

MD1705

Multilayer Chip Antenna for Extra Wide Band (Preliminary Information)

MD1705 Multilayer Chip Antenna

◆ Features

- Size : 17.0mm(L)X5.0mm(W)X1.63mm(H)
- Light weight and low profile
- Omni-directional in azimuth
- Lead (Pb) Free

◆ Applications

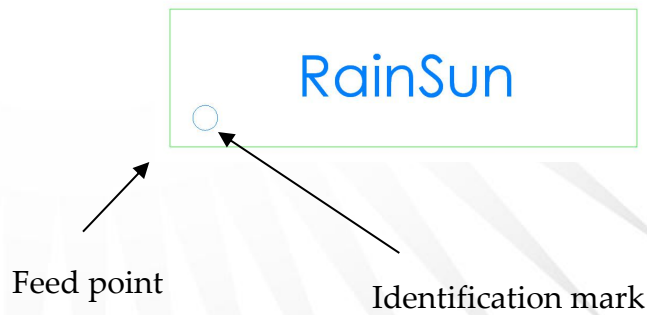
- Broad Band wireless communications

Specifications

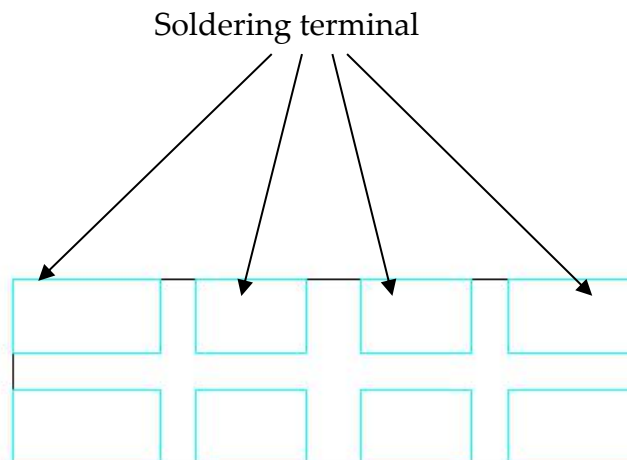
Frequency range	800~2100MHz
Peak gain	1 dBi
Operation temperature	-40 ~ +85 °C
Storage temperature	-40 ~ +100 °C
VSWR	2.5 (Max)
Input Impedance	50 Ohm
Power handling	5W (Max)
Bandwidth	1300 MHz (typ.)
Azimuth beam width	Omni-directional
Polarization	Linear
Soldering pad	Natural tin

Pin configuration

Top view

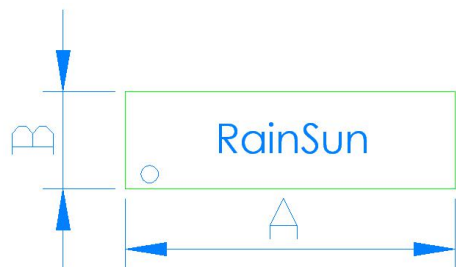


Bottom view

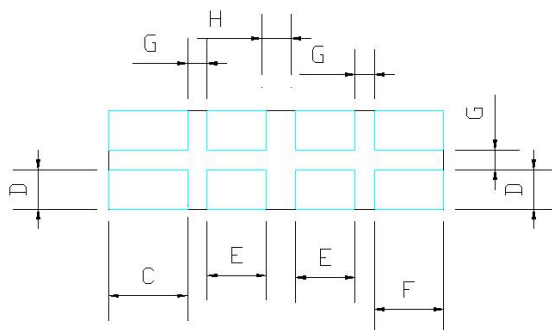


Dimensions

Top view



Top view



Symbol	Dimensions (mm)
A	17.0 ± 0.1
B	5.0 ± 0.1
C	4 ± 0.1
D	2 ± 0.1
E	3 ± 0.1
F	3.5 ± 0.1
G	1 ± 0.1
H	1.5 ± 0.1

