid form factors.

The most basic function of a test socket lid is to provide mechanical stability that helps form a strong mechanical and electrical connection between the leads of the device under test and the test socket contacts.

Our design approach for lids is the same as our approach to sockets; application specific to optimize the performance, the reliability and the cost effectiveness.

In order to guarantee that the lid design meets your application requirements we offer a variety of options for our lids including:

- Multiple plunger configurations
- Spring loaded latches
- Thermal stream access holes
- Liquid heatsinks
- Passive heatsinks
- Heat dissipating fans

Clamshell Lid

Clamshell Lids are used primarily in manual test applications. These lids provide an easy-to-use solution for repetitive cycling. Our innovative controlled travel design permits virtually effortless actuation and adjusts to accommodate a wide range of device thicknesses.

The Clip-On Lid design has been given a new body to provide a user friendly solution while offering the same quick turn around, which is often a key requirement in handler setup hardware.

VCC Lid

The Vertical Compression Clamshell Lid (VCC), is a clamshell lid without secondary actuation. Numerous customers prefer the convenience of pushing the device into the pocket with a single actuation. The VCC's unique design offers natural linear compression of the device.

Failure Analysis One-Piece-Bolt-On Lid

One-Piece Bolt-On Lids are one of the most straightforward style of manual lid. When test times are long and the price is the primary driver, this can be the optimal solution.

Integral Lid

Integral Lid solutions are permanently attached to the socket and offer a more simplistic approach to low end test.

Clip-On Lid or Clamping Lid

The Clip-On Lid design has been given a new body to provide a user friendly solution while offering the same quick turn around, which is often a key requirement in handler setup hardware.

Dyno™ Test Sockets for QFN Devices

IDI's patented Dyno™ Test Sockets for QFN testing, has significant advantages over any competitive technology.

- Self-cleaning contact design
- The Dyno footprint is compatible with most all competitive offset designs.
- Unmatched reliability
- Fast delivery time

The Dyno™ Test Socket employs an innovative contact design that slightly wipes across the surface of the device lead during compression. This ensures low and consistent contact resistance and high first pass yields in even the harshest and most demanding applications.

Designed for Efficiency

The Dyno™ contact is a monolithic element which derives compliance to the load board from a simple elastomeric rod and device compliance from a painstakingly crafted contact bending effect. The Dyno boasts of a mechanical life in excess of 500,000 cycles and requires minimal cleaning with little fatigue.

Because the contact tip scrubs across the device lead with each compression, contaminants and tin oxides are wiped from both the lead and the contact surface, ensuring a low and consistent resistance and high yields throughout the contact's life. Minimal cleaning is required, and the user can expect the contact to deliver cycle after cycle with little attention.

The Endura Advantage

The Dyno contact is a beryllium copper shaped metal, contact featuring IDI's Endura plating. This proprietary plating provides a contact surface that is more resistant to debris build up in lead free device testing.

Dyno Contacts and Probes in a Single Socket

The Dyno contact is designed to be compatible with the Synergetix flagship, the 3-piece probe. The peripheral leads on the QFN can be tested with the Dyno contact and the ground pad in the center of the device can utilize our 101267 probe. Depending on package and ground pad site, Dyno contacts can be used on center ground pads as well.

A Long-Lasting Test Socket

The Dyno Test Socket requires a minimal amount of cleaning and has mechanical life of over 500,000 cycles. Its unique design provides a slight wiping action on the device to penetrate contaminants and oxides on the hard, lead-free surfaces. Because compliance to the load board is derived from the elastomer and isolated from the movement of the contact tip, board scrub is minimized and board pad life should be relatively infinite.

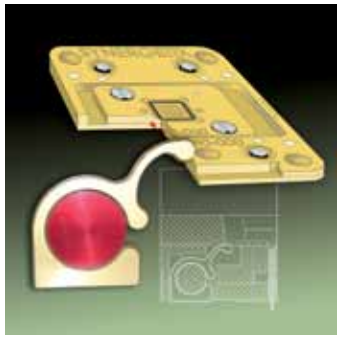
Easy Contact Replacement

With a cycle life well in excess of 500,000 insertions, the Dyno contact and silicone elastomer do not require frequent refurbishment. However, should the need arise both items are field replaceable with relative ease. The Dyno contacts can be individually replaced.

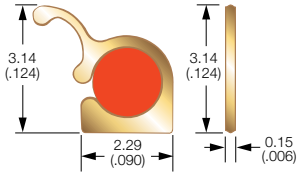
The Dyno Difference

Only IDI has the Dyno contact – a revolutionary breakthrough in High-Performance QFN testing.

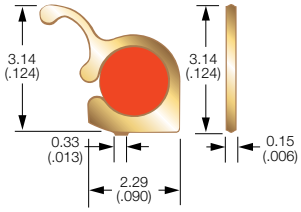
- Patented design
- Resistance < 20 mΩ against a matte-tin device
- Bandwidths > 10GHz @ -1dB on 0.50mm pitch
- Mechanical life >500,000 cycles
- Endura plating resists solder build-up
- Wiping action ensures good device contact with minimal board side scrub
- Requires minimal cleaning



0.4mm Dyno Contact



RP Dyno Contact



Specifications

Minimum Device Pitch: 0.40mm (.016)
Test Height: 2.92mm (.115)
Force per Contact:
42g (1.5 oz.) @ 0.38mm (.015) travel for RP
51g (1.8 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.23mm (.009)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55˚C to 150˚C
Insertions: > 500,000

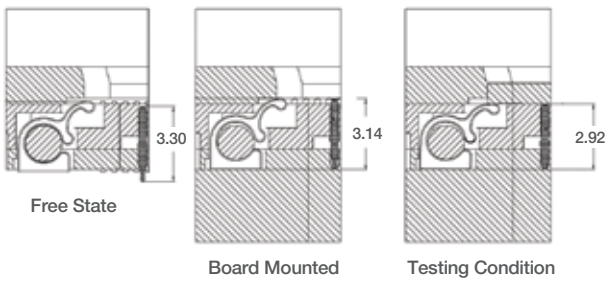
Materials

Contact: Full-hard beryllium copper, Endura plated
Insulator: Silicone

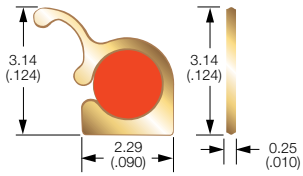
Electrical Specifications

Typical Resistance: < 20 mΩ
Current Carrying Capacity: 5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R at 0.4mm pitch
Characteristic Impedance: 34 Ω
Time Delay: 37 pSec
Loop Inductance: 1.51 nH
Signal Pin to Return Capacitance: 0.90 pF
-1dB Insertion Loss Bandwidth: >10 GHz

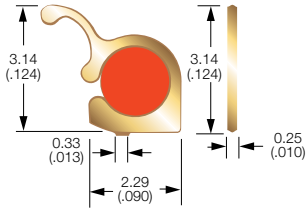
Testing Condition



0.5mm Dyno Contact



RP Dyno Contact



Specifications

Minimum Device Pitch: 0.50mm (.020)
Test Height: 2.92mm (.115)
Force per Contact:
52g (1.8 oz.) @ 0.38mm (.015) travel for RP
85g (3.0 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.23mm (.009)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55˚C to 150˚C
Insertions: >500,000

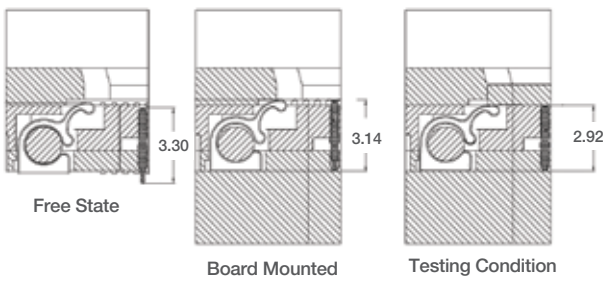
Materials

Contact: Full-hard beryllium copper, Endura plated
Insulator: Silicone

Electrical Specifications

Typical Resistance: < 20 mΩ
Current Carrying Capacity: 5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R at 0.5mm pitch
Characteristic Impedance: 34 Ω
Time Delay: 48 pSec
Loop Inductance: 1.74 nH
Signal Pin to Return Capacitance: 1.34 pF
-1dB Insertion Loss Bandwidth: >10 GHz

Testing Condition



Specifications subject to change without notice. Dimensions in millimeters (inches)

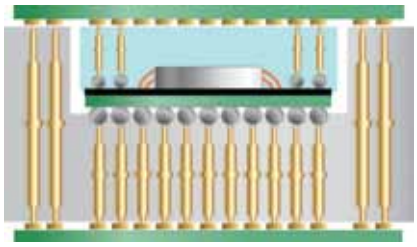
PoP Sockets

IDI's Antares brand PoP test sockets for years have been providing reliable solutions for both the manual and automated testing of package-on-package devices. Our PoP test sockets accurately and simultaneously align both the upper and lower device pads and leads which increases versatility and lowers the cost of test.

IDI Offers three distinct types of PoP sockets designs to meet your specific requirements.

Memory-Less

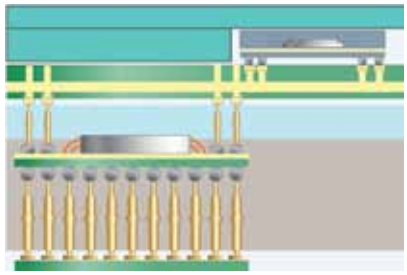
Memory-Less (ML) PoP Socket – top and bottom access to leads on devices with memory information supplied from the tester thru the socket assembly.



Memory-Less

Memory-Bearing

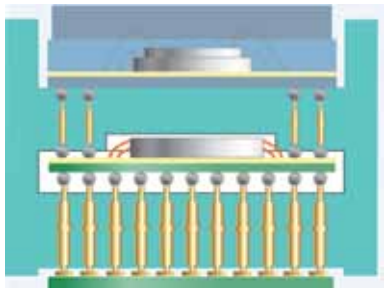
Memory-Bearing (MB) PoP Socket – top and bottom access to leads on devices with a known good memory device that is contained within the socket assembly providing a temporary connection to the PoP device test.



Memory-Bearing

Manual Test

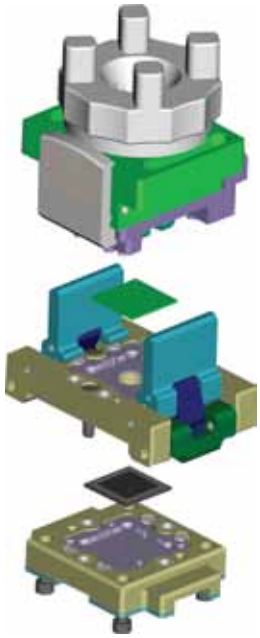
Manual Test (MT) PoP Socket – top and bottom access to leads on devices with a known good memory device contained within the lid assembly providing a temporary connection to the PoP device test.



Manual Test

PoP Test Sockets

- Proven design – over two years in the field
- Reliable alignment to the top and bottom leads
- Superior Signal Integrity to both packages
- Interface bandwidths to 10 GHz
- 0.40mm pitch & above – production ready solutions
- 0.25mm pitch – is in development



WLCSP Test Sockets

IDI's interposers are revolutionizing the testing of wafer-level chip scale packages (WLCSP) in vertical probing applications. Test engineers are realizing tremendous savings in cost of ownership as IDI delivers a highly reliable, easily maintained, and eminently capable solution for this rapidly emerging form of test.

Where engineers were previously required to use expensive and difficult to maintain vertical probing solutions, IDI interposers can:

- Be implemented at a fraction of the initial cost and lead time as compared to most traditional technologies.
- Produce a radical improvement in maintenance downtime and contact life.

Remarkably Low Cost of Ownership

IDI sockets for production test of packaged devices are well known for their extreme durability and ease of maintenance. Now, IDI brings this same degree of ease to the wafer probing level.

An IDI WLCSP interposer solution is typically less than 20% of the cost of a comparably effective vertical probing card.

IDI's WLSCP interposers have a low cost of ownership that begins with their initial cost. The interposer is a simple plastic assembly that contains IDI's proven semiconductor probe technology. This is combined with an easy-to-design and fabricated load board.

The savings continue as the WLSCP interposer is put into action. IDI's spring probe technology provides more than 300 microns travel, therefore allowing for easy probe set-up and forgiving performance cycle after cycle.

Fast Delivery Time

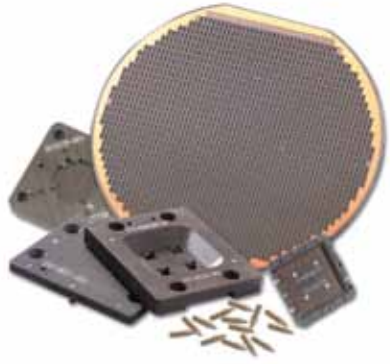
Delivery times are greatly reduced on the WLCSP interposers as well. IDI designs its interposers within a week and ships within three weeks – a fraction of the lead time that is associated with vertical probe card technologies.

A Long Lasting Interposer Solution

IDI WLCSP interposers run long and hard, with minimal attention required. They are easily maintained by the test technician with little tooling or training. Their resulting minimal downtime combined with their fractional initial investment equals a far lower cost of ownership than any other vertical probing solution available.

Effortless Cleaning & Maintenance

Recommended off-line cleaning techniques take only minutes, and in many cases the interposer may be left attached to the load board. Online cleaning can be done depending on the medium used. When contact replacement is required, it may be done at the test technician level with tools no more complex than tweezers and a screwdriver.



Modeling and Analysis

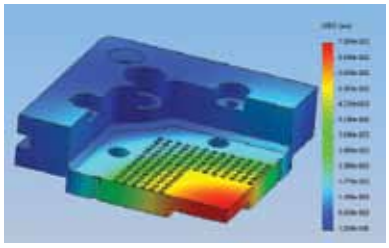
In more complex socket designs, it is often necessary to model the socket's performance to guarantee that the socket design is mechanically robust while delivering virtually transparent signal paths.

Structural Finite Element Analysis

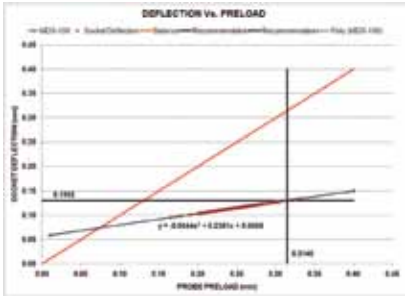
Determines the yield failure due to pin array and lid force, as well as socket deflection at the pin array.

Thermal FEA

Determines power dissipation from the package. Steady State Analysis is performed.



Spring Probe Travel Analysis



Preload – Level 1 - The Monte Carlo analysis verifies the spring probe is always in contact with the load board when mounted. This analysis assumes a constant socket deflection.

Preload – Level 2 - Analysis is typically required for higher pin count sockets. It uses variable socket deflection based on additional structural FEA.

Preload – Level 3 - This level adds a lid travel analysis.

Compression - Monte Carlo analysis optimizes spring life, contact life, CRES and force.

Post Preload Compression - Monte Carlo analysis checks for continuity and pin bottoming in socket.

Contactor Alignment Analysis

Alignment to Load Board - Analysis checks the dowel pin's size and position.

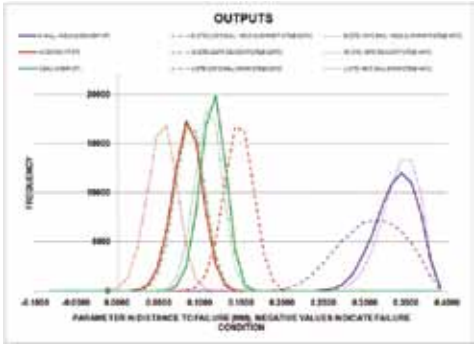
Spring Probe to Load Board - Monte Carlo analysis checks the probe contact to load board pad alignment.

DUT Into IC Pocket Fit - Analysis checks that the min/max package body against the IC pocket.

Spring Probe to DUT - Monte Carlo analysis method checks the DUT to top contact alignment.

Package Damage due to Misalignment - Monte Carlo analysis checks for ball or pin shear.

Alignment with CTE Considerations - Monte Carlo analysis checks the CTE of each material in the specific test temperature environment.



Lid Alignment - Platen to IC Pocket - Prevent damage to IC pocket walls. Heatsink to Die - Prevent die cracking

DUT/LID/Heatsink Travel - Analysis for DUT force balance. Force balancing for PoP systems - substrate and die. Prevents damage to package or die.

Handler Alignment - Handler placement and positional accuracy into IC pocket. Package theta rotational accuracy.

Spring Probe Pointing Accuracy - Prevents damage to spring probe tip and to the load board pads.

Socket Cleaning

IDI recommends cleaning sockets on either as needed or per cycle basis for regular maintenance.

Generally, the most effective cycle for cleaning of sockets can be determined by tracking test yields, and establishing a maintenance schedule based on when they begin to fall measurably below the acceptable performance level.

Acetone Cleaning Socket Mounted on Board

1. Visually inspect socket and probes for contamination, particles, scratches, etc.
2. Blow filtered air or inert gas on the surfaces to remove all loose particles of contaminations.
3. If contaminants still exist, apply the acetone to a soft bristle brush or soft pad to clean the surfaces. Blow filtered air or inert gas on socket and probe to remove solvent and any contaminants.
4. If contaminants are still present, the socket should be removed from the board to perform offline cleaning.

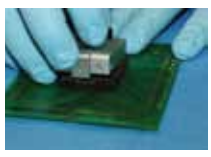
Acetone Cleaning - Socket Removed From Board

1. Dismantle the socket; remove the bottom retainer plate and all the probes from the socket.
2. Place socket parts in one glass beaker and probes in a separate glass beaker containing the acetone, IPA or methanol. All parts should be submersed in the liquid.
3. Place the glass beakers in the ultrasonic cleaner cleaning the parts for a minimum of 30 minutes.
4. Remove all the parts individually from the ultrasonic bath and place on a white absorbent paper.
5. Use a nylon hog hair or horse tail brush to remove any left over contaminants on the socket parts.
6. Place the socket and/or probes in a beaker or other oven suitable container; place in a pre-heated oven at 60°C for 30 minutes to dry all parts. (This process must be performed for IPA or methanol cleaned parts. Acetone cleaned parts must be dried with clean compressed air only (30psi); no oven drying).

7. Reassemble socket.

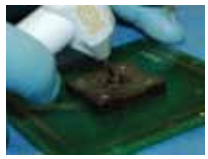
IDI Cleaning Kits - Socket Removed From The Board

1. Remove socket and load board from the tester and place both on a clean work surface (do not remove socket from load board if possible).
2. If a floating nest is included in your socket's design, remove the nest and set it aside. Be sure to retain the springs which drive the floating nest.
3. If the socket is removed from the load board, you must compress the board-side tips of the probes. Use a flat instrument. This will cause the probe tips to project from the top surface of the socket, allowing for easier and more effective cleaning.
4. Trim the pre-saturated cleaning cloth with scissors to the size of the pocket and place in pocket; if the device is larger than the cloth, multiple cloths may be overlaid.
5. Place the sacrificial device in the pocket over the cloth and attach the lid to the socket.
6. Turn the socket lid handle to the test position and allow to soak. Longer soak times have proven to be the most effective; soak for a minimum of one minute.



Longer soak times will not hurt the socket performance; the cleaning agent continues to remove solder and oxides as long as the cloth is in place.

7. If a socket lid is not available, cycle the device 10 times over the cloth. Allow the cloth to remain in place over the device for the recommended soak time, then cycle the device 10 more times.
8. After completion, remove the device and the cleaning cloth from the socket pocket. Discard cleaning cloth after each use.
9. Remove rotary tool from the kit and insert the nylon brush tip into the tool.
10. Approach the probe tips at a 30° angle with the rotary tool brush, and apply light pressure.
11. Actuate the rotary tool and work slowly across the probe tips in a sweeping manner working left to right (work in one direction only).



12. Rotate socket 90° and repeat.
13. Visually inspect probe tips to ensure tin removal. Repeat as necessary to loosen stubborn deposits.
14. The nylon hand brush tool may be used to remove any loose particles remaining on the socket.
15. Do not rinse the socket; the chemical left on the socket by the cloth is safe for the device and will help to limit any further contamination.

- Use safety goggles and latex gloves during the cleaning
- Preserve cleaning kit; rinse nylon brushes with isopropyl alcohol (IPA) after each cleaning. Allow IPA to evaporate from the brush bristles before using.
- Keep the saturated cleaning cloth in a closed package when not in use for maximum life.

Homogeneous Probes

IDI's spring test probe designs combine conductivity and rigidity to form a reliable electrical path with excellent force distribution and compliance. Mechanical probe tip designs can be varied at each end of the contact to provide the absolute best socket-to-package and socket-to-PCB interconnection.

Tips styles can also be designed for specific applications to optimize contact surface area while minimizing contact wear factors, as well as lead and solder ball deformation. Elements can be scaled and materials chosen to produce a contact that optimizes performance for high-speed signals, or for high or low power requirements. Scaling also allows the design and production of spring probes to meet high pin-count and tight pitch requirements.

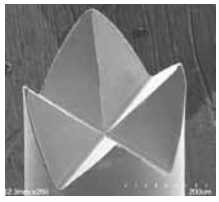
The homogeneous probe series features device contact tips made from custom developed solid precious metal alloy, usable without an additional plating process. This method of construction offers a more robust structure that is capable of withstanding the extreme cleaning techniques associated with the testing of SAC-105 BGA and NiPdAu QFN packages. Measured against typical contact materials, this alloy offers less wear than beryllium copper, increased hardness and superior electrical conductivity compared to carbon steel.

Homogeneous Probe Advantages

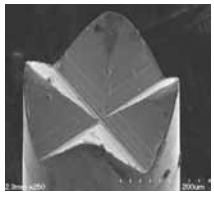
- In-Situ Cycle Life in excess of 800K
- Improved test yields - up to 80% increase in FPY vs. standard product
- Increased "uptime"
- Low and stable contact resistance
- Drop-in replacement for standard IDI – Antares & Synergetix probes
- Available for all pitches 0.4mm and higher

Characteristics

Material	Conductivity % IACS	Hardness HV
Beryllium Copper	25%	HV360
Carbon Steel	-9%	HV620
Homogeneous	15%	HV450



New Tip



Clean and Sharp
After 400K Cycles

Semiconductor Probe Table of Contents

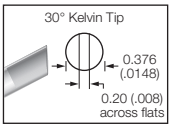
Base Part No.	Pitch	Length	-1 dB Insertion Loss Bandwidth	Loop Inductance	Homogeneous Option	Page
101500	0.50mm	5.74mm or 6.74mm	—	—	No	35
101245	0.50mm	5.74mm	> 14.6 GHz	1.6nH	No	35
101303	0.40mm	3.30mm	> 20.0 GHz	1.02nH	No	36
101795	0.40mm	3.30mm	> 20.0 GHz	1.02nH	Yes	36
623-0286	0.40mm	3.30mm	> 17.5 GHz	0.98nH	Yes	37
623-0334	0.40mm	3.80mm	> 15.4 GHz	1.01nH	Yes	37
200-000940	0.40mm	4.75mm	> 20 GHz	0.95nH	Yes	38
623-0248	0.40mm	5.44mm to 5.64mm	> 13.2 GHz	1.38nH	Yes	38
623-0249	0.50mm	2.87mm	> 20 GHz	0.89nH	Yes	39
623-0290	0.50mm	5.16mm	> 9.6 GHz	1.19nH	Yes	39
101267	0.50mm	3.30mm	> 20 GHz	1.12nH	No	40
623-0326	0.50mm	3.30mm	> 20 GHz	1.12nH	Yes	40
623-0047	0.50mm	5.99mm	> 20 GHz	1.56nH	Yes	41
623-0303	0.65mm	3.70mm	> 20 GHz	0.85nH	Yes	41
100938	0.65mm	5.72mm	> 2.4 GHz	1.46nH	No	42
623-0270	0.80mm	2.65mm	> 20 GHz	0.59nH	Yes	42
623-0271	0.80mm	2.65mm	> 20 GHz	0.72nH	No	43
623-0195	0.80mm	4.84mm	> 20 GHz	0.86nH	Yes	43
101785	0.80mm	5.94mm	> 10 GHz	1.03nH	No	44
101312	1.00mm	7.37mm	> 10 GHz	1.19nH	No	44
623-0117	1.00mm	4.75mm	> 20 GHz	1.02nH	No	45
100785	1.27mm	10.72mm	> 16.2 GHz	1.93nH	No	45

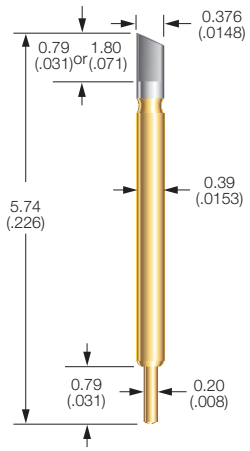
Specifications subject to change without notice. Dimensions in millimeters (inches)

Offset Kelvin Test Probes

101500 Kelvin Test Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length:
5.26mm (.207) for 101500-000
Spring Force per Contact: 35g (1.25 oz.)
@ 0.48mm (.019) travel
Device Compliance: 0.33mm (.013)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55˚C to 150˚C
Insertions: > 500,000

Materials

Barrel: Phosphorus Bronze, gold plated
Spring: Stainless steel, gold plated
Device Side Contact: Stainless steel, palladium cobalt plated
Board Side Plunger: Full-hard beryllium copper, gold plated

Electrical Specifications

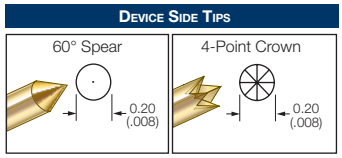
Typical Resistance: < 100 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)

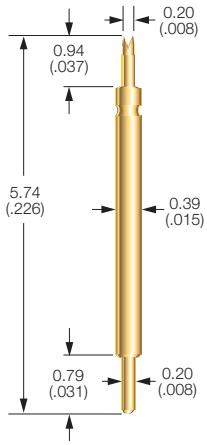
How to Order

Part No.	Overall Length
101500-000	5.74mm (.226)

101245 Ground Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 5.26mm (.207)
Force per Contact: 35g (1.25 oz.)
@ 0.48mm (.019) travel
Device Compliance: 0.33mm (.013)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55°C to 150°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Stainless steel, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 50 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.5mm pitch
Characteristic Impedance: 41 Ω
Time Delay: 28 pSec
Loop Inductance: 1.16 nH
Signal Pin to Return Capacitance: 0.68 pF
-1 dB Insertion Loss Bandwidth: > 14.6 GHz

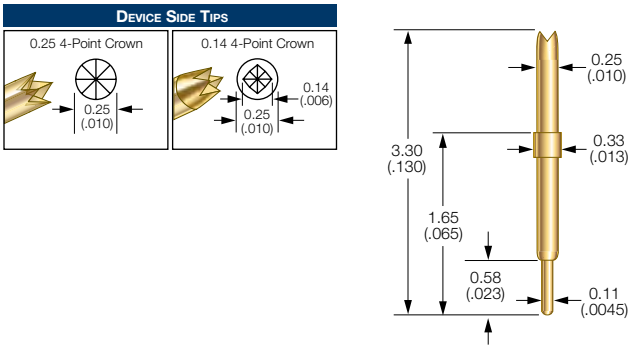
How to Order

Part No.	Device Side Tip	PCB Side Tip
101245-000	0.20 4-pt. Crown	Radius
101245-001	Spear Tip	Radius

Specifications subject to change without notice. Dimensions in millimeters (inches)

Semiconductor Probes 0.40mm Pitch

101303 Probe



Probe Specifications

Minimum Device Pitch: 0.40mm (.016)
Signal Path Length: 2.92mm (.115)
Spring Force per Contact:
202 & 210 - 21.2g (0.75 oz.) @ 0.38mm (.015) travel
207 & 211 - 16.7g (0.59 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.25mm (.010)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature:
-55˚C to 150˚C for stainless steel spring
-55˚C to 120˚C for music wire spring
Insertions: > 500,000

Materials

Barrel: Beryllium copper, Endura plating
Spring: Stainless steel, gold plated - 17g spring;
Music wire, gold plated - 21g spring
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

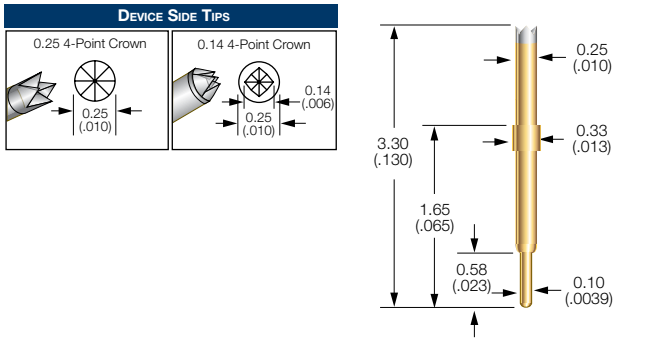
Electrical Specifications

Typical Resistance: < 40 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.4mm pitch
Characteristic Impedance: 54 Ω
Time Delay: 19 pSec
Loop Inductance: 1.02 nH
Signal Pin to Return Capacitance: 0.35 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
101303-202	0.25 4-pt. Crown	Radius	21.2g
101303-207	0.25 4-pt. Crown	Radius	16.7g
101303-210	0.14 4-pt. Crown	Radius	21.2g
101303-211	0.14 4-pt. Crown	Radius	16.7g

101795 Probe



Probe Specifications

Minimum Device Pitch: 0.40mm (.016)
Signal Path Length: 2.92mm (.115)
Force per Contact: 21g (0.74 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.25mm (.010)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Brass, gold plating
Spring: Music wire, gold plated
Device Side Contact: Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 50 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.4mm pitch
Characteristic Impedance: 54 Ω
Time Delay: 19 pSec
Loop Inductance: 1.02 nH
Signal Pin to Return Capacitance: 0.35 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

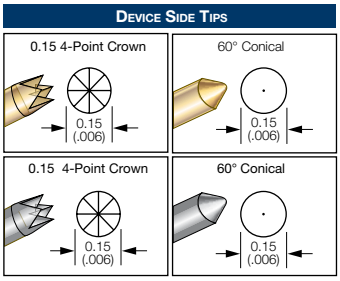
Part No.	Device Side Tip	PCB Side Tip	Spring Force
101795-H2	0.25 4-pt. Crown	Radius	21g
101795-H10	0.14 4-pt. Crown	Radius	21g

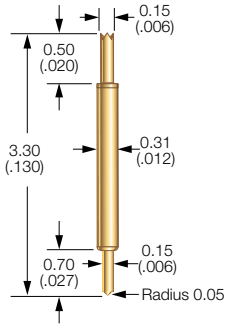
Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

Specifications subject to change without notice. Dimensions in millimeters (inches)

0.40mm Pitch Semiconductor Probes

623-0286 Probe





Probe Specifications

Minimum Device Pitch: 0.40mm (.016)
Signal Path Length: 2.80mm (.110)
Force per Contact: 19.2g (0.68 oz.) @ 0.50mm (.020) travel
Device Compliance: 0.30mm (.012)
DUT Board Compliance: 0.20mm (.008)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact: Carbon steel, gold plated or Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

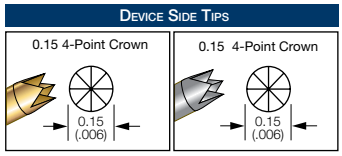
Typical Resistance: < 60 mΩ
Current Carrying Capacity: 2.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.4mm pitch
Characteristic Impedance: 49 Ω
Time Delay: 20 pSec
Loop Inductance: 0.98 nH
Signal Pin to Return Capacitance: 0.41 pF
-1 dB Insertion Loss Bandwidth: > 17.5 GHz

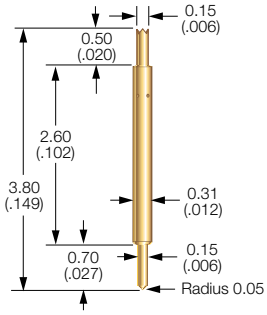
How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
623-0286-02	0.15 4-pt. Crown	Conical	19.2g
623-0286-03	Conical	Conical	19.2g
623-0286-H2	0.15 4-pt. Crown	Conical	19.2g
623-0286-H3	Conical	Conical	19.2g

H2 & H3 have the homogeneous alloy on the device side of the contact.

623-0334 Probe





Probe Specifications

Minimum Device Pitch: 0.40mm (.016)
Signal Path Length: 3.30mm (.130)
Force per Contact: 25g (.88 oz.) @ 0.50mm (.020) travel
Device Compliance: 0.30mm (.012)
DUT Board Compliance: 0.20mm (.008)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact: Carbon steel, gold plated or Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 60 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.4mm pitch
Characteristic Impedance: 47 Ω
Time Delay: 22 pSec
Loop Inductance: 1.01 nH
Signal Pin to Return Capacitance: 0.46 pF
-1 dB Insertion Loss Bandwidth: > 15.4 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
623-0334-01	0.15 4-pt. Crown	Conical	25g
623-0334-H1	0.15 4-pt. Crown	Conical	25g

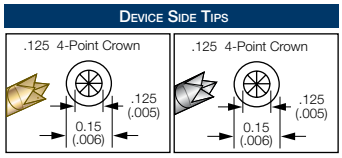
H1 has the homogeneous alloy on the device side of the contact.

