

OEM / Integrators Installation Manual

Module Features

- Bluetooth system v3.0+EDR, 2.1+EDR, 2.0+EDR Compliant
- Class 2 Level Output Power Available
- UART Bypass Mode Support
- Scatternet Support
- Support of all Bluetooth packet types (voice and data)
- Support of low power modes: Park, Sniff and Hold
- UART, USB and PCM Interface Available
- Built-in Reference Clock: 26MHz
- High performance Stereo Codec
- 16Mbits Flash Memory
- Enhanced Audibility and Noise Cancellation
- RoHS Compliant

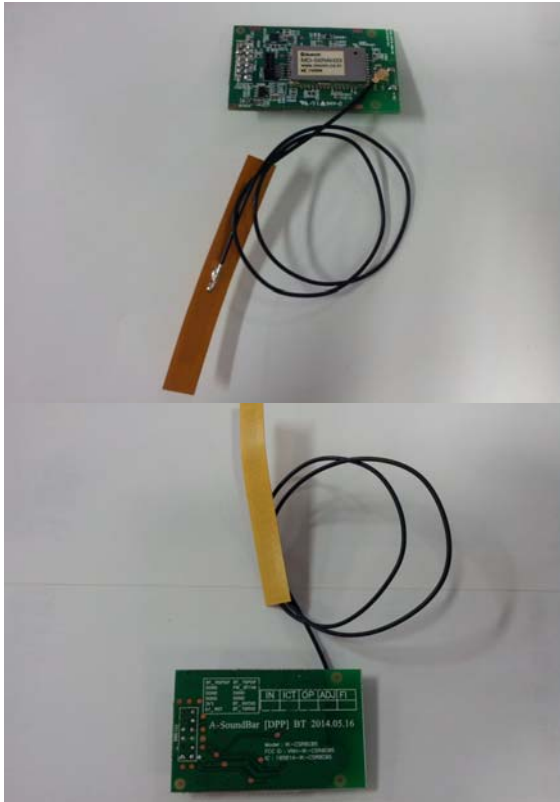
Applications

- High Quality Stereo Wireless Headsets
- Hands-Free Car Kits
- Wireless Speakers
- Analogue and USB Multimedia Dongles
- Bluetooth-Enabled Automotive wireless Gateways.

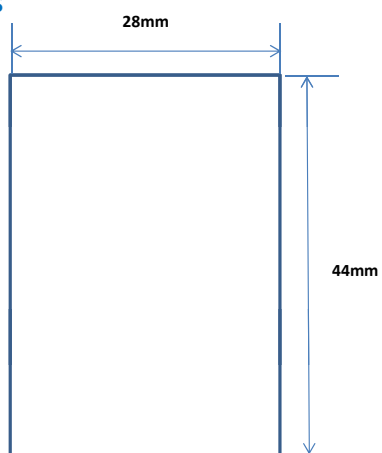
Features

- Size (12.0 X 20.0 X 2.3 mm)
- Class2 Support
- Surface Mountable
- 1.8V Power Supply for core
- 3.3V Power Supply for Memory, USB, UART, GPIO
- Not built-in Antenna (Antenna gain: 0dBi)

