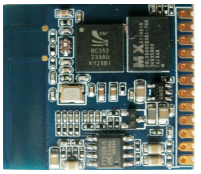
29.0 x 25.5 x 2.8 mm SMT Bluetooth Module

ABBTM-2.4GHz-33-T

Compliant to MSL level 3

RoHS Compliant



29.0 x 25.5 x 2.8 mm SMT

FEATURES:

- Bluetooth Spec v1.2 Compliant
- Class 2, up to 10-meter range
- Complete 2.4GHz Bluetooth® System
- Power management: low power 1.8V operation for Bluetooth® core
- Compact size: 29.0mm (L) x 25.5 (W) mm x 2.8 (H) mm
- Bluetooth® Profile Supported: HSP, HFP, A2DP, AVRCP
- Built-in stereo codec
- Internal antenna
- Built-in audio amplifier
- Built-in power manager
- On-board flash memory (8Mbits)
- Echo cancellation software library
- Several firmware options
- Rewritable flash memory for easy upgrade route

APPLICATIONS:

- Automotive car kit applications
- PDAs and other portable terminals
- Car radio/Car DVD

GENERAL DESCRIPTION

Abracon's ABBTM-2.4GHz-33-T module is a complete Bluetooth® solution built on CSR BC03 MultiMedia External Core, supported by 8Mbit on-board Flash Memory. ABBTM-2.4GHz-33-T is a short range, compact, cost effective solution designed to facilitate Bluetooth® connectivity for applications including Car & Home Audio and other Handsfree solutions.

ABBTM-2.4GHz-33-T module is a Power Class-2 Bluetooth® device, compliant with version 1.2 specification. The overall architecture comprises of built-in antenna and supporting circuitry for software protocols including L2CAP, SDP, GAP, HSP, HFP, A2DP and AVRCP, resident in the on-board Flash Memory.

ELECTRICAL SPECIFICATIONS:

Operating Frequency Band	2.4GHz ~ 2.48GHz Unlicensed ISM Band
Bluetooth Specification	V1.2
Output Power Class	Class 2
Operating Voltage	+3.3V and +5.0V
Host Interface	UART
Flash Memory Size	8 Mb

Absolute Maximum Ratings		
	Minimum	**Maximum**
Storage temperature	-40ºC	+150ºC
Supply voltage: VBAT	-0.30V	3.6V

Recommended Operating Conditions		
	Minimum	**Maximum**
Operating temperature range	-40ºC	+85ºC
Supply voltage: Vcc	+3.0V	+3.6V
Supply voltage: Vdd	+1.7V	+1.9V

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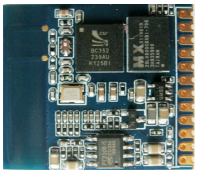


