# PRELIMINARY DATA SHEET: CA3508M4

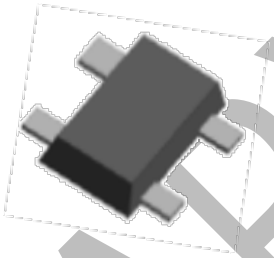
## L TO S BAND LOW NOISE AMPLIFIER

### Features :

- Low noise figure and high associated gain
  NF=0.43dB Typ., Ga=18.0dB Typ.
  @Vdd=3.0V, Idd=30mA, f=1.575GHz

### Description :

- Low Noise and High Gain
- On chip Bias supply circuit
- On chip ESD protection diode



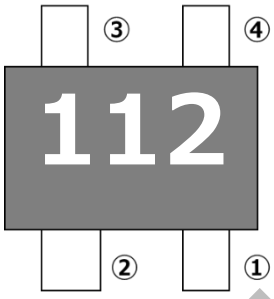
### Applications :

- LNA IC for GNSS/4K,8K LNA Block

### Package :

- Flat-lead 4-pin thin-type super minimold package

### PIN Configuration :




| PIN No. | PIN Name |
|---|---|
| 1 | Source |
| 2 | OUT |
| 3 | Source |
| 4 | IN |

### Ordering Information :

| Part Number | Order Number | Package | Marking | Supplying Form |
|---|---|---|---|---|
| CA3508M4-C2 | CA3508M4-C2 | Flat-lead 4-pin thin-type super minimold package | 112 | ・Embossed 8 mm wide<br>・Pin 1 (Source), Pin 2 (OUT) Face the perforation side of the Tape<br>・Qty 15Kpcs/reel |

## Absolute Maximum Ratings :

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Supply Voltage | Vdd | 4.0 | V |
| Input Power | Pin | +13 | dBm |
| Operating Ambient Temperature | $T_A$ | -45~+85 | ℃ |
| Storage Temperature | Tstg | -55~+150 | ℃ |

## Recommended Operating Range :

($T_A$=+25℃, unless otherwise specified)

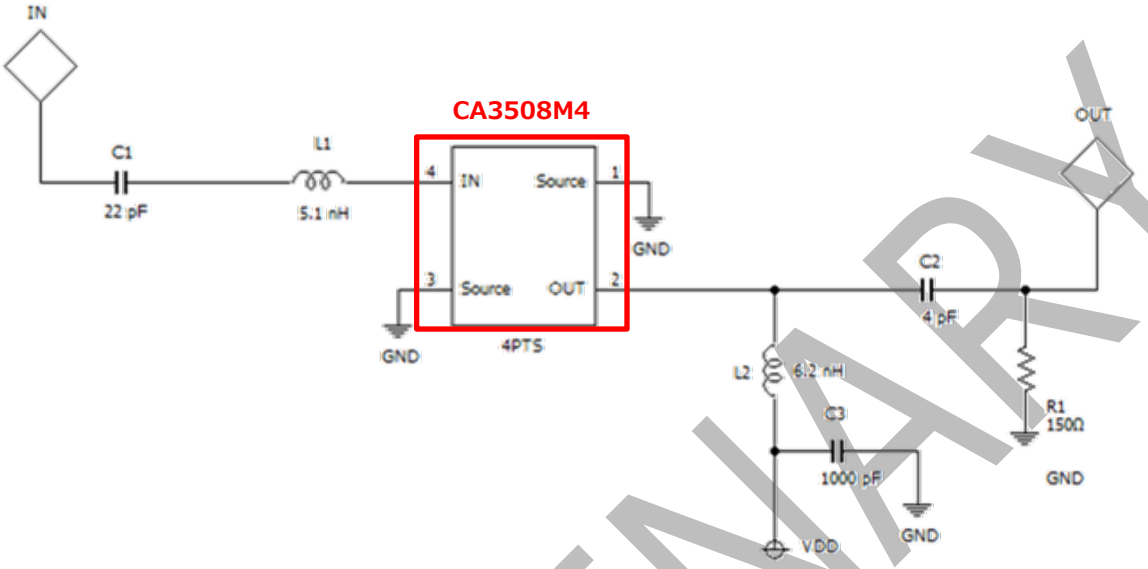
| Parameter | Symbol | MIN. | TYP. | MAX. | Unit |
|---|---|---|---|---|---|
| Supply Voltage | Vdd | 2.7 | 3.0 | 3.3 | V |
| Supply Current | Idd | TBD | 30 | TBD | mA |

## Electrical Characteristics :

($T_A$=+25℃, unless otherwise specified)

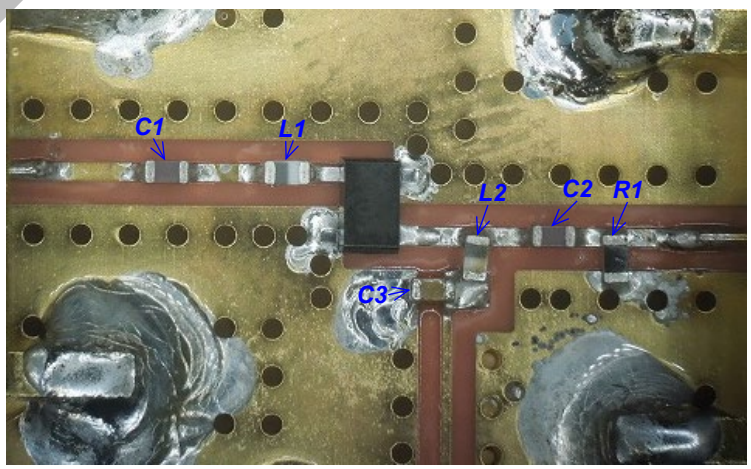
| Parameter | Symbol | Condition | MIN. | TYP. | MAX. | Unit |
|---|---|---|---|---|---|---|
| Power Gain | Gain | Vdd=3.0V, Idd=30mA, f=1.575GHz | TBD | 18.0 | - | dB |
| Noise Figure | NF | | - | 0.43 | TBD | dB |
| Input 3rd Order Intercept Point | IIP3 | Vdd=3.0V, Idd=30mA, f=1.575GHz | - | TBD | - | dBm |
| Output Power at 1dB Compression Point | $P_{O(1dB)}$ | Vdd=3.0V, Idd=30mA (Non-RF) f=1.575GHz | - | 12.0 | - | dBm |