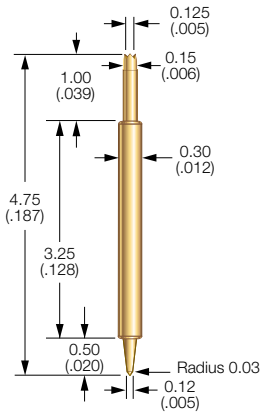
Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

Specifications subject to change without notice. Dimensions in millimeters (inches)

Semiconductor Probes 0.40mm Pitch

200-000940 Probe





Probe Specifications

Minimum Device Pitch: 0.40mm (.016)
Signal Path Length: 4.05mm (.160)
Force per Contact: 26g (0.92 oz.) @ 0.70mm (.027) travel
Device Compliance: 0.50mm (.020)
DUT Board Compliance: 0.20mm (.008)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated or Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

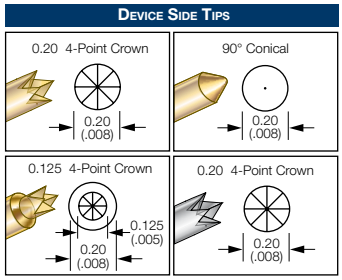
Typical Resistance: < 80 mΩ
Current Carrying Capacity: 1.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.4mm pitch
Characteristic Impedance: 44 Ω
Time Delay: 21 pSec
Loop Inductance: 0.95 nH
Signal Pin to Return Capacitance: 0.48 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

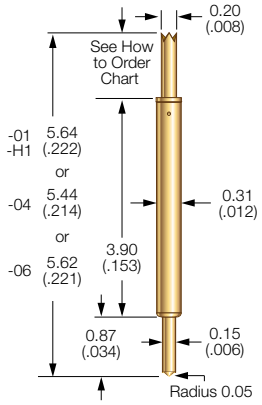
How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
200-000940-001	0.125 4-pt. Crown	Conical	26g
200-000940-H1	0.125 4-pt. Crown	Conical	26g

H1 has the homogeneous alloy on the device side of the contact.
Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

623-0248 Probe





Probe Specifications

Minimum Device Pitch: 0.40mm (.016)
Signal Path Length:
01 & H1- 5.04mm (.198)
04 - 4.84mm (.190)
06 - 5.02mm (.198)
Force per Contact: 25g (.88 oz.) @ 0.60mm (.024) travel
Device Compliance: 0.40mm (.016)
DUT Board Compliance: 0.20mm (.008)
Operating Temperature: -55°C to 120°C
(Higher operating temperature probes available, consult factory)
Insertions: > 500,000

Materials

Barrel: Brass, gold plated
Spring: Music wire, gold plated
Device Side Contact:
01 & 06 Full-hard beryllium copper, gold plated
04 Carbon steel, gold plated
H1 Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance:
01 & H1 < 60 mΩ
04 & 06 < 50 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.4mm pitch
Characteristic Impedance: 46 Ω
Time Delay: 30 pSec
Loop Inductance: 1.38 nH
Signal Pin to Return Capacitance: 0.67 pF
-1 dB Insertion Loss Bandwidth: > 13.2 GHz

How to Order

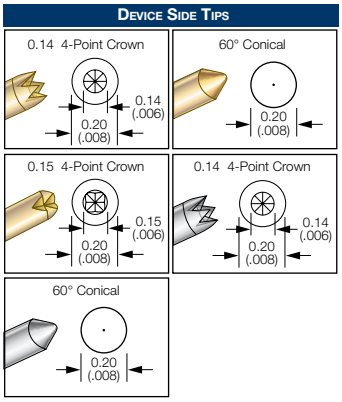
Part No.	Device Side Tip	Plunger Length	PCB Side Tip
623-0248-01	0.20 4-pt. Crown	0.87mm (.034)	Conical
623-0248-04	Conical	0.67mm (.026)	Conical
623-0248-06	0.125 4-pt. Crown	0.85mm (.033)	Conical
623-0248-H1	0.20 4-pt. Crown	0.87 mm(.034)	Conical

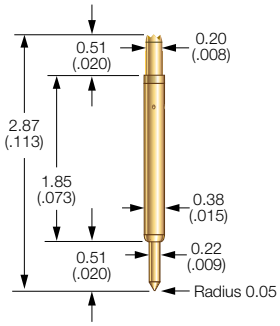
H1 has the homogeneous alloy on the device side of the contact.

Specifications subject to change without notice. Dimensions in millimeters (inches)

0.50mm Pitch Semiconductor Probes

623-0249 Probe





Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 2.49mm (.098)
Force per Contact: 25g (.88 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.23mm (.009)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact:
01 & 03 Full-hard beryllium copper, gold plated
02 Carbon steel, gold plated
H1 & H2 Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

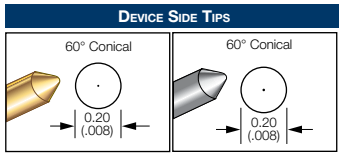
Typical Resistance: < 50 mΩ
Current Carrying Capacity: 3.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.5mm pitch
Characteristic Impedance: 50 Ω
Time Delay: 18 pSec
Loop Inductance: 0.89 nH
Signal Pin to Return Capacitance: 0.36 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

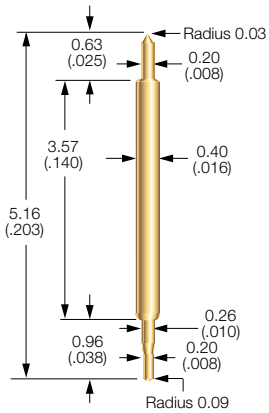
How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
623-0249-01	0.14 4-pt Crown	Conical	25g
623-0249-02	Conical	Conical	25g
623-0249-03	0.15 4-pt Crown	Conical	25g
623-0249-H1	0.14 4-pt Crown	Conical	25g
623-0249-H2	Conical	Conical	25g

H1 & H2 have the homogeneous alloy on the device side of the contact.

623-0290 Probe





Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 4.56mm (.180)
Force per Contact: 40g (1.4oz.) @ 0.60mm (.024) travel
Device Compliance: 0.45mm (.018)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature: -55°C to 120°C
(Higher operating temperature probes available, consult factory)
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plated
Spring: Music wire, gold plated
Device Side Contact: Carbon steel, gold plated or Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: 01: < 50 mΩ & H1: < 40 mΩ
Current Carrying Capacity: 3.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.5mm pitch
Characteristic Impedance: 38 Ω
Time Delay: 32 pSec
Loop Inductance: 1.19 nH
Signal Pin to Return Capacitance: 0.82 pF
-1 dB Insertion Loss Bandwidth: > 9.6 GHz

How to Order

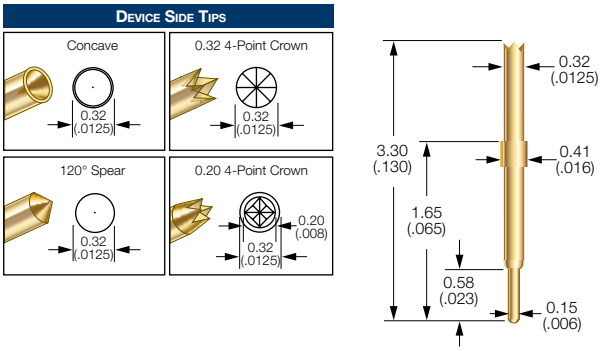
Part No.	Device Side Tip	PCB Side Tip	Spring Force
623-0290-01	Conical	Radius	40g
623-0290-H1	Conical	Radius	40g

H1 has the homogeneous alloy on the device side of the contact.
Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

Specifications subject to change without notice. Dimensions in millimeters (inches)

Semiconductor Probes 0.50mm Pitch

101267 Probe



Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 2.92mm (.115)
Force per Contact: 24g (0.86 oz.), 27g (.94 oz.), 31.1g (1.10 oz.) or 37g (1.30 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.23mm (.009)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature:
-55°C to 150°C for stainless steel spring
-55°C to 120°C for music wire spring
Insertions: > 500,000

Materials

Barrel: Full-hard beryllium copper, Endura plating
Spring:
Stainless steel, gold plated – 24g & 27g spring
Music wire, gold plated – 32g & 37g spring
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

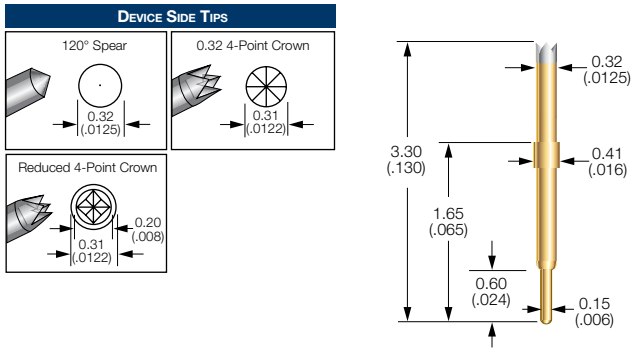
Electrical Specifications

Typical Resistance: < 40 mΩ
Current Carrying Capacity: 3.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.5mm pitch
Characteristic Impedance: 61 Ω
Time Delay: 18 pSec
Loop Inductance: 1.12 nH
Signal Pin to Return Capacitance: 0.30 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
101267-200	Concave	Radius	24g
101267-202	0.32 4-pt. Crown	Radius	24g
101267-203	120° Spear	Radius	24g
101267-206	0.32 4-pt. Crown	Radius	31.1g
101267-208	0.20 4-pt. Crown	Radius	37g
101267-209	0.20 4-pt. Crown	Radius	27g

623-0326 Probe



Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 2.9mm (.114)
Force per Contact: 25.3g (0.89 oz.) or 30g (1.06 oz.) @ 0.38mm (.015) travel
Device Compliance: 0.23mm (.009)
DUT Board Compliance: 0.15mm (.006)
Operating Temperature:
-55°C to 150°C for stainless steel spring
-55°C to 120°C for music wire spring
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring:
Stainless steel, gold plated – 25.3g spring
Music wire, gold plated – 30g spring
Device Side Contact: Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 55 mΩ
Current Carrying Capacity: 3.5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.5mm pitch
Characteristic Impedance: 61 Ω
Time Delay: 18 pSec
Loop Inductance: 1.12 nH
Signal Pin to Return Capacitance: 0.30 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip	Spring Force
623-0326-H3	120° Spear	Radius	25.3g
623-0326-H6	0.32 4-pt. Crown	Radius	25.3g
623-0326-H9	0.20 4-pt. Crown	Radius	30g

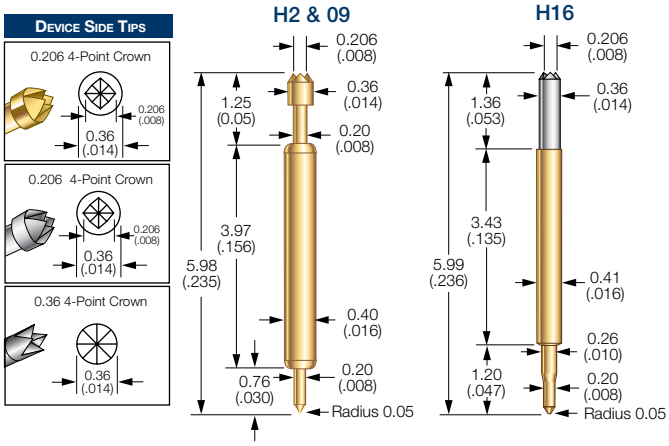
H3, H6 & H9 has the homogeneous alloy on the device side of the contact.

Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

Specifications subject to change without notice. Dimensions in millimeters (inches)

0.50mm & 0.65mm Pitch Semiconductor Probes

623-0047 Probe



Probe Specifications

Minimum Device Pitch: 0.50mm (.020)
Signal Path Length: 5.28mm (.208)
Force per Contact:
09 - 32g (1.1 oz.) @ 0.70mm (.028) travel
H2 - 22g (0.78 oz.), @ 0.70mm (.028) travel
H16 - 35g (1.24 oz.) @ 0.70mm (.028) travel
Device Compliance: 0.40mm (.016)
DUT Board Compliance: 0.30mm (.012)
Operating Temperature:
-55°C to 150°C for stainless steel spring
-55°C to 120°C for music wire spring
(Higher operating temperature probes available, consult factory)
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring:
09 & H2 - Stainless steel, gold plated
H16 - Music wire, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated or Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

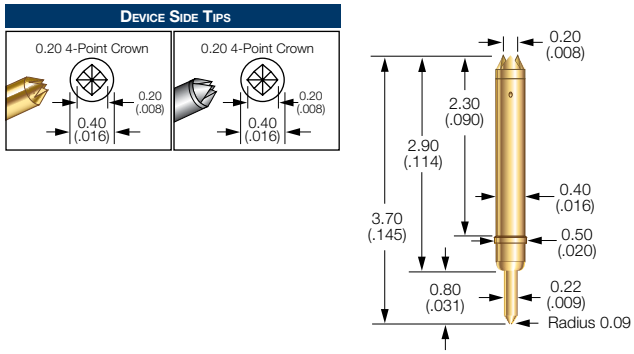
Typical Resistance: H2 & H9 < 45 mΩ; H16 < 50 mΩ
Current Carrying Capacity: 2.2 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.65mm pitch
Characteristic Impedance: 50 Ω
Time Delay: 31 pSec
Loop Inductance: 1.56 nH
Signal Pin to Return Capacitance: 0.62 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip
623-0047-09	0.206 4-pt Crown	Conical
623-0047-H2	0.36 4-pt Crown	Conical
623-0047-H16	0.206 4-pt Crown	Conical

H2 & H16 has the homogeneous alloy on the device side of the contact.

623-0303 Probe



Probe Specifications

Minimum Device Pitch: 0.65mm (.026)
Signal Path Length: 3.10mm (.122)
Force per Contact: 30g (1.06 oz.) @ 0.60mm (.024) travel
Device Compliance: 0.40mm (.016)
DUT Board Compliance: 0.20mm (.008)
Operating Temperature: -55°C to 120°C
(Higher operating temperature probes available, consult factory)
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact: Carbon steel, gold plated or Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 40 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.65mm pitch
Characteristic Impedance: 49 Ω
Time Delay: 17 pSec
Loop Inductance: 0.85 nH
Signal Pin to Return Capacitance: 0.35 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip
623-0303-01	0.20 4-pt. Crown	Conical
623-0303-H1	0.20 4-pt. Crown	Conical

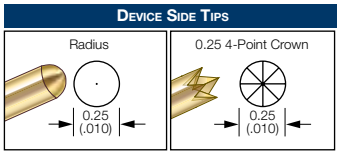
H1 has the homogeneous alloy on the device side of the contact.

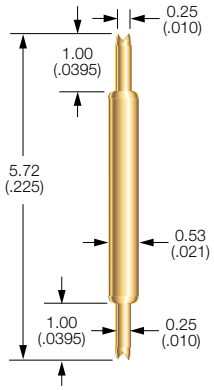
Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

Specifications subject to change without notice. Dimensions in millimeters (inches)

Semiconductor Probes 0.65mm & 0.80mm Pitch

100938 Probe





Probe Specifications

Minimum Device Pitch: 0.65mm (.026)
Signal Path Length: 4.75mm (.187)
Force per Contact: 31g (1.1oz.) @ 0.97mm (.038) travel
Device Compliance: 0.48mm (.019)
DUT Board Compliance: 0.48mm (.019)
Operating Temperature: -55°C to 150°C
Insertions: > 500,000

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

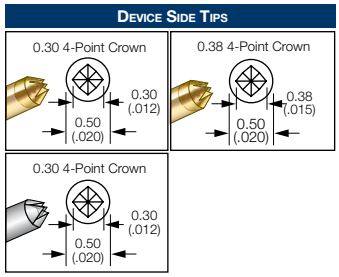
Electrical Specifications

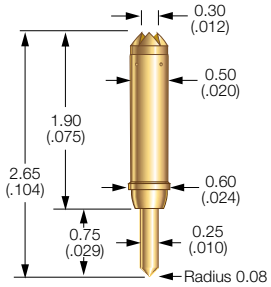
Typical Resistance: < 70 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.65mm pitch
Characteristic Impedance: 50 Ω
Time Delay: 31 pSec
Loop Inductance: 1.46 nH @ 0.75mm pitch
Signal Pin to Return Capacitance: 0.10 pF
-1 dB Insertion Loss Bandwidth: > 2.4 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip
100938-001	0.25 4-pt Crown	0.25 4-pt Crown
100938-014	0.25 4-pt Crown	Radius
100938-016	Radius	Radius

623-0270 Probe





Probe Specifications

Minimum Device Pitch: 0.80mm (.031)
Signal Path Length: 2.15mm (0.085)
Force per Contact: 27.5g (0.97 oz.) @ 0.50mm (.020) travel
Device Compliance: 0.30mm (.012)
DUT Board Compliance: 0.20mm (.008)
Operating Temperature: -55°C to 120°C
(Higher operating temperature probes available, consult factory)
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music Wire, gold plated
Device Side Contact:
01 & 03 Carbon steel, gold plated
H1 Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 40 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.8mm pitch
Characteristic Impedance: 44 Ω
Time Delay: 14 pSec
Loop Inductance: 0.59 nH
Signal Pin to Return Capacitance: 0.31 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip
623-0270-01	0.30 4-pt. Crown	Conical
623-0270-03	0.38 4-pt. Crown	Conical
623-0270-H1	0.30 4-pt. Crown	Conical

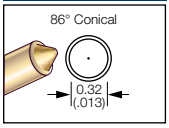
H1 has the homogeneous alloy on the device side of the contact.

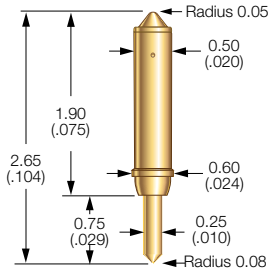
Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

Specifications subject to change without notice. Dimensions in millimeters (inches)

623-0271 Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 0.80mm (.031)
Signal Path Length: 2.15mm (0.085)
Force per Contact: 27.5g (0.97 oz.) @ 0.50mm (.020) travel
Device Compliance: 0.30mm (.012)
DUT Board Compliance: 0.20mm (.008)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact: Carbon steel, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 40 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 1.0 mm pitch
Characteristic Impedance: 54 Ω
Time Delay: 13 pSec
Loop Inductance: 0.72 nH
Signal Pin to Return Capacitance: 0.25 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

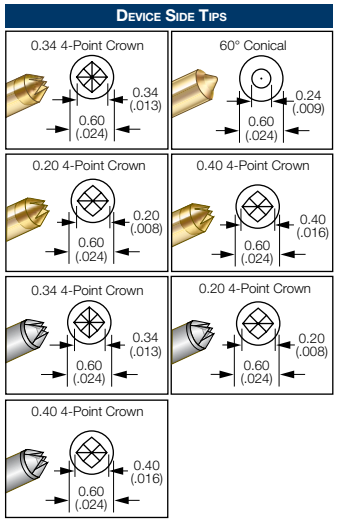
How to Order

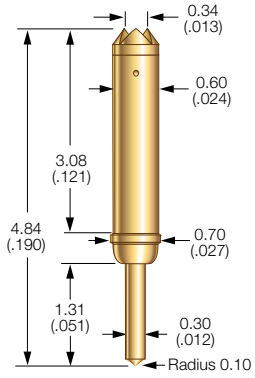
Part No.	Device Side Tip	PCB Side Tip
623-0271-01	Conical	Conical

Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

623-0195 Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 0.80mm (.031)
Signal Path Length: 4.04mm (.159)
Force per Contact: 33.4g (1.18 oz.) @ 0.80mm (.031) travel
Device Compliance: 0.50mm (.020)
DUT Board Compliance: 0.30mm (.012)
Operating Temperature: -55°C to 120°C
(Higher operating temperature probes available, consult factory)
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact:
02 & 03 Carbon steel, gold plated
08 & 09 Full-hard beryllium copper, gold plated
H2, H8, & H9 Homogeneous alloy
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: 03 < 35 mΩ;
02, 08, 09, H2, H8, & H9 < 50 mΩ
Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 0.8mm pitch
Characteristic Impedance: 37 Ω
Time Delay: 23 pSec
Loop Inductance: 0.86 nH
Signal Pin to Return Capacitance: 0.62 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip
623-0195-02	0.34 4-pt. Crown	Conical
623-0195-03	Conical	Conical
623-0195-08	0.20 4-pt. Crown	Conical
623-0195-09	0.40 4-pt. Crown	Conical
623-0195-H2	0.34 4-pt. Crown	Conical
623-0195-H8	0.20 4-pt. Crown	Conical
623-0195-H9	0.40 4-pt. Crown	Conical

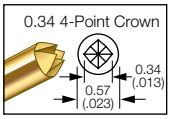
H2, H8 & H9 has the homogeneous alloy on the device side of the contact.

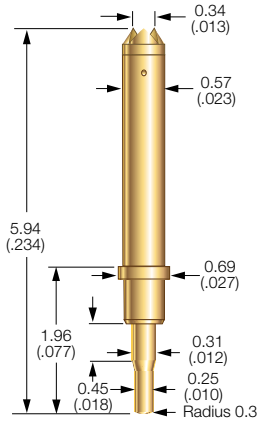
Specifications subject to change without notice. Dimensions in millimeters (inches)

Semiconductor Probes 0.80mm & 1.00mm Pitch

101785 Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 0.80mm (.031)
Signal Path Length: 5.21mm (.205)
Force per Contact: 35.4g (1.25 oz..) @ 0.74mm (.029) travel
Device Compliance: 0.33mm (.013)
DUT Board Compliance: 0.41mm (.016)
Operating Temperature: -55°C to 150°C
Insertions: > 500,000

Materials

Barrel: Full-hard beryllium copper, Endura plating
Spring: Stainless steel, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

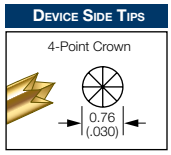
Typical Resistance: < 40 mΩ
Current Carrying Capacity: 5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R at 0.8mm pitch
Characteristic Impedance: 38 Ω
Time Delay: 27 pSec
Loop Inductance: 1.03 nH
Signal Pin to Return Capacitance: 0.71 pF
-1 dB Insertion Loss Bandwidth: > 10 GHz

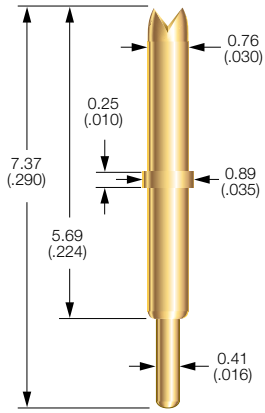
How to Order

Part No.	Device Side Tip	PCB Side Tip
101785-001	0.34 4-pt. Crown	Radius

101312 Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 1.00mm (.039)
Signal Path Length: 6.97mm (.274)
Force per Contact: 31g (1.1 oz.) @ 1.02mm (.040) travel
Device Compliance: 0.25mm (.010)
DUT Board Compliance: 0.76mm (.030)
Operating Temperature: -55°C to 150°C
Insertions: > 500,000

Materials

Barrel: Full-hard beryllium copper, Endura plating
Spring: Stainless steel, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 40 mΩ
Current Carrying Capacity: 5 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R at 1.00mm pitch
Characteristic Impedance: 36 Ω
Time Delay: 33 pSec
Loop Inductance: 1.19 nH
Signal Pin to Return Capacitance: 0.92 pF
-1 dB Insertion Loss Bandwidth: > 10 GHz

How to Order

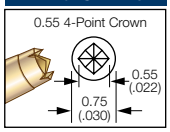
Part No.	Device Side Tip	PCB Side Tip
101312-001	0.76 4-pt. Crown	Radius

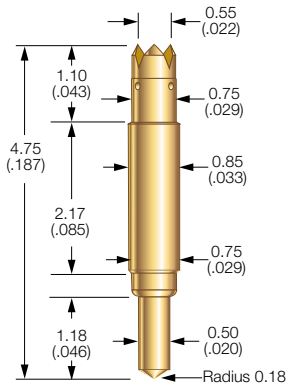
Specifications subject to change without notice. Dimensions in millimeters (inches)

1.00mm & 1.27mm Pitch Semiconductor Probes

623-0117 Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 1.00mm (.039)
Signal Path Length: 3.90mm (.154)
Force per Contact: 35.5g (1.25 oz.) @ 0.85mm (.033) travel
Device Compliance: 0.45mm (.018)
DUT Board Compliance: 0.40mm (.016)
Operating Temperature: -55°C to 120°C
Insertions: > 500,000

Materials

Barrel: Phosphorous bronze, gold plating
Spring: Music wire, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 60 mΩ
Current Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 1.27mm pitch
Characteristic Impedance: 43 Ω
Time Delay: 24 pSec
Loop Inductance: 1.02 nH
Signal Pin to Return Capacitance: 0.56 pF
-1 dB Insertion Loss Bandwidth: > 20 GHz

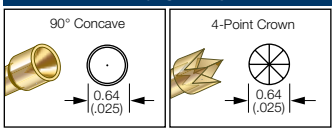
How to Order

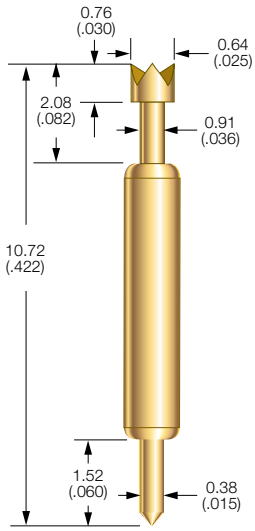
Part No.	Device Side Tip	PCB Side Tip
623-0117-02	0.55 4-pt Crown	Conical

Prolonged exposure of greater than one hour reduces the maximum operating temperature of music wire springs to 85°C.

100785 Probe

Device Side Tips





Probe Specifications

Minimum Device Pitch: 1.27mm (.050)
Signal Path Length: 9.2mm (.362)
Force per Contact: 42.5g (1.5 oz.) @ 1.52mm (.060) travel
Device Compliance: 0.76mm (.030)
DUT Board Compliance: 0.76mm (.030)
Operating Temperature: -55°C to 150°C
Insertions: > 250,000

Materials

Barrel: Full-hard beryllium copper, gold plated
Spring: Stainless steel, gold plated
Device Side Contact: Full-hard beryllium copper, gold plated
Board Side Contact: Full-hard beryllium copper, gold plated

Electrical Specifications

Typical Resistance: < 50 mΩ
Carrying Capacity: 3 amps continuous
(Current DC carry capability @ 80° C steady state)
Pattern 2a: R S R @ 1.27mm pitch
Characteristic Impedance: 41 Ω
Time Delay: 47 pSec
Loop Inductance: 1.93 nH
Signal Pin to Return Capacitance: 1.15 pF
-1 dB Insertion Loss Bandwidth: > 16.2 GHz

How to Order

Part No.	Device Side Tip	PCB Side Tip
100785-002	0.64 4-pt. Crown	Conical
100785-003	90° Concave	Conical

Specifications subject to change without notice. Dimensions in millimeters (inches)

IDI Test Probes

IDI offers a wide range of spring contact probes to meet your testing requirements and has long been recognized as the world's largest probe manufacturer. This section of our catalog has over 60 different probe series that includes our Standard PCB Probes as well as our Specialty Probe Series.

Micro Series

The Micro Series Probes ranges in pitch from .010 (0.25) to .025 (0.64) pitch and are typically between half an inch to an inch in length. Shorter fine pitch probes can be found in our Semiconductor Probe section.

Standard Probes

IDI standard probes range in pitch from 0.039 (1.00) to .187 (4.75). Within most of the pitch series, you will find multiple length and travel options. Also included in the Standard Probe Section are our more aggressive probes that are dimensionally equivalent to the standard probes.

ICT Probes

The ICT probe design features a bifurcated barrel with four separate fingers. The barrel is compliant, and formed against the plunger, thus eliminating any gap between the plunger and barrel. ICT probes are more accurate and most stable in resistance than standard designs.

Lead Free Probes

The Lead Free Probe Series is based on IDI's ICT Probes Series. The plunger material, plating and tip geometry have been optimized to provide less wear and contamination build-up while using a moderate spring force of 7 to 8 ounces.

Rotator Probes

Ideal for no-clean and lead-free applications, this aggressive probe rotates 90° at the rated travel, virtually drilling through contaminants with a low spring force.

Double Ended Probes and Receptacles

Double ended probes feature both a top side and bottom side compliant plunger. Double ended receptacles are available with a permanent bottom side plunger and a replaceable probe on the top side. They are also available with both a top side and bottom side replaceable probe.

Switch Probes

A Switch Probe is a spring contact probe and receptacle that has two individual current paths. One current path is closed, the other is open and after a designated travel the second current path closes.

High Current Probes

IDI offers two different high current probe designs in four different pitches. The SH Series features a bias ball, which is the most aggressive biasing technique to aid in assuring a low and consistent resistance, cycle after cycle. The SHE Series features a bias spring, an effective biasing technique for many applications.

Thermocouple Probes

The Thermocouple Probe is an ungrounded, thermally conductive probe used for the measurement of variations in temperature. IDI offers two Thermocouple Probes, Type T for up to 300°F and Type K for up to 500°F.

Kelvin Probes

The Kelvin Probe has two paths on the same axis (inner path and outer path) that are insulated from each other and are capable of testing low levels of resistance.

Coaxial Probes

IDI Coax Probes provide a low noise, controlled impedance signal path with reliable easy connect/disconnect options. Many designs include a spring loaded signal probe and a spring loaded shielding plunger for the ground.

Connector & Semiconductor Probes

If you cannot find what you are looking for in this section of our catalog, be sure to check out the OEM Probes and Semiconductor Test Probe sections.

In the OEM Probes you will find a variety of probes that are primarily designed to mount in plastic or on a PCB, ranging in centers and lengths.

In the Semiconductor Probe section, you will find extremely fine pitch probes with very short lengths.

