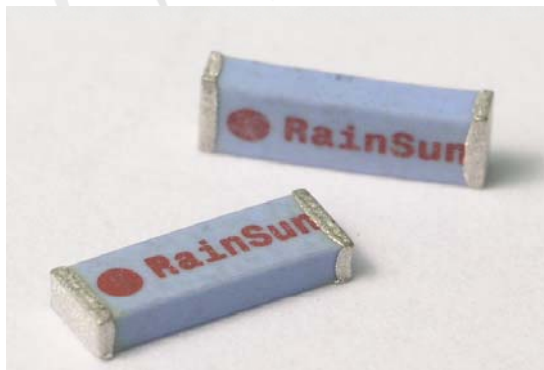


AN6520

Multilayer Chip Antenna for 2.4GHz Wireless Communication



Manufacturer: RainSun Corporation
Address: 3F, No.14, Lane 235, Baociao Rd., Sindian Dist, New Taipei City 231
Tel: +886-2-2911-7997 Fax: +886-2-2918-5200
www.rainsun.com / sales@rainsun.com

AN6520 Multilayer Chip Antenna

◆ Features

- Light weight and low profile 6.5mm(L)X2.2mm(W)X1.0mm(H)
 - Omni-directional in azimuth
- Lead (Pb) Free

◆ Applications

- 2.4GHz wireless communications
 - 2.4GHz Modules
 - Bluetooth System
- 802.11b/g Wireless LAN System

Specifications

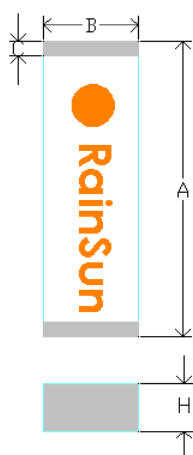
Frequency	2.4GHz-2.5GHz
Peak gain	0.5dBi
Operation temperature	-40 ~ +85 °C
Storage temperature	-40 ~ +85 °C
VSWR	2.0 (max)
Input Impedance	50 Ohm
Power handling	3W (max)
Bandwidth	200MHz
Azimuth beamwidth	Omni-directional
Polarization	Linear

Pin configuration



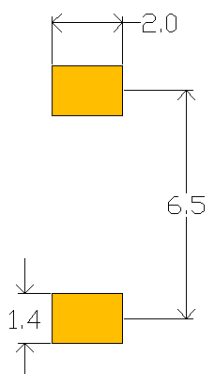
Pin No	Pin assignment
1	Feed termination
2	Feed point mark
3	Solder termination

Dimensions

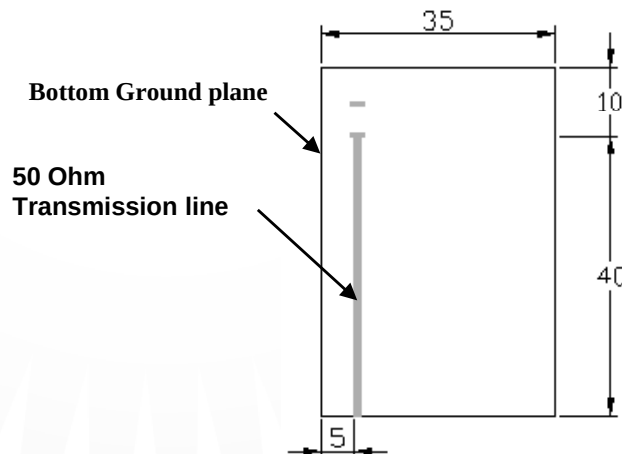


Symbol	Dimensions(mm)
A	6.50 ± 0.10
B	2.20 ± 0.10
C	0.30 ± 0.05
H	1.00 ± 0.20

PCB foot printer



Recommended Test Board Pattern



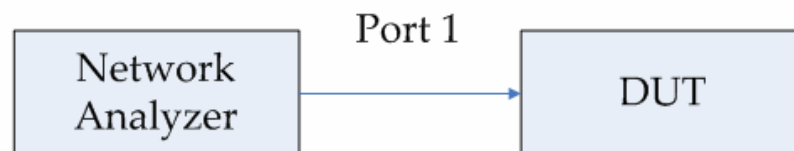
Unit : mm

Board thickness : 0.6mm

Board material : FR4

Fig-1

Testing Setup



Measurement



Testing Instrument:

