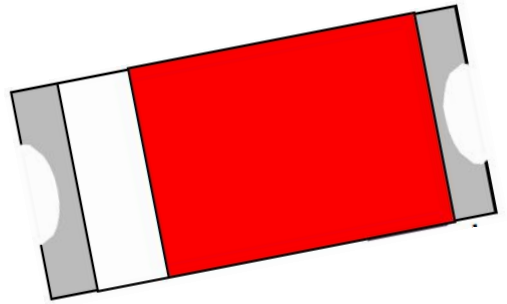


2.4GHz 5221 Chip Antenna: RANT5221F245M02

1. Applications

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



2. Features

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

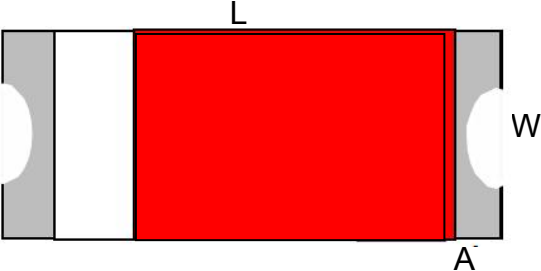
3. Part Number Information

RANT 5221 F 245 M 02
(A) (B) (C) (D) (E) (F)

(A)Product Type	Chip Antenna
(B) Size Code	5.0x2.0mm(±0.2mm)
(C) Material	High K material
(D) Frequency	2.4 ~ 2.5GHz
(E) Feeding mode	PIFA & Single Feeding
(F) Antenna type	Type=02

Shenzhen Li Tongchuang Technology Co., Ltd
深圳市宝安区银田街道银田路4号宝安智谷D栋409

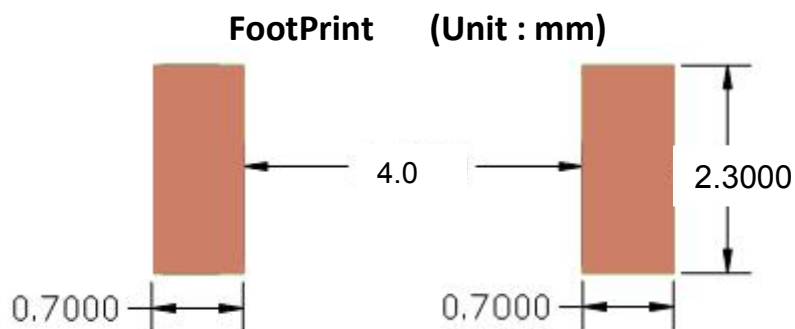
4. Dimension

Figure	Symbol	Dimension (mm)
	L	5.00 ± 0.20
	W	2.00 ± 0.30
	T	1.0 ± 0.30
	A	0.50 ± 0.20

5. Electrical Specification

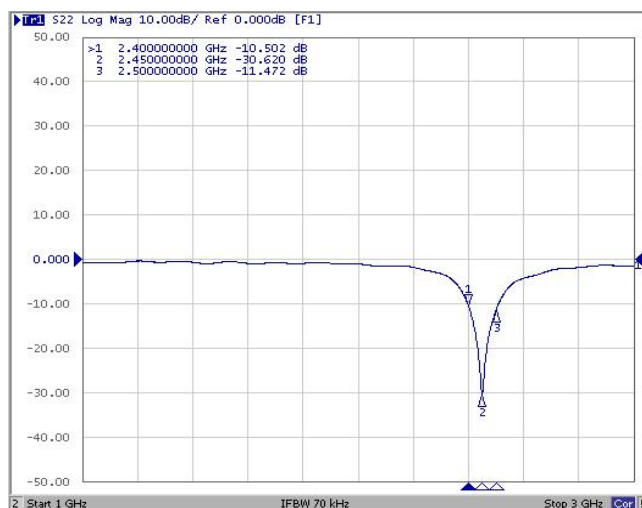
Specification		
Part Number	RANT 5221 F245 M02	
Central Frequency	2450	MHz
Bandwidth	120 (Min.)	MHz
Return Loss	-10 (Max)	dB
Peak Gain	3.59	dBi
Impedance	50	Ohm
Operating Temperature	-40~+85	°C
Maximum Power	4	W
Resistance to Soldering Heats	10 (@ 260°C)	sec.
Polarization	Linear	
Azimuth Beamwidth	Omni-directional	
Termination	Sn (Leadless)	