Spring Contact Probes

Board Test Probes Table of Contents

Micro Series ≤ .025 (0.64) centers 48

Standard Probes

.039 (1.00) centers 51

.050 (1.27) centers 54

.075 (1.91) centers 62

.100 (2.54) centers 68

≥ .125 (3.18) centers 76

Double Ended Probes 79

Double Ended Receptacles 80

Interface Probes 82

Interface Pins 83

High Current Probes 84

Switch Probes 88

Thermocouple Probes 90

Kelvin Probes 91

Coaxial Probes 92

Crimping Pliers

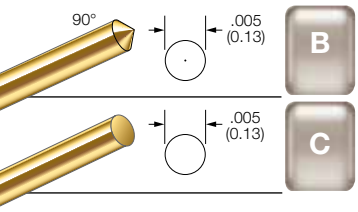
Receptacle Insertion Tools

Crimp Tools		
Model	Receptacle Size/Blank	Wire Range
CP00T	R00T	30 GA
CP00W	R00W	30 GA
CP0	0	28-30 GA
CPR-50J	R-50J	28-30 GA
CPR-50C	R-50C	28-30 GA
CP1	1	24-28 GA
CPR-075	R-075	24-28 GA
CP2	2	22-26 GA
CPR-100	R-100	22-26 GA
CP3	3	22-26 GA
CP4	4	22-26 GA
CP5	5	22-26 GA
CP-SS30	RSS-30	28-30 GA
CP-SS40-T	RSS-40-T	30 GA
CP-SS40-W	RSS40-W	30 GA
CP-SS50	RSS-50	28-30 GA
CP-SS75	RSS-75	24-28 GA
CP-SS100	RSS-100	28-30 GA

Insertion Tools	
Model	Receptacle Size
RT00	00
RT0	0
RTR50C, RTR50J	R-50C, R-50J
RT1	1
RTR075	R-075
RT2	2
RTR100	100
RT3	3
RT4	4
RT5	5
RT-SS30	RSS30
RT-SS40	RSS40
RT-SS50	RSS50
RT-SS75	RSS75
RT-SS100	RSS100

Penta 0 .010 - .015 Centers

Steel Plunger Tips



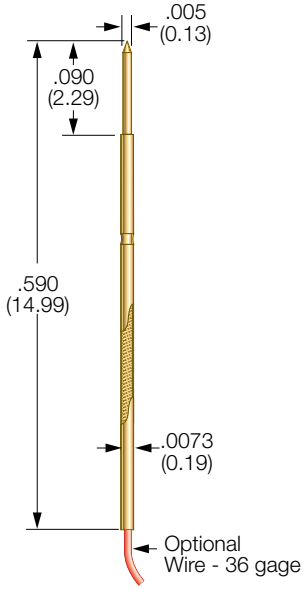
Probe Specifications

Minimum Centers:
Without receptacle: .010 (0.25)
With receptacle: .015 (0.38)
Current Rating: 0.2 amps continuous
Spring Force: 0.7 oz. (20g) @ .033 (0.84) travel
Typical Resistance: < 250 mΩ
Maximum Travel: .050 (1.27)
Working Travel: .033 (0.84)

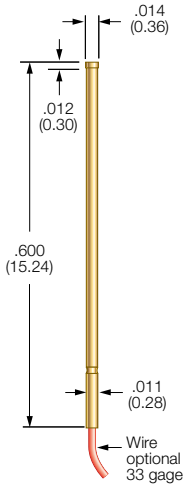
Materials

Barrel: Gold alloy
Spring: Music wire, gold plated
Plunger: Steel, gold plated
Receptacle: Bronze, preplated gold

Penta 0-Probe



Penta-0 Receptacle



Drill Size: 0.32mm
Mounting Hole Size:
.0125 to .0130
(0.32 to 0.33)
Recommended Wire: 33 gage

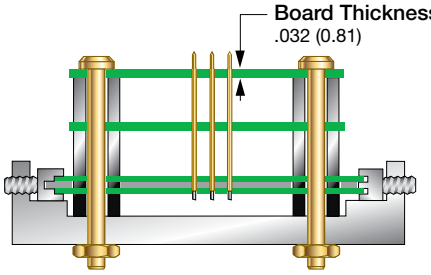
Fixturing Options

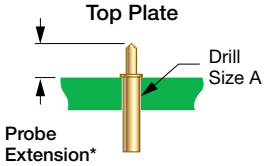
Penta 0 Probe

Drill Size A - #91: .0083 (0.21)
Drill Size B - #91: .0083 (0.21)
Drill Size C - #95: .0067 (0.17)
Dimension D: .022 (0.56)
Dimension E: .010 (0.25)

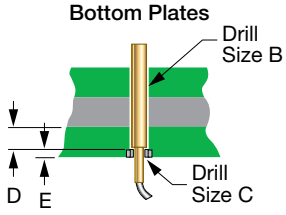
Penta 0 Receptacle

Drill Size A - 0.32 mm: .0126 (0.32)
Drill Size B - 0.30 mm: .0118 (0.30)
Drill Size C: N/A
Dimensions D & E: N/A





*Penta 0 Probe has no flange
Probe Extension: Penta 0 — .090 (2.29)
Penta 0 with receptacle — .102 (2.59)



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length
Penta-0-Rec*	Preattached Wire	0.600 (15.24)	0.690 (17.53)

* Unless otherwise specified, wire length 36", strip length 1", 36 gage wire preattached

How to Order: Spring Contact Probe

Penta-0B	36	1
Series & Tip 0B: Spear Point 0C: Flat Tip	Wire Length (in inches)	Strip Length (in inches)

*To order without wire: PENTA-0B-0-0

* Unless otherwise specified, wire length 36", strip length 1", 36 gage wire preattached. 12" & 36" standard.

Receptacle

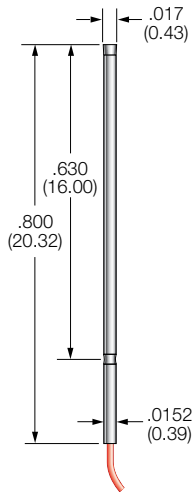
Penta-0 Rec	36	1
Series	Wire Length (in inches)	Strip Length (in inches)

* Unless otherwise specified, wire length 36", strip length 1", 33 gage wire preattached. 12" & 36" standard.

View updates of this information at www.idinet.com

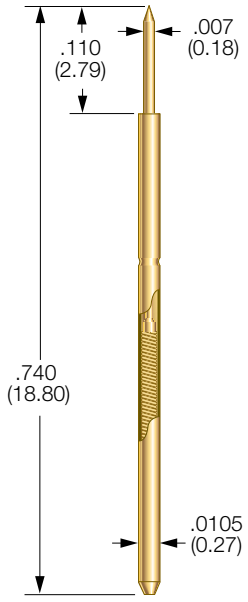
Specifications subject to change without notice. Dimensions in inches (millimeters)

Quad-00 Receptacle



Drill Size: #78
Mounting Hole Size: .016 (0.41)
Recommended Wire: 30 gage

Quad-00 Probe



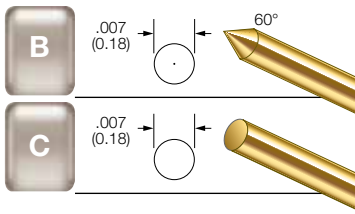
Probe Specifications

Minimum Centers: .020 (0.51)
Current Rating: 0.3 amps continuous
Spring Force: 0.75 oz. (21g) @ .067 (1.70) travel
Preload Force: 0.23 oz. (6.5g)
Typical Resistance: < 160 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .067 (1.70)

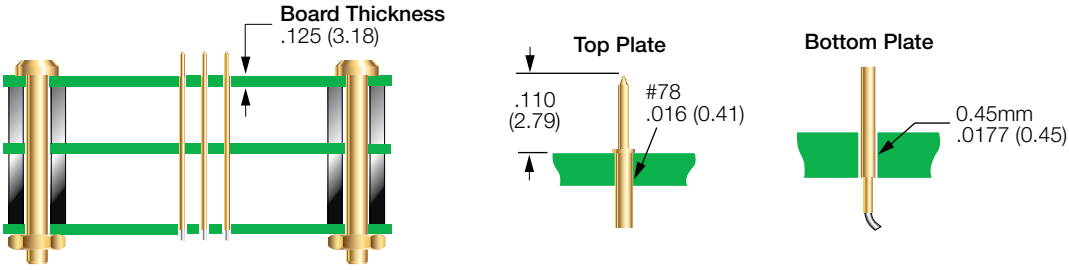
Materials

Barrel: Gold alloy
Spring: Music wire, gold plated
Plunger: Steel, gold plated over nickel
Receptacle: Nickel/silver, gold lined inside

Steel Plunger Tips



Fixturing Options



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length
Quad-00-Rec*	Preattached Wire	0.800 (20.32)	0.910 (23.11)

* Unless otherwise specified, wire length 36", strip length 1", 30 gage wire preattached

How to Order: Spring Contact Probe

Quad-00B

Series & Tip
00B: Spear Point
00C: Flat Tip

Receptacle

Quad-00Rec | **36** | **1**

Series | Wire Length (in inches) | Strip Length (in inches)

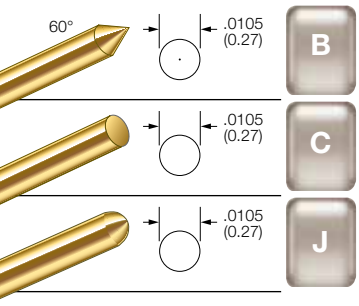
* Unless otherwise specified, wire length 36", strip length 1", 30 gage wire preattached. 12" & 36" standard.

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Quad 0 .020 - .030 Centers

Steel Plunger Tips



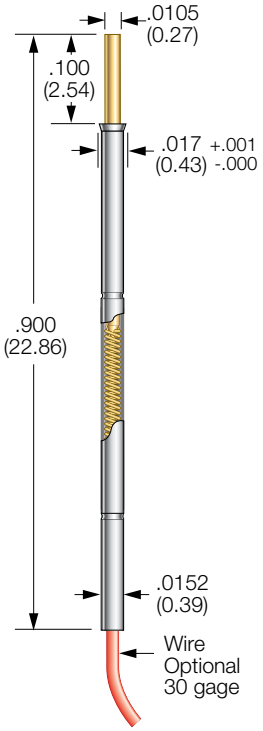
Probe Specifications

Minimum Centers:
Without Receptacle: .020 (0.51)
With Receptacle: .030 (0.76)
Current Rating: 0.5 amps continuous
Spring Force: 0.7 oz. (20g) @ .045 (1.14) travel
Preload Force: 0.4 oz. (11g)
Typical Resistance: < 60 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .045 (1.14)

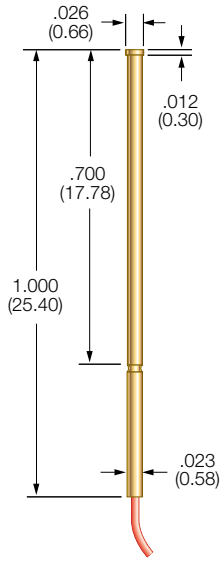
Materials

Barrel: Nickel/silver, gold lined
Spring: Stainless steel, gold plated
Plunger: Steel, gold plated over nickel
Receptacle: Nickel/silver, gold plated

Quad-0 Probe



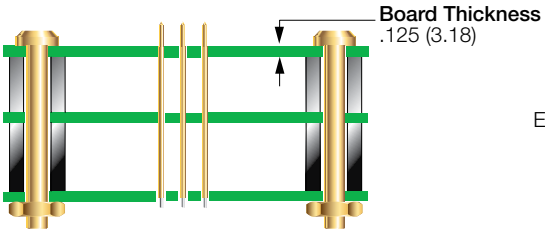
Quad-0 Receptacle

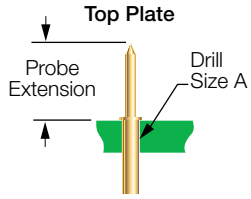


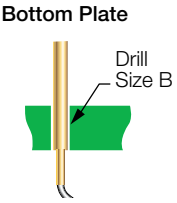
Drill Size: #72
Mounting Hole Size: .024/.025 (0.61/0.64)
Recommended Wire: 26 gage

Fixturing Options

Quad 0 Probe	Quad 0 Receptacle
Probe Extension: .110 (2.79)	**Probe Extension:** .210 (5.33)
Drill Size A - #78: .016 (0.41)	**Drill Size A** - #72: .025 (0.64)
Drill Size B - 0.45mm: .0177 (0.45)	**Drill Size B** - 0.70 mm: .0276 (0.70)







Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length
Quad-0-Rec*	Preattached Wire	1.000 (25.40)	1.200 (30.48)

How to Order: Spring Contact Probe

Quad-0C	36	1
Series & Tip	Wire Length (in inches)	Strip Length (in inches)

* Unless otherwise specified, wire length 36", strip length 1", 30 gage wire preattached. 12" & 36" standard.

Receptacle

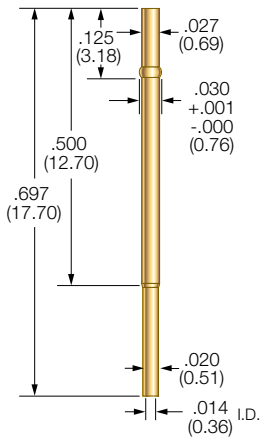
Quad-0 Rec	36	1
Series	Wire Length (in inches)	Strip Length (in inches)

* Unless otherwise specified, wire length 36", strip length 1", 26 gage wire preattached. 12" & 36" standard.

View updates of this information at www.idinet.com

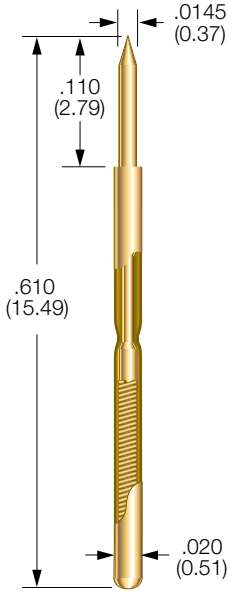
Specifications subject to change without notice. Dimensions in inches (millimeters)

RSS-30 Receptacle



Drill Size: 0.75mm
Mounting Hole Size: .028/.0295 (0.71/0.75)
Recommended Wire: 30 gage

SS-30 Probe



Probe Specifications

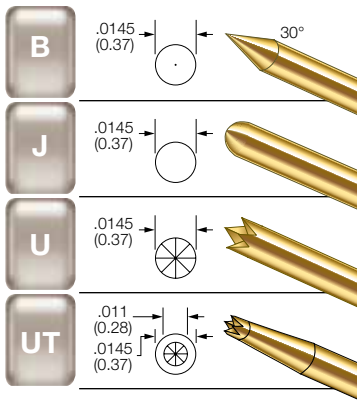
Minimum Centers: .039 (0.99)
Current Rating: 3 amps continuous
Spring Force: 1.3 or 1.6 oz. @ .067 (1.70) travel
Typical Resistance: < 40 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .067 (1.70)

Rated Force oz. (g)	Preload oz. (g)	Material
1.3 (37)	0.5 (14)	SS
1.6 (45)	0.5 (14)	MW

Materials

Barrel: Nickel/silver, preplated gold
Spring: Stainless steel or music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, preplated gold

BeCu Plunger Tips



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-SS-30-CR	Crimp	0.697 (17.70)	0.807 (20.50)	–
R-SS-30-SC	Solder Cup	0.697 (17.70)	0.807 (20.50)	–
R-SS-30-PS	Preattached Wire*	0.697 (17.70)	0.807 (20.50)	30 gage, vacuum sealed

How to Order: Spring Contact Probe

SS	30	B	1.3	G
Series	Size	Tip Style	Spring Force	Plating Options

Spring Force:
1.3 oz. @ .067 (1.70) travel
1.6 oz. @ .067 (1.70) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CPSS30
Insertion tool: RTSS30

Receptacle

R-SS	30	CR
Series	Size	Terminations

Terminations:
CR: Crimp
SC: Solder Cup
PS: Preattached Wire*

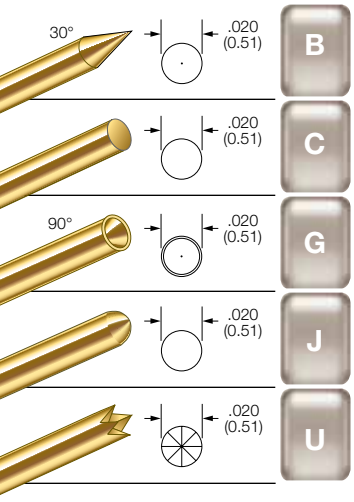
* Unless otherwise specified, wire length 36" with a 1" semi-strip. 12" & 36" standard.

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Series S Size 00 - .039 Centers

BeCu Plunger Tips



Probe Specifications

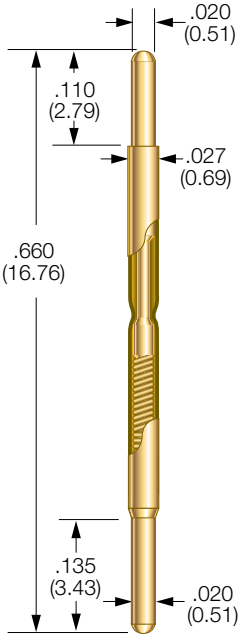
Minimum Centers: .039 (0.99)
Current Rating: 3 amps continuous
Spring Force: 1.3 or 1.6 oz. @ .050 (1.27) travel
Typical Resistance: < 55 mΩ
Maximum Travel: .090 (2.29)
Working Travel: .050 (1.27)

Rated Force oz. (g)	Preload oz. (g)	Material
1.3 (37)	0.6 (17)	BeCu
1.6 (45)	0.7 (20)	SS

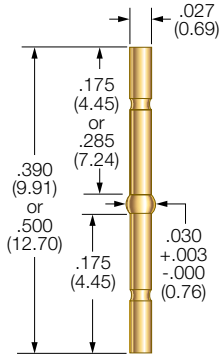
Materials

Barrel: Nickel/silver, preplated gold
Spring: Beryllium copper or stainless steel, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated
Plug-In Terminal: Beryllium copper, preplated gold

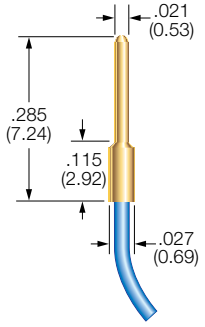
S-00 Probe



R-00 Receptacles
R00-W-390 / R00-W-500



FP-Plug



Drill Size: 0.75mm
Mounting Hole Size: .028/.0295 (0.71/0.75)
Recommended Wire: 30 gage

Receptacle Options

Part Number	Style	Receptacle or Terminal Length	Probe/Receptacle Combined Length	Probe/Receptacle/Terminal Combined Length
R-00-W-390	Receptacle	0.390 (9.91)	0.915 (23.24)	1.03 (26.16)
R-00-W-500	Receptacle	0.500 (12.70)	1.025 (26.04)	1.14 (28.96)
FP-Plug	Plug-In Terminal*	0.285 (7.24)	—	—

*To order with preattached wire, add wire length and strip length (in inches) to the end of the part number. For example: R-00-W-390-36-1 or FP-Plug-36-1

How to Order: Spring Contact Probe

S	00	J	1.3	G
Series	Size	Tip Style	Spring Force	Plating Options

Spring Force:
1.3 oz. @ .050 (1.27) travel
1.6 oz. @ .050 (1.27) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping Pliers:
CP00W-390
CP00W-500
Insertion Tool: RT00

Receptacle

R	00	W	390
Series	Size	Termination	Length

Terminations:
W: Receptacle

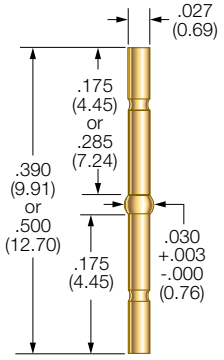
Lengths:
390 or 500

* To order with preattached wire, add wire length and strip length (in inches) to the end of the part number. 12" and 36" standard.

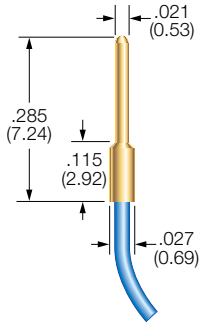
View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

RSS-40 Receptacles
RSS-40-W-390 / RSS-40-W-500

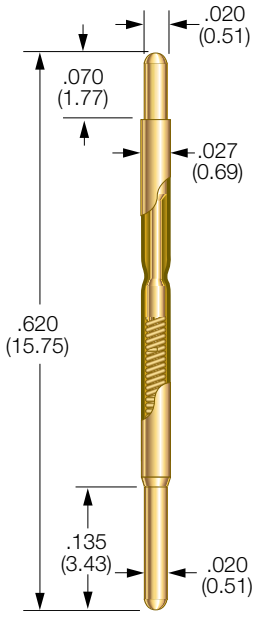


FP-Plug



Drill Size: 0.75mm
Mounting Hole Size: .028/.0295 (0.71/0.75)
Recommended Wire: 30 gage

SS-40 Probe



Probe Specifications

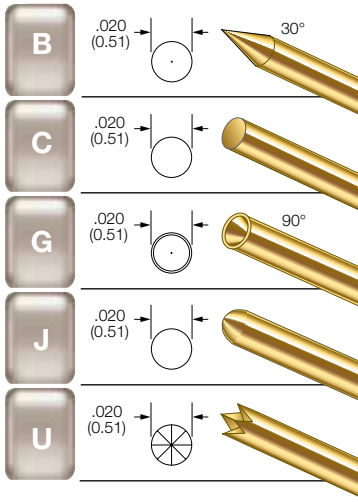
Minimum Centers: .039 (0.99)
Current Rating: 3 amps continuous
Spring Force: 1.8 or 2.4 oz. @ .050 (1.27) travel
Typical Resistance: < 55 mΩ
Maximum Travel: .050 (1.27)
Working Travel: .050 (1.27)

Rated Force oz. (g)	Preload oz. (g)	Material
1.8 (51)	1.1 (31)	BeCu
2.4 (68)	1.5 (43)	SS

Materials

Barrel: Nickel/silver, preplated gold
Spring: Beryllium copper or stainless steel, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated
Plug-In Terminal: Beryllium copper, preplated gold

BeCu Plunger Tips



Receptacle Options

Part Number	Style	Receptacle or Terminal Length	Probe/Receptacle Combined Length	Probe/Receptacle/Terminal Combined Length
RSS-40-W-390	Receptacle	0.390 (9.91)	0.875 (22.23)	.990 (25.15)
RSS-40-W-500	Receptacle	0.500 (12.70)	0.985 (25.02)	1.100 (27.94)
FP-Plug	Plug-In Terminal*	0.285 (7.24)	—	—

*To order with preattached wire, add wire length and strip length (in inches) to the end of the part number. For example: R-00-W-390-36-1 or FP-Plug-36-1

How to Order: Spring Contact Probe

SS	40	J	1.8	G
Series	Size	Tip Style	Spring Force	Plating Options

Spring Force:
1.8 oz. @ .050 (1.27) travel
2.4 oz. @ .050 (1.27) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers:
CPSS40W-390
CPSS40W-500
Insertion tool: RTSS40

Receptacle

R-SS	40	W	390
Series	Size	Termination	Length

Terminations:
W: Receptacle

Lengths:
390 or 500

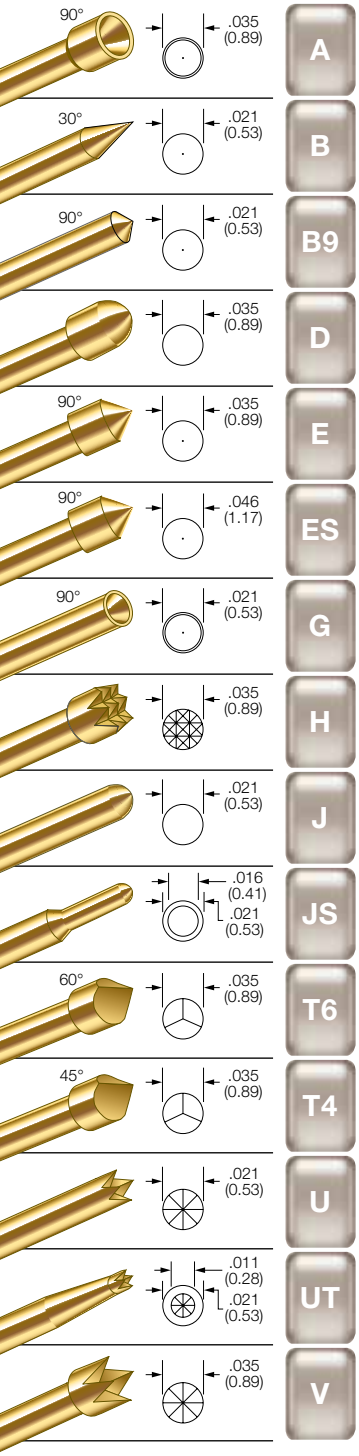
* To order with preattached wire, add wire length and strip length (in inches) to the end of the part number. For example: RSS-40-W-390-36-1. 12" & 36" standard.

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Series S Size 0 - .050 Centers

BeCu Plunger Tips



Probe Specifications

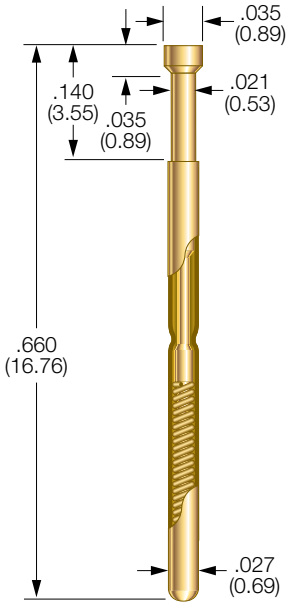
Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 2.2, 2.5 or 3.7 oz. @ .070 (1.78) travel
Typical Resistance: < 35 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .070 (1.78)

Rated Force oz. (g)	Preload oz. (g)	Material
2.2 (62)	0.6 (17)	BeCu
2.5 (71)	0.6 (17)	SS
3.7 (105)	1.9 (54)	MW

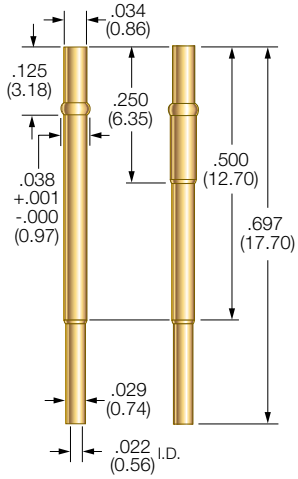
Materials

Barrel: Nickel/silver, gold plated
Spring: Beryllium copper, music wire or stainless steel, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated, gold plated post
Plug-In Terminal: Beryllium copper, preplated gold

S-0 Probe



R-0 Receptacles
R Series RX Series



Drill Size: #64
Mounting Hole Size: .035/.0365 (0.89/0.93)
Recommended Wire: 28-30 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-0-CR	Crimp	0.697 (17.70)	0.857 (21.77)	—
R-0-SC	Solder Cup	0.697 (17.70)	0.857 (21.77)	—
R-0-WW-016	Wire Wrap	0.947 (24.05)	1.107 (28.12)	.250 post length - .016 sq.
R-0-WW-025	Wire Wrap	0.997 (25.32)	1.157 (29.39)	.300 post length - .025 sq.
R-0-PW	Preattached Wire	0.697 (17.70)	0.857 (21.77)	30 gage - non vacuum sealed*
R-0-DS	Duraseal®	0.697 (17.70)	0.857 (21.77)	30 gage - vacuum sealed*
R-0-WT	Plug-In Receptacle	0.697 (17.70)	0.857 (21.77)	For use with FP-Plug terminal
FP-Plug	Plug-In Terminal	—	—	Plugs into R-0-WT receptacle*

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar

How to Order: Spring Contact Probe

S	0	A	2.2	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
S: Standard
SX: Improved Pointing Accuracy

Spring Force:
2.2 oz. @ .070 (1.78) travel
2.5 oz. @ .070 (1.78) travel
3.7 oz. @ .070 (1.78) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CP0
Insertion tool: RT0
Wire Plug tool: RTWT

Receptacle

R	0	CR
Series	Size	Termination

Series:
R: High Performance
RX: Improved Pointing Accuracy

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar. 12" & 36" standard.

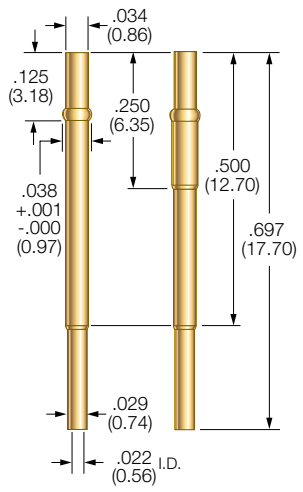
**For use with FP-plug terminal. 12" & 36" standard

Terminations:
CR: Crimp
SC: Solder Cup
WW-016: Wire Wrap .016 sq
WW-025: Wire Wrap .025 sq
PW: Preattached Wire*
DS: Duraseal*
WT: Plug-In Receptacle**

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

RSS-50 Receptacles
R Series RX Series

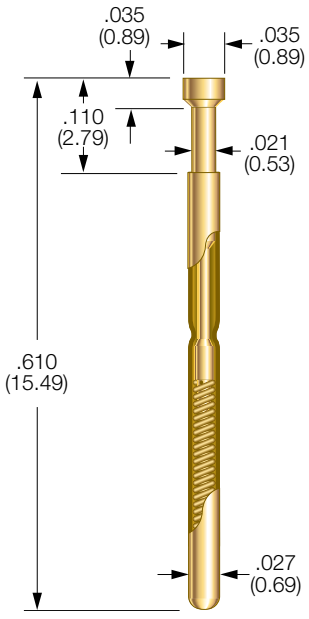


Drill Size: #64

Mounting Hole Size: .035/.0365 (0.89/0.93)

Recommended Wire: 28-30 gage

SS-50 Probe



Probe Specifications

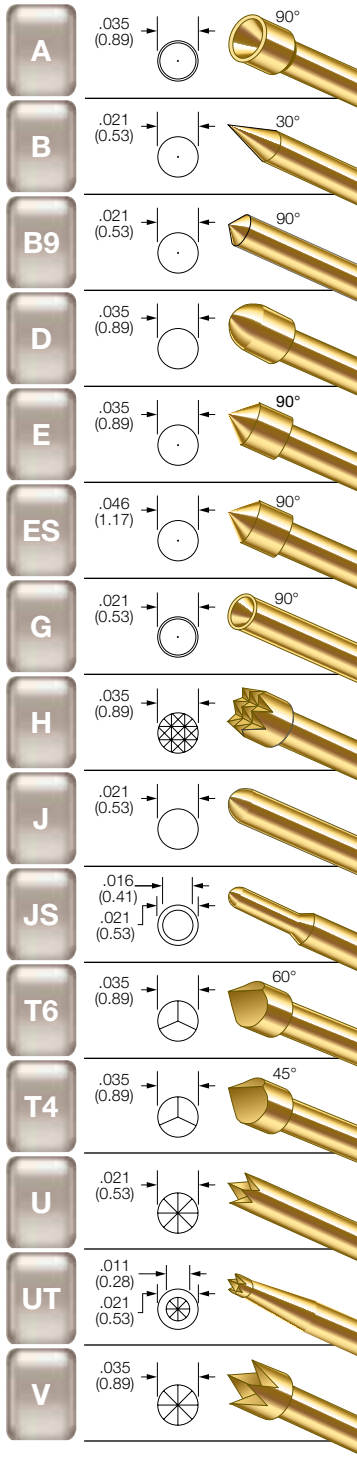
Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 2.9, 3.3 or 5.1 oz. @ .050 (1.27) travel
Typical Resistance: < 35 mΩ
Maximum Travel: .070 (1.78)
Working Travel: .050 (1.27)

Rated Force oz. (g)	Preload oz. (g)	Material
2.9 (82)	1.1 (31)	BeCu
3.3 (94)	1.7 (48)	SS
5.1 (145)	1.5 (42)	MW

Materials

Barrel: Nickel/silver, gold plated
Spring: Beryllium copper, stainless steel or music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated, gold plated post
Plug-In Terminal: Beryllium copper, preplated gold

BeCu Plunger Tips



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
RSS-50-CR	Crimp	0.697 (17.70)	0.807 (20.50	—
RSS-50-SC	Solder Cup	0.697 (17.70)	0.807 (20.50)	—
RSS-50-WW-016	Wire Wrap	0.947 (24.05)	1.057 (26.85)	.250 post length - .016 sq.
RSS-50-WW-025	Wire Wrap	0.997 (25.32)	1.107 (28.12)	.300 post length - .025 sq.
RSS-50-PW	Preattached Wire	0.697 (17.70)	.807 (20.50)	30 gage - non vacuum sealed*
RSS-50-DS	Duraseal®	0.697 (17.70)	.807 (20.50)	30 gage - vacuum sealed*
RSS-50-WT	Plug-In Receptacle	0.697 (17.70)	.807 (20.50)	For use with FP-Plug terminal
FP-Plug	Plug-In Terminal	—	—	Plugs into R-SS-50-WT receptacle*

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar

How to Order: Spring Contact Probe

SS	50	A	2.9	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
SS: Standard
SSX: Improved Pointing Accuracy

Spring Force:
2.9 oz. @ .050 (1.27) travel
3.3 oz. @ .050 (1.27) travel
5.1 oz. @ .050 (1.27) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CPSS50
Insertion tool: RTSS50
Wire Plug tool: RTWT

Receptacle

RSS	50	CR
Series	Size	Termination

Series:
RSS: High Performance
RXSS: Improved Pointing Accuracy

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar. 12" & 36" standard.