Recommended Test Board Pattern



- GND plane
- Matching circuit
- 50 Ohm feeding line

Unit : mm

Board thickness : 0.8mm
Board material : FR4

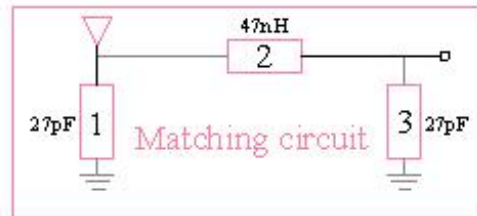
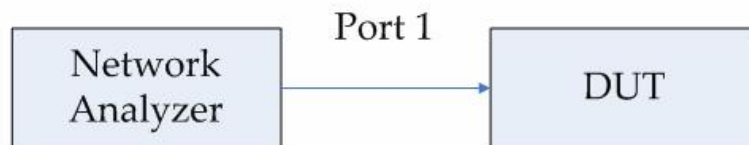


Fig-1

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.

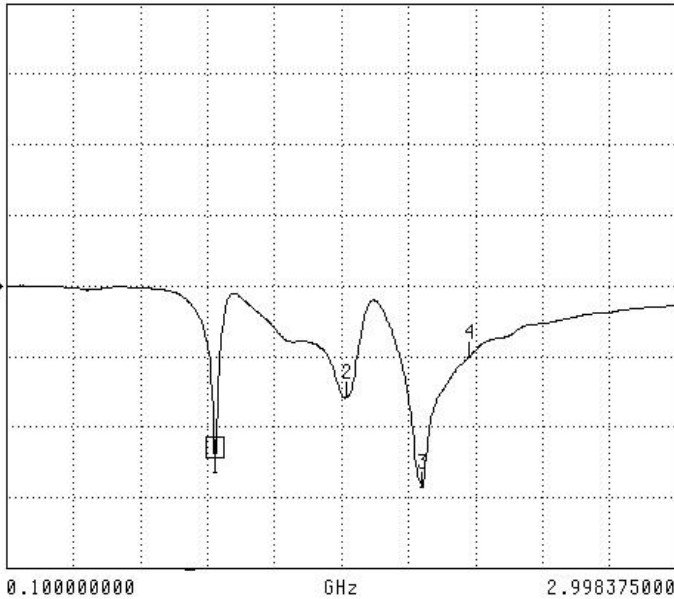
The test board dimension and it's layout is the same as Fig-1.

Typical Electrical Characteristics

Return loss

S11 FORWARD REFLECTION

LOG MAGNITUDE REF=0.000 dB 10.000 dB/DIV



CH 1 - S11
 REFERENCE PLANE
 0.0000 mm

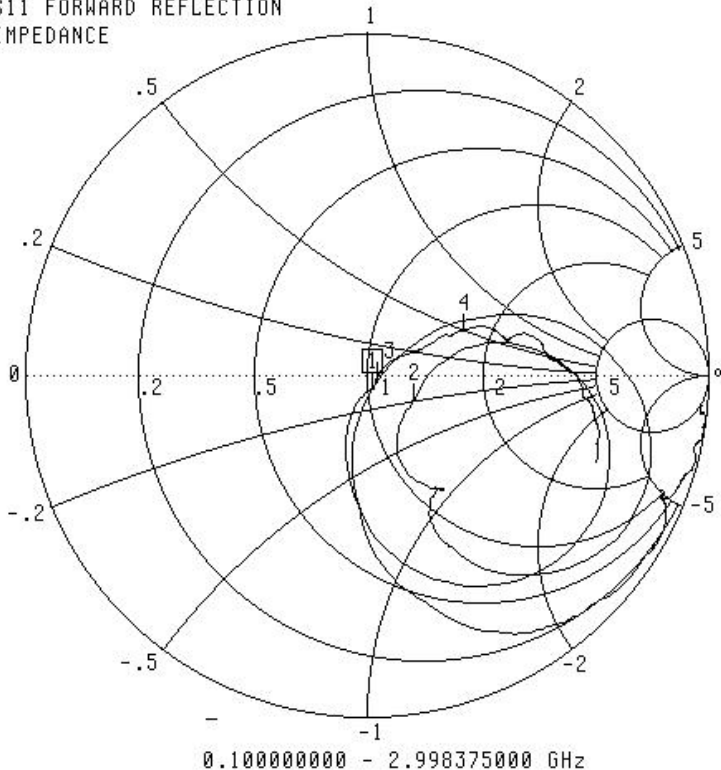
MARKER 1
 1.003437500 GHz
 -26.470 dB

MARKER TO MAX
 MARKER TO MIN

- 2 1.571312500 GHz
-15.852 dB
- 3 1.899500000 GHz
-20.509 dB
- 4 2.102312500 GHz
-10.127 dB