6. PCB

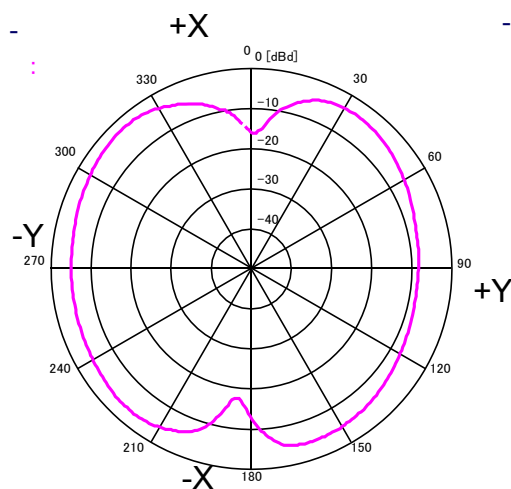
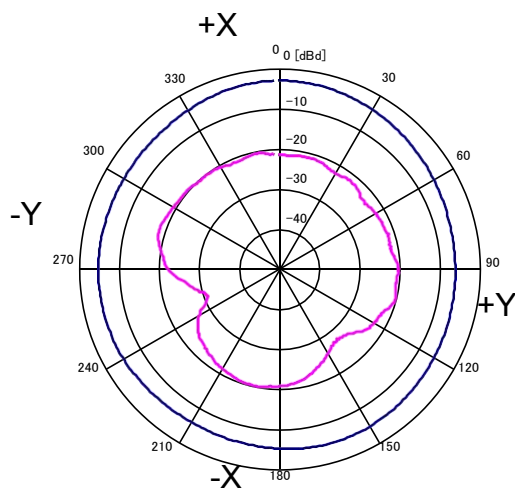
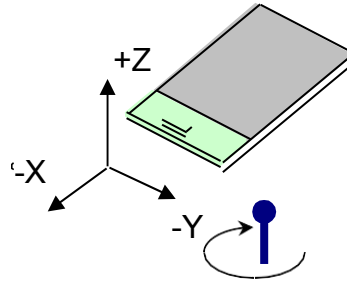
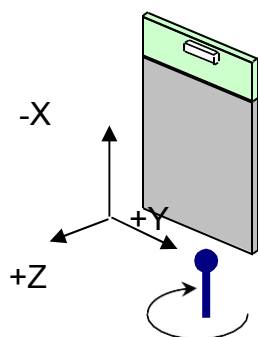