**For use with FP-Plug terminal. 12" & 36" standard.

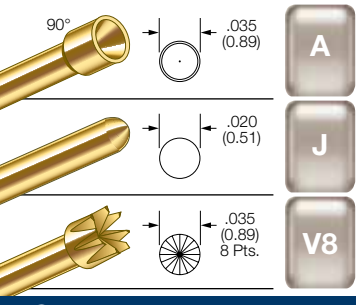
Terminations:
CR: Crimp
SC: Solder Cup
WW-016: Wire Wrap .016 sq
WW-025: Wire Wrap .025 sq
PW: Preattached Wire*
DS: Duraseal*
WT: Plug-In Receptacle**

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

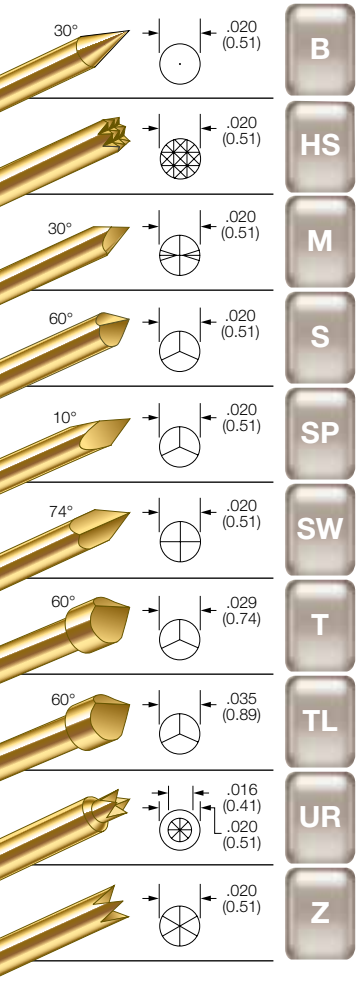
ICT-50C and S-50C Size 50C - .050 Centers

BeCu Plunger Tips



A J V8

Steel Plunger Tips



B HS M S SP SW T TL UR Z

Probe Specifications

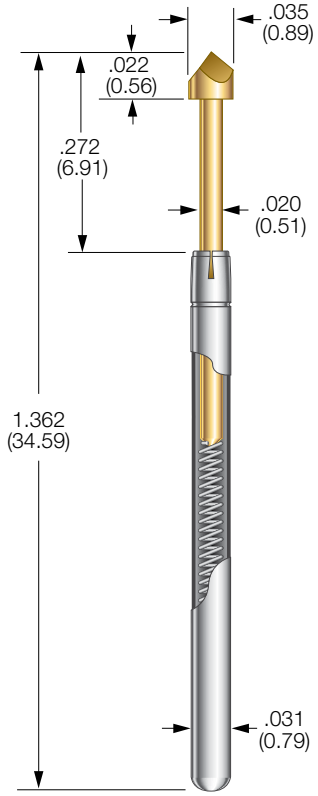
Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 4.3 or 5.6 oz. @ .170 (4.32) travel
Typical Resistance:
< 20 mΩ for ICT-50C
< 25 mΩ for S-50C
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz. (g)	Preload oz. (g)	Material
4.3 (122)	1.9 (54)	SS
5.6 (159)	2.1 (60)	MW

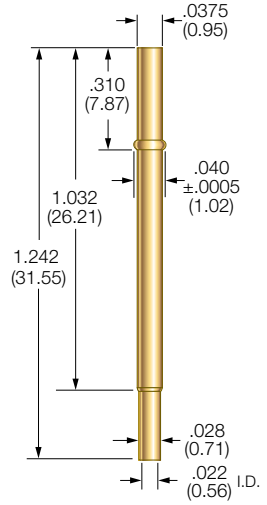
Materials

Barrel: Nickel/silver, gold lined
Spring: Music wire, nickel plated or stainless steel
Plunger: Beryllium copper or steel, gold plated over nickel
Receptacle: Beryllium copper, preplated gold, gold plated post
Terminal: Beryllium copper, preplated gold

ICT-50C/S-50C Probe



R-50C Receptacle



Drill Size: #61
Mounting Hole Size: .0385/.0390 (0.98/0.99)
Recommended Wire: 28-30 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-50C-CR	Crimp	1.242 (31.54)	1.572 (39.92)	—
R-50C-SC	Solder Cup	1.242 (31.54)	1.572 (39.92)	—
R-50C-WW-016	Wire Wrap	1.492 (37.89)	1.822 (46.27)	.250 post length - .016 sq.
R-50C-WW-025	Wire Wrap	1.542 (39.16)	1.872 (47.55)	.300 post length - .025 sq.
R-50C-DS	Duraseal®	1.242 (31.54)	1.572 (39.92)	30 gage wire, vacuum sealed*
R-50C-WT	Plug-In Receptacle	1.242 (31.54)	1.572 (39.92)	For use with FP-Plug plug-in terminal
FP-Plug	Plug-In Terminal	—	—	Plugs into R-50C-WT receptacle*

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar

How to Order: Spring Contact Probe

ICT	50C	T	5.6	DG	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger Option

Series:
ICT: High Performance
S: Standard Performance, (No Bifurcated Beam)

Spring Force:
4.3 oz. @ .170 (4.32) travel
5.6 oz. @ .170 (4.32) travel

Crimping pliers: CPR50C
Insertion tool: RTR50C

Receptacle

R	50C	CR
Series	Size	Termination

Terminations:
CR: Crimp
SC: Solder Cup
WW-016: Wire Wrap .016 sq
WW-025: Wire Wrap .025 sq
DS: Duraseal*
WT: Plug-In Receptacle**

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar. 12" & 36" standard.

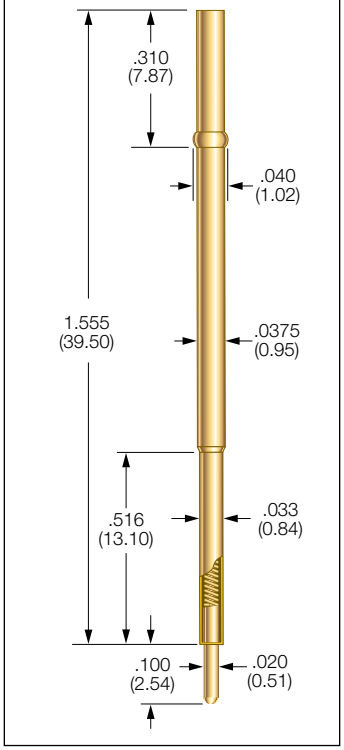
**For use with FP-Plug plug-in terminal. 12" & 36" standard.

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

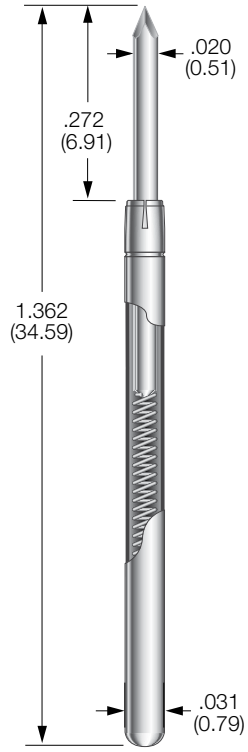
Wireless Receptacle

R-50C-J-DE

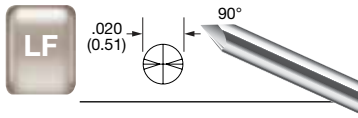


Lead Free Test Probe

ICT-50C-LF Probe



Steel Plunger Tip



Probe Specifications

Minimum Centers: .050 (1.27)
Drill Size: #61
Mounting Hole Size: .0385/.0390 (0.98/0.99)
Spring Force: 2.7 oz. (77g) @ .069 (1.75) travel
Maximum Travel: .100 (2.54)
Working Travel: .070 (1.77)

Materials

Receptacle: Beryllium copper, gold plated
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel

How to Order

R	50C	J	DE
Series	Size	Tip Style	Termination

Probe Specifications

Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 5.6 oz. @ .170 (4.32) travel
Typical Resistance: < 60 mΩ against a lead free surface
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Materials

Barrel: Nickel/silver, gold lined
Spring: Music wire, nickel plated
Plunger: Steel, Duralloy™ plated

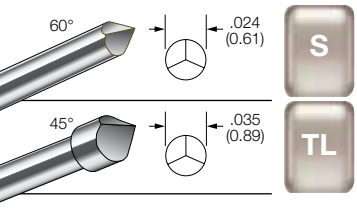
How to Order

ICT	50C	LF	5.6	DGD	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger

Specifications subject to change without notice. Dimensions in inches (millimeters).

S-50C Rotator .050 Centers

BeCu Plunger Tips



Probe Specifications

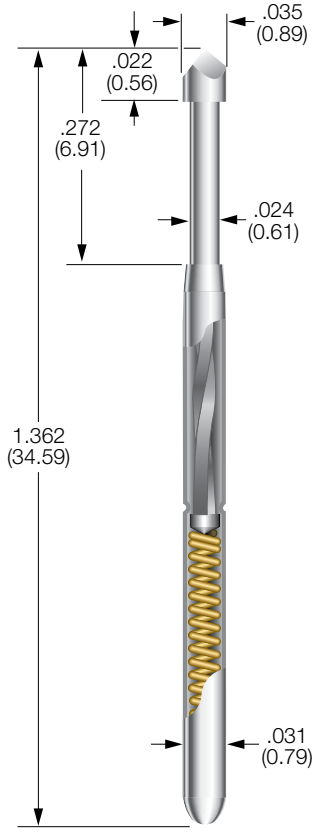
Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 3.7oz. @ .170 (4.32) travel
Typical Resistance: < 25 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)
Rotates: 85° @ .170 (4.32) travel

Rated Force oz. (g)	Preload oz. (g)
3.7 (105)	1.5 (42)

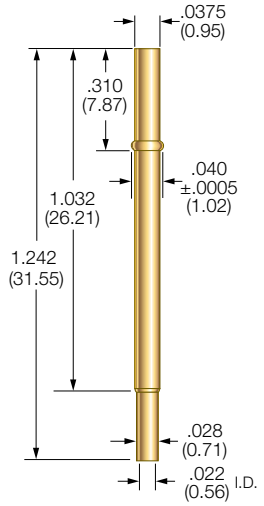
Materials

Barrel: Nickel/silver, gold lined
Spring: Music wire, gold plated
Plunger: Beryllium copper, Duralloy™ plated
Receptacle: Beryllium copper, preplated gold, gold plated post
Plug-In Terminal: Beryllium copper, preplated gold

S-50C Rotator



R-50C Receptacle



Drill Size: #61
Mounting Hole Size: .0385/.0390 (0.98/0.99)
Recommended Wire: 28-30 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-50C-CR	Crimp	1.242 (31.55)	1.572 (39.93)	—
R-50C-SC	Solder Cup	1.242 (31.55)	1.572 (39.93)	—
R-50C-WW-016	Wire Wrap	1.492 (37.88)	1.822 (46.28)	.250 post length - .016 sq.
R-50C-WW-025	Wire Wrap	1.542 (39.17)	1.872 (47.55)	.300 post length - .025 sq.
R-50C-DS	DuraSeal®	1.242 (31.55)	1.572 (39.93)	30 gage wire, vacuum sealed *
R-50C-WT	Plug-In Receptacle	1.242 (31.55)	1.572 (39.93)	For use with FP-Plug plug-in terminal
FP-Plug	Plug-In Terminal	—	—	Plugs into R-50C-WT receptacle *

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar

How to Order: Spring Contact Probe

S	50C	TL	3.7	RT
Series	Size	Tip Style	Spring Force	Rotator

Crimping pliers: CPR50C
Insertion tool: RTR50C

Receptacle

R	50C	CR
Series	Size	Termination

Terminations:
CR: Crimp
SC: Solder Cup
WW-016: Wire Wrap .016 sq
WW-025: Wire Wrap .025 sq
DS: DuraSeal*
WT: Plug-In Receptacle **

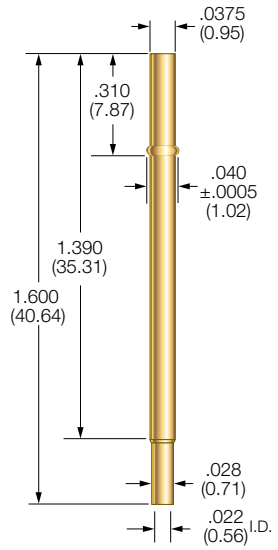
* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar. 12" & 36" standard.

**For use with FP-Plug plug-in terminal. 12" & 36" standard.

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

R-50J Receptacle

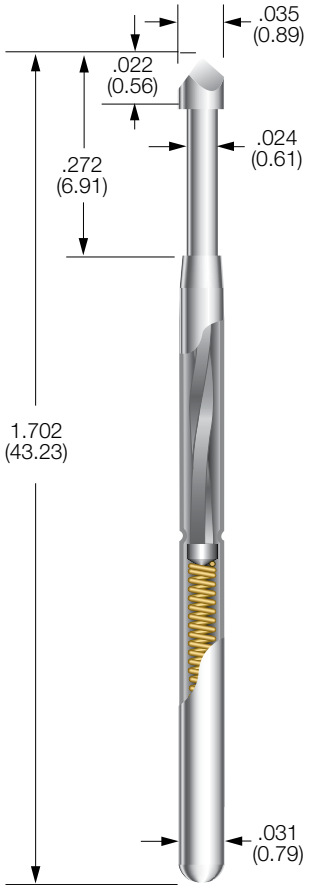


Drill Size: #61

Mounting Hole Size: .0385/.0390 (0.98/0.99)

Recommended Wire: 28-30 gage

S-50J Rotator



Probe Specifications

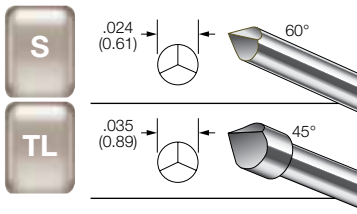
Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 3.6, 5.5, 7.0 or 10.0 oz. @ .170 (4.32) travel
Typical Resistance: < 25 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)
Rotates: 85° @ .170 (4.32) travel

Rated Force oz. (g)	Preload oz. (g)	Material
3.6 (102)	2.0 (57)	SS
5.5 (156)	2.9 (82)	MW
7.0 (198)	2.6 (74)	MW
10.0 (284)	2.6 (74)	MW

Materials

Barrel: Nickel/silver, gold lined
Spring: Stainless steel or music wire, gold plated
Plunger: Beryllium copper, Duralloy™ plated
Receptacle: Beryllium copper, preplated gold, gold plated post
Plug-In Terminal: Beryllium copper, gold plated

BeCu Plunger Tips



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-50J-CR	Crimp	1.600 (40.64)	1.912 (48.56)	—
R-50J-SC	Solder Cup	1.600 (40.64)	1.912 (48.56)	—
R-50J-WW-016	Wire Wrap	1.850 (46.99)	2.162 (54.91)	.250 post length - .016 sq.
R-50J-WW-025	Wire Wrap	1.900 (48.26)	2.212 (56.18)	.300 post length - .025 sq.
R-50J-DS	DuraSeal®	1.600 (40.64)	1.912 (48.56)	30 gage wire, vacuum sealed*
R-50J-WT	Plug-In Receptacle	1.600 (40.64)	1.912 (48.56)	For use with FP-Plug plug-in terminal
FP-Plug	Plug-In Terminal	—	—	Plugs into R-50J-WT receptacle*

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar

How to Order: Spring Contact Probe

S	50J	TL	3.6	RT
Series	Size	Tip Style	Spring Force	Rotator

Spring Force:
3.6 oz. @ .170 (4.32) travel
5.5 oz. @ .170 (4.32) travel
7.0 oz. @ .170 (4.32) travel
10.0 oz. @ .170 (4.32) travel

Crimping pliers: CPR50J
Insertion tool: RTR50J

Receptacle

R	50J	CR
Series	Size	Termination

Terminations:
CR: Crimp
SC: Solder Cup
WW-016: Wire wrap .016 sq
WW-025: Wire Wrap .025 sq
DS: DuraSeal *
WT: Plug-In Receptacle**

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar. 12" & 36" standard.

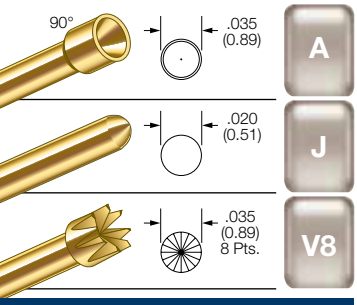
**For use with FP-Plug plug-in terminal. 12" & 36" standard.

View updates of this information at www.idinet.com

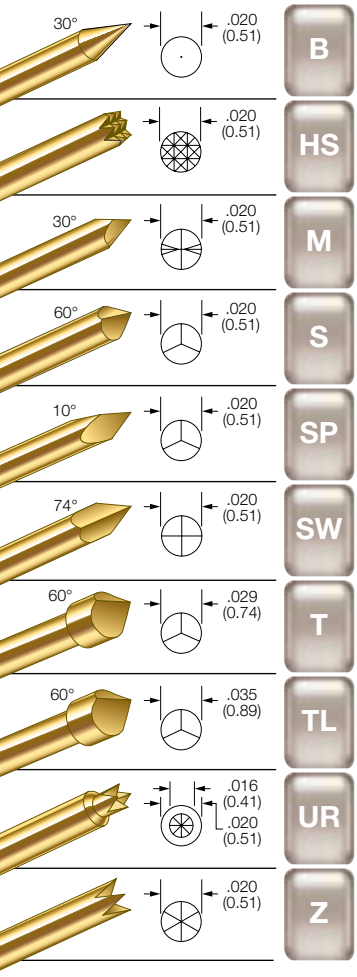
Specifications subject to change without notice. Dimensions in inches (millimeters)

ICT-50J and S-50J Size 50J - .050 Centers

BeCu Plunger Tips



Steel Plunger Tips



Probe Specifications

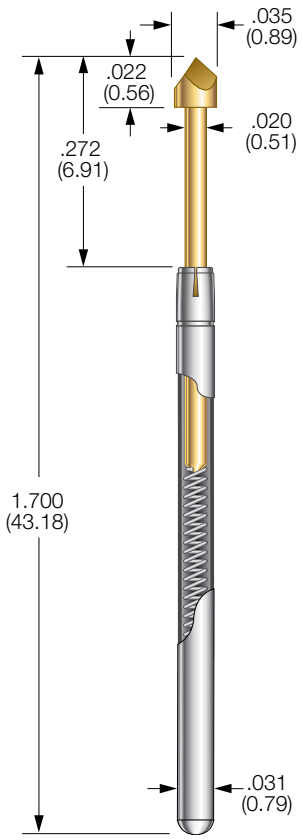
Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 4.0, 5.6, 7.0 or 10.0 oz. @ .170 (4.32) travel
Typical Resistance:
< 20 mΩ for ICT-50J
< 25 mΩ for S-50J
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz. (g)	Preload oz. (g)	Material
4.0 (113)	1.8 (51)	SS
5.6 (159)	2.5 (71)	SS
7.0 (198)	3.1 (88)	MW
10.0 (283)	4.6 (130)	MW

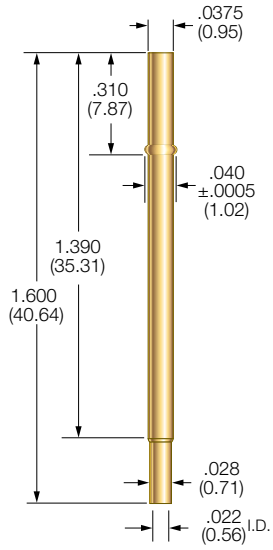
Materials

Barrel: Nickel/silver, gold lined
Spring: Music wire, nickel plated or stainless steel
Plunger: Beryllium copper or steel, gold plated over nickel
Receptacle: Beryllium copper, preplated gold, gold plated post
Terminal: Beryllium copper, preplated gold

ICT-50J/S-50J Probe



R-50J Receptacle



Drill Size: #61
Mounting Hole Size: .0385/.0390 (0.98/0.99)
Recommended Wire: 28-30 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-50J-CR	Crimp	1.600 (40.64)	1.910 (48.51)	—
R-50J-SC	Solder Cup	1.600 (40.64)	1.910 (48.51)	—
R-50J-WW-016	Wire Wrap	1.850 (46.99)	2.160 (54.86)	.250 post length - .016 sq.
R-50J-WW-025	Wire Wrap	1.900 (48.26)	2.210 (56.13)	.300 post length - .025 sq.
R-50J-DS	Duraseal®	1.600 (40.64)	1.910 (48.51)	30 gage wire, vacuum sealed*
R-50J-WT	Plug-In Receptacle	1.600 (40.64)	1.910 (48.51)	For use with FP-Plug plug-in terminal
FP-Plug	Plug-In Terminal	—	—	Plugs into R-50J-WT receptacle *

* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar

How to Order: Spring Contact Probe

ICT	50J	T	5.6	DG	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger Option

Series:
ICT: High Performance
S: Standard Performance, (No Bifurcated Beam)

Spring Force:
4.0 oz. @ .170 (4.32) travel
5.6 oz. @ .170 (4.32) travel
7.0 oz. @ .170 (4.32) travel
10.0 oz. @ .170 (4.32) travel

Crimping pliers: CPR50J
Insertion tool: RTR50J

Receptacle

R	50J	CR
Series	Size	Termination

Terminations:
CR: Crimp
SC: Solder Cup
WW-016: Wire Wrap .016 sq
WW-025: Wire Wrap .025 sq
DS: Duraseal*
WT: Plug-In Receptacle**

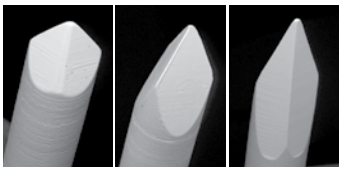
* Unless otherwise specified, wire length 36", strip length 1", 30 gage Kynar. 12" & 36" standard.
** For use with FP-Plug plug-in terminal. 12" & 36" standard.

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Optimized Tip Geometry For Lead Free Testing

IDI has invested significantly in the discovery of the ideal tip for lead-free applications. IDI's research and testing laboratory, the industry's most advanced, developed a special test system which permitted IDI to compare the performance of various tip styles when cycled against matte tin, the most aggressive test contact material in terms of contamination and rapid tip wear. Through this process, the obtuse blade ('LF') tip showed itself to be by far the most reliable—its rugged shape retains its integrity far longer than more acute designs.

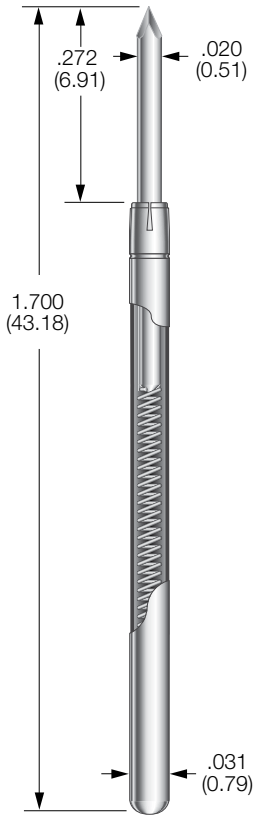


Obtuse blade | 15° 3-sided chisel | Acute dagger

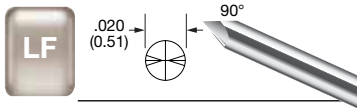
IDI's unique Duralloy™ plating provides a clear advantage over competitors. Duralloy is noble and is exceptionally resistant to corrosion and oxidation. It remains bright and untarnished in atmospheric exposure. Duralloy is extremely smooth when plated and does not develop microcracks. It is very thick and completely nonporous. This surface greatly contributes to Duralloy's ability to resist corrosion and limit wear. Duralloy is slightly more resistive than gold, and is not recommended for extremely sensitive measurements.

Lead Free Test Probe

ICT-50J-LF Probe



Steel Plunger Tip



Probe Specifications

Minimum Centers: .050 (1.27)
Current Rating: 3 amps continuous
Spring Force: 7.0 oz. @ .170 (4.32) travel
Typical Resistance: < 60 mΩ against a lead free surface
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Materials

Barrel: Nickel/silver, gold lined
Spring: Music wire, nickel plated
Plunger: Steel, Duralloy™ plated

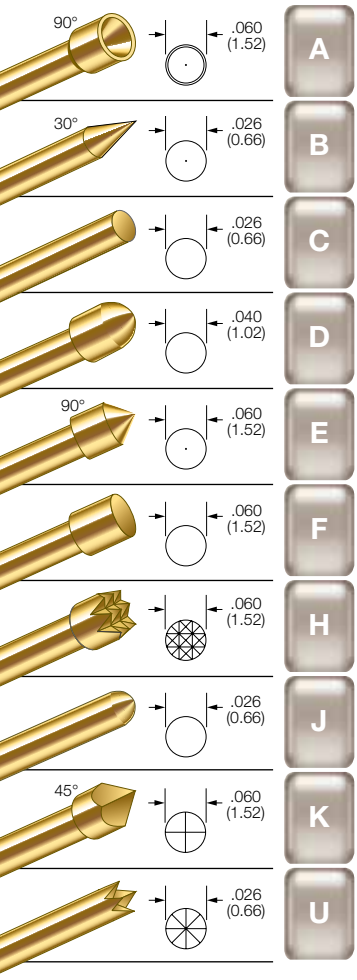
How to Order

ICT	50J	LF	7	DGD	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger

Specifications subject to change without notice. Dimensions in inches (millimeters)

Series S Size 1 - .075 Centers

BeCu Plunger Tips



Probe Specifications

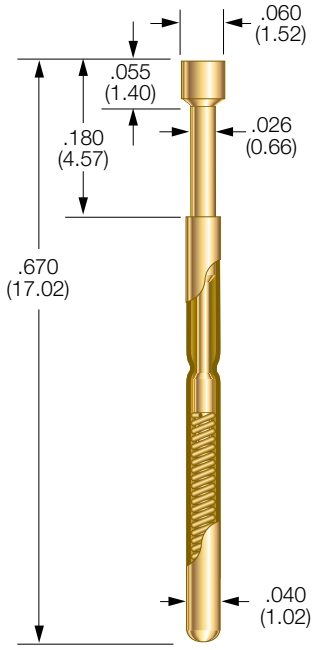
Minimum Centers: .075 (1.91)
Current Rating: 3 amps continuous
Spring Force: 2.0, 3.8 or 6.6 oz. @ .070 (1.78) travel
Typical Resistance: < 25 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .070 (1.78)

Rated Force oz. (g)	Preload oz. (g)	Material
2.0 (57)	0.8 (23)	SS
3.8 (108)	1.5 (43)	SS
6.6 (187)	2.0 (57)	MW

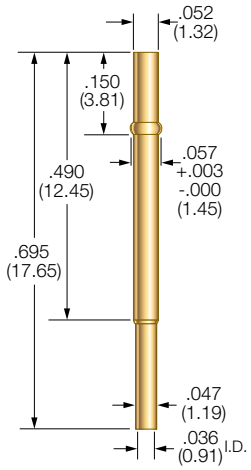
Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel or music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated, gold plated post

S-1 Probe



R-1 Receptacle



Drill Size: 1.45mm
Mounting Hole Size: .055/.057 (1.40/1.45)
Recommended Wire: 24-28 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-1-CR	Crimp	0.695 (17.65)	0.875 (22.23)	—
R-1-SC	Solder Cup	0.695 (17.65)	0.875 (22.23)	—
R-1-RP	Round Post	1.070 (27.18)	1.250 (31.75)	.375 post length - .025 dia.
R-1-WW-429	Wire Wrap	1.124 (28.55)	1.304 (33.12)	.429 post length - .025 sq.

How to Order: Spring Contact Probe

S	1	A	3.8	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
S: Standard
SX: Improved Pointing Accuracy

Spring Force:
2.0 oz. @ .070 (1.78) travel
3.8 oz. @ .070 (1.78) travel
6.6 oz. @ .070 (1.78) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CP1
Insertion tool: RT1

Receptacle

R	1	WW	429
Series	Size	Termination	Post Length

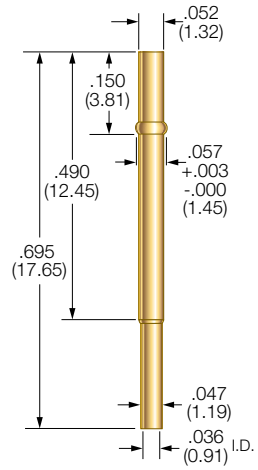
Terminations:
CR: Crimp
SC: Solder Cup
RP: Round Post
WW: Wire Wrap

Post Length:
WW: 429

View updates of this information at www.idinet.com

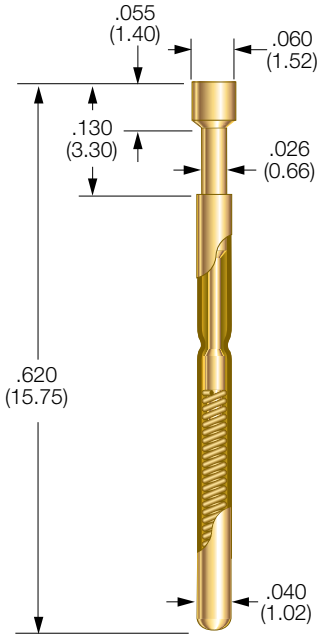
Specifications subject to change without notice. Dimensions in inches (millimeters)

RSS-75 Receptacle



Drill Size: 1.45mm
Mounting Hole Size: .055/.057 (1.40/1.45)
Recommended Wire: 24-28 gage

SS-75 Probe



Probe Specifications

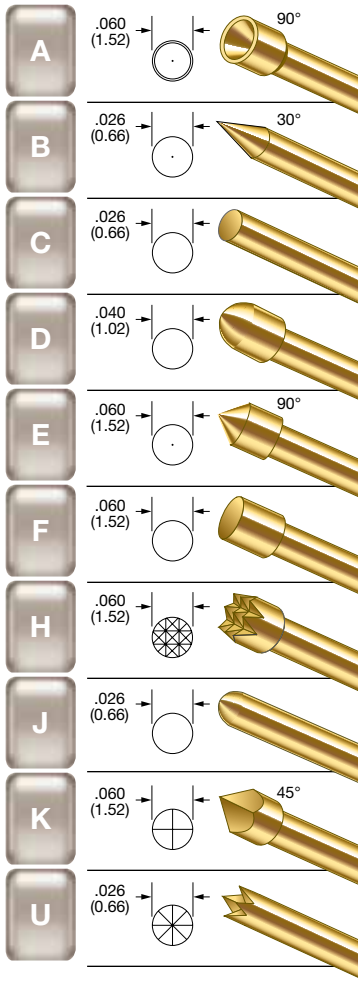
Minimum Centers: .075 (1.91)
Current Rating: 3 amps continuous
Spring Force: 2.4 or 4.9 oz. @ .050 (1.27) travel
Typical Resistance: < 25 mΩ
Maximum Travel: .050 (1.27)
Working Travel: .050 (1.27)

Rated Force oz. (g)	Preload oz. (g)	Material
2.4 (68)	1.7 (48)	SS
4.9 (139)	3.1 (88)	SS

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated, gold plated post

BeCu Plunger Tips



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
RSS-75-CR	Crimp	0.695 (17.65)	0.825 (20.96)	—
RSS-75-SC	Solder Cup	0.695 (17.65)	0.825 (20.96)	—
RSS-75-RP	Round Post	1.070 (27.18)	1.200 (30.48)	.375 post length - .025 dia.
RSS-75-WW-429	Wire Wrap	1.124 (28.55)	1.254 (31.85)	.429 post length - .025 sq.

How to Order: Spring Contact Probe

SS	75	A	2.4	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
SS: Standard
SSX: Improved Pointing Accuracy

Spring Force:
2.4 oz. @ .050 (1.27) travel
4.9 oz. @ .050 (1.27) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CPSS75
Insertion tool: RTSS75

Receptacle

RSS	75	WW	429
Series	Size	Termination	Post Length

Terminations:
CR: Crimp
SC: Solder Cup
WW: Wire Wrap
RP: Round Post

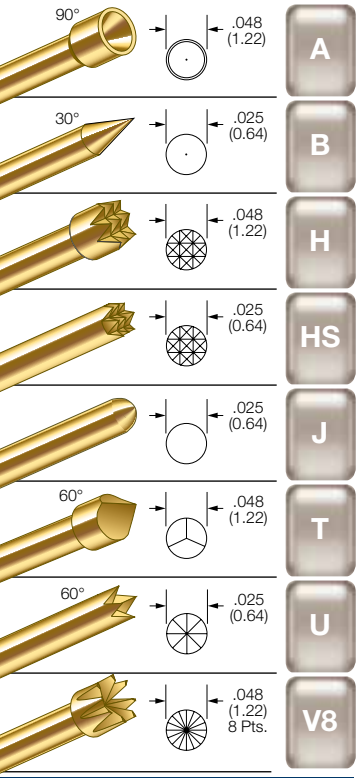
Post Length:
WW: 429

View updates of this information at www.idinet.com

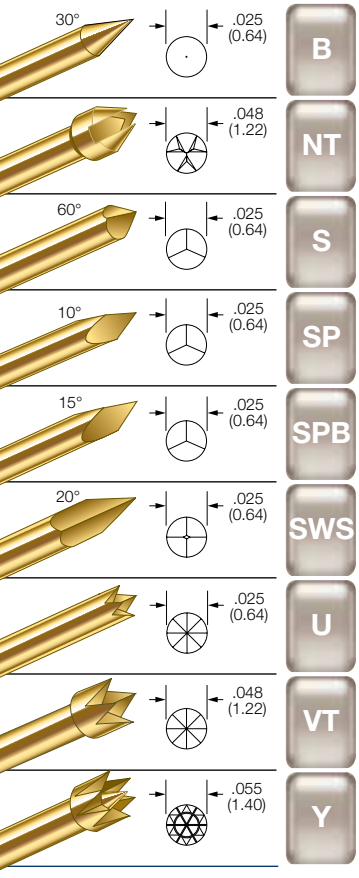
Specifications subject to change without notice. Dimensions in inches (millimeters)

ICT-075 and S-075 Size 075 - .075 Centers

BeCu Plunger Tips



Steel Plunger Tips



Probe Specifications

Minimum Centers: .075 (1.91)
Current Rating: 3 amps continuous
Spring Force: 3.0, 5.0, 7.0 or 10.0 oz. @ .170 (4.32) travel
Typical Resistance: < 25 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

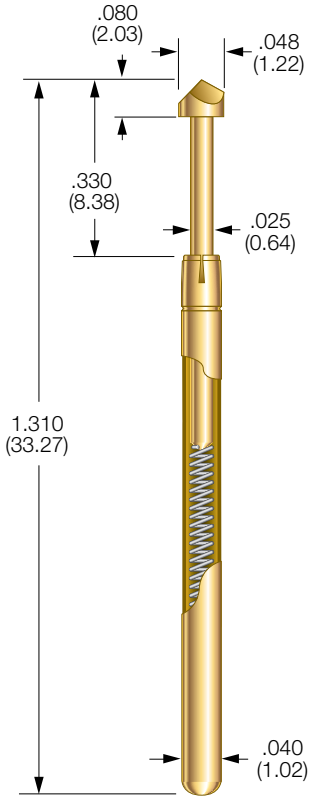
Rated Force oz. (g)	Preload oz. (g)
3.0* (85)	1.2 (34)
5.0 (142)	2.0 (57)
7.0 (198)	2.9 (82)
10.0 (283)	3.3 (94)

*3.0 oz., S-075 only

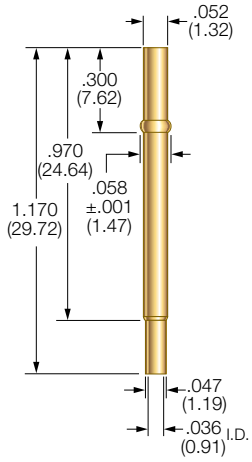
Materials

Barrel: G2
Spring: Music wire, nickel plated
Plunger: Beryllium copper or steel, gold plated over nickel
Receptacle: Nickel/silver, gold plated; gold plated post

ICT-075 Probe



R-075 Receptacle



Drill Size: 1.45mm
Mounting Hole Size: .055/.057 (1.40/1.45)
Recommended Wire: 24-28 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-075-CR	Crimp	1.170 (29.72)	1.500 (38.10)	—
R-075-SC	Solder Cup	1.170 (29.72)	1.500 (38.10)	—
R-075-RP	Round Post	1.545 (39.24)	1.875 (47.63)	.375 post length - .025 dia.
R-075-WW-429	Wire Wrap	1.599 (40.61)	1.929 (49.00)	.429 post length - .025 sq.
R-075-WW-694	Wire Wrap	1.864 (47.35)	2.194 (55.73)	.694 post length - .025 sq.
R-075-WW-1.044	Wire Wrap	2.214 (56.24)	2.544 (64.62)	1.044 post length - .025 sq.

