

ECN/PCN No.: R0043

For Manufacturer			
Product Description: Bluetooth modules	Abracon Part Number / Part Series: ABBTM Bluetooth module series	<input type="checkbox"/> Documentation only <input type="checkbox"/> ECN <input checked="" type="checkbox"/> EOL	<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number
Affected Revision: N/A	New Revision: EOL	Application: <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety	
Prior to Change: ABBTM-2.4GHZ, ABBTM-2.4GHZ-31, ABBTM-2.4GHZ-31-T, ABBTM-2.4GHZ-33, ABBTM-2.4GHZ-33-T, ABBTM-2.4GHZ-51, ABBTM-2.4GHZ-51-T, ABBTM-2.4GHZ-52, ABBTM-2.4GHZ-52-T, ABBTM-2.4GHZ-EVAL, ABBTM-2.4GHZ-T, ABBTM-2.4GHZ-T2, ABBTM-NVC-EVK-56, ABBTM-NVC-EVK-71, ABBTM-NVC-EVK-71-MESH, ABBTM-NVC-MB-EVK, ABBTM-NVC-MDCS42A-CON, ABBTM-NVC-MDCS71, ABBTM-NVC-MDCS71-CON, ABBTM-NVC-MDCS71-MESH, ABBTM-NVC-MDCS71-MESH-CON, ABBTM-NVC-MDCS71-101, ABBTM-NVC-MDCS86-101, ABBTM-101-2.4GHZ-T, ABBTM-2.4GHZ-51-101-, ABBTM-2.4GHZ-52-101, ABBTM-53-2.4GHZ-T, ABBTM-103-2.4GHZ-T, ABBTM-2.4GHZ-T; VER.10, ABBTM-NVC-MDCS42A-101, ABBTM-NVC-MDCS42A-F07, and ABBTM-NVC-MDCS56-102.			
After Change: All 32 EOL			
Cause/Reason for Change: Due to low demand, the Bluetooth Module ABBTM series is discontinued.			
Change Plan			
Effective Date: 06/08/2021	Additional Remarks: N/A		
Change Declaration: EOL			
Issued Date: 06/08/2021	Issued By: <i>Nicholas El-Takach</i>	Issued Department: Engineering	
Approval: <i>Syed Raza</i> Engineering VP	Approval: <i>Reuben Quintanilla</i> Quality Director	Approval: <i>Ying Huang</i> Purchasing Director	
For Abracon EOL only			
Last Time Buy (if applicable): No last time buy.	Alternate Part Number / Part Series: N/A		
Additional Approval:	Additional Approval:	Additional Approval:	
Customer Approval (If Applicable)			
Qualification Status: <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>			
Customer Part Number:		Customer Project:	
Company Name:	Company Representative:	Representative Signature:	
Customer Remarks:			

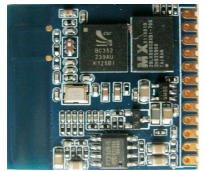
29.0 x 25.5 x 2.8 mm SMT Bluetooth Module

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

Abrakon'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	-40°C	+150°C
Supply voltage: VBAT	-0.30V	3.6V

Recommended Operating Conditions

	Minimum	Maximum
Operating temperature range	-40°C	+85°C
Supply voltage: Vcc	+3.0V	+3.6V
Supply voltage: Vdd	+1.7V	+1.9V

