

2.4GHz 3216 Chip Antenna: RANT3216F245T01

Application:

WLAN, 802.11b/g, Bluetooth, WLAN, etc...

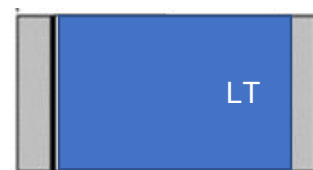
Features

SMD, high reliability, ultra Impact, Omni-directional...

Part number Information

RANT 3216 F 245 T 01
(A) (B) (C) (D) (E) (F)

(A)Product Type	Chip Antenna
(B) Size Code	3.2x1.6mm(±0.2mm)
(C) Material	High K material
(D) Frequency	2.4 ~ 2.5GHz
(E) Feeding mode	PIFA & Single Feeding
(F) Antenna type	Type=01

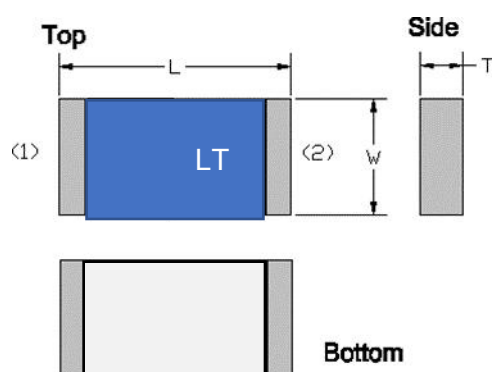


Electrical Specification

Working Frequency Range	2400 ~2500 MHz
Bandwidth	120 MHz (Min.)
Peak Gain	1.24dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(°C)	-40 ~85°C
Resistance to Soldering Heats	10sec. (@ 280°C)
Termination	Ni / Au (Leadless)

The specification is defined on EVB.

Dimension and Terminal Configuration



Dimension (mm)	
L	3.20 ± 0.20
W	1.60 ± 0.20
T	0.45 ± 0.20

No.	Terminal Name
1	Feeding/GNG
2	GND/Feeding

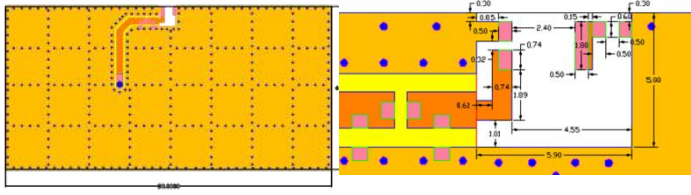
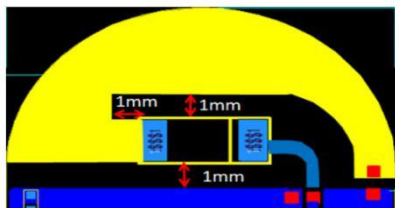
Manufacturer : WOFONE TECHNOLOGY LIMITED

Add:RM18, 27/F, Ho King Comm CTR, 2-16 Fayuen ST, Mongkok Kowloon, HongKong, China



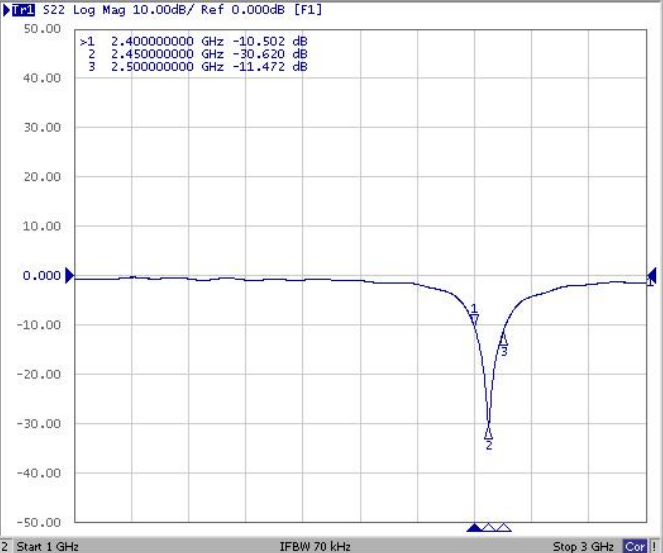
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Evaluation Board Reference

PCB Dimension	Antenna Layout Reference
 The image shows a PCB layout with a yellow grid background. On the left is a large rectangular area with a dashed border. To its right is a more complex layout with various rectangular and circular features. Numerous dimensions are provided in millimeters, including 0.30, 0.50, 0.74, 0.84, 1.01, 1.09, 1.20, 1.50, 1.60, 1.80, 2.40, 2.60, 2.80, 3.00, 3.50, 4.50, 5.00, and 5.50. A scale bar at the bottom left indicates 0.50mm.	Unit :mm  The image shows a schematic of an antenna layout. It features a yellow semi-circular area on a black background. Below this, there are two blue rectangular components, each with a red double-headed arrow indicating a width of 1mm. A red double-headed arrow indicates a height of 1mm for one of the components. A blue line connects the two components, and a red double-headed arrow indicates a width of 1mm for this connection. The entire layout is set against a blue background with red square markers at the corners.

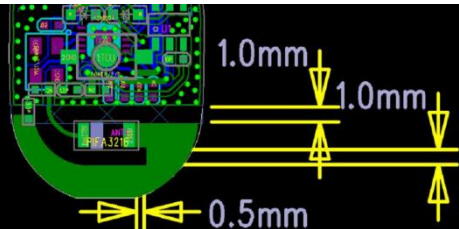
Electrical Characteristics

Return Loss



The plot shows the Return Loss (S11) in dB versus Frequency in GHz. The y-axis ranges from -50.00 to 50.00 dB, and the x-axis ranges from 2.400 to 2.500 GHz. The curve shows a sharp dip at approximately 2.45 GHz, reaching a minimum of -30.62 dB. Three points are marked on the curve: 1 at 2.400 GHz (-10.502 dB), 2 at 2.450 GHz (-30.620 dB), and 3 at 2.500 GHz (-11.472 dB).

Point	Frequency (GHz)	Return Loss (dB)
1	2.400	-10.502
2	2.450	-30.620
3	2.500	-11.472



The micrograph shows the physical antenna structure on a PCB. The antenna is a circular patch with a central feed. Dimensions are indicated: 1.0mm for the patch radius, 1.0mm for the feed width, and 0.5mm for the feed gap.

Frequency (MHz)	S11 (dB)
2400	-10.50
2450	-30.62
2500	-11.47

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