7. Measurement Results

Return Loss



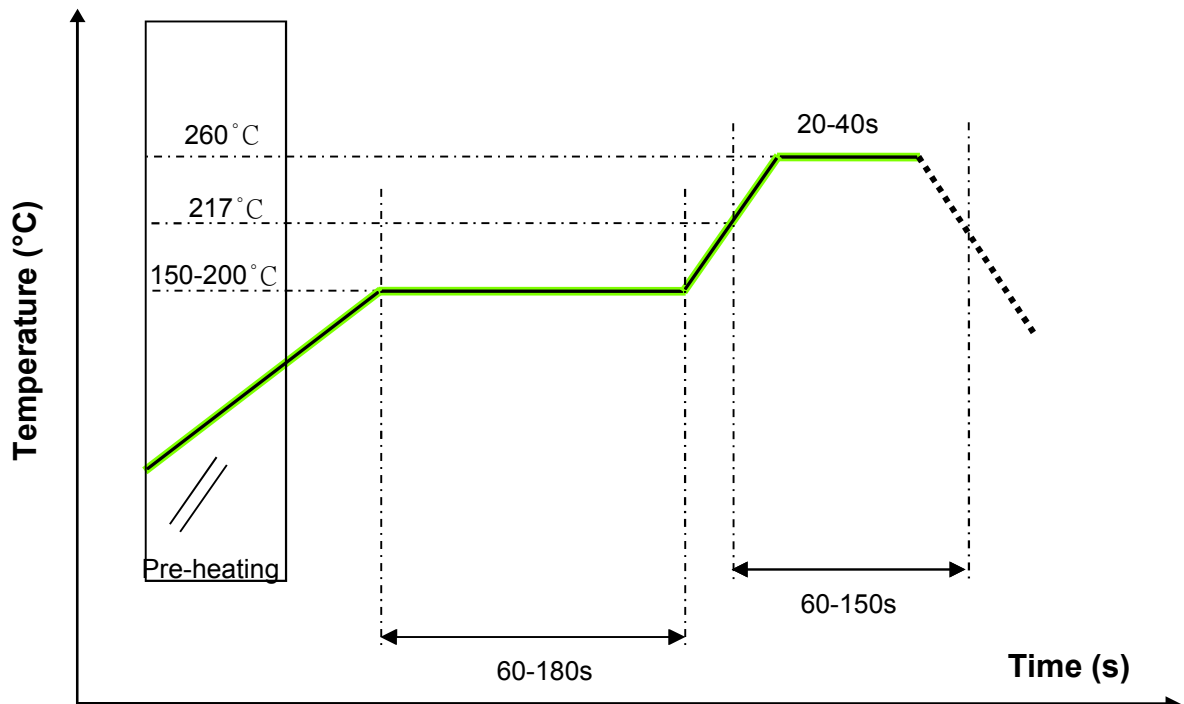
7.2 Radiation Pattern



8. Reliability and Test Conditions

Test item	Test condition / Test method	Specification
Solderability JIS C 0050-4.6 JESD22-B102D	*Solder bath temperature: $235 \pm 5^{\circ}\text{C}$ *Immersion time : 2 ± 0.5 sec Solder : Sn3Ag0.5Cu for lead-free	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) IEC 60068-2-58	*Solder bath temperature: $260 \pm 5^{\circ}\text{C}$ *Leaching immersion time: 30 ± 0.5 sec Solder : SN63A	Loss of metallization on the edges of each electrode shall not exceed 25%.
Bending test JIS C 0051- 7.4.1	The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm/s per second until the deflection becomes 1mm/s and then pressure shall be maintained for 5 ± 1 sec. Measurement to be made after keeping at room temperature for 24 ± 2 hours	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within $-40 \sim 85^{\circ}\text{C}$.
Resistance to soldering heat JIS C 0050-5.4	*Preheating temperature : $120 \sim 150^{\circ}\text{C}$, 1 minute. *Solder temperature: $270 \pm 5^{\circ}\text{C}$ *Immersion time : 10 ± 1 sec Solder : Sn3Ag0.5Cu for lead-free Measurement to be made after keeping at room temperature for 24 ± 2 hrs	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within $-40 \sim 85^{\circ}\text{C}$. Loss of metallization on the edges of each electrode shall not exceed 25%.

9. Soldering and Mounting

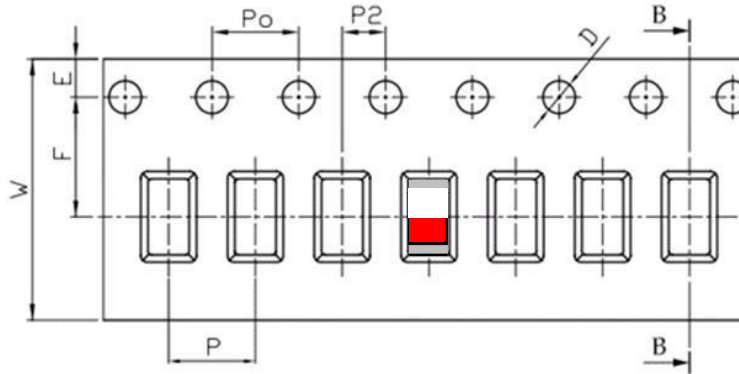


12. Packing

(1) Quantity/Reel: 2000 pcs/Reel

(2) Plastic tape:

a. Tape Drawing



b. Tape Dimensions (unit: mm)

Feature	Specifications	Tolerances
W	12.00	±0.30
P	4.00	±0.10
E	1.75	±0.10
F	5.50	±0.10
P2	2.00	±0.10
D	1.50	+0.10 -0.00
P0	4.00	±0.10
10P0	40.00	±0.20

c. Reel Drawing