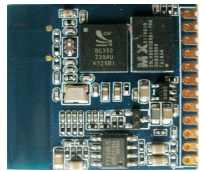


29.0 x 25.5 x 2.8 mm SMT Bluetooth Module

ABBTM-2.4GHz-33-T



RoHS
Compliant



29.0 x 25.5 x 2.8 mm SMT

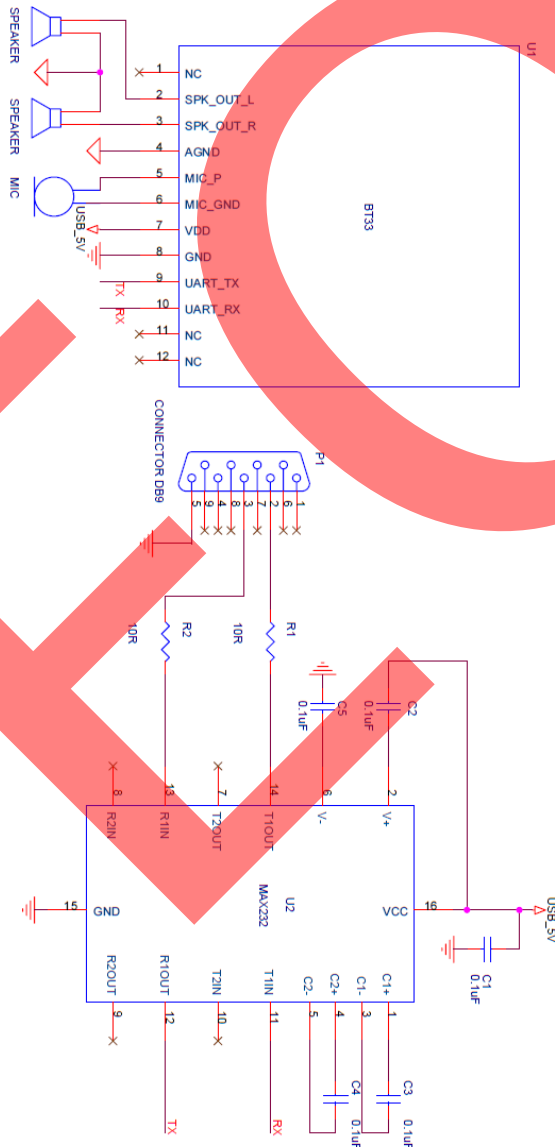
Firmware Configuration

- 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

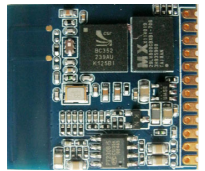


29.0 x 25.5 x 2.8 mm SMT Bluetooth Module

ABBTM-2.4GHz-33-T

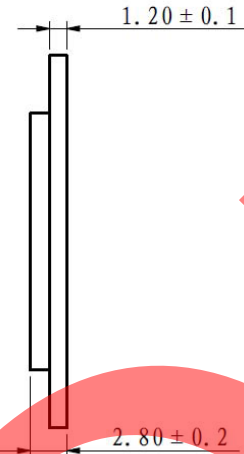
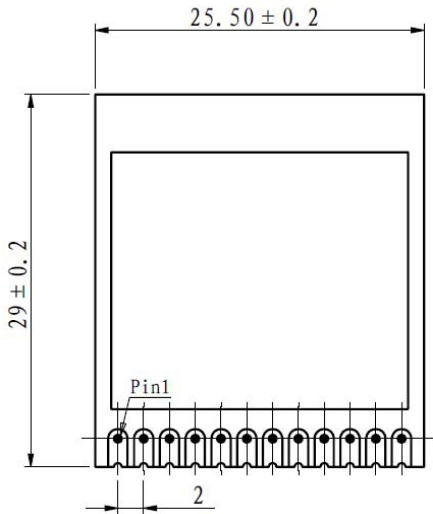


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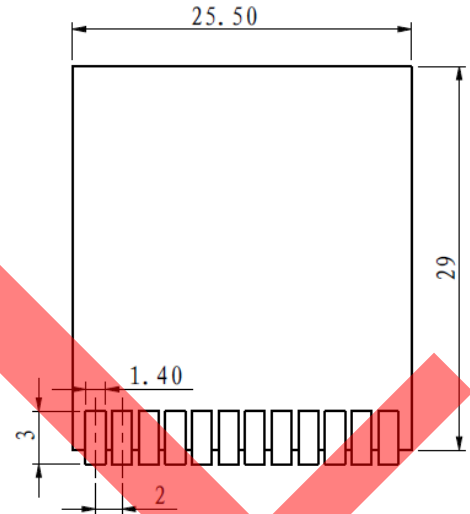


29.0 x 25.5 x 2.8 mm SMT

MECHANICAL DIMENSIONS



Recommended Land Pattern



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

Dimensions: mm.