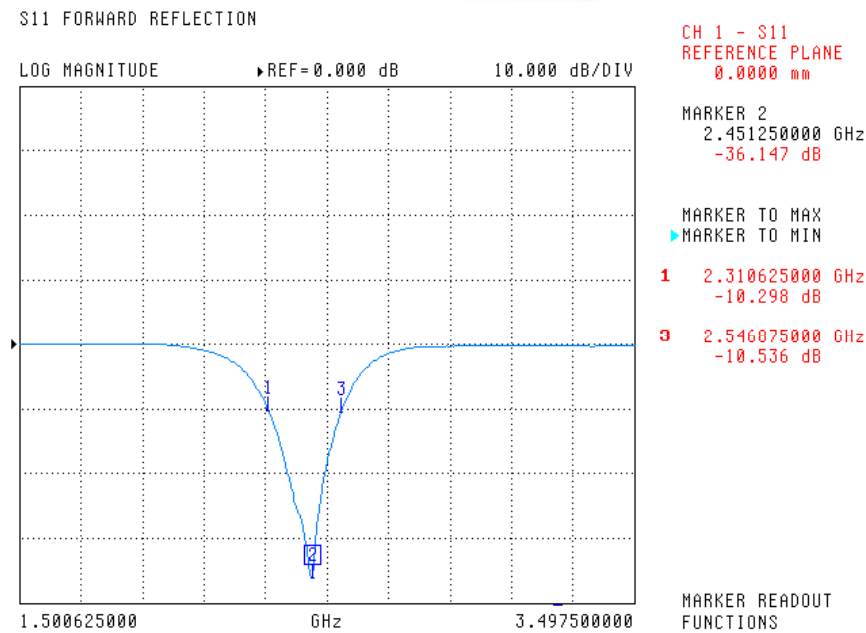
Anritsu 37369C VNA(Vector Network Analyzer)

VNA calibrate with 1 path reflection only calibration sequence on test board feed point.

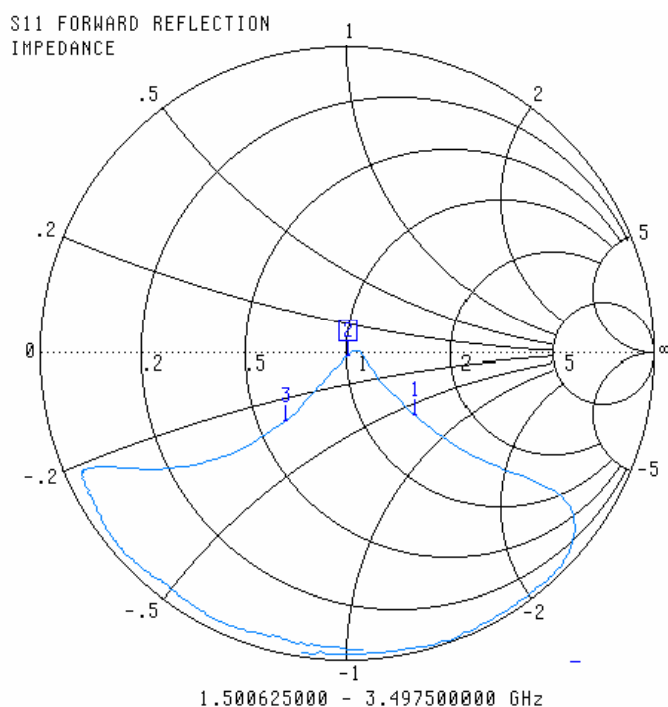
The test board dimension and it's layout is the same as Fig-1.

Typical Electrical Characteristics

Return loss



Smith Chart

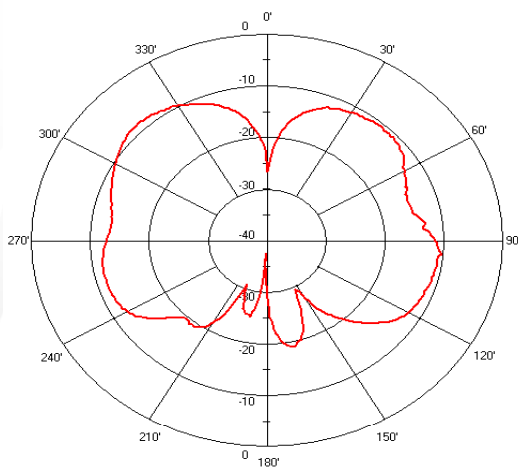


Marker data:

