

LPWA/WiFi Ceramic Chip Antenna Evaluation Board

ACAR3005-C2WB-EVB

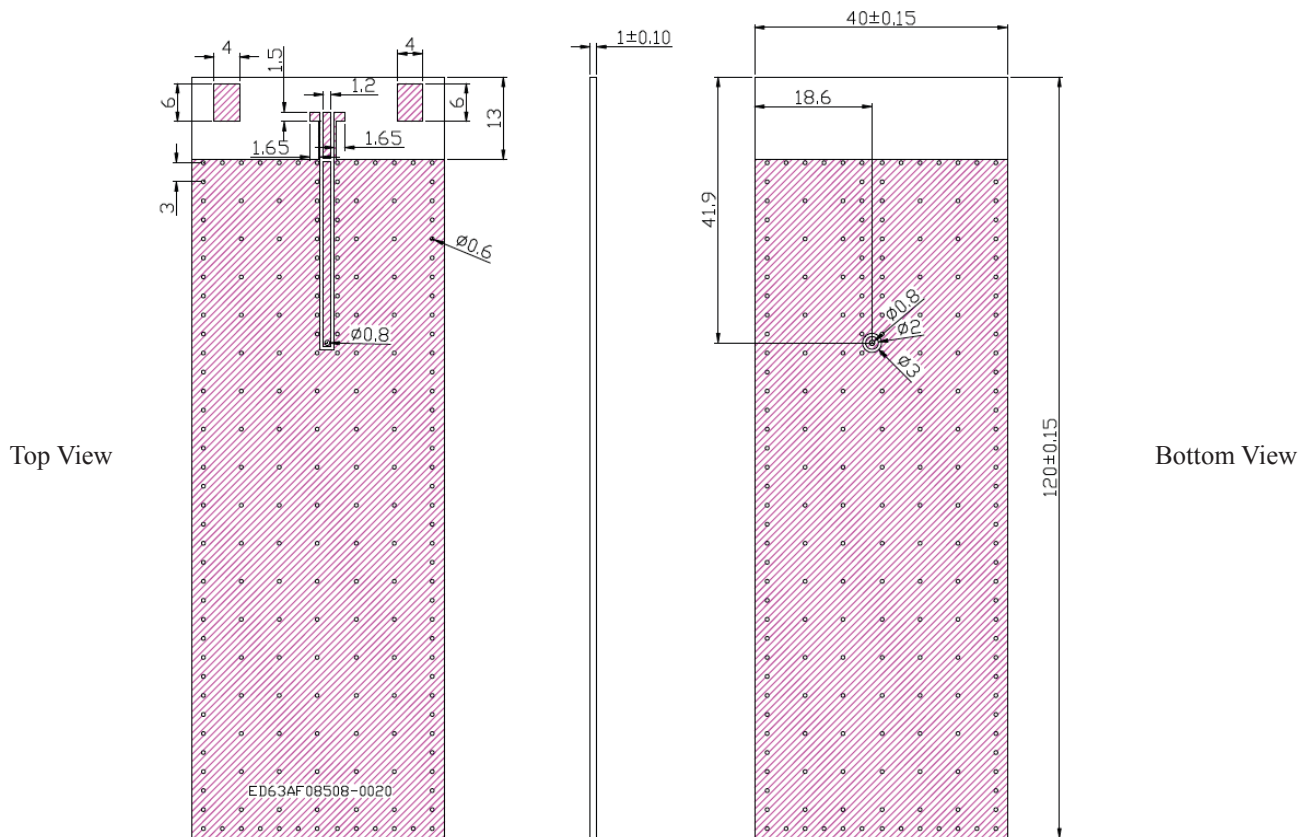
120.0 x 40.0 mm

Description

ACAR3005-C2WB-EVB Evaluation boards are designed to provide a means to facilitate engineering evaluation of the dual band chip antenna : ACAR3005-C2WB-T. With a typical bandwidth of 136 MHz and 100 MHz between 824~960 MHz and 2400~2500 MHz respectively, the chip can be used for applications including but not limited to LPWA, Wi-Fi, Bluetooth, BLE and ISM.

To evaluate the performance of antenna, calibrate the Vector Network analyzer (VNA) for the testing frequency band and connect the evaluation board to the calibrated port using the given SMA connector on the board.