How to Order: Spring Contact Probe

ICT	075	T	5.0	G	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger Option

Series:
ICT: High Performance
S: Standard Performance, (No Bifurcated Beam)

Crimping pliers: CPR075
Insertion tool: RTR075

Spring Force:
3.0 oz. @ .170 (4.32) travel*
5.0 oz. @ .170 (4.32) travel
7.0 oz. @ .170 (4.32) travel
10.0 oz. @ .170 (4.32) travel

*S-075 Series only

Receptacle

R	075	WW	429
Series	Size	Termination	Post Length

Terminations:
CR: Crimp
SC: Solder Cup
RP: Round Post
WW: Wire Wrap

Post Length:
WW: 429, 694 or 1.044

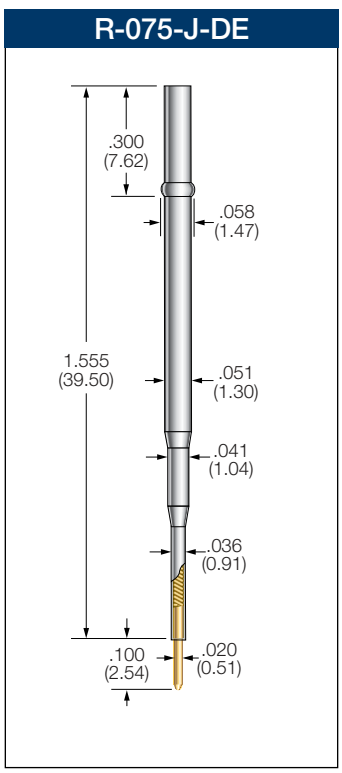
View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

smiths

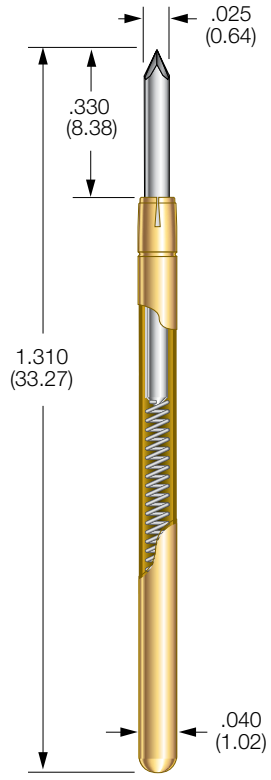
Wireless Receptacle

R-075-J-DE

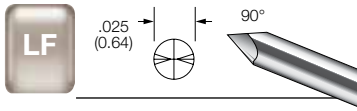


Lead Free Test Probe

ICT-075-LF Probe



Steel Plunger Tip



Probe Specifications

Minimum Centers: .075 (1.91)
Drill Size: 1.45mm
Mounting Hole Size: .055/.057 (1.40/1.45)
Spring Force: 2.7 oz. (77g) @ .070 (1.77) travel
Maximum Travel: .100 (2.54)
Working Travel: .070 (1.77)

Materials

Receptacle: Nickel/silver, gold lined inside
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel

How to Order

R	075	J	DE
Series	Size	Tip Style	Plating Option

Probe Specifications

Minimum Centers: .075 (1.91)
Current Rating: 3 amps continuous
Spring Force: 7.0 oz. @ .170 (4.32) travel
Typical Resistance: < 40 mΩ against a lead free surface
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Materials

Barrel: G2
Spring: Music wire, nickel plated
Plunger: Steel, Duralloy™ plated

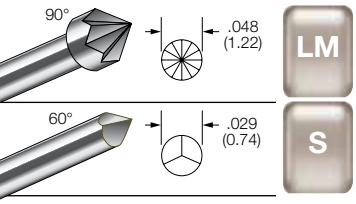
How to Order

ICT	075	LF	7	D	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger

Specifications subject to change without notice. Dimensions in inches (millimeters).

S-075 Rotator .075 Centers

BeCu Plunger Tips



Probe Specifications

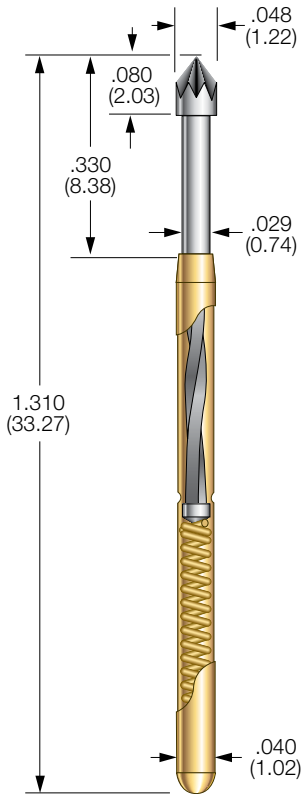
Minimum Centers: .075 (1.91)
Current Rating: 3 amps continuous
Spring Force: 3.8 or 6.6 oz. @ .170 (4.32) travel
Typical Resistance: < 25 mΩ
Maximum Travel: .225 (5.72)
Working Travel: .170 (4.32)
Rotates: 90° @ .170 (4.32) travel

Rated Force oz (g)	Preload oz (g)
3.8 (108)	0.5 (14)
6.6 (187)	1.6 (45)

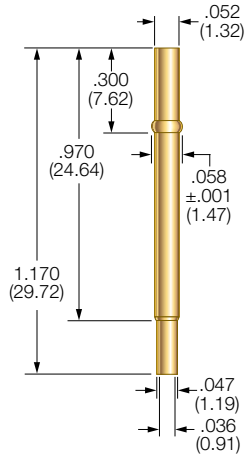
Materials

Barrel: G2
Spring: Music wire, gold plated
Plunger: Beryllium copper, Duralloy™ plated
Receptacle: Nickel/silver, gold plated; gold plated post

S-075-Rotator



R-075 Receptacle



Drill Size: 1.45mm
Mounting Hole Size: .055/.057 (1.40/1.45)
Recommended Wire: 24-28 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-075-CR	Crimp	1.170 (29.72)	1.500 (38.10)	—
R-075-SC	Solder Cup	1.170 (29.72)	1.500 (38.10)	—
R-075-RP	Round Post	1.545 (39.24)	1.875 (47.63)	.375 post length - .025 dia.
R-075-WW-429	Wire Wrap	1.599 (40.61)	1.929 (49.00)	.429 post length - .025 sq.
R-075-WW-694	Wire Wrap	1.864 (47.35)	2.194 (55.73)	.694 post length - .025 sq.
R-075-WW-1.044	Wire Wrap	2.214 (56.24)	2.544 (64.62)	1.044 post length - .025 sq.

How to Order: Spring Contact Probe

S	075	LM	3.8	RT
Series	Size	Tip Style	Spring Force	Rotator

Spring Force:
3.8 oz. @ .170 (4.32) travel
6.6 oz @ .170 (4.32) travel

Crimping pliers: CPR075
Insertion tool: RTR075

Receptacle

R	075	WW	429
Series	Size	Termination	Post Length

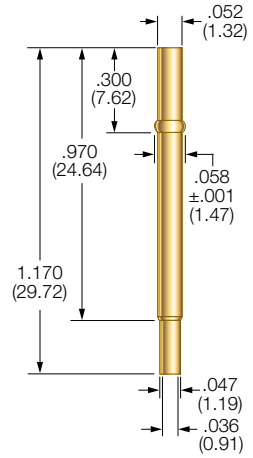
Terminations:
CR: Crimp
SC: Solder Cup
RP: Round Post
WW: Wire Wrap

Post Length:
WW: 429, 694 or 1.044

View updates of this information at www.idinet.com

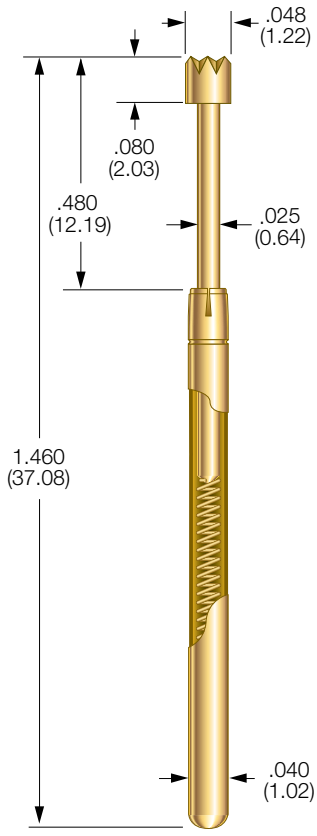
Specifications subject to change without notice. Dimensions in inches (millimeters)

R-075 Receptacle



Drill Size: 1.45mm
Mounting Hole Size: .055/.057 (1.40/1.45)
Recommended Wire: 24-28 gage

ICT-L075 Probe



Probe Specifications

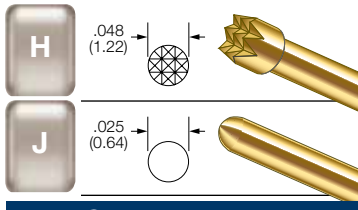
Minimum Centers: .075 (1.91)
Current Rating: 3 amps continuous
Spring Force: 4.3 oz. @ .317 (8.05) travel
Typical Resistance: < 15 mΩ
Maximum Travel: .400 (10.16)
Working Travel: .317 (8.05)

Rated Force oz (g)	Preload oz (g)
4.3 (122)	1.8 (51)

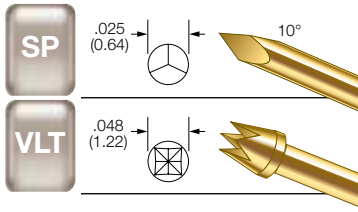
Materials

Barrel: G2
Spring: Music wire, gold plated
Plunger: Beryllium copper or steel, gold plated over nickel
Receptacle: Nickel/silver, gold plated; gold plated post

BeCu Plunger Tips



Steel Plunger Tips



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-075-CR	Crimp	1.170 (29.72)	1.650 (41.91)	—
R-075-SC	Solder Cup	1.170 (29.72)	1.650 (41.91)	—
R-075-RP	Round Post	1.545 (39.24)	2.025 (51.44)	.375 post length - .025 dia.
R-075-WW-429	Wire Wrap	1.599 (40.61)	2.079 (52.81)	.429 post length - .025 sq.
R-075-WW-694	Wire Wrap	1.864 (47.35)	2.344 (59.54)	.694 post length - .025 sq.
R-075-WW-1.044	Wire Wrap	2.214 (56.24)	2.694 (68.43)	1.044 post length - .025 sq.

How to Order: Spring Contact Probe

ICT	L075	H	4.3	G	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger Option

Spring Force:
4.3 oz. @ .317 (8.05) travel

Crimping pliers: CPR075
Insertion tool: RTR075

Receptacle

R	075	WW	429
Series	Size	Termination	Post Length

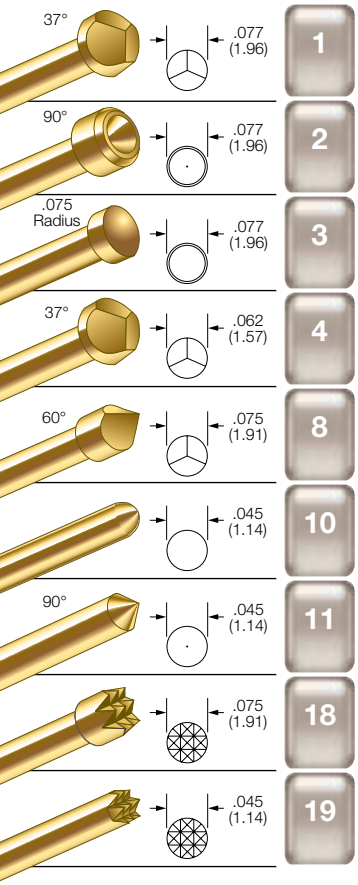
Terminations:
CR: Crimp
SC: Solder Cup
WW: Wire Wrap
RP: Round Post
Post Length:
WW: 429, 694 or 1.044

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Series SS & GSS .100 Centers

BeCu Plunger Tips



Probe Specifications

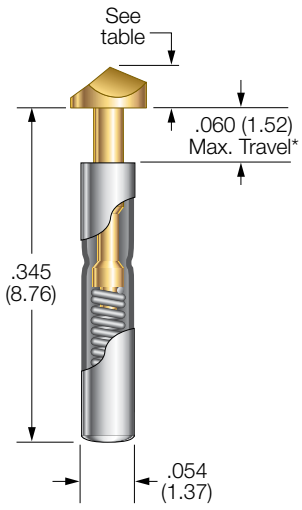
Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 3.8 or 7.0 oz. @ .050 (1.27) travel
Typical Resistance:
SS: < 65 mΩ
GSS: < 30 mΩ
Maximum Travel: .060 (1.52)
*for SS-8 .050 (1.27)
Working Travel: .050 (1.27)

Rated Force oz (g)	Preload oz (g)	Material
3.8 (108)	1.6 (45)	SS
7.0 (198)	1.3 (37)	MW

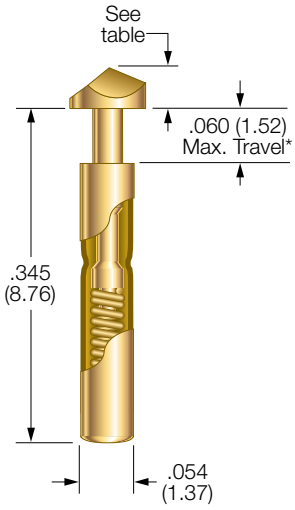
Materials

Barrel:
SS: Nickel/silver
GSS: Nickel/silver, gold plated
Spring: SS: Stainless steel or music wire
GSS: Stainless steel or music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel
Receptacle: Nickel/silver

SS-100 Probe



GSS-100 Probe



Head Length By Tip Style - SS & GSS Probe

Tip	Head Length	Tip	Head Length
1	.040 (1.02)	10	.028 (0.71)
2	.028 (0.71)	11	.040 (1.02)
3	.028 (0.71)	18	.060 (1.52)
4	.040 (1.02)	19	.055 (1.40)
8	.080 (2.03)		

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
RSS-100-CR	Crimp	0.475 (12.07)	0.550 (13.97)*	—
RSS-100-NT	No Tail	0.402 (10.21)	0.462 (11.73)*	—
RSS-100-RP	Round Post	0.625 (15.88)	0.685 (17.40)*	.220 post length - .028 dia.
RSS-100-WW	Wire Wrap	0.822 (20.88)	0.882 (22.40)*	.420 post length - .025 sq.

* Plus head length per tip style from chart

How to Order: Spring Contact Probe

SS	1	3.8	G
Series	Tip Style	Spring Force	Plating Options

Series:
SS: Nickel/Silver Barrel
GSS: Gold Plated Barrel

Spring Force:
3.8 oz. @ .050 (1.27) travel
7.0 oz. @ .050 (1.27) travel

Crimping pliers: CPSS100

Insertion tool: RTSS100

Receptacle

RSS	100	WW
Series	Size	Termination

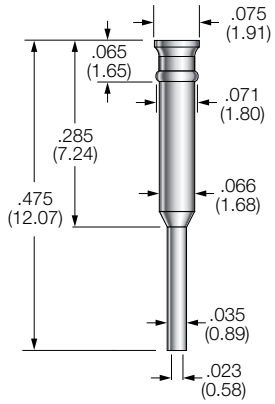
Terminations:
CR: Crimp
RP: Round Post
NT: No Tail
WW: Wire Wrap

View updates of this information at www.idinet.com

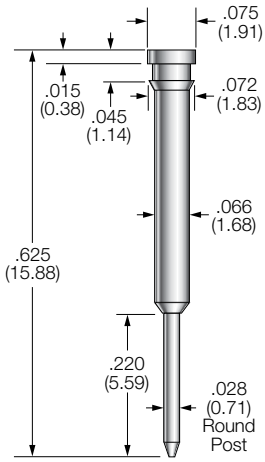
Specifications subject to change without notice. Dimensions in inches (millimeters)

RSS-100 Receptacles

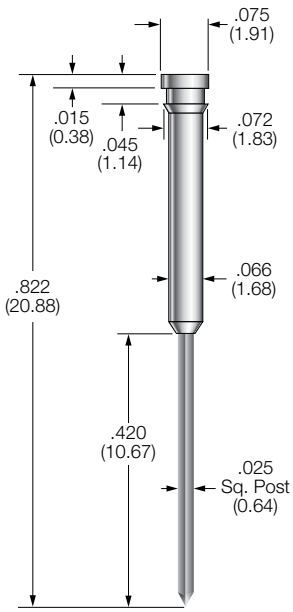
RSS-100-CR



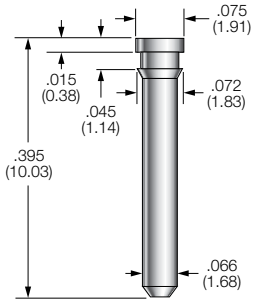
RSS-100-RP



RSS-100-WW

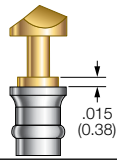


RSS-100-NT

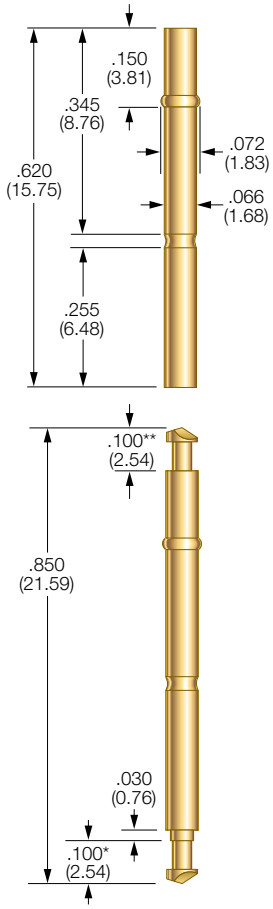


Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)
Recommended Wire: 28-30 gage

Probe Extension for RSS-100-CR



R-SS/SS Receptacle



* For plunger with .040 (1.02) tip length
** Headed plunger only this end

Receptacle Options

Minimum Centers: .100 (2.54)
Drill Size: #50
Mounting Hole Size:
.068/.070 (1.73/1.78)

Materials

Standard Series:
Nickel/silver

High Performance Series:
Nickel/silver, gold plated

This receptacle houses an SS100 or GSS100 on each end.

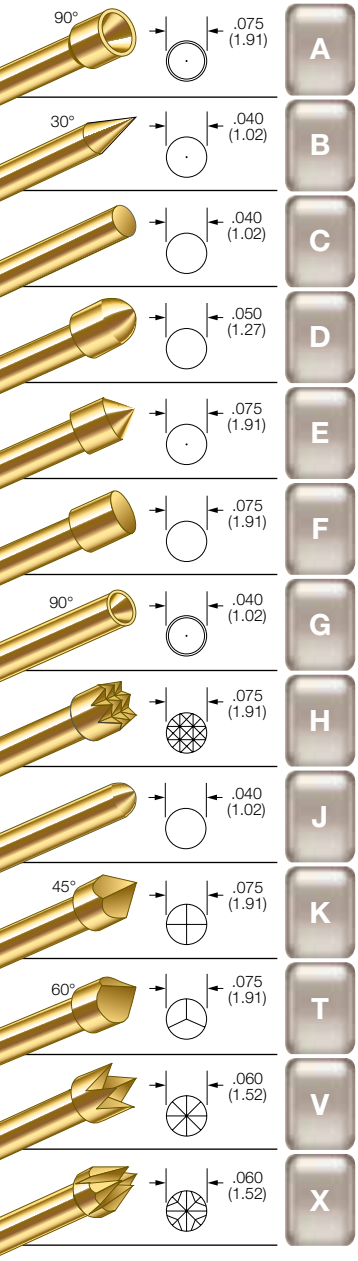
How to Order

Standard Series:
RS-SS/SS
High Performance:
R-SS/SS

Specifications subject to change without notice. Dimensions in inches (millimeters)

Series S Size 2 .100 Centers

BeCu Plunger Tips



Probe Specifications

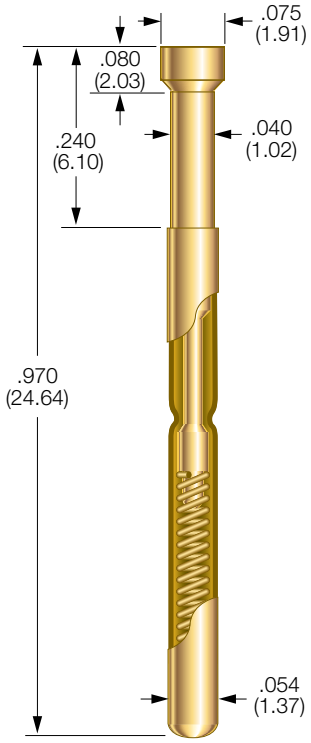
Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 4.0, 7.0, 8.3 or 10.0 oz. @ .100 (2.54) travel
Typical Resistance: < 35 mΩ
Maximum Travel: .160 (4.06)
Working Travel: .100 (2.54)

Rated Force oz (g)	Preload oz (g)	Material
4.0 (113)	1.6 (45)	BeCu
7.0 (198)	2.9 (82)	SS
8.3 (235)	3.3 (93)	MW
10.0 (283)	3.9 (110)	MW

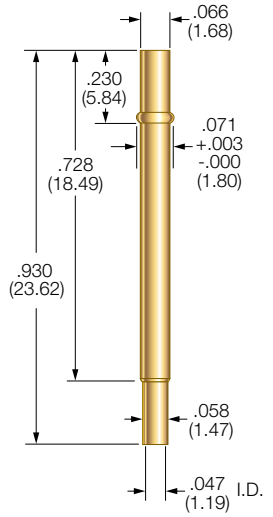
Materials

Barrel: Nickel/silver, gold plated
Spring: Beryllium copper, precious metal plated, music wire or stainless steel, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated; gold plated post

S-2 Probe



R-2 Receptacle



Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)
Recommended Wire: 22-26 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-2-CR	Crimp	0.930 (23.62)	1.170 (29.72)	—
R-2-SC	Solder Cup	0.930 (23.62)	1.170 (29.72)	—
R-2-RP	Round Post	1.305 (31.15)	1.545 (39.24)	.375 post length - .025 dia.
R-2-WW-429	Wire Wrap	1.359 (34.52)	1.599 (40.61)	.429 post length - .025 sq.

How to Order: Spring Contact Probe

S	2	A	4	G
Series	Size	Tip Style	Spring Force	Plating Options

Spring Force:
4.0 oz. @ .100 (2.54) travel
7.0 oz. @ .100 (2.54) travel
8.3 oz. @ .100 (2.54) travel
10.0 oz. @ .100 (2.54) travel

Series:
S: Standard
SX: Improved Pointing Accuracy

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CP2
Insertion tool: RT2

Receptacle

R	2	WW	429
Series	Size	Termination	Post Length

Terminations:
CR: Crimp
SC: Solder Cup
RP: Round Post
WW: Wire Wrap

Post Length:
WW: 429

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

GenRad Interface Probes

SGR-2-B-4-G w/o bend
- GenRad 2270
- GenRad 2271
- GenRad 2272
- GenRad 2282

SPGR-2-B-4-G w/bend
- GenRad 2283
- GenRad 2284
- GenRad 2286
- GenRad 2287

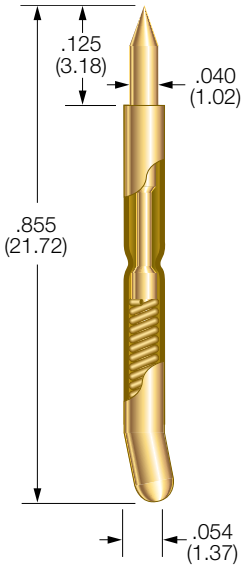
(models prior to 07/95)

SGR-2-B-3.7-G-880 w/o bend
- GenRad 2280
- GenRad 2281
- GenRad 2281A
- GenRad 2287A
- GenRad 228x ICA

SPGR-2-B-3.7-G-880
- GenRad 2283
- GenRad 2284
- GenRad 2286
- GenRad LX 228

(models prior to 07/95)

.855 GenRad Interface Probe

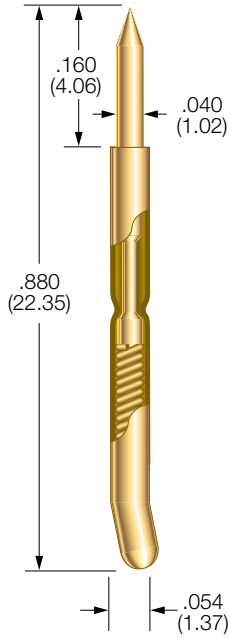


Probe Specifications
Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 4.0 oz. @ .083 (2.10) travel
Preload Force: 1.3 (37g)
Typical Resistance: < 25 mΩ
Maximum Travel: .125 (3.18)
Working Travel: .083 (2.10)

Materials
Barrel: Nickel silver, gold plated
Spring: Beryllium copper, precious metal plated
Plunger: Beryllium copper, gold plated over nickel

How to Order
SGR-2-B-4-G w/o bend
SPGR-2-B-4-G with bend

.880 GenRad Interface Probe



Probe Specifications
Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 3.7 oz. @ .107 (2.72) travel
Preload Force: 1.4 (40g)
Typical Resistance: < 25 mΩ
Maximum Travel: .160 (4.06)
Working Travel: .107 (2.72)

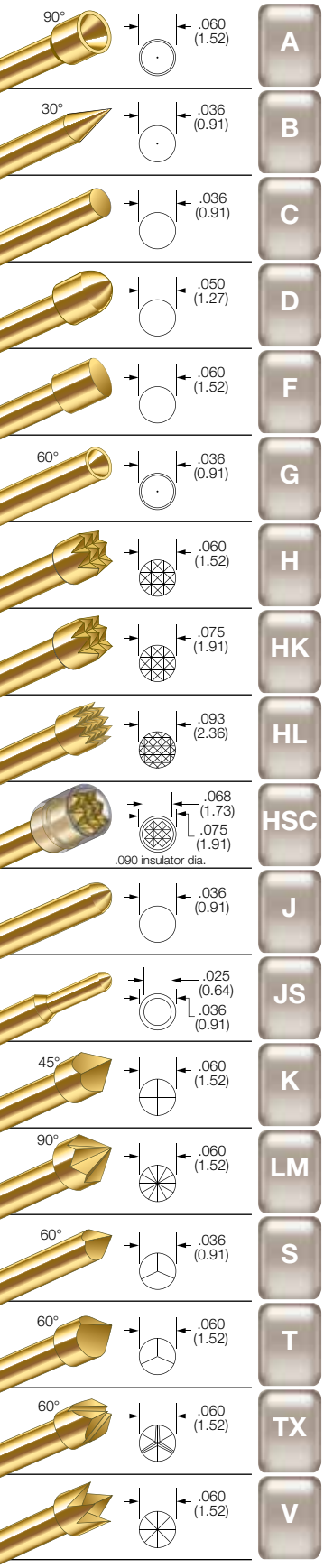
Materials
Barrel: Nickel silver, gold plated
Spring: Beryllium copper, precious metal plated
Plunger: Beryllium copper, gold plated over nickel

How to Order
SGR-2-B-3.7-G-880 w/o bend
SPGR-2-B-3.7-G880 with bend

Specifications subject to change without notice. Dimensions in inches (millimeters)

ICT-100 and S-100 Size 100 .100 Centers

BeCu Plunger Tips



Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 3.5, 5.5, 6.7, 8.0, 10.0 or 17.0 oz. @.170 (4.32) travel
Typical Resistance: < 8 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

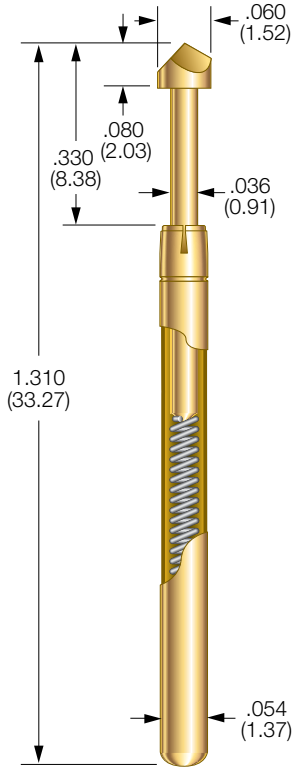
Rated Force oz (g)	Preload oz (g)	Material
3.5 (99)	1.5 (43)	BeCu*
5.5 (156)	2.4 (68)	MW**
6.7 (190)	2.8 (80)	SS
8.0 (227)	3.3 (94)	MW**
10.0 (283)	3.7 (105)	MW
17.0 (483)	6.8 (193)	MW

* 3.5 oz spring S-100 only ** BeCu for S Series

Materials

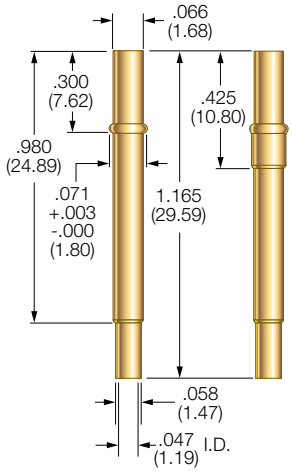
Barrel: G2
Spring: Beryllium copper, music wire, nickel plated or stainless steel
Plunger: Beryllium copper or steel, gold plated over nickel
Receptacle: Nickel/silver, gold plated; gold plated post

ICT-100 Probe



R-100 Receptacle

R Series RX Series

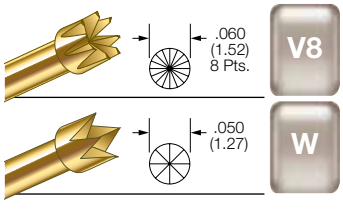


Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)
Recommended Wire: 22-26 gage

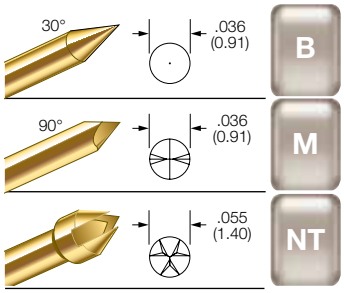
Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-100-CR	Crimp	1.165 (29.59)	1.495 (37.97)	—
R-100-SC	Solder Cup	1.165 (29.59)	1.495 (37.97)	—
R-100-RP	Round Post	1.540 (39.12)	1.870 (47.50)	.375 post length - .025 dia.
R-100-WW-429	Wire Wrap	1.594 (40.49)	1.924 (48.87)	.429 post length - .025 sq.
R-100-WW-694	Wire Wrap	1.859 (47.22)	2.189 (55.60)	.694 post length - .025 sq.
R-100-WW-1.044	Wire Wrap	2.209 (56.11)	2.539 (64.49)	1.044 post length - .025 sq.