MARKER READOUT
 FUNCTIONS

S11 FORWARD REFLECTION
 IMPEDANCE



CH 1 - S11
 REFERENCE PLANE
 0.0000 mm

MARKER 1
 1.003437500 GHz
 51.730 Ω
 -4.515 jΩ

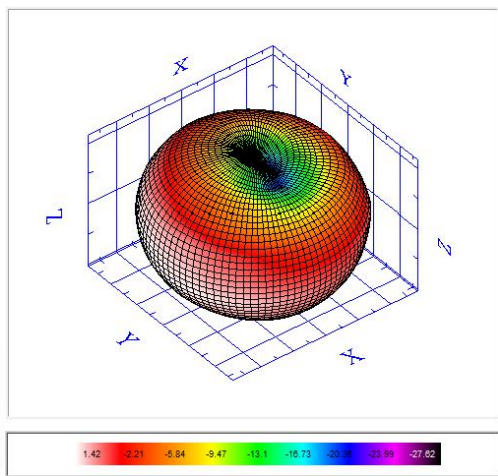
MARKER TO MAX
 MARKER TO MIN

- 2 1.571312500 GHz
65.462 Ω
-10.503 jΩ
- 3 1.899500000 GHz
53.446 Ω
-1.792 jΩ
- 4 2.102312500 GHz
85.346 Ω
24.220 jΩ

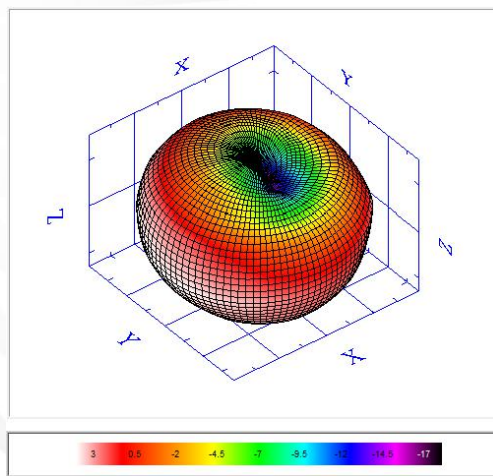
MARKER READOUT
 FUNCTIONS

Typical Electrical Characteristics Radiation

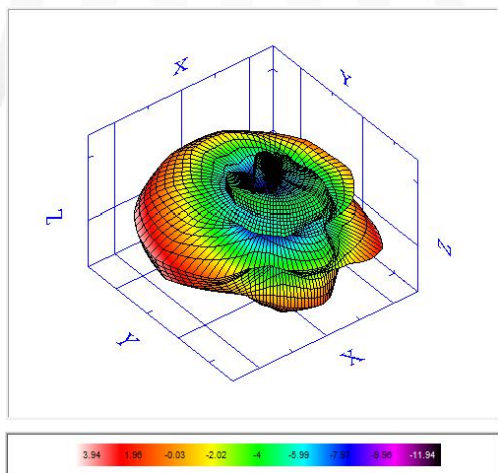
850MHz



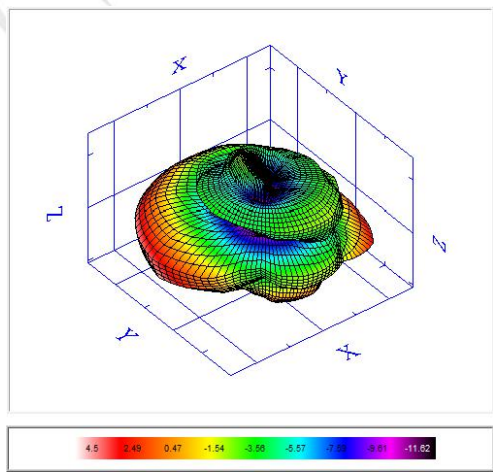
900MHz



1800MHz



1900MHz



2100MHz