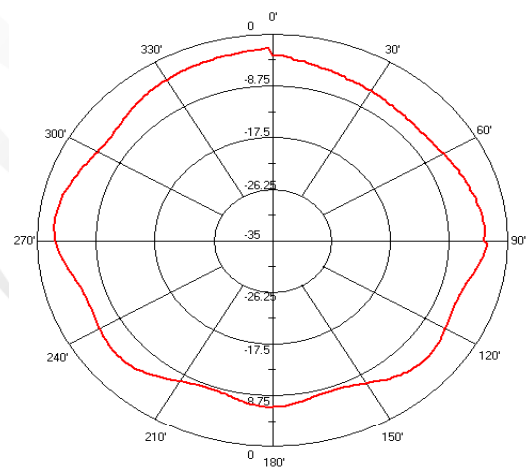
- 1 : f=2.310 GHz
- 2 : f=2.451 GHz
- 3 : f=2.546 GHz

Typical Radiation Patterns

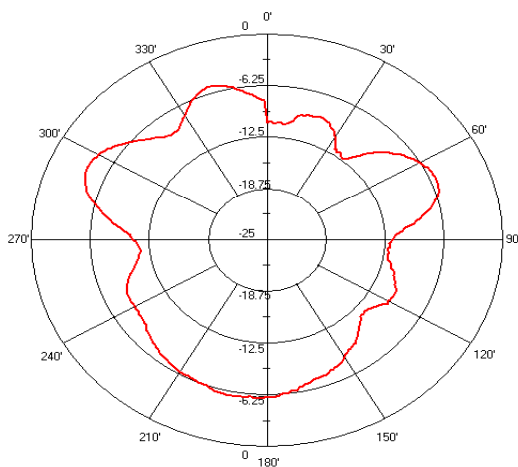
**2.45 GHz H-Plane
vertical**



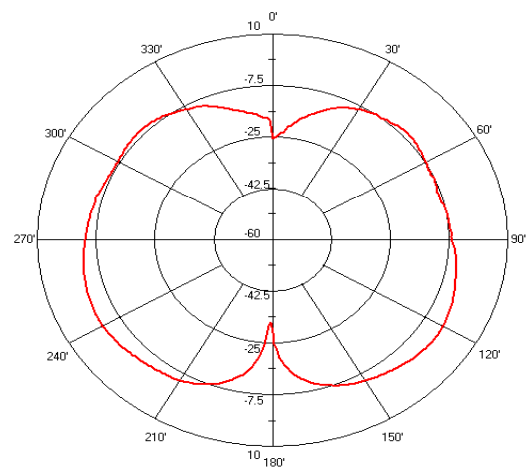
**2.45 GHz H-Plane
horizontal**



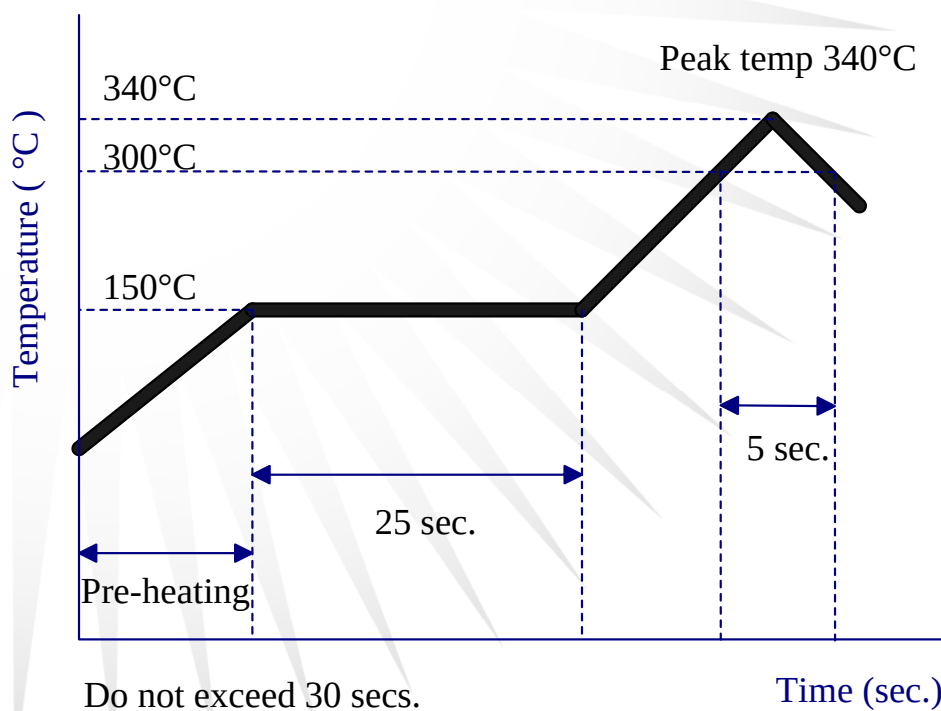
**2.45 GHz E-Plane
vertical**