29.0 x 25.5 x 2.8 mm SMT

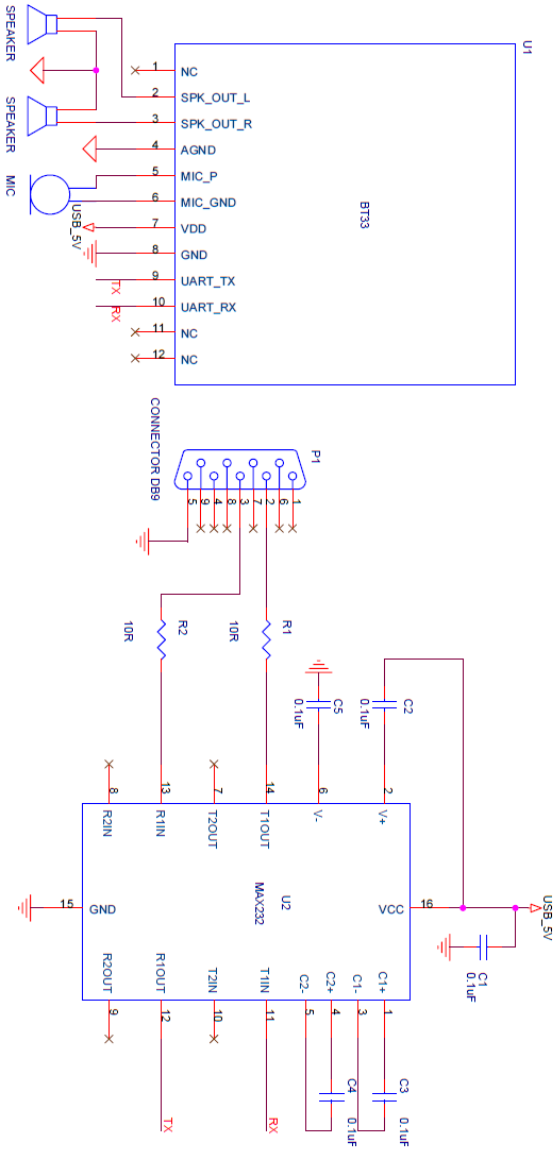
Firmware Configuration

a) UART Baud: 115200 , N, 8, 1
b) BlueTooth Name: BlueAudio
c) Pin Code: 0000

Software Description

1. After Power on 3V3, the module is connectable and Pairing
2. ABBTM-2.4GHz-33-T can be found with the name “BlueAudio” via any Bluetooth device
3. Input the Pincode “0000”, you can pair with the module named “BlueAudio”
4. Then the BlueAudio can be connected
5. Data can be transferred between the BlueAudio and any other Bluetooth device

APPLICATION SCHEMATIC



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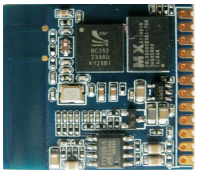

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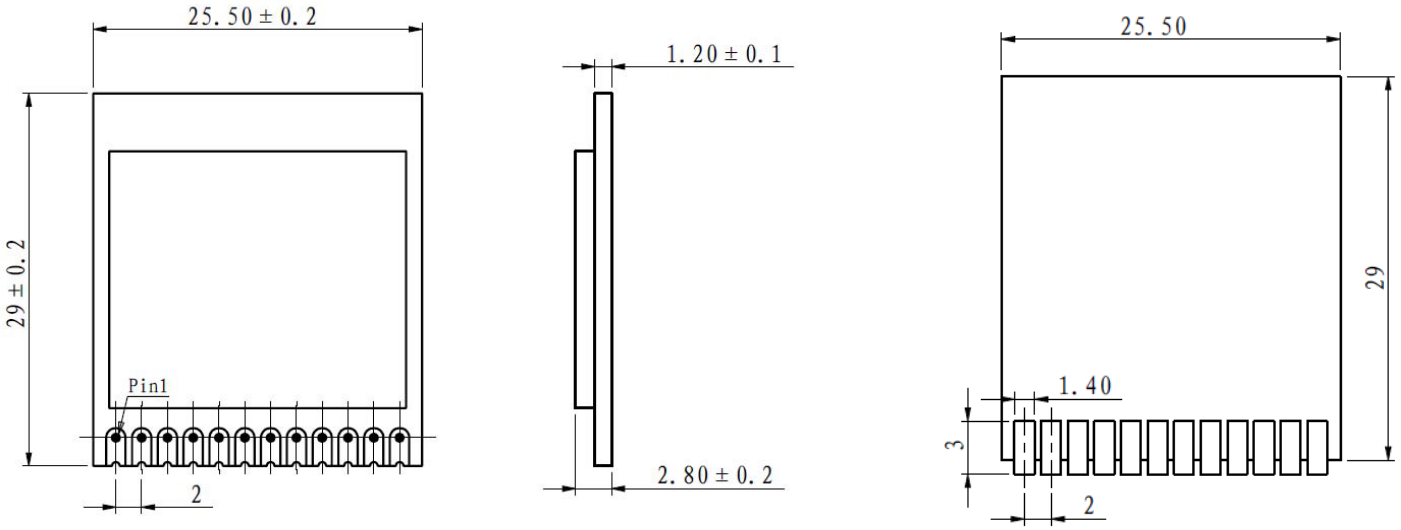
MECHANICAL DIMENSIONS



Note: Specified dimensions without tolerance are listed for reference purposes only. Dimensions: mm.

PIN DESCRIPTION

Pin No.	Name	Type	Function
1	NC	Input / Output	Not used currently
2	SPK_OUT_L	Output	Left channel audio out
3	SPK_OUT_R	Output	Right channel audio out
4	AGND	Ground	Analog ground
5	MIC_P	Input	Microphone positive pole input, internal power supply
6	MIC_GND	Ground	Microphone ground
7	VDD	Input	Power supply, +3.3V ~ +5V
8	GND	Ground	Power ground
9	UART_TX	Output	UART data output
10	UART)RX	Input	UART data input
11	NC	Input / Output	Not used currently
12	NC	Input / Output	Not used currently

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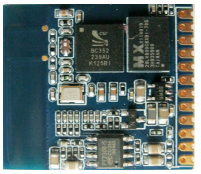