Evaluation Board with Matching Circuits



Evaluation Board dimension : 120 x 40 mm

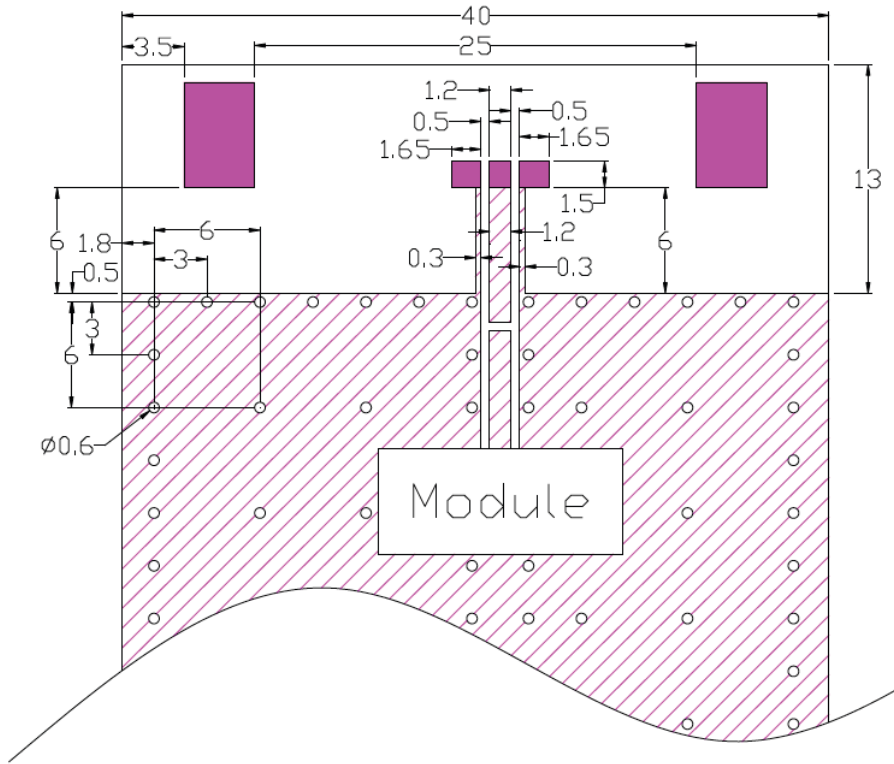
Unit: mm

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Chip Antenna Layout



Unit: mm

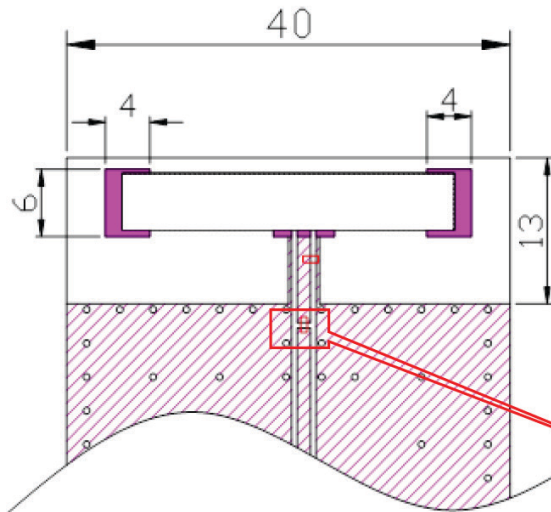
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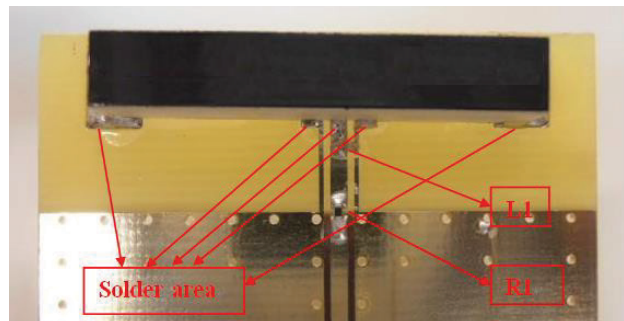
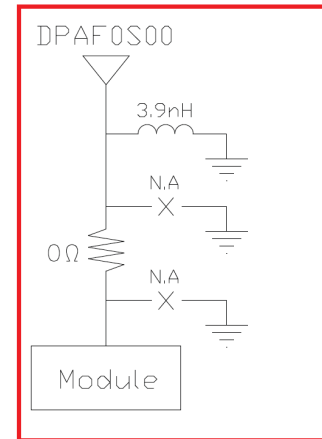
120.0 x 40.0 mm

Matching Network on EVB

Antenna matching network is designed using a combination of inductor and resistor near the input terminal.



Pi-matching network



Circuit Symbol	Size	Description
L1	0402	3.9 nH
R1	0402	0 Ω

Note :

1. Yellow space around the chip antenna in “Matching Network on EVB” represents the ground clearance area.
2. Desired clearance area : 40 x 13 mm
3. Width of the 50 Ω line is designed in accordance with the PCB thickness and material considered.
4. Matching network (Pi - network) provided is in accordance with the EVB layout and matching will differ in the actual customer PCB depending on the layout.