## Application Circuit:

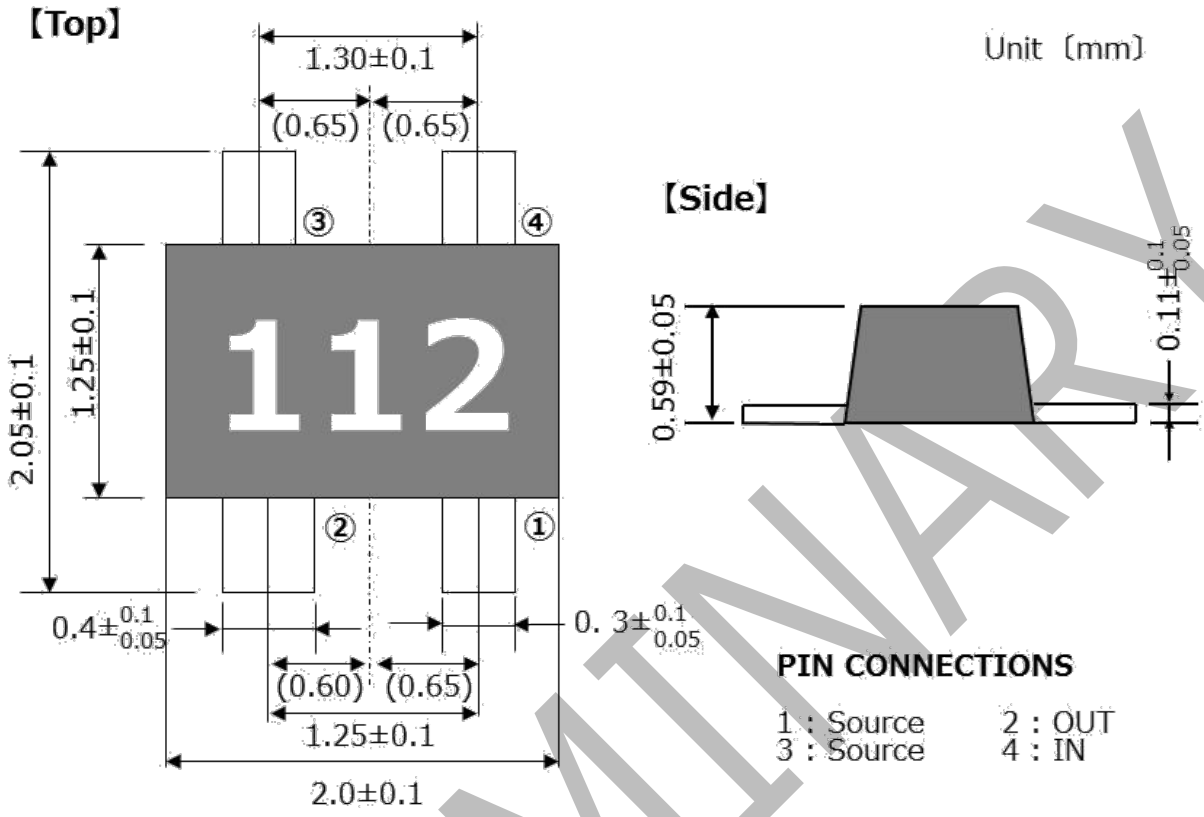



## Evaluation Board Information :

**<PCB>**
**FR-4**
**t = 0.2 mm**
**εr = 4.30**
**tan delta = 0.016**



## Package Dimensions :



[Caution in the gallium arsenide (GaAs) product handling]

This product uses gallium arsenide (GaAs) of the toxic substance appointed in laws and ordinances. GaAs vapor and powder are hazardous to human health if inhaled or ingested.

- Do not dispose in fire or break up this product.
- Do not chemically make gas or powder with this product.
- When discard this product, please obey the law of your country.
- Do not lick the product or in any way allow it to enter the mouth.

[CAUTION]

Although this device is designed to be as robust as possible, ESD (Electrostatic Discharge) can damage this device. This device must be protected at all times from ESD. Static charges may easily produce potentials of several kilovolts on the human body or equipment, which can discharge without detection. Industry-standard ESD precautions should be used at all times.

CEL Headquarters • 4590 Patrick Henry Drive • Santa Clara, CA 95054 • Tel: (408) 919-2500 • www.cel.com

For a complete list of sales offices, representatives and distributors,

Please visit our website: www.cel.com/contactus

For inquiries email us at rfw@cel.com

# PRELIMINARY DATA SHEET: CA3508M4

## L TO S BAND LOW NOISE AMPLIFIER

**Revision History**

| Version | Change to current version | Page(s) |
|---|---|---|
| CDS-0058-01<br>Sept. 2018 | Preliminary data sheet | N/A |
| | | |
| | | |