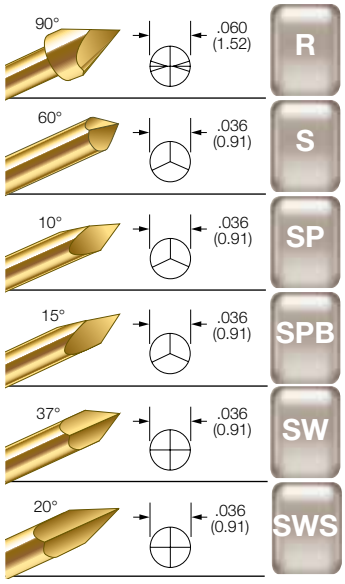
BeCu Plunger Tips



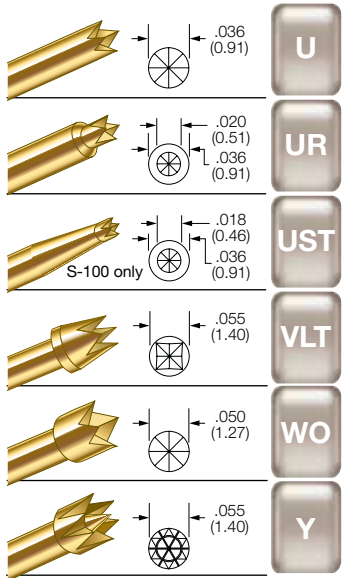
Steel Plunger Tips



Steel Plunger Tips

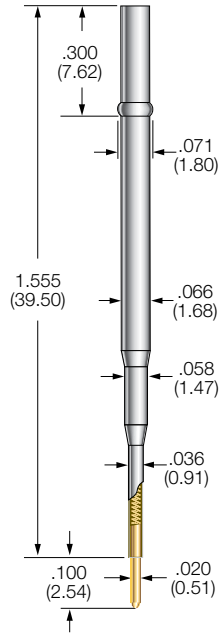


Steel Plunger Tips



Wireless Receptacle

R-100-J-DE



Probe Specifications

Minimum Centers: .100 (2.54)
Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)
Spring Force: 2.7 oz. (77g) @ .070 (1.77) travel
Maximum Travel: .100 (2.54)
Working Travel: .070 (1.77)

Materials

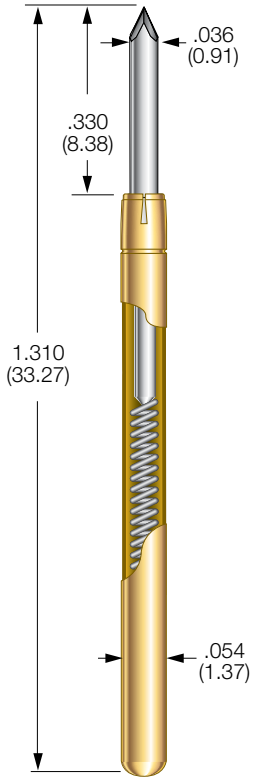
Receptacle: Nickel/silver, gold lined inside
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel

How to Order

R	100	J	DE
Series	Size	Tip Style	Termination

Lead Free Test Probe

ICT-100-LF Probe



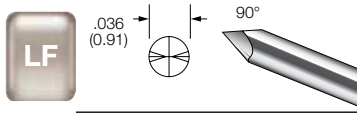
Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 8.0 oz. @ .170 (4.32) travel
Typical Resistance: < 30 mΩ against a lead free surface
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Materials

Barrel: G2
Spring: Music wire, nickel plated
Plunger: Steel, Duralloy™ plated

Plunger Tip



How to Order

ICT	100	LF	8	D	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger Option

How to Order: Spring Contact Probe

ICT	100	T	5.5	G	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger Option

Series:
ICT: High Performance
S: Standard Performance (No Bifurcated Beam)

Crimping pliers: CPR100
Insertion tool: RTR100

Spring Force:
3.5 oz. @ .170 (4.32) travel*
5.5 oz. @ .170 (4.32) travel
6.7 oz. @ .170 (4.32) travel
8.0 oz. @ .170 (4.32) travel
10.0 oz. @ .170 (4.32) travel
17.0 oz. @ .170 (4.32) travel
*S-100 Series only

Receptacle

R	100	WW	429
Series	Size	Termination	Post Length

Series:
R: High Performance
RX: Improved Pointing Accuracy

Termination:
CR: Crimp
SC: Solder Cup
RP: Round Post
WW: Wire Wrap

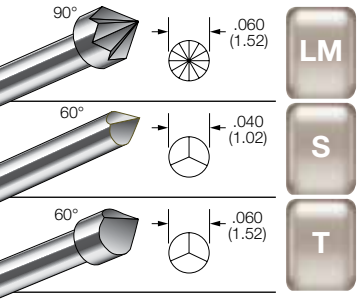
Post Length:
WW: 429, 694 or 1.044

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

S-100 Rotator .100 Centers

BeCu Plunger Tips



LM

S

T

Probe Specifications

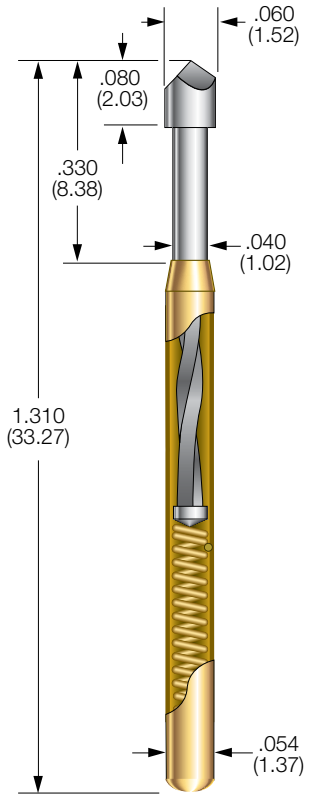
Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 4.0, 5.5, 6.7, 8.0 or 10.0 oz. @ .170 (4.32) travel
Typical Resistance: < 50 mΩ
Maximum Travel: .220 (5.59)
Working Travel: .170 (4.32)
Rotates: 90° @ .170 (4.32) travel

Rated Force oz (g)	Preload oz (g)	Material
4.0 (113)	1.5 (43)	SS
5.5 (156)	2.0 (57)	SS
6.7 (190)	1.5 (43)	SS
8.0 (227)	2.8 (80)	MW
10.0 (283)	1.8 (51)	MW

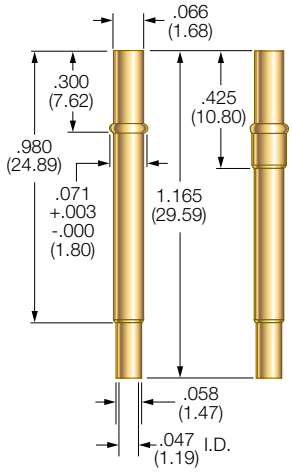
Materials

Contact Barrel: G2
Spring: Music wire or stainless steel, gold plated
Plunger: Beryllium copper, Duralloy™ plated
Receptacle: Nickel/silver, gold plated; gold plated post

S-100 Rotator



R-100 Receptacle
R Series RX Series



Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)
Recommended Wire: 22-26 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-100-CR	Crimp	1.165 (29.59)	1.495 (37.97)	—
R-100-SC	Solder Cup	1.165 (29.59)	1.495 (37.97)	—
R-100-RP	Round Post	1.540 (39.12)	1.870 (47.50)	.375 post length - .025 dia.
R-100-WW-429	Wire Wrap	1.594 (40.49)	1.924 (48.87)	.429 post length - .025 sq.
R-100-WW-694	Wire Wrap	1.859 (47.22)	2.189 (55.60)	.694 post length - .025 sq.
R-100-WW-1.044	Wire Wrap	2.209 (56.11)	2.539 (64.49)	1.044 post length - .025 sq.

How to Order: Spring Contact Probe

S	100	T	4	RT
Series	Size	Tip Style	Spring Force	Rotator

Spring Force:
4.0 oz. @ .170 (4.32) travel
5.5 oz. @ .170 (4.32) travel
6.7 oz. @ .170 (4.32) travel
8.0 oz. @ .170 (4.32) travel
10.0 oz. @ .170 (4.32) travel

Crimping pliers: CPR100
Insertion tool: RTR100

Receptacle

R	100	WW	429
Series	Size	Termination	Post Length

Series:
R: High Performance
RX: Improved Pointing Accuracy

Terminations:
CR: Crimp
SC: Solder Cup
RP: Round Post
WW: Wire Wrap

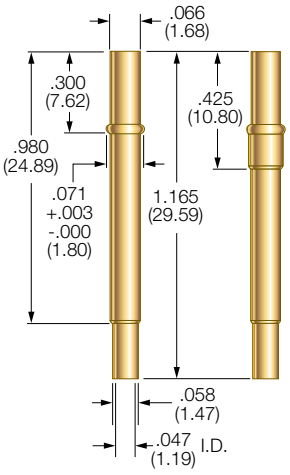
Post Length:
WW: 429, 694 or 1.044

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

R-100 Receptacle

R Series RX Series

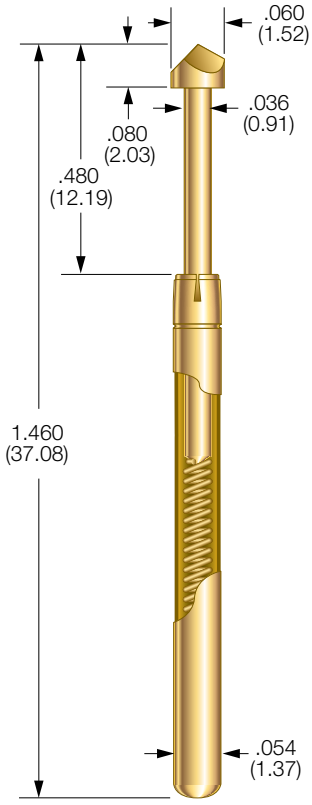


Drill Size: #50

Mounting Hole Size:
.068/.070 (1.73/1.78)

Recommended Wire: 22-26 gage

ICT-L100 Probe



Probe Specifications

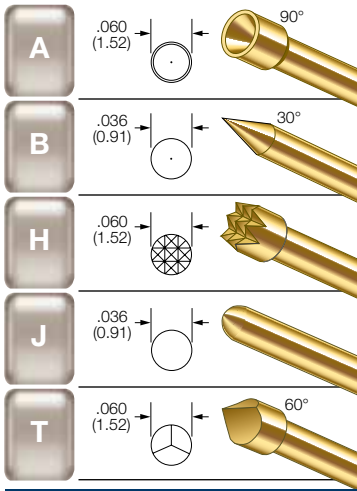
Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 5.7 oz. @.317 (8.05) travel
Typical Resistance: < 10 mΩ
Maximum Travel:
VLT tip: .385 (9.78)
All others: .400 (10.16)
Working Travel: .317 (8.05)

Rated Force oz (g)	Preload oz (g)
5.7 (162)	1.8 (51)

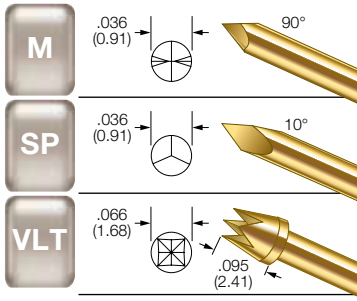
Materials

Barrel: G2
Spring: Music wire, gold plated over nickel
Plunger: Beryllium copper or steel, gold plated over nickel
Receptacle: Nickel/silver, gold plated; gold plated post

BeCu Plunger Tips



Steel Plunger Tips



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-100-CR	Crimp	1.165 (29.59)	1.645 (41.78)	—
R-100-SC	Solder Cup	1.165 (29.59)	1.645 (41.78)	—
R-100-RP	Round Post	1.540 (39.12)	2.020 (51.31)	.375 post length - .025 dia.
R-100-WW-429	Wire Wrap	1.594 (40.49)	2.074 (52.68)	.429 post length - .025 sq.
R-100-WW-694	Wire Wrap	1.859 (47.22)	2.339 (59.41)	.694 post length - .025 sq.
R-100-WW-1.044	Wire Wrap	2.209 (56.11)	2.689 (68.30)	1.044 post length - .025 sq.

How to Order: Spring Contact Probe

ICT	L100	T	5.7	G	S
Series	Size	Tip Style	Spring Force	Plating Options	Steel Plunger Option

Spring Force:
5.7 oz. @ .317 (8.05) travel

Crimping pliers: CPR100
Insertion tool: RTR100

Receptacle

R	100	WW	429
Series	Size	Termination	Post Length

Series:
R: High Performance
RX: Improved Pointing Accuracy, High Performance

Terminations:
CR: Crimp
SC: Solder Cup
WW: Wire Wrap
RP: Round Post

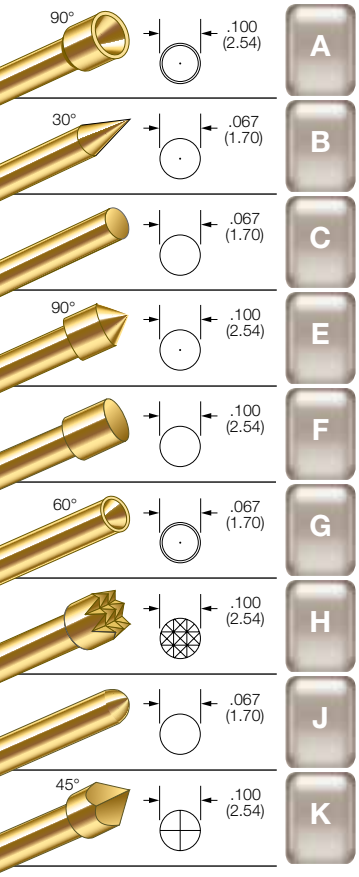
Post Length:
WW: 429, 694 or 1.044

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Series S Size 3 .125 Centers

Steel Plunger Tips



Probe Specifications

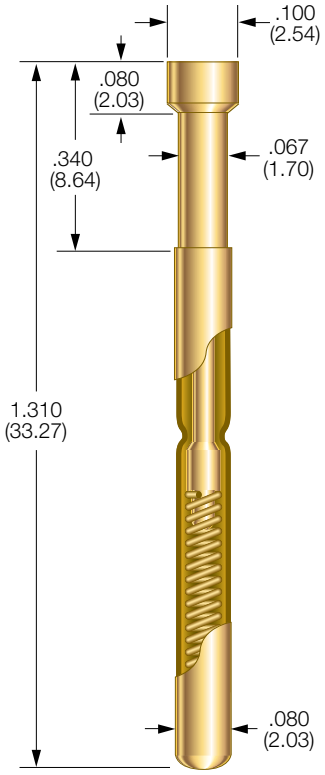
Minimum Centers: .125 (3.18)
Current Rating: 5 amps continuous
Spring Force: 4.0 or 7.0 oz. @ .170 (4.32) travel
Typical Resistance: < 20 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz (g)	Preload oz (g)
4.0 (113)	1.8 (51)
7.0 (198)	2.9 (82)

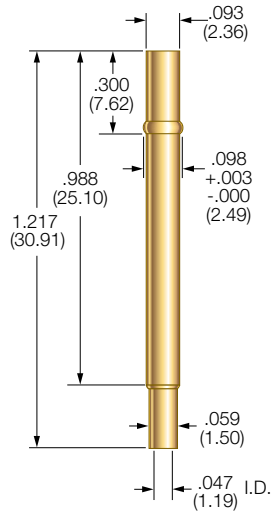
Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated, gold plated post

S-3 Probe



R-3 Receptacle



Drill Size: #41
Mounting Hole Size: .094/.096 (2.39/2.44)
Recommended Wire: 22-26 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-3-CR	Crimp	1.217 (30.91)	1.539 (39.09)	—
R-3-SC	Solder Cup	1.217 (30.91)	1.539 (39.09)	—
R-3-WW-429	Wire Wrap	1.646 (41.81)	1.968 (49.99)	.429 post length - .025 sq.

How to Order: Spring Contact Probe

S	3	A	4	G
Series	Size	Tip Style	Spring Force	Plating Options

Spring Force:
4.0 oz. @ .170 (4.32) travel
7.0 oz. @ .170 (4.32) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CP3
Insertion tool: RT3

Receptacle

R	3	WW	429
Series	Size	Termination	Post Length

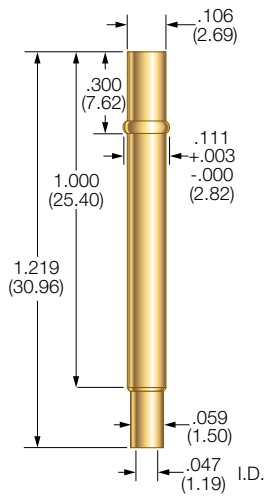
Terminations:
CR: Crimp
SC: Solder Cup
WW: Wire Wrap

Post Length:
WW: 429

View updates of this information at www.idinet.com

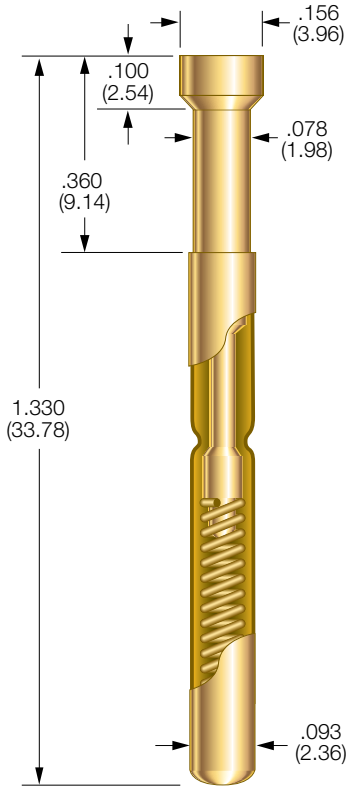
Specifications subject to change without notice. Dimensions in inches (millimeters)

R-4 Receptacle



Drill Size: #35
Mounting Hole Size: .108/.110 (2.74/2.79)
Recommended Wire: 22-26 gage

S-4 Probe



Probe Specifications

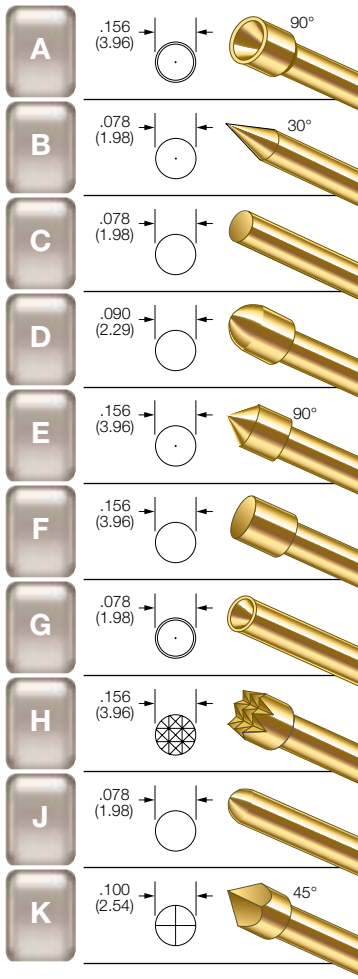
Minimum Centers:
Tip Styles B, C, D, G, J, K
.156 (3.96)
Tip Styles A, E, F, H
.187 (4.75)
Current Rating: 5 amps continuous
Spring Force: 5.0 or 7.0 oz. @ .170 (4.32) travel
Typical Resistance: < 20 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz (g)	Preload oz (g)
5.0 (142)	2.0 (57)
7.0 (198)	2.8 (79)

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel, gold plated
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated, gold plated post

BeCu Plunger Tips



Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length*	Comments
R-4-CR	Crimp	1.219 (30.96)	1.549 (39.34)	—
R-4-SC	Solder Cup	1.219 (30.96)	1.549 (39.34)	—
R-4-WW-429	Wire Wrap	1.648 (41.86)	1.978 (50.24)	.429 post length - .025 sq.

* Headless probes sit .020" deeper in receptacle. Dimension shown is for headed probe.

How to Order: Spring Contact Probe

S	4	A	5	G
Series	Size	Tip Style	Spring Force	Plating Options

Spring Force:
5.0 oz. @ .170 (4.32) travel
7.0 oz. @ .170 (4.32) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CP4
Insertion tool: RT4

Receptacle

R	4	WW	429
Series	Size	Termination	Post Length

Terminations:
CR: Crimp
SC: Solder Cup
WW: Wire Wrap

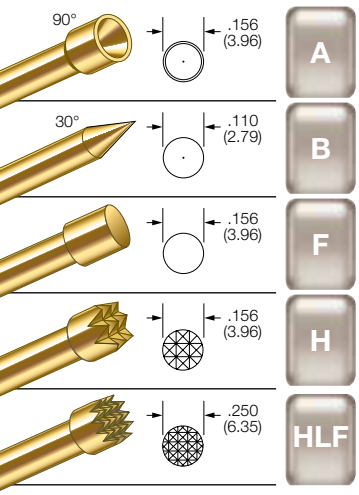
Post Length:
WW: 429

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Series S Size 5 .187 Centers

BeCu Plunger Tips



Probe Specifications

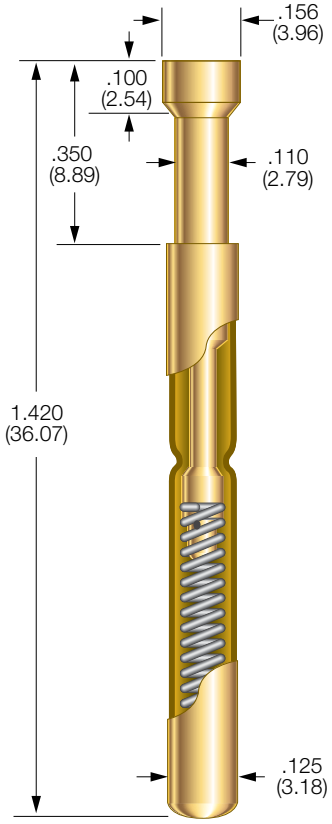
Minimum Centers: .187 (4.75)
.275 (6.99) for HLF tip style
Current Rating: 5 amps continuous
Spring Force: 8.0, or 16.4 oz. @ .170 (4.32) travel
Typical Resistance: < 8 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz (g)	Preload oz (g)	Material
8.0 (227)	3.1 (88)	SS
16.4 (465)	2.8 (79)	MW

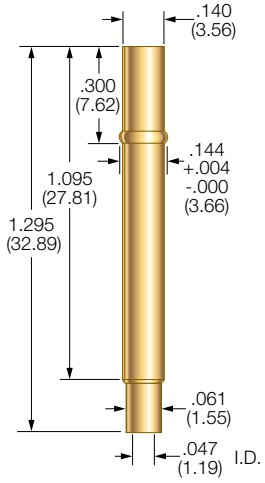
Materials

Barrel: Nickel/silver, gold plated
Spring: Music wire or stainless steel
Plunger: Beryllium copper, gold plated over nickel or Duralloy™
Receptacle: Nickel/silver, gold plated, gold plated post

S-5 Probe



R-5 Receptacle



Drill Size: 3,60mm
Mounting Hole Size:
.141/.143 (3.58/3.63)
Recommended Wire: 22-26 gage

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
R-5-CR	Crimp	1.295 (32.89)	1.620 (41.15)	—
R-5-SC	Solder Cup	1.295 (32.89)	1.620 (41.15)	—
R-5-WW-429	Wire Wrap	1.724 (43.79)	2.049 (52.04)	.429 post length - .025 sq.

How to Order: Spring Contact Probe

S	5	A	16.4	G
Series	Size	Tip Style	Spring Force	Plating Options

Spring Force:
8.0 oz. @ .170 (4.32) travel
16.4 oz. @ .170 (4.32) travel

Plating Options:
G: Gold Plated Plunger
D: Duralloy™ Plated Plunger

Crimping pliers: CP5
Insertion tool: RT5

Receptacle

R	5	WW	429
Series	Size	Termination	Post Length

Terminations:
CR: Crimp
SC: Solder Cup
WW: Wire Wrap

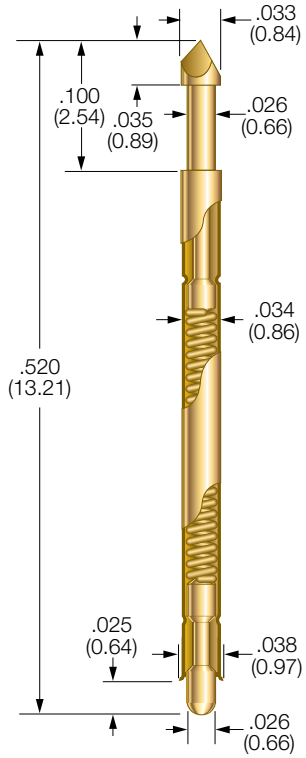
Post Length:
WW: 429

View updates of this information at www.idinet.com

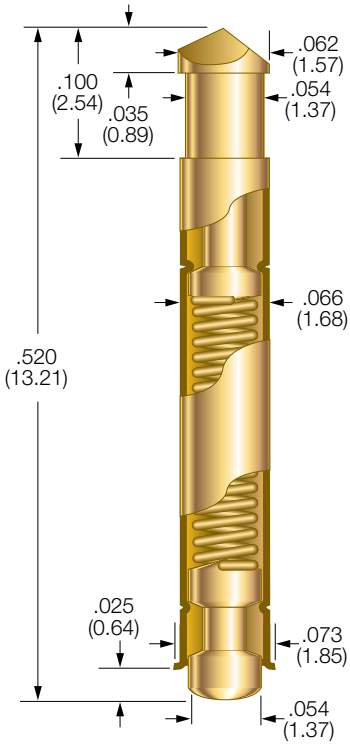
Specifications subject to change without notice. Dimensions in inches (millimeters)

Double Ended Interconnect Probes

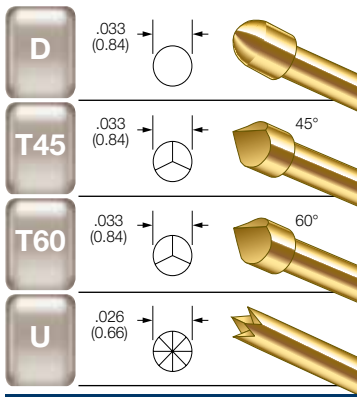
DE-50 Probe



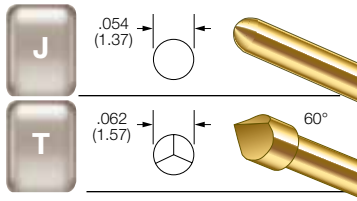
DE-100 Probe



DE-50 Plungers



DE-100 Plungers



Probe Specifications

Minimum Centers: .050 (1.27)
Drill Size: #64 – .0350/.0365 (0.89/0.93)
Current Rating: 3 amps continuous
Spring Force: 2.0 oz. (57g) @ .050 (1.27) travel
Typical Resistance: < 50 mΩ
Maximum Travel: .080 (2.03)
Working Travel: .050 (1.27)

Probe Specifications

Minimum Centers: .100 (2.54)
Drill Size: 1.75mm – .067/.069 (1.70/1.75)
Current Rating: 3 amps continuous
Spring Force: 3.0 oz. (85g) @ .050 (1.27) travel
Typical Resistance: < 50 mΩ
Maximum Travel: .080 (2.03)
Working Travel: .050 (1.27)

Materials

Barrel: Nickel/silver, gold plated
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated
Contact: Beryllium copper, gold plated

Materials

Barrel: Nickel/silver, gold plated
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated
Contact: Beryllium copper, gold plated

How to Order

DE-50-D-2-G
DE-50-T45-2-G
DE-50-T60-2-G
DE-50-U-2-G

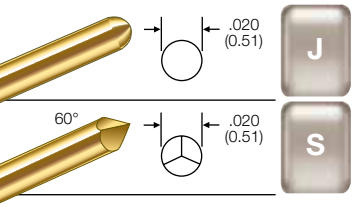
How to Order

DE-100-T-3-G
DE-100-J-3-G

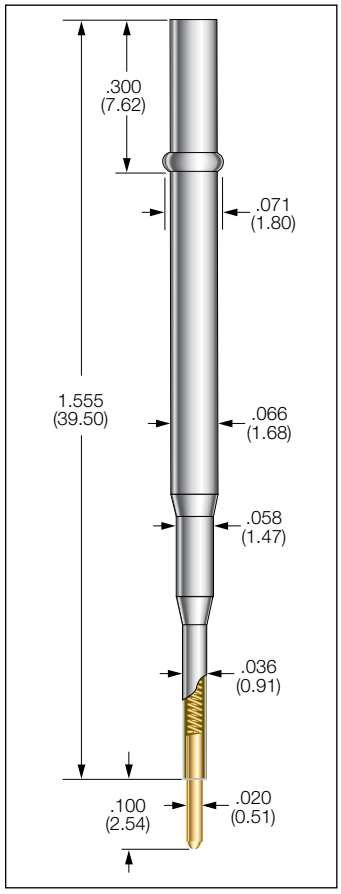
Specifications subject to change without notice. Dimensions in inches (millimeters)

Wireless Receptacles

BeCu Plunger Tips



R-100-J-DE



Probe Specifications

Minimum Centers: .100 (2.54)
Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)
Spring Force: 2.7 oz. (77g) @ .070 (1.77) travel

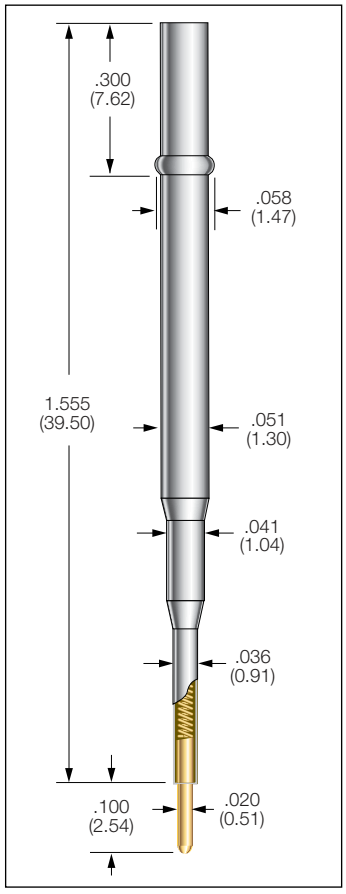
Materials

Receptacle: Nickel/silver, gold lined inside
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel
R-100-DE: Uses ICT-100, S-100 or ICT-L100 probe

How to Order:

R	100	J	DE
Series	Size	Tip Style	Termination

R-075-J-DE



Probe Specifications

Minimum Centers: .075 (1.91)
Drill Size: 1.45mm
Mounting Hole Size: .055/.057 (1.40/1.45)
Spring Force: 2.7 oz. (77g) @ .070 (1.77) travel

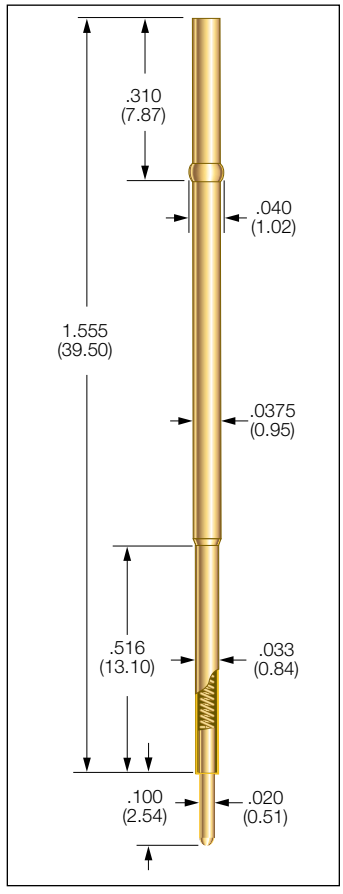
Materials

Receptacle: Nickel/silver, gold lined inside
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel
R-075-DE: Uses ICT-075, S-075 or ICT-L075 probe

How to Order:

R	075	J	DE
Series	Size	Tip Style	Termination

R-50C-J-DE



Probe Specifications

Minimum Centers: .050 (1.27)
Drill Size: #61
Mounting Hole Size: .0385/.0390 (0.98/0.99)
Spring Force: 2.7 oz. (77g) @ .070 (1.77) travel

Materials

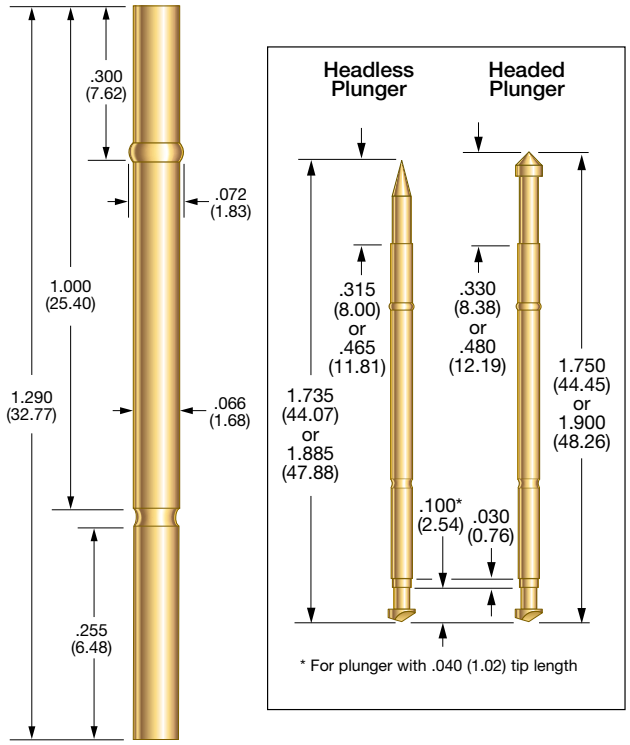
Receptacle: Beryllium copper, gold plated
Spring: Music wire, gold plated
Plunger: Beryllium copper, gold plated over nickel
R-50C-DE: Uses ICT-50C or S-50C probe

How to Order:

R	50C	J	DE
Series	Size	Tip Style	Termination

Specifications subject to change without notice. Dimensions in inches (millimeters)

R-100/SS



Receptacle Specifications

Minimum Centers: .100 (2.54)
Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)

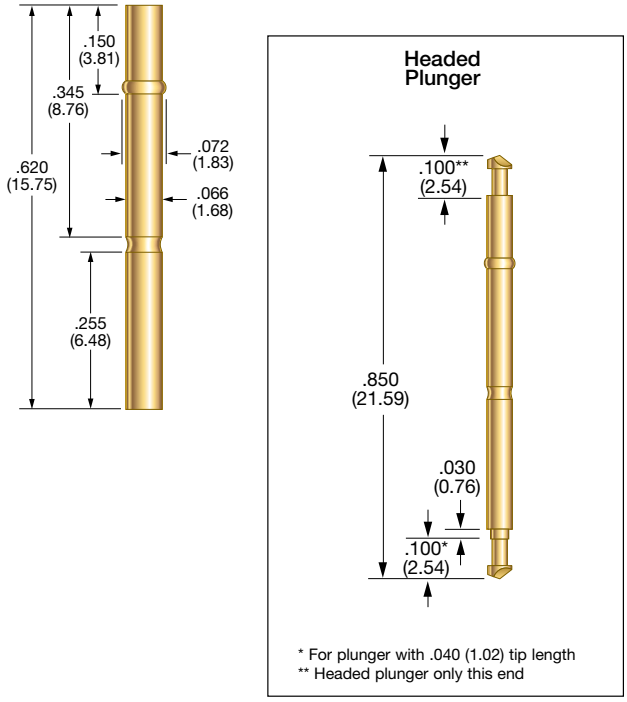
Materials

High Performance Series: Nickel/silver, gold plated
Standard Series: Nickel/silver
This receptacle houses a S-100, ICT-100 or ICT-L100 probe on the top end and an SS100 or GSS100 probe on the bottom end.