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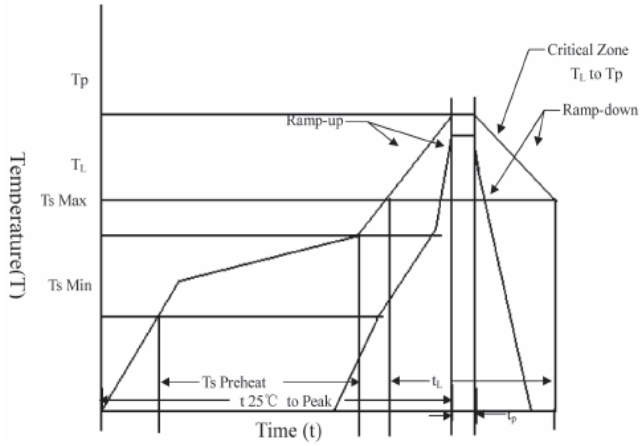
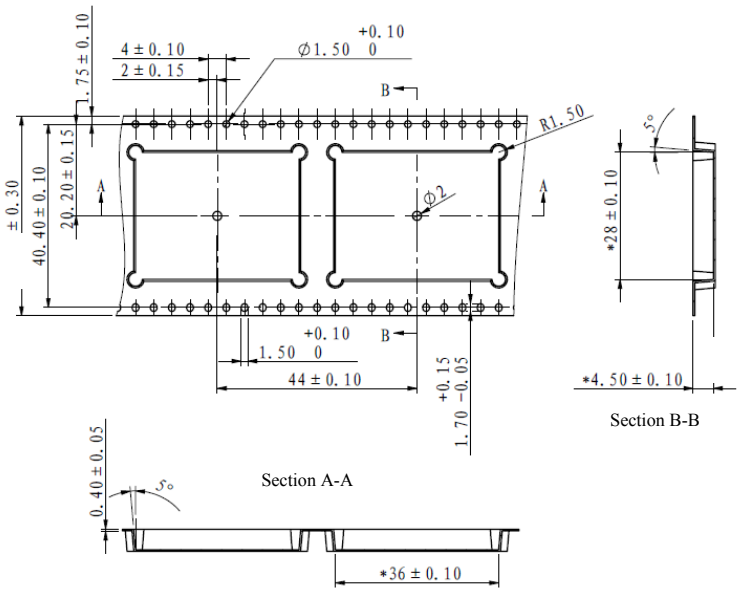
REFLOW PROFILE

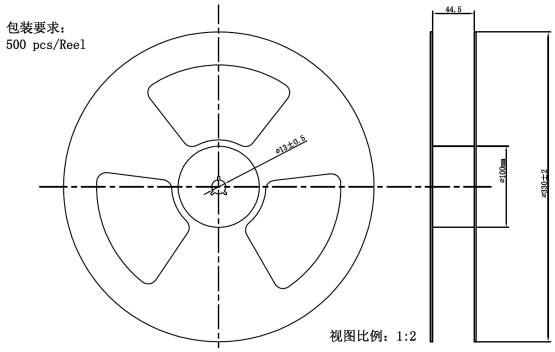


T_S max to T_L (Ramp-up Rate)	3°C/second max.
Preheat Temperature Min. (T_S Min.) Temperature Typical (T_S Typ.) Temperature Max. (T_S Max.) Time (t_S)	 150°C 175°C 200°C 60 ~ 180 seconds
Ramp-up rate (T_L to T_p)	3°C/second max.
Time Maintained Above: --Temperature (T_L)/Time (T_L)	 217°C/60 ~ 150 seconds
Peak Temperature (T_p)	250°C max. for 10 seconds
Target Peak Temperature (T_p Target)	250°C +0/-5°C
Time within 5°C of actual peak (t_p)	20 ~ 40 seconds
Ramp-down Rate	6°C/second max.
Tune 25°C to Peak Temperature (t)	8 minutes max.

PACKAGING:

300pcs/reel





a) Unless otherwise specified, the tolerance is ±0.1mm
b) The carrier tape material thickness is 0.4mm
c) Unless otherwise specified, the round corner is R0.3; the peeling angle is no greater than 5°
d) The finished products has no rough edges and no damage; cover tape should is sealed
e) Material is ROHS compliant

Packaging:

ABBTM-2.4GHz-33-T devices will be packaged per MSL level-3 requirements; Labeled as MSL 3, Tape- Packed + Vacuum-Packed with Antistatic bag, Desiccant, Humidity Indicator Card (HIC). Ref: IPC/JEDEC J-STD-033B.1

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