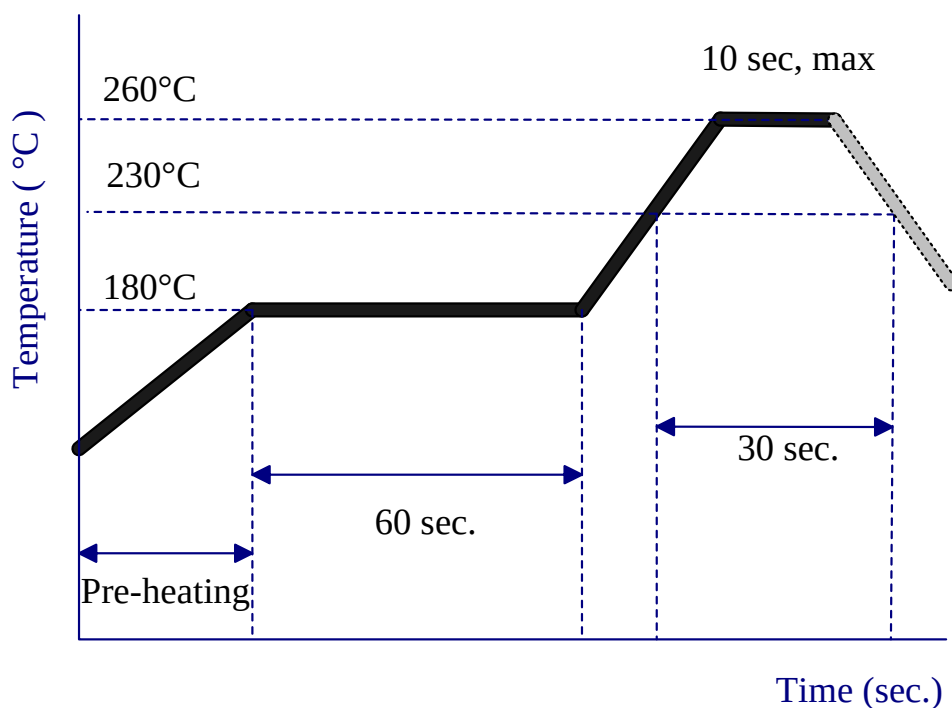
**2.45 GHz E-Plane
horizontal**



Typical Soldering Profile for Lead-free Process

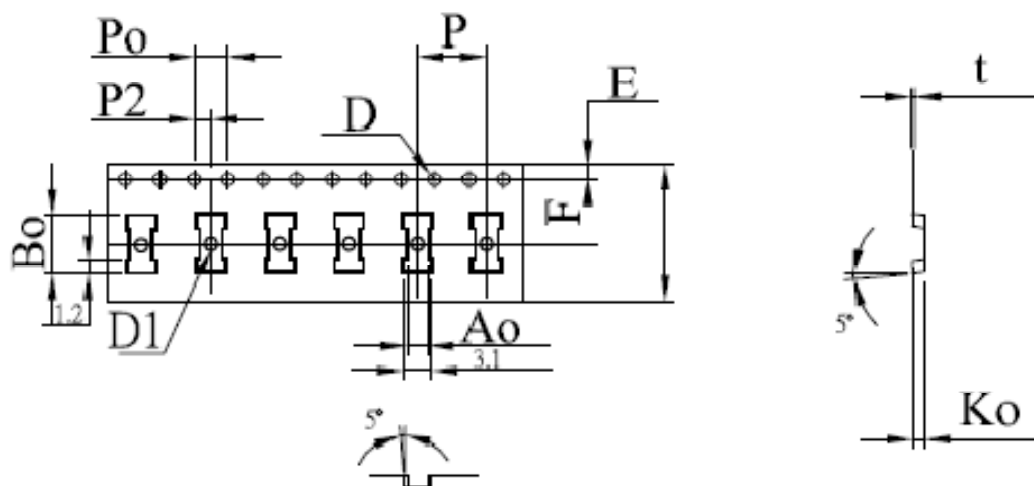


Reflow Soldering



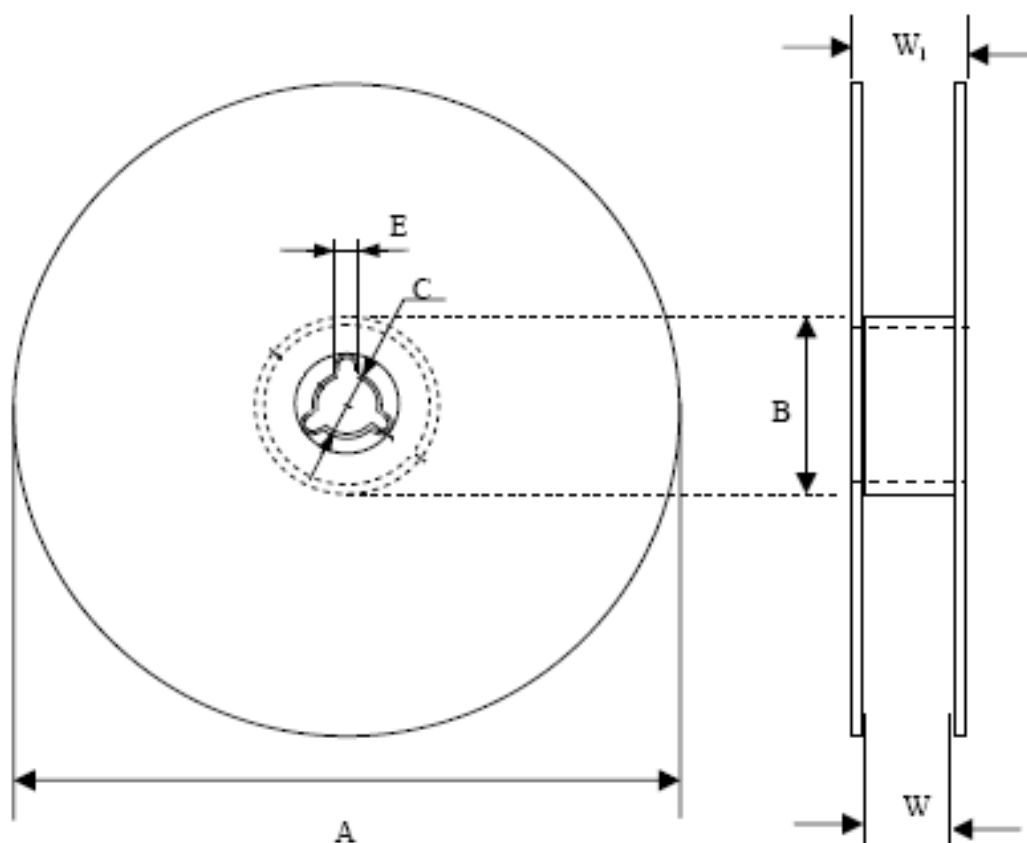
Packing

Blister Tape Specifications



Symbol	Dimension	Tolerance	Unit
W	16.00	± 0.10	mm
E	1.75	± 0.10	mm
F	7.50	± 0.10	mm
D	1.50	+ 0.10 - 0.00	mm
D ₁	1.50	+ 0.25 - 0.00	mm
P ₀	4.00	± 0.10	mm
P	8.00	± 0.10	mm
P ₂	2.00	± 0.10	mm
A ₀	2.30	± 0.10	mm
B ₀	6.60	± 0.10	mm
K ₀	1.30	± 0.10	mm
t	0.30	± 0.05	mm

Reel Specifications



Quantity Per Reel	Tape Width (mm)	A (mm)	C (mm)	B (mm)	E (mm)	W (mm)	W ₁ (mm)
1,500	16	180±1	13.0±0.2	62±0.5	2.2±0.5	16±0.5	20±0.2