How to Order

R-100/SS	High Performance Series
RS-100/SS	Standard Series

R-SS/SS



Receptacle Specifications

Minimum Centers: .100 (2.54)
Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)

Materials

High Performance Series: Nickel/silver, gold plated
Standard Series: Nickel/silver
This receptacle houses an SS100 or GSS100 probe on each end.

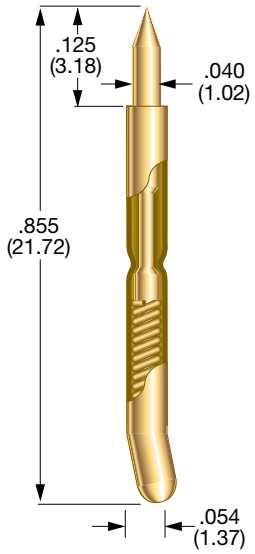
How to Order

R-SS/SS	High Performance Series
RS-SS/SS	Standard Series

Specifications subject to change without notice. Dimensions in inches (millimeters)

Interface Probes

GenRad Interface Probe



Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 4.0 oz. (113g) @ .083 (2.10) travel
Preload Force: 1.3 (37g)
Typical Resistance: < 25 mΩ
Maximum Travel: .125 (3.18)
Working Travel: .083 (2.10)

Materials

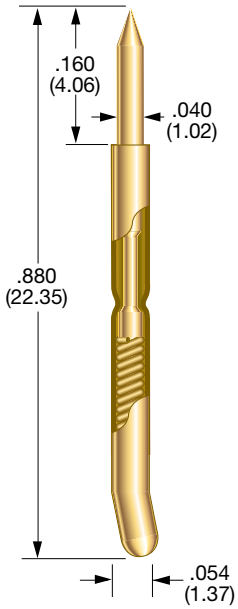
Barrel: Nickel silver, gold plated
Spring: Beryllium copper, precious metal plated
Plunger: Beryllium copper, gold plated over nickel

How to Order

SGR-2-B-4-G w/o bend
For use in GenRad 2270, 2271, 2272, 2282

SPGR-2-B-4-G with bend
For use in GenRad 2283, 2284, 2286, 2287 – models prior to 7/95

GenRad Interface Probe



Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 3.7 oz. (105g) @ .107 (2.72) travel
Preload Force: 1.4 (40g)
Typical Resistance: < 25 mΩ
Maximum Travel: .160 (4.06)
Working Travel: .107 (2.72)

Materials

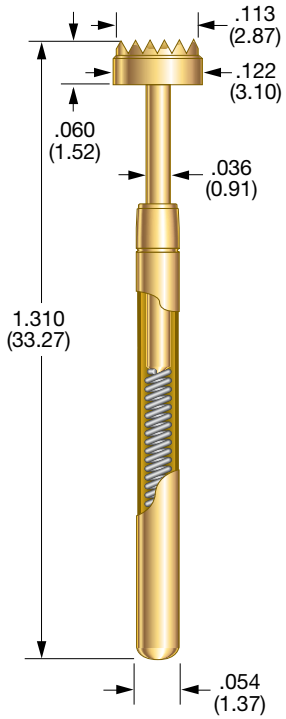
Barrel: Nickel silver, gold plated
Spring: Beryllium copper, precious metal plated
Plunger: Beryllium copper, gold plated over nickel

How to Order

SGR-2-B-3.7-G-880 w/o bend
For use in GenRad 2280, 2281, 2281A, 2287A, 228x ICA

SPGR-2-B-3.7-G-880 with bend
For use in GenRad 2283, 2284, 2286, 2287, LX228 – models prior to 7/95

Agilent Interface Probe



Probe Specifications

Minimum Centers: .150 (3.81)
Current Rating: 3 amps continuous
Spring Force: 3.5 oz. (99g) @ .170 (4.32) travel
Preload Force: 1.5 (43g)
Typical Resistance: < 25 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

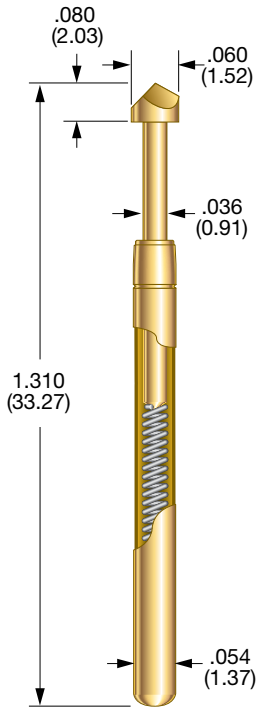
Materials

Barrel: G2
Spring: Beryllium copper, precious metal plated
Plunger: Beryllium copper, gold plated over nickel

How to Order

S-100-HP-3.5-G
For use in HP 3070, Series I and Series III

Teradyne Interface Probe



Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating: 3 amps continuous
Spring Force: 3.5 oz. (99g) @ .170 (4.32) travel
Preload Force: 1.5 (43g)
Typical Resistance: < 25 mΩ
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Materials

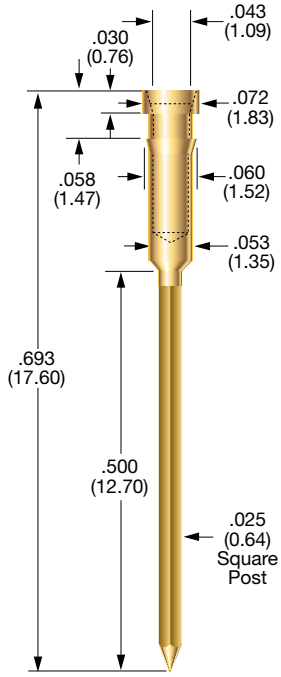
Barrel: G2
Spring: Beryllium copper, precious metal plated
Plunger: Beryllium copper, gold plated over nickel

How to Order

S-100-T-3.5-G
For use in 1800, Series 7878

Specifications subject to change without notice. Dimensions in inches (millimeters)

PI-301



Pin Specifications

Drill Size: 1.45mm
Mounting Hole: .057 (1.45)

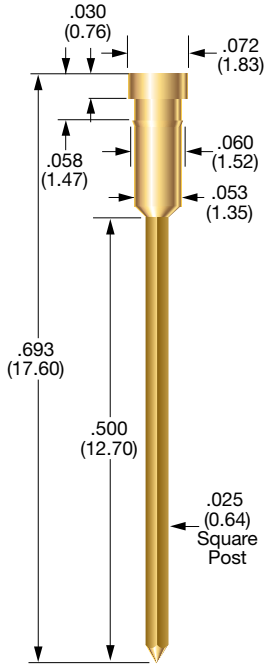
Materials

Material: Brass
Plating: Gold over nickel

How to Order

PI-301

PI-410



Pin Specifications

Drill Size: 1.45mm
Mounting Hole: .057 (1.45)

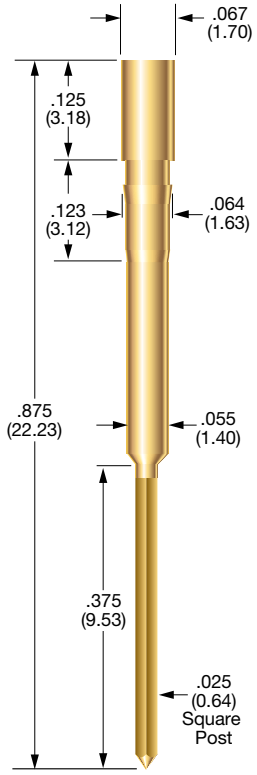
Materials

Material: Brass
Plating: Gold over nickel

How to Order

PI-410

PI-137



Pin Specifications

Drill Size: 1.55mm
Mounting Hole: .061 (1.55)

Materials

Material: Brass
Plating: Gold over nickel

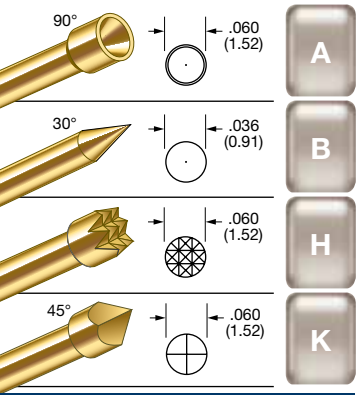
How to Order

PI-137

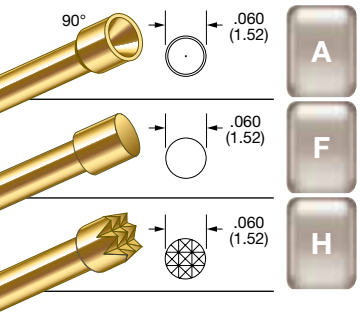
Specifications subject to change without notice. Dimensions in inches (millimeters)

SH-100 and SHE-100 .100 Centers

SHE-100 Plunger Tips



SH-100 Plunger Tips



Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating:
SHE-100: 8 amps continuous
SH-100: 15 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force:
4.0 oz. or 6.7 oz. @ .170 (4.32) travel
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

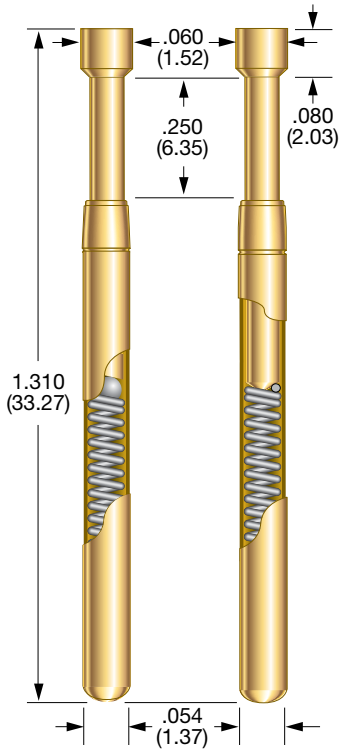
Rated Force oz. (g)	Preload oz. (g)
4.0* (113)	1.6 (45)
6.7 (190)	2.4 (68)

* SH-100 only

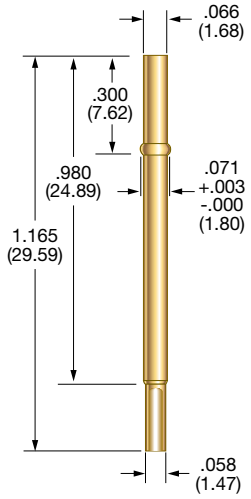
Materials

Barrel: High performance copper alloy, gold plated
Spring: Stainless steel
Plunger: Beryllium copper, gold plated
Ball: SH probe: Stainless steel
Receptacle: Copper alloy, gold plated

SH-100 SHE-100

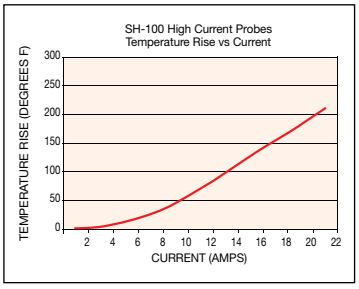


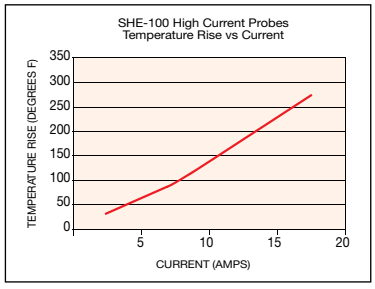
RH-100 Receptacle



Drill Size: #50
Mounting Hole Size: .068/.070 (1.73/1.78)
Recommended Wire: 22-26 gage

.100 Center High Current Probes





IDI current ratings are defined as the maximum current at which the temperature rise of the probe does not exceed 144°F (80°C) for a single probe in free air at ambient temperature for one hour.

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
RH-100-SC	Solder Cup	1.165 (29.59)	1.495 (37.97)	—
RH-100-WW-429	Wire Wrap	1.594 (40.49)	1.924 (48.87)	.429 post length - .025 sq.

How to Order: Spring Contact Probe

SHE	100	A	6.7	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
SHE: 8 Amps
SH: 15 Amps

Spring Force:
4.0* oz. @ .170 (4.32) travel
6.7 oz. @ .170 (4.32) travel

* SH-100 only

How to Order: Receptacle

RH	100	WW	429
Series	Size	Termination	Post Length

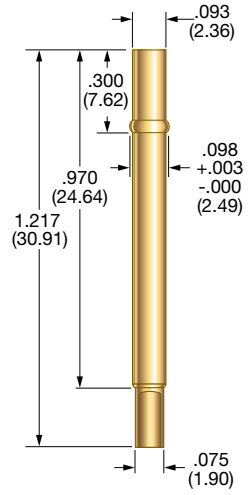
Terminations:
SC: Solder Cup
WW: Wire Wrap

Post Length
WW: 429

View updates of this information at www.idinet.com

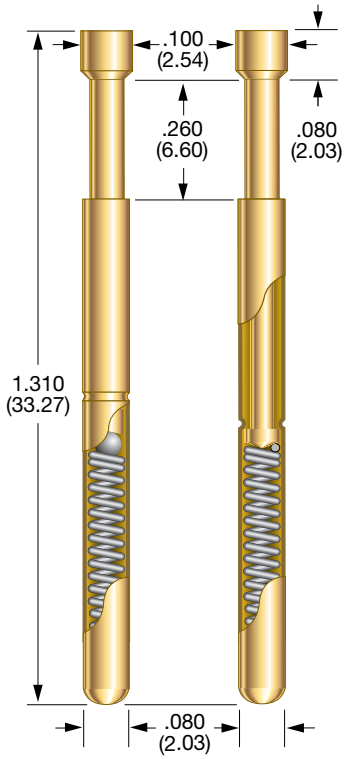
Specifications subject to change without notice. Dimensions in inches (millimeters)

RH-3 Receptacle



Drill Size: #41
Mounting Hole Size: .094/.096 (2.39/2.44)
Recommended Wire: 16 gage max.

SH-3 SHE-3



Probe Specifications

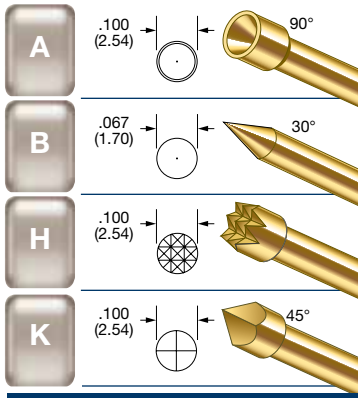
Minimum Centers: .125 (3.18)
Current Rating:
SHE-3: 14 amps continuous
SH-3: 27 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 7.0 oz. @ .170 (4.32) travel
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz. (g)	Preload oz. (g)
7.0 (199)	2.9 (82)

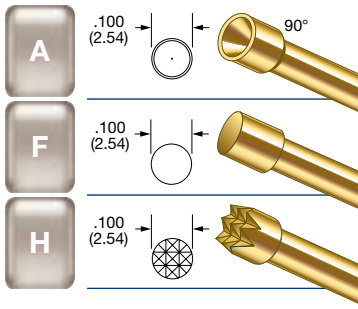
Materials

Barrel: High performance copper alloy, gold plated
Spring: Stainless steel
Plunger: Beryllium copper, gold plated
Ball: SH probe: Stainless steel
Receptacle: Copper alloy, gold plated

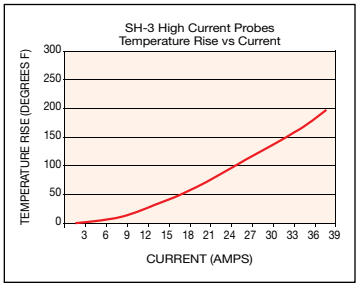
SHE-3 Plunger Tips

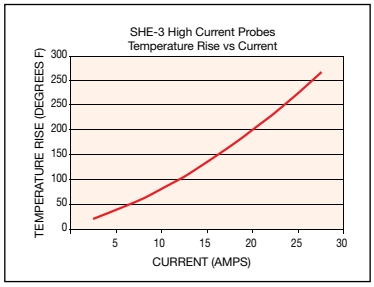


SH-3 Plunger Tips



.125 Center High Current Probes





IDI current ratings are defined as the maximum current at which the temperature rise of the probe does not exceed 144°F (80°C) for a single probe in free air at ambient temperature for one hour.

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
RH-3-SC	Solder Cup	1.217 (30.91)	1.539 (39.09)	—

How to Order: Spring Contact Probe

SHE	3	A	7	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
SHE: 14 amps
SH: 27 amps

Receptacle

RH	3	SC
Series	Size	Termination

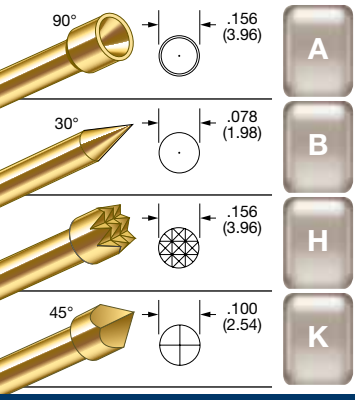
Terminations:
SC: Solder Cup

View updates of this information at www.idinet.com

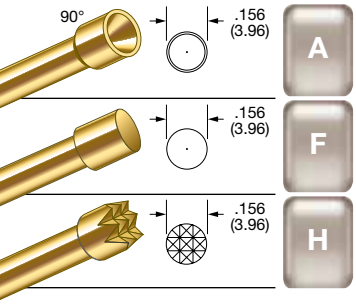
Specifications subject to change without notice. Dimensions in inches (millimeters)

SH-4 and SHE-4 .156 and .187 Centers

SHE-4 Plunger Tips



SH-4 Plunger Tips



Probe Specifications

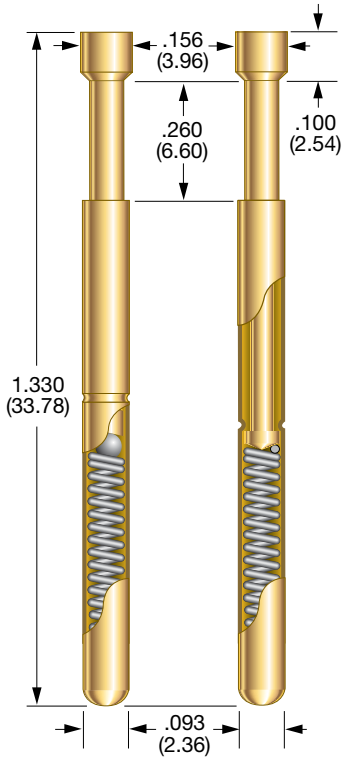
Minimum Centers:
.156 (3.96) tips B, K
.187 (4.75) tips A, F, H
Current Rating:
SHE-4: 21 amps continuous
SH-4: 32 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force:
10.0 oz. @ .170 (4.32) travel
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz. (g)	Preload oz. (g)
10.0 (283)	4.0 (115)

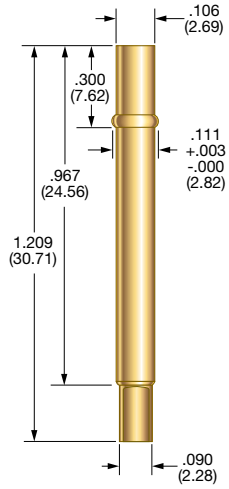
Materials

Barrel: High performance copper alloy, gold plated
Spring: Stainless steel
Plunger: Beryllium copper, gold plated
Ball: SH probe: Stainless steel
Receptacle: Copper alloy, gold plated

SH-4 SHE-4

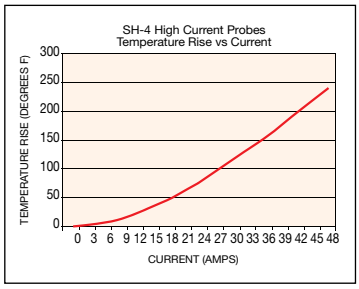


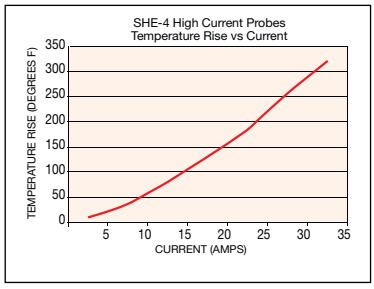
RH-4 Receptacle



Drill Size: #35
Mounting Hole Size:
.108/.100 (2.74/2.79)
Recommended Wire:
16 gage max.

.156 and .187 Center High Current Probes





IDI current ratings are defined as the maximum current at which the temperature rise of the probe does not exceed 144°F (80°C) for a single probe in free air at ambient temperature for one hour.

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
RH-4-SC	Solder Cup	1.209 (30.71)	1.539 (39.09)	—

How to Order: Spring Contact Probe

SHE	4	A	10	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
SHE: 21 Amps
SH: 32 Amps

Receptacle

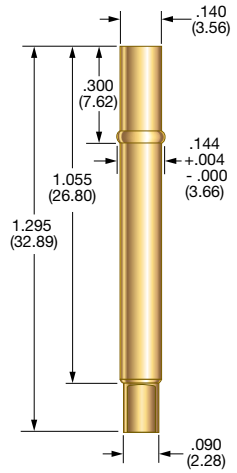
RH	4	SC
Series	Size	Termination

Terminations:
SC: Solder Cup

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

RH-5 Receptacle

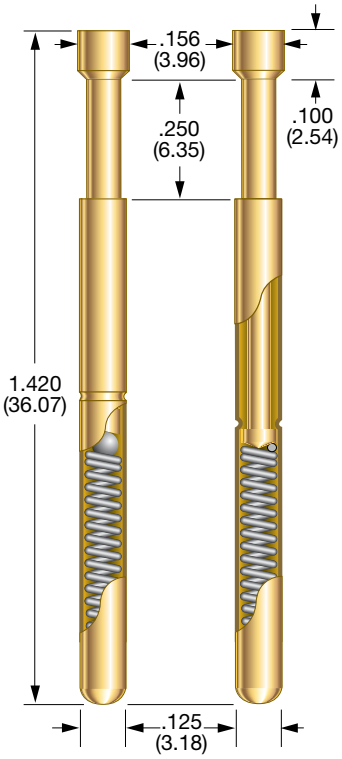


Drill Size: 3.60mm

Mounting Hole Size:
.141/.143 (3.58/3.63)

Recommended Wire:
16 gage max.

SH-5 SHE-5



Probe Specifications

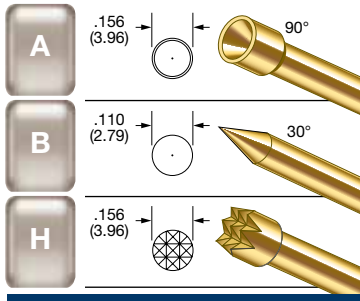
Minimum Centers: .187 (4.75)
Current Rating:
SHE-5: 23 amps continuous
SH-5: 39 amps continuous
(Individual probe in free air @ ambient temperature)
Spring Force: 18.7 oz. @ .170 (4.32) travel
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)

Rated Force oz. (g)	Preload oz. (g)
18.7 (531)	7.2 (204)

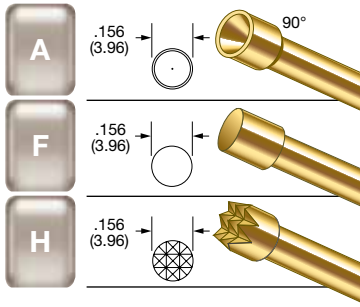
Materials

Barrel: High performance copper alloy, gold plated
Spring: Stainless steel
Plunger: Beryllium copper, gold plated
Ball: SH probe: Stainless steel
Receptacle: Copper alloy, gold plated

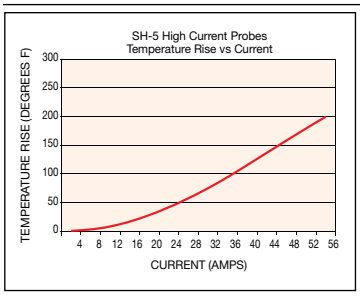
SHE-5 Plunger Tips

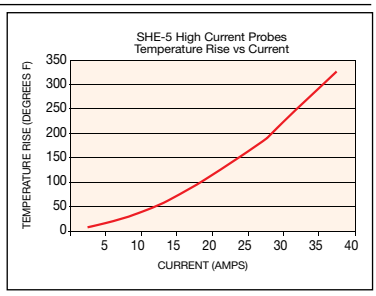


SH-5 Plunger Tips



.187 Center High Current Probes





IDI current ratings are defined as the maximum current at which the temperature rise of the probe does not exceed 144°F (80°C) for a single probe in free air at ambient temperature for one hour.

Receptacle Options

Part Number	Style	Receptacle Length	Probe/Receptacle Combined Length	Comments
RH-5-SC	Solder Cup	1.295 (32.89)	1.620 (41.15)	—

How to Order: Spring Contact Probe

SHE	5	A	18.7	G
Series	Size	Tip Style	Spring Force	Plating Options

Series:
SHE: 23 amps
SH: 39 amps

Receptacle

RH	5	SC
Series	Size	Termination

Terminations:
SC: Solder Cup

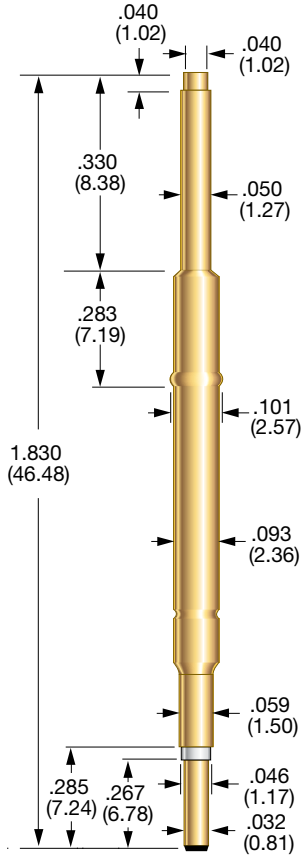
View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Switch Probes

The most common use for Switch Probes is in the cable harness testing industry. The Switch Probe is used to verify the correct location of a terminal in a connector while also checking the retention force. In addition, Switch Probes also verify the presence of non conductive components such as caps for connectors or devices on a circuit board. There are two separate current paths in a Switch Probe. From the plunger tip to the tail is normally open and closes only after the probe deflects to the designated travel. The second path, from the plunger tip to the outside of the receptacle, is always closed.

Size 3 Switch Probe



Probe Specifications

Minimum Centers: .125 (3.18)
Current Rating: 3 amps continuous
Maximum Travel: .295 (7.49)
Working Travel: .197 (5.00)
Travel to Switch Point: .025 (0.64)
Spring Force at Switch Point: 1.8 oz.

Rated Force oz. (g)	Rated Force @ Switch oz. (g)	Preload oz. (g)
4.0 (114)	1.8 (51)	1.4 (40)

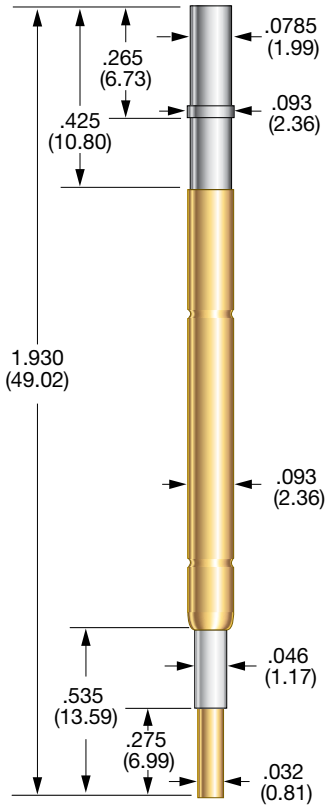
Materials

Barrel: Nickel/silver, gold plated
Spring: Music wire
Plungers: Full-hard beryllium copper, gold plated
Insulator: Delrin
Contact: Beryllium copper, gold plated

Mounting

Drill Size: #41
Mounting Hole Size: .094/.096 (2.39/2.44)
The size 3 switch probe shown does not require a receptacle. The barrel of the switch probe is designed to mount directly in the mounting plate.

Size 4 Switch Probe



Probe Specifications

Minimum Centers: .156 (3.96)
Current Rating: 3 amps continuous
Maximum Travel: .160 (4.06)
Working Travel: .120 (3.05)
Travel to Switch Point: .107 (2.72)
Spring Force at Switch Point: 4.4 oz.

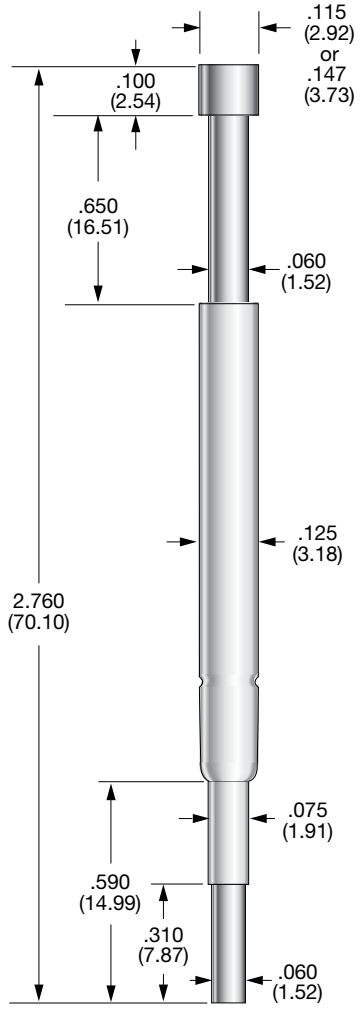
Rated Force oz. (g)	Rated Force @ Switch oz. (g)	Preload oz. (g)
4.8 (136)	4.4 (125)	2.5 (71)

Materials

Barrel: Nickel/silver, gold plated
Spring: Stainless steel
Plunger: Beryllium copper, nickel plated
Insulator: Delrin
Contact: Beryllium copper, gold plated

Specifications subject to change without notice. Dimensions in inches (millimeters)

Size 5 Switch Probe



Probe Specifications

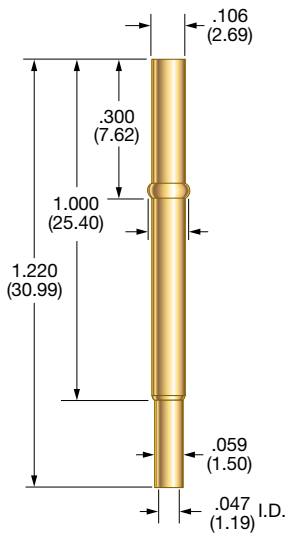
Minimum Centers: .187 (4.75)
Current Rating: 3 amps continuous
Maximum Travel: .190 (4.83)
Working Travel: .137 (3.48)
Travel to Switch Point: .030 (0.76)
Spring Force at Switch Point: 4.0 or 10.3 oz.

