

AN242

**Multilayer Antenna for 2.4GHz
Wireless Communication**

(Advance Information)

AN242 Multilayer Antenna

◆ Features

- Miniaturized size, Wide and width
- Light weight and low profile
- Omni-directional in azimuth

◆ Applications

- 2.4GHz wireless communications
- Bluetooth
- 802.11b
- Other 2.4GHz Wireless Application



Specifications

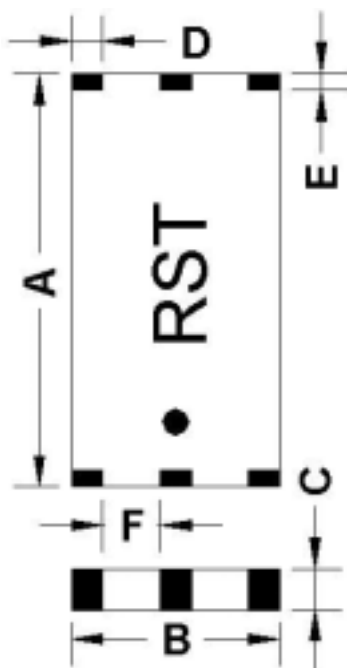
Center frequency	2.45GHZ
Peak gain	1.5dBi
Operation temperature	-40 ~ +85 °C
Storage temperature	-40 ~ +85 °C
VSWR	2.0 (Max)
Input Impedance	50 Ohm
Power handling	3W (Max)
Bandwidth	150MHz
Azimuth beamwidth	Omni-directional
Polarization	Linear

Pin configuration



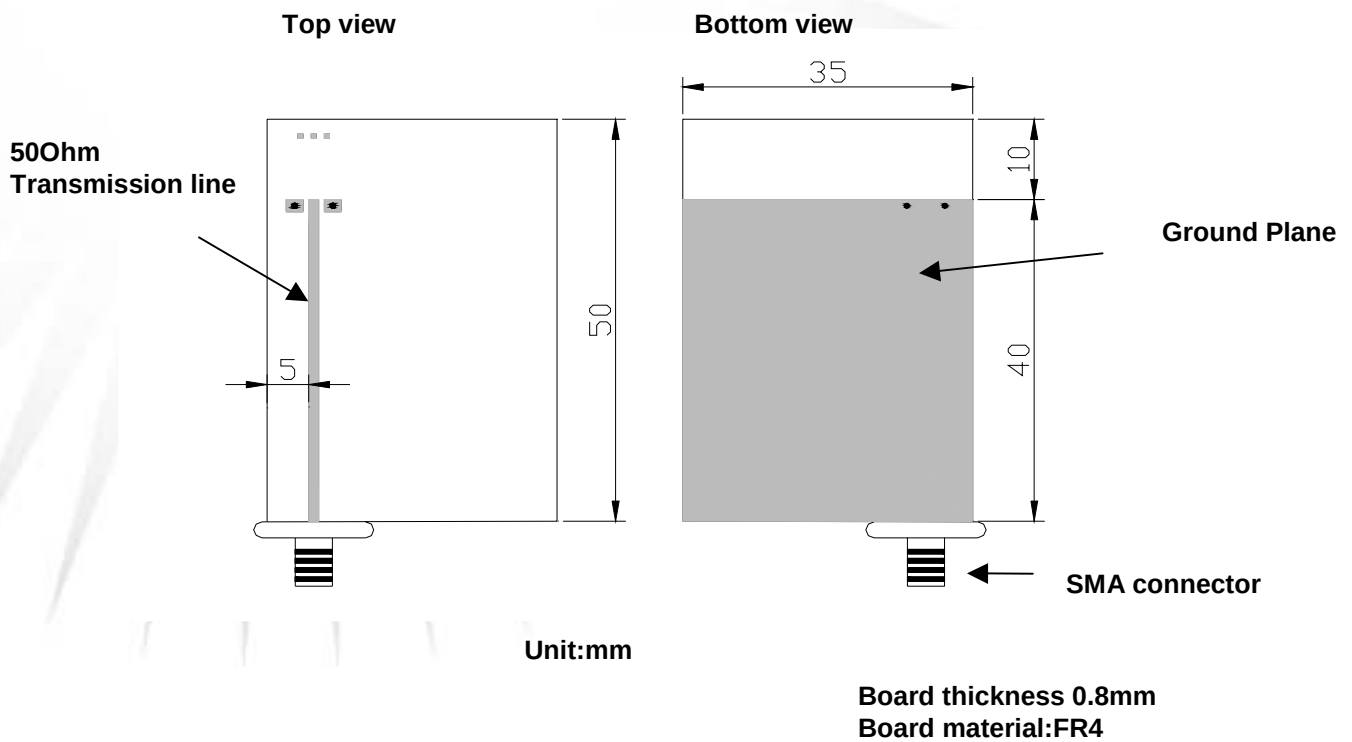
Pin No	Pin assignment
1	Solder termination
2	Solder termination
3	Solder termination
4	Ground termination
5	Feed termination
6	Ground termination
7	Feed point mark