PIN DESCRIPTION

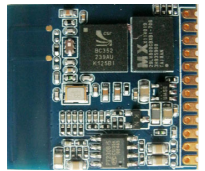
Pin No.	Name	Type	Function
1	NC	Input / Output	Not used currently
2	SPK_OUT_L	Output	Left channel audio out
3	SPK_OUT_R	Output	Right channel audio out
4	AGND	Ground	Analog ground
5	MIC_P	Input	Microphone positive pole input, internal power supply
6	MIC_GND	Ground	Microphone ground
7	VDD	Input	Power supply, +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

29.0 x 25.5 x 2.8 mm SMT Bluetooth Module

ABBTM-2.4GHz-33-T

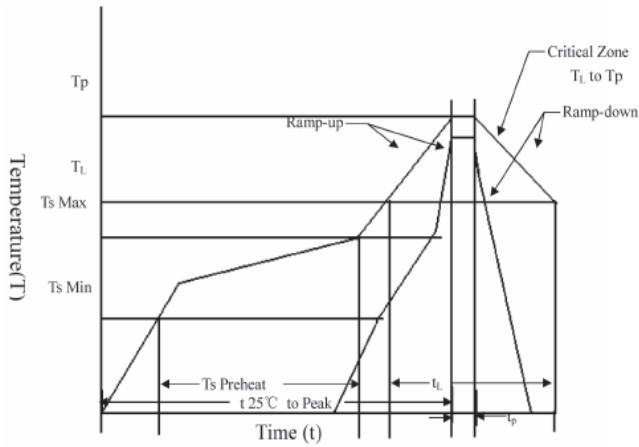


RoHS
Compliant



29.0 x 25.5 x 2.8 mm SMT

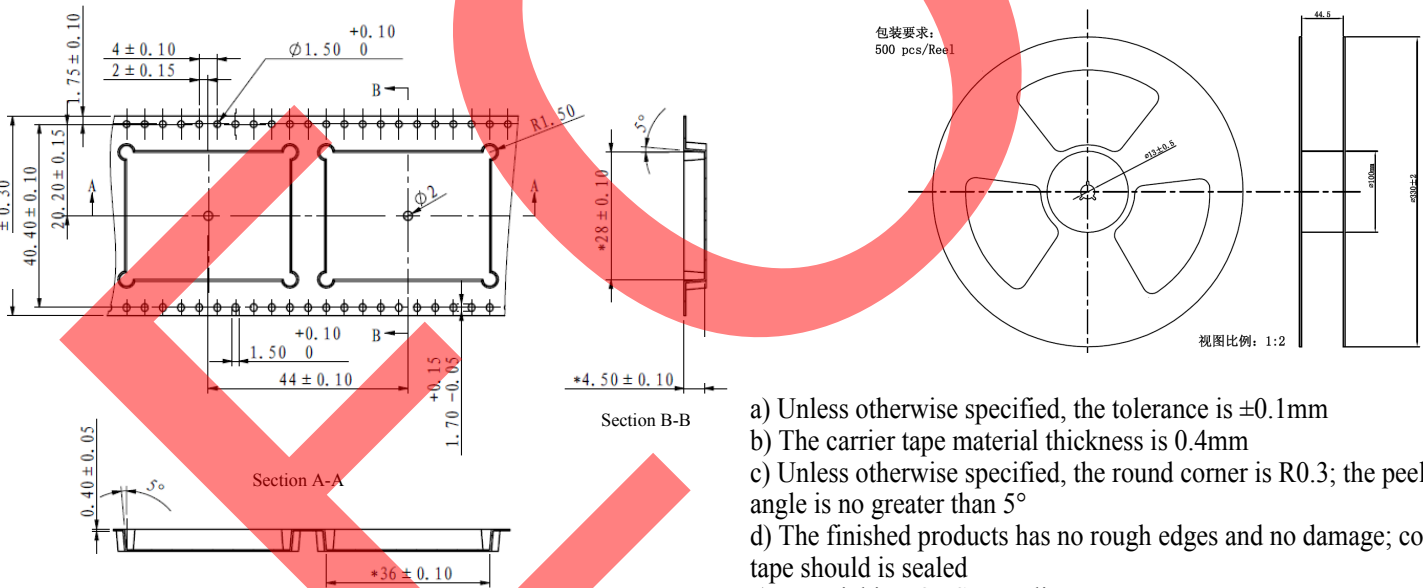
REFLOW PROFILE



T_s max to T_l (Ramp-up Rate)	3°C/second max.
Preheat	
Temperature Min. (T_s Min.)	150°C
Temperature Typical (T_s Typ.)	175°C
Temperature Max. (T_s Max.)	200°C
Time (t_s)	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



- Unless otherwise specified, the tolerance is ± 0.1 mm
- The carrier tape material thickness is 0.4mm
- Unless otherwise specified, the round corner is R0.3; the peeling angle is no greater than 5°
- The finished products has no rough edges and no damage; cover tape should be sealed
- 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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