Rated Force oz. (g)	Force @ Switch oz. (g)	Preload oz. (g)	Material
8.6 (244)	4.0 (113)	1.8 (51)	SS
20.4 (579)	10.3 (293)	5.2 (148)	MW

Materials

Barrel: Nickel/silver, silver plated
Spring: Music wire or stainless steel
Plunger: Beryllium copper, nickel plated
Insulator: Delrin
Contact: Beryllium copper, nickel plated

R-4-SW



Probe Specifications

Minimum Centers: .156 (3.96)
Drill Size: #35
Mounting Hole Size:
.108/.110 (2.74/2.79)

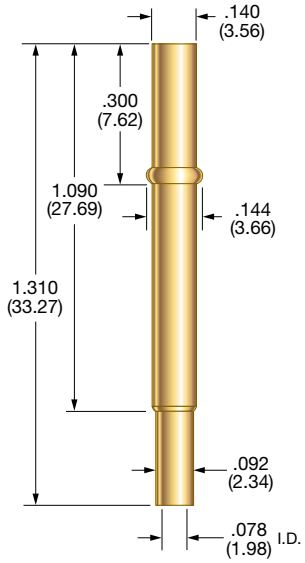
Materials

Nickel/silver, gold plated

How to Order

R-4-SW

R-5-SW



Probe Specifications

Minimum Centers: .187 (4.75)
Drill Size: 3.6mm
Mounting Hole Size:
.141/.143 (3.58/3.63)

Materials

Nickel/silver, gold plated

How to Order

R-5-SW

How to Order

SW	5	F	4.0	EN	115
Spring Contact Probe	Size	Tip Style	Spring Force at Switch	Plating Options	Head Diameter
	Size: 3, 4 or 5	Size 3: CS Size 4: C Size 5: F	Size 3: 1.8 Size 4: 4.4 Size 5: 4.0,10.3	Size 3: G-Gold Size 4: EN-Nickel Size 5: EN-Nickel	Size 5: 115 or 147

View updates of this information at www.idinet.com

Specifications subject to change without notice. Dimensions in inches (millimeters)

Thermocouple Probe

The Thermocouple Probe is an ungrounded, thermally conductive probe used for the measurement of variations in temperature. This probe is ideal for applications such as thermostat testing, semiconductor testing (burn-in), or any application in which accurate local temperature data is needed.

Temperature Range

Type T— up to 220° F

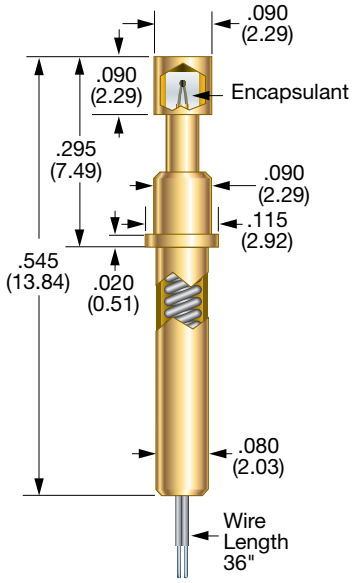
Type K— up to 350° F

Thermocouple Probe Design

The Thermocouple Probe's unique design insures that the wires are internally fixed. This is done to prevent the two thermocouple wires from becoming dislodged from the plunger head cavity. This result is increased durability, which extends the service life of the probe.

- The plunger material is gold plated over full hard beryllium copper
- Thes pring force is 3.0 oz. @ .060" rated travel
- The barrel is gold plated over brass.
- The plunger head cavity is filled with a thermally conductive, electrically insulative epoxy, encapsulating the thermocouple tip. The insulative epoxy allows for more efficient flow of heat to the thermocouple tip for faster temperature readings, while insulating it from electrical interference.

100895 Thermocouple Probe



Probe Specifications

Minimum Centers: .156 (3.96)
Spring Force: 3.0 oz. @ .060 (1.52) travel
Maximum Travel: .060 (1.52)
Working Travel: .060 (1.52)
Temperature Range:
Type T: up to 220° F
Type K: up to 350° F

Materials

Barrel: Brass, gold plated
Spring: Stainless steel
Plunger: Brass, gold plated
Tip: Beryllium copper, gold plated
Encapsulant: Thermally conductive, electrically insulative epoxy
Wire: 36 Gage
Type T - Red & Blue
Type K - Red & Yellow

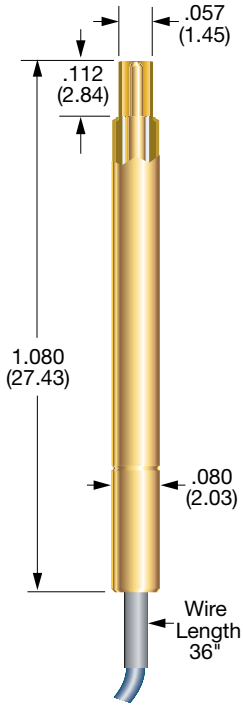
How to Order

100895-000: for Type K
100895-002: for Type T

Specifications subject to change without notice. Dimensions in inches (millimeters)

Kelvin Probes

SK-3 Kelvin Probe



Probe Specifications

Minimum Centers: .125 (3.18)
Current Rating: 3 amps continuous
Spring Force:
Center Conductor: 1.6 oz. @ .070 (1.78) travel
Outer Conductor: 3.3 oz. @ .070 (1.78) travel
Maximum Travel: .090 (2.28)
Working Travel: .070 (1.78)
Receptacle: R-3-CR (see page 76)

Materials

Barrel: Nickel/silver, gold plated
Outer Spring: Stainless steel, gold plated
Outer Plunger: Beryllium copper, gold plated
Center Conductor: S-00-DS probe

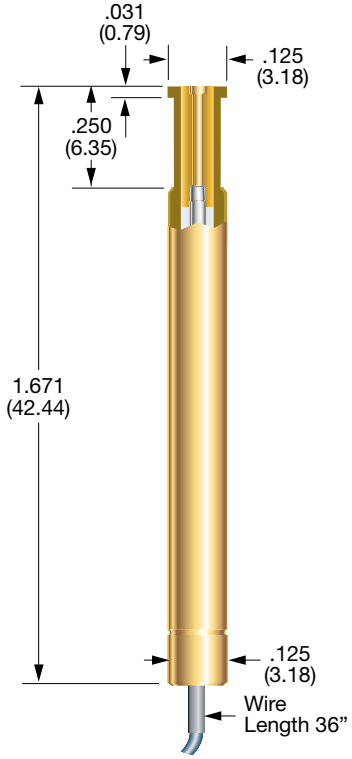
How to Order

SK	3	J	F	36	1
Series	Size	Center Conductor	Outer Plunger	Wire Length*	Strip Length*

F: Flat
S: Serrated

* Wire length 36", strip length 1". 12" & 36" standard.

SK-5 Kelvin Probe



Probe Specifications

Minimum Centers: .187 (4.75)
Current Rating: 3 amps continuous
Spring Force:
Center Conductor: 3.2 oz. @ .170 (4.32) travel
Outer Conductor: 4.0 oz. @ .170 (4.32) travel
Maximum Travel: .250 (6.35)
Working Travel: .170 (4.32)
Receptacle: R-5-CR (see page 78)

Materials

Barrel: Nickel/silver, gold plated
Outer Spring: Stainless steel, gold plated
Outer Plunger: Beryllium copper, gold plated
Center Conductor: S-50C probe

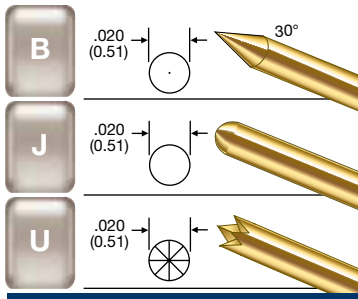
How to Order

SK	5	A	F	36	1
Series	Size	Center Conductor	Outer Plunger	Wire Length*	Strip Length*

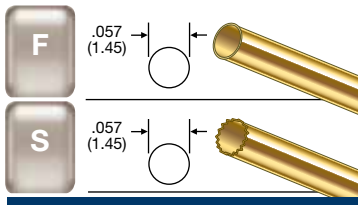
F: Flat
S: Serrated

* Wire length 36", strip length 1". 12" & 36" standard.

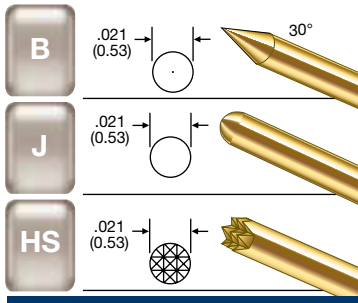
SK-3 Center Conductor



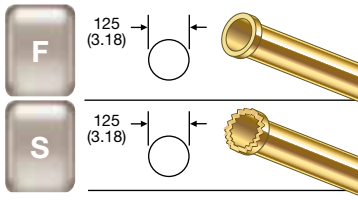
SK-3 Outer Plunger



SK-5 Center Conductor



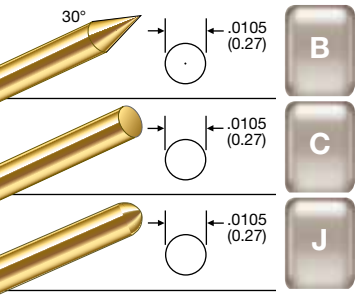
SK-5 Outer Plunger



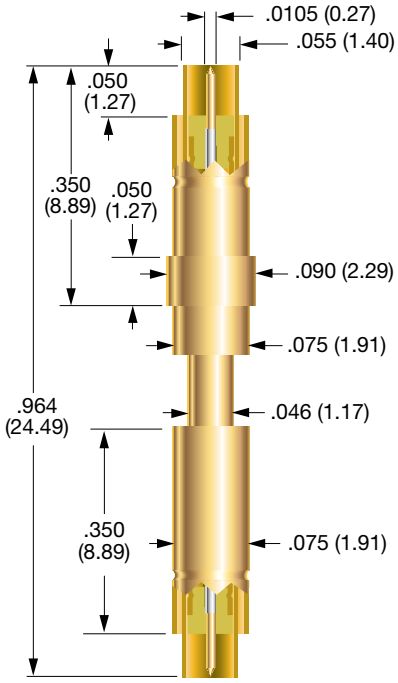
Specifications subject to change without notice. Dimensions in inches (millimeters)

Coax Probes Double Ended

Signal Plungers



100546



Probe Specifications

Minimum Centers: .100 (2.54)
Current Rating: 0.5 amps continuous
Spring Force:
Signal Conductor:
1.1 oz. @ .023 (0.58) travel, each end
Shielding Plunger:
2.2 oz. @ .023 (0.58) travel, each end
Nominal Impedance: 50 Ω
Maximum Travel: .050 (1.27), each end
Working Travel: .023 (0.58), each end

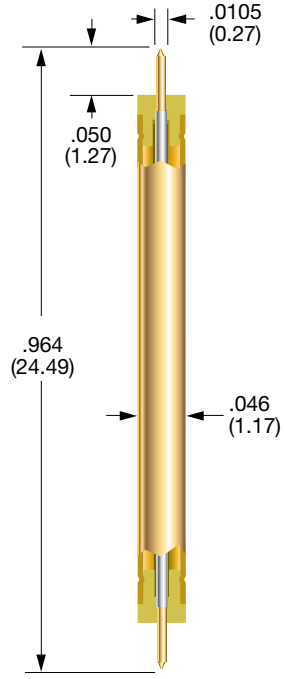
Materials

Barrel: Brass, gold plated
Spring:
Signal Conductor: Music wire, gold plated
Shielding Plunger: Music wire, gold plated
Shielding Plunger: Copper alloy, gold plated
Isolation Plug: Torlon
Dielectric Insulator: Air
Shielding Tube: Stainless steel, gold plated
Signal Conductor: Special Quad-0 probe

How to Order

100546	B	B	F
Base Part Number	Top Signal Probe Tip	Bottom Signal Probe Tip	Mounting Flange

100547



Probe Specifications

Minimum Centers: .070 (1.78)
Current Rating: 0.5 amps continuous
Spring Force:
Signal Conductor:
1.1 oz. @ .023 (0.58) travel, each end
Nominal Impedance: 50 Ω
Maximum Travel: .050 (1.27), each end
Working Travel: .023 (0.58), each end

Materials

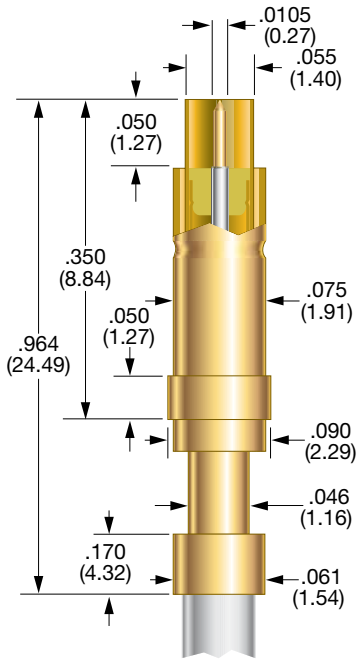
Spring: Music wire, gold plated
Isolation Plug: Torlon
Dielectric Insulator: Air
Shielding Tube: Stainless steel, gold plated
Signal Conductor: Special Quad-0 probe

How to Order

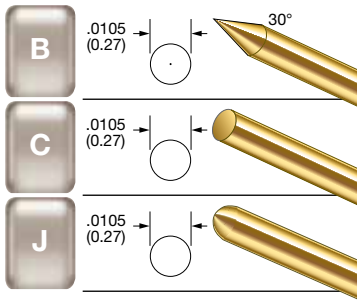
100547	B	B
Base Part Number	Top Signal Probe Tip	Bottom Signal Probe Tip

Specifications subject to change without notice. Dimensions in inches (millimeters)

100780



SIGNAL PLUNGER TIPS



PROBE SPECIFICATIONS

Minimum Centers: .100 (2.54)
Current Rating: 0.5 amps continuous
Spring Force:
Signal Conductor: 1.1 oz. @ .045 (1.14) travel
Shielding Plunger: 2.2 oz. @ .023 (0.58) travel
Nominal Impedance: 50 Ω
Maximum Travel: .050 (1.27)
Working Travel: .023 (0.58)

MATERIALS

Barrel: Brass, gold plated
Shielding Plunger: Beryllium copper, gold plated
Springs:
Signal Conductor: Music wire, gold plated
Shielding Plunger: Music wire, gold plated
Isolation Plug: Torlon
Dielectric Insulator: Air
Shielding Tube: Stainless steel, gold plated
Signal Conductor: Special Quad 0 probe
Coaxial Cable: Semi-rigid cable

HOW TO ORDER

100780	B	F	12	AM
BASE PART NUMBER	SIGNAL PROBE TIP	MOUNTING FLANGE	CABLE LENGTH	TERMINATION

CABLE LENGTH:
12 - 12 INCHES
36 - 36 INCHES

AM: SMA MALE
AF: SMA FEMALE
NC: NO CONNECTOR

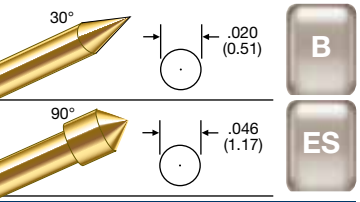
* WHEN ORDERING WITH A PREATTACHED CONNECTOR, PLEASE NOTE THAT THE CONNECTOR WILL NOT FIT THROUGH THE PROBE MOUNTING HOLE. THE PROBE MUST BE INSERTED FROM THE BOTTOM SIDE OF THE MOUNTING PLATE.

CONSULT IDI FOR MORE INFORMATION.

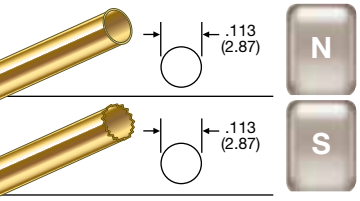
Specifications subject to change without notice. Dimensions in inches (millimeters)

Coax Probes SMB Connector

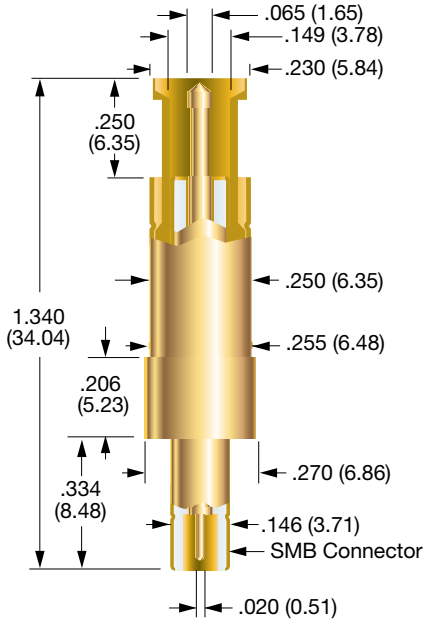
100559 & 100910 Signal Plungers



100559 & 100910 Shielding Plungers



100563



Probe Specifications

Minimum Centers: .300 (7.62)
Current Rating: 3 amps continuous
Spring Force:
Signal Conductor:
2.3 oz. @ .107 (2.72) travel
Shielding Plunger:
5.8 oz. @ .107 (2.72) travel
Nominal Impedance: 50 Ω
Maximum Travel: .170 (4.32)
Working Travel: .107 (2.72)

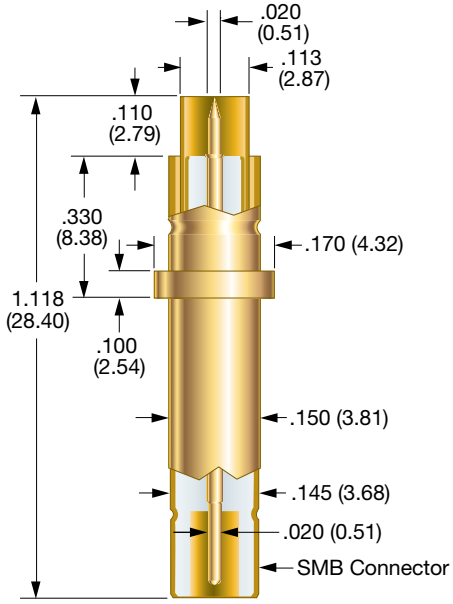
Materials

Barrel: Brass, gold plated
Spring:
Signal Conductor:
Beryllium copper, gold plated
Shielding Plunger:
Stainless steel, gold plated
Shielding Plunger: Brass, gold plated
Dielectric Insulator: Teflon
Shielding Tube: Stainless steel, gold plated
Signal Conductor: 100954

How to Order

100563	E
Base Part Number	Signal Probe Tip

100559 & 100910



Probe Specifications

Minimum Centers: .300 (7.62)
Current Rating: 3 amps continuous
Spring Force:
Signal Conductor:
1.6 oz. @ .070 (1.78) travel: tip B
2.0 oz. @ .070 (1.78) travel: tip ES
Shielding Plunger:
4.3 oz. @ .070 (1.78) travel
Nominal Impedance: 50 Ω
Maximum Travel:
.090 (2.29) for tip B
.075 (1.91) for tip ES
Working Travel: .070 (1.78)

Materials

Barrel: Brass, gold plated
Spring:
Signal Conductor:
Beryllium copper, gold plated
Shielding Plunger:
Stainless steel, gold plated
Shielding Plunger:
Beryllium copper, gold plated
Dielectric Insulator: Teflon
Shielding Tube: Brass, gold plated
Signal Conductor: Series S, Size 00

How to Order

100559	B	S
Base Part Number	Signal Probe Tip	Shielding Plunger

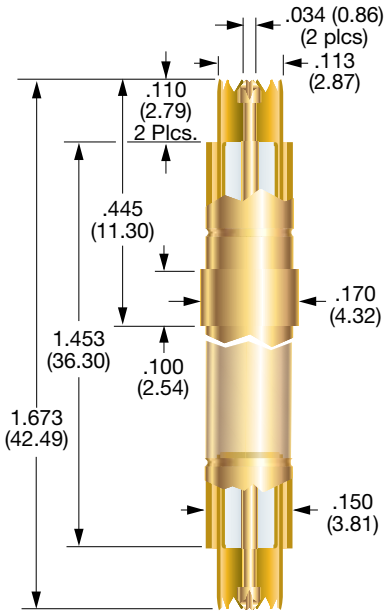
100559 without flange
100910 with flange

S: Serrated
N: Flat

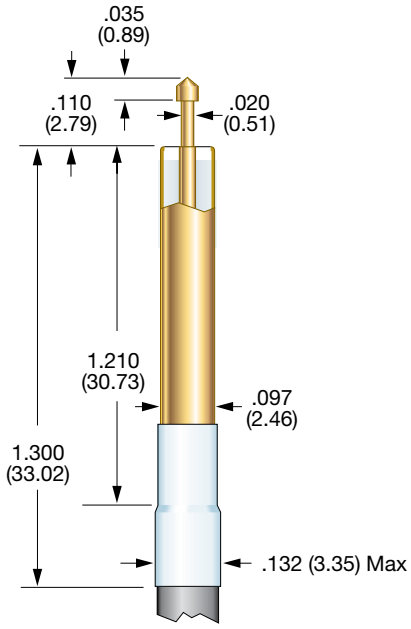
Specifications subject to change without notice. Dimensions in inches (millimeters)

Coax Probe

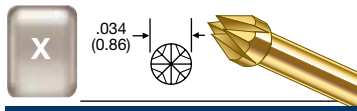
101097



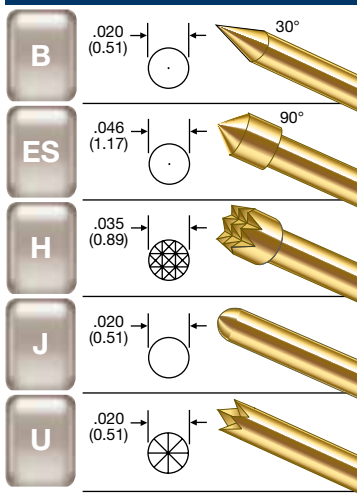
100526



101097 Signal Tip



100526 Signal Tips



Probe Specifications

Minimum Centers: .200 (5.08)
Current Rating: 3 amps continuous
Spring Force:
Signal Conductor:
1.6 oz. @ .037 (0.94) travel, each end
Shielding Plunger:
3.4 oz. @ .037 (0.94) travel, each end
Nominal Impedance: 50 Ω
Maximum Travel: .075 (1.91) each end
Working Travel: .037 (0.94) each end

Probe Specifications

Minimum Centers: .150 (3.18)
Current Rating: 3 amps continuous
Spring Force:
Signal Conductor:
1.6 oz. @ .070 (1.78) travel: tips B, J, U
2.0 oz. @ .070 (1.78) travel: tips ES, H
Nominal Impedance: 50 Ω
Maximum Travel:
.090 (2.29) for tips B, J, & U
.075 (1.91) for tips ES, & H
Working Travel: .070 (1.78)

Materials

Barrel: Brass, gold plated
Spring: Stainless steel, gold plated
Shielding Plunger: Beryllium copper, gold plated
Dielectric Insulator: Teflon
Shielding Tube: Brass, gold plated
Signal Conductor: 100617-000 probe

Materials

Spring: Beryllium copper, gold plated
Dielectric Insulator: Teflon
Shielding Tube: Brass, gold plated
Signal Conductor: Series S, Size 00 probe
Coaxial Cable: RG 316

How to Order

101097	X	X
Base Part Number	Top Signal Probe Tip	Bottom Signal Probe Tip

How to Order

100526	ES	12	AM
Base Part Number	Signal Probe Tip	Cable Length	Termination

Cable Length:
12 - 12 inches
36 - 36 inches

NC: No Connector
AM: SMA Male
AF: SMA Female

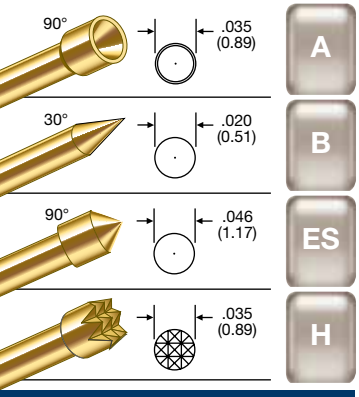
* When ordering with a preattached connector, please note that the connector will not fit through the probe mounting hole. The probe must be inserted from the bottom side of the mounting plate.

Consult IDI for more information.

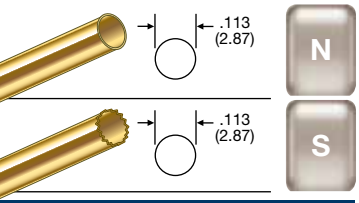
Specifications subject to change without notice. Dimensions in inches (millimeters)

Coax Probes Attached Cable

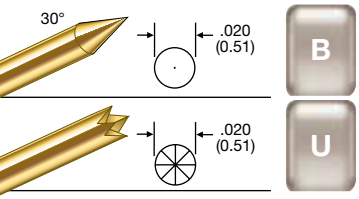
100445 & 100746 Signal Plungers



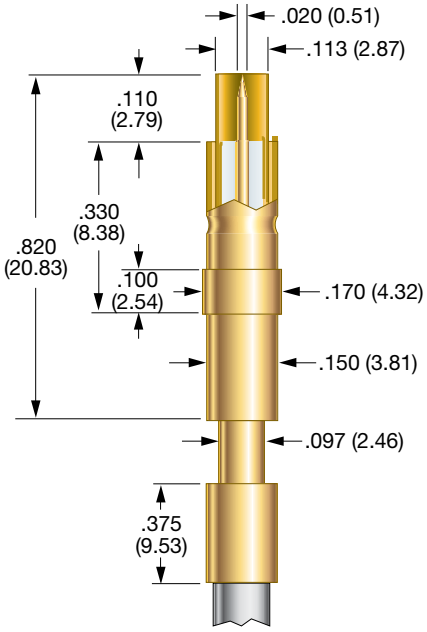
100445 & 100746 Shielding Plungers



100999 Plungers Tips



100445/100746



Probe Specifications

Minimum Centers: .200 (5.08)
Current Rating: 3 amps continuous
Spring Force: Signal Conductor:
B Tip: 1.6 oz. @ .070 (1.78) travel
A, ES, H Tips: 2.0 oz. @ .070 (1.78) travel
Shielding Plunger: 4.3 oz. @ .070 (1.78) travel
Nominal Impedance: 50 Ω
Maximum Travel:
.090 (2.29) for tip B
.075 (1.91) for tips A, ES, H
Working Travel: .070 (1.78)

Materials

Barrel: Brass, gold plated
Spring:
Signal Conductor: Beryllium copper, gold plated
Shielding Plunger: Stainless steel, gold plated
Shielding Plunger: Beryllium copper, gold plated
Dielectric Insulator: Teflon
Shielding Tube: Stainless steel, gold plated
Signal Conductor: Series S, Size 00 probe
Crimp Ferrule: Brass, gold plated
Coaxial Cable: 100445: RG 174U
100746: RG 316

How to Order

100445	B	F	N	12	AM
Base Part Number	Signal Probe Tip	Mounting Flange	Shielding Plunger	Cable Length	Termination

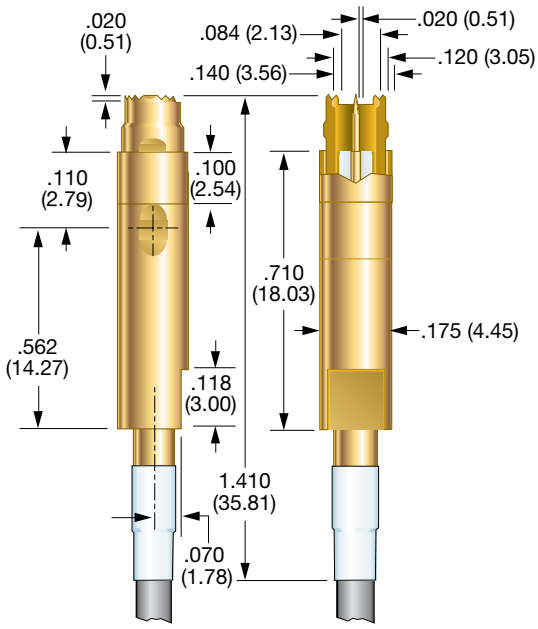
N: Without flange
F: With flange

Shielding Plunger:
S: Serrated
N: Flat

Cable Length:
12 - 12 inches
36 - 36 inches

AM: SMA Male
AF: SMA Female
NC: No Connector

100999



Probe Specifications

Minimum Centers: .200 (5.08)
Current Rating: 3 amps continuous
Spring Force: Signal Conductor:
B Tip: 1.6 oz. @ .070 (1.78) travel
U Tip: 3.3 oz. @ .070 (1.78) travel
Shielding Plunger: 4.5 oz. @ .070 (1.78) travel
Nominal Impedance: 50 Ω
Maximum Travel: .090 (2.29)
Working Travel: .070 (1.78)

Materials

Barrel: Brass, gold plated
Spring:
Signal Conductor: Beryllium copper, gold plated
Shielding Plunger: Stainless steel, gold plated
Shielding Plunger: Beryllium copper, gold plated
Dielectric Insulator: Teflon
Shielding Tube: Brass, gold plated
Signal Conductor: Series S, Size 00 probe
Coaxial Cable: Semi-flex or flex cable

How to Order

100999	B	12	AM	F
Base Part Number	Signal Probe Tip	Cable Length	Termination	Cable Type

Cable Length:
12 - 12 inches
36 - 36 inches

AM: SMA Male
AF: SMA Female
NC: No Connector

F: Flex
S: Semi-Flex

* When ordering with a preattached connector, please note that the connector will not fit through the probe mounting hole. The probe must be inserted from the bottom side of the mounting plate.

Consult IDI for more information.

Specifications subject to change without notice. Dimensions in inches (millimeters)

Comprehensive Source Book

Our comprehensive IDI Source Book can now be found on our web site: www.idinet.com, in the technology section. Our purpose for the IDI Source Book was to compile an easy to use, informative reference manual for test engineers, probe specifiers, purchasers and others involved in the test probe industry. It is intended to introduce design engineers to the concept of using spring contact probes as electromechanical interconnects. Growing daily in sophistication and utilization, spring contact probes are an exciting contact technology that is becoming a primary consideration in the connector world.

Product engineers are incorporating probes in cellular phones, military electronics, aerospace electronics, medical devices, and the most cutting-edge portable devices. Designers select from probes that offer exceptional DC or RF performance, controlled impedance, very low profiles, semiconductor scale pitch, or million cycle reliability; however, probes offer design engineers an almost infinitely customizable interconnect to form precisely the best probe for their particular application.

Green Initiative Policy Statement

Interconnect Devices, Inc., strives to continually reduce our impact on the environment and promote awareness of environmental issues. By implementing responsible cost saving or cost neutral practices wherever possible, we confirm our commitment to minimizing our overall environmental impact.

As a part of this effort, we have reduced the size of our printed catalog and have chosen to put the information online, therefore making it more readily available while conserving and reducing resources. In addition, we make every effort to chose printers who strive to do their part to reduce their impact on the environment.

It is our intent to educate and integrate our employees, customers, and our business partners on environmental responsibility. We commit to doing our part in keeping the world environmentally healthy.

INTERCONNECT DEVICES, INC.

GLOBAL SALES OFFICES

Customer Service

Kansas City, KS	913.342.5544	China	86.512.6273.1170
Sunnyvale, CA	408.834.1436	Singapore	65.6846.1655

Sales and Applications Engineering

Kansas City, KS	913.342.5544	France	33.617.93.1564
Sunnyvale, CA	408.834.1419	Germany	49.173.669.8335
Dallas, TX	972.899.2860	Italy	39.347.222.3420
Gilbert, AZ	480.682.6200	Israel	39.347.222.3420
Boston, MA	508.222.1132	United Kingdom	44.1869.245630
Southern CA	951.837.5385		
Malaysia	65.6846.1655	Philippines	63.92855.26843
Singapore	65.6846.1655	Korea	82.10.4939.3269
Taiwan	886.936.857.752	China	86.512.6273.1069

5101 Richland Ave., Kansas City, KS 66106
Phone: 913.342.5544 • Fax: 913.342.7043
E-mail: info@idinet.com
www.idinet.com

INNOVATORS IN INTERCONNECT TECHNOLOGY

www.idinet.com