Dimensions

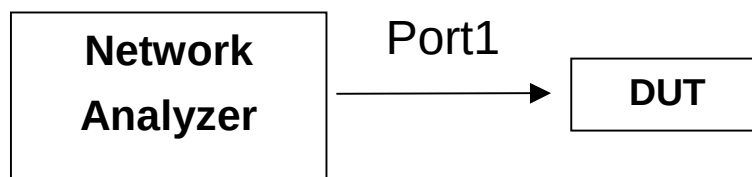


symbol	Dimensions(mm)
A	7.6±0.3
B	3.8±0.2
C	1.1±0.1
D	0.8±0.2
E	0.5±0.3
F	0.7 ±0.2

Recommend Test Board Pattern



Testing Block



Measurement

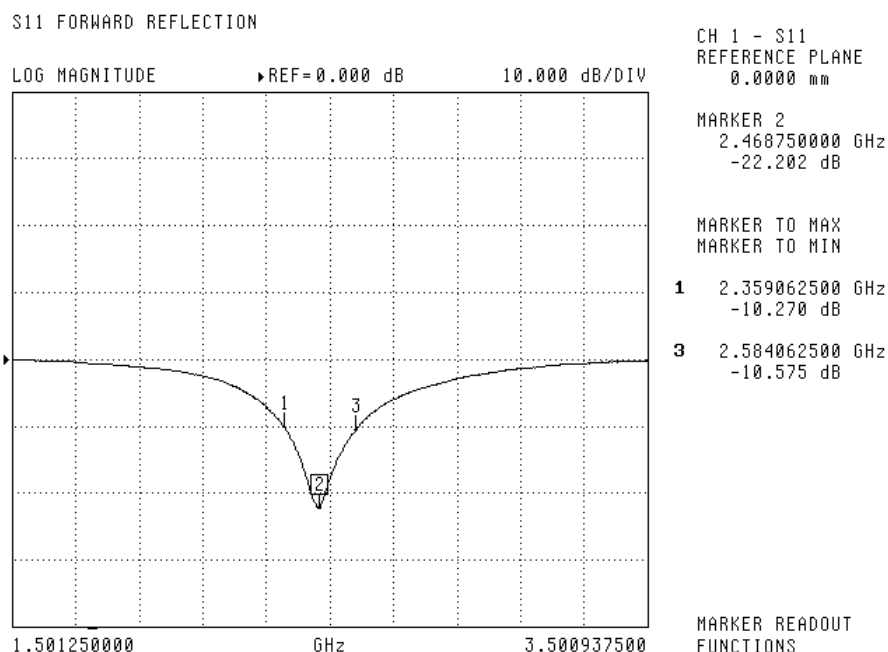


Testing Instrument: Anritsu 37369C
VNA(Vector Network Analyzer)

VNA calibrate with 1 path reflection only calibration sequence on test board feed point. The test board layout as recommend dimension.

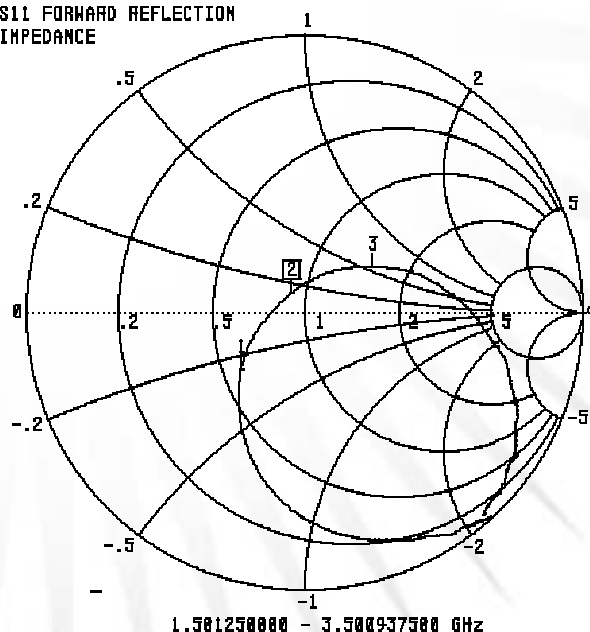
Measured Antenna patterns

Return loss



Smith Chart

S11 FORWARD REFLECTION
IMPEDANCE



CH 1 - S11
REFERENCE PLANE
0.0000 mm

MARKER 2
2.460750000 GHz
45.630 Ω
6.017 j Ω

MARKER TO MAX
MARKER TO MIN

1 2.359862500 GHz
29.392 Ω
-13.604 j Ω
3 2.584862500 GHz
77.115 Ω
27.303 j Ω

MARKER READOUT
FUNCTIONS

2.45 GHz H-Plane

2.45 GHz E-Plane