Device Overview



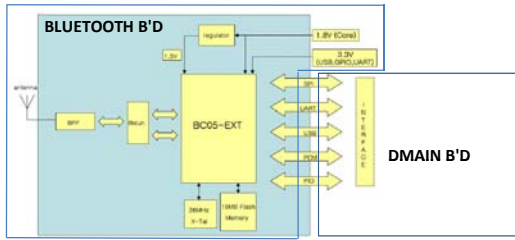
Dimensions



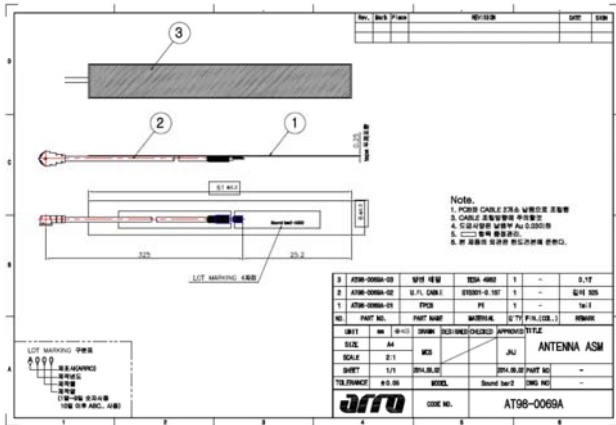
RF specification

Transmitter Performance					
Parameter	Condition	Min	Typ	Max	Unit
Output Power	Normal/extreme test	-6	3	5	dBm
Power Density	Normal/extreme test	-	-	20	dBm
Power Control	Normal/extreme test				
Frequency Range	Normal/extreme test	2402	-	2480	MHz
20dB Bandwidth	Normal/extreme test	-	850	1000	KHz
Adjacent channel power	±2MHz	-	-	-20	dBm
	±3MHz	-	-	-40	dBm
	±4MHz	-	-	-40	dBm
Modulation Characteristics	ΔF1avg	140	-	175	KHz
	ΔF2max	115	-	-	KHz
	ΔF2avg/ΔF1avg	-	-	80	%
Initial Carrier Frequency Tolerance		-75	-	75	KHz
Carrier Frequency Drift	One slot Packet(DH1)	-25	-	25	KHz
	Three slot Packet(DH3)	-40	-	40	KHz
	Five slot Packet(DH5)	-40	-	40	KHz
Transceiver Performance					
Parameter	Condition	Min	Typ	Max	Unit
Out-of Band spurious Emissions	30MHz-1GHz	-	-	-36	dBm
	1GHz-12.75GHz	-	-	-30	dBm
	1.8GHz-5.3GHz	-	-	-47	dBm
	5.1GHz-5.3GHz	-	-	-47	dBm
Receiver Performance					
Parameter	Condition	Min	Typ	Max	Unit
Sensitivity level	Single slot packets	-70	-83	-	dBm
Sensitivity level	Multi slot packets	-70	-	-	dBm
C/I performance	C/I co-channel	-	9	11	dB
	C/I _{1MHz} (adjacent channel)		-2	0	dB
	C/I _{2MHz} (2nd Adjacent channel)		-34	-30	dB
	C/I _{≥3MHz} (3 rd adjacent channel)		-43	-40	dB
Blocking performance	30MHz-2000MHz	-10	-	-	dBm
	2000MHz-2400MHz	-27	-	-	dBm
	2500MHz-3000MHz	-27	-	-	dBm
	3000MHz-12.75MHz	-10	-	-	dBm
Intermodulation Performance	N=5	-39	-	-	dBm
Maximum Input Level		-20	-5	-	dBm

Block Diagram



Antenna



Regulatory

USA

The **IK-CSRBC05** module has been labeled with its own FCC ID number, and if the FCC ID is not visible when the module is installed inside host audio device.

Then the outside of the finished product into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording as follows:

Contains FCC ID: **VNH-IK-CSRBC05**

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference,
- And (2) this device must accept any interference received,
Including interference that may cause undesired operation

A user's manual for the product should include the following statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The following statement must be included as a CAUTION statement in manuals to alert users of FCC RF exposure compliance:

To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions:

The antenna must be installed such that 20 cm is maintained between the antenna and users, and The transmitter module may not be co-located with any other transmitter or antenna. As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following:

"Contains FCC ID:VNH-IK-CSRBC05",

"contains IC: 10581A-IKCSRBC05". The grantee's FCC ID can be used only when all FCC/ IC compliance requirements are met.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The Grantee must instruct the OEM/Integrator to include statements as required per Parts 15.19 and 15.21.

An attestation that the Grantee will provide guidance to the host manufacturer for compliance to Part 15, subpart B requirements.

The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirement.

CANADA

The **IK-CSRBC05** module has been labeled with its own IC number, and if the IC is not visible when the module is installed inside host audio device.

Then the outside of the finished product into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording as follows:

Contains IC: **10581A-IKCSRBC05**

A user's manual for the product should include the following statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.