

MD1506

Multilayer Chip Antenna for Extra Wide Band (Preliminary Information)

MD1506-12N Multilayer Chip Antenna

◆ Features

- Size : 14.7mm(L)X6.5mm(W)X1.6mm(H)
 - Light weight and low profile
 - Omni-directional in azimuth
- Lead (Pb) Free

◆ Applications

- Broad Band wireless communications
- GSM/DCS of 890-960, 1710-1880 MHz
- CDMA/PCS of 825-894, 1820-1990 MHz

Specifications

Frequency range	820~1950MHz
Peak gain	-0.3 dBi
Operation temperature	-40 ~ +85 °C
Storage temperature	-40 ~ +100 °C
VSWR	2.5 (Max)
Input Impedance	50 Ohm
Power handling	5W (Max)
Bandwidth	1130MHz (typ.)
Azimuth beam width	Omni-directional
Polarization	Linear
Soldering pad	Natural tin

Pin configuration

Identification mark

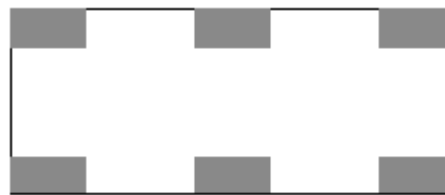
Top side



Feed point

Bottom side

Soldering terminal

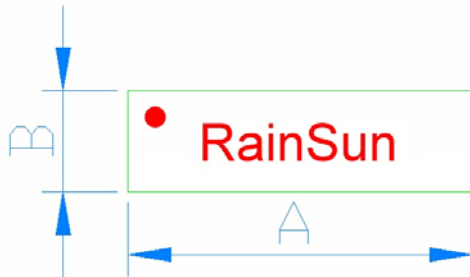


Feed point

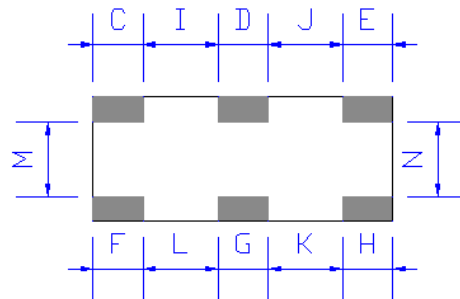
Soldering terminal

Dimensions

Top view

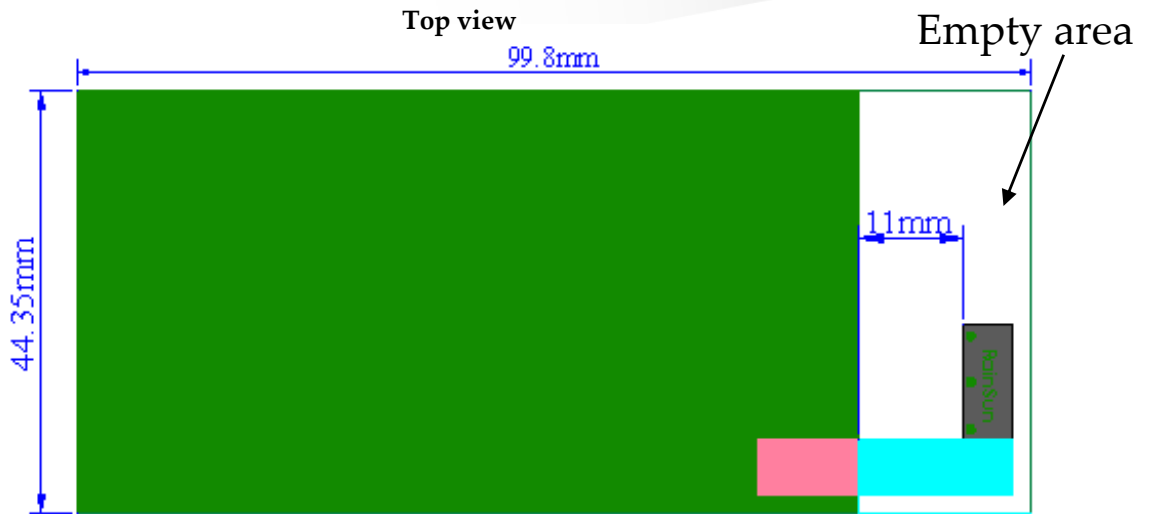


Bottom view



Symbol	Dimensions (mm)
A	14.7 ± 0.3
B	6.0 ± 0.1
C	3.8 ± 0.1
D	3.1 ± 0.1
E	3.8 ± 0.1
F	3.8 ± 0.1
G	3.1 ± 0.1
H	3.8 ± 0.1
I	2.0 ± 0.1
J	2.0 ± 0.1
K	1.9 ± 0.1
L	1.9 ± 0.1
M	1.8 ± 0.1
N	1.8 ± 0.1

Recommended Test Board Pattern

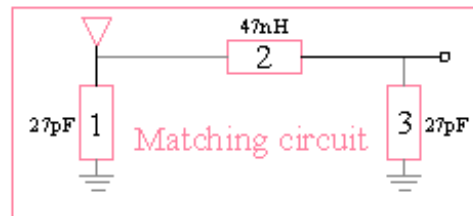


- GND plane
- Matching circuit
- 50 Ohm feeding line

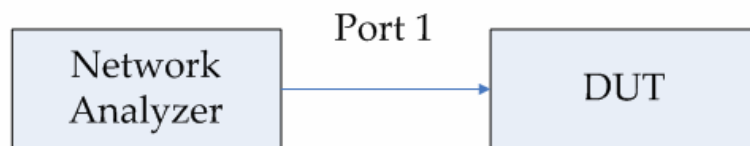
Unit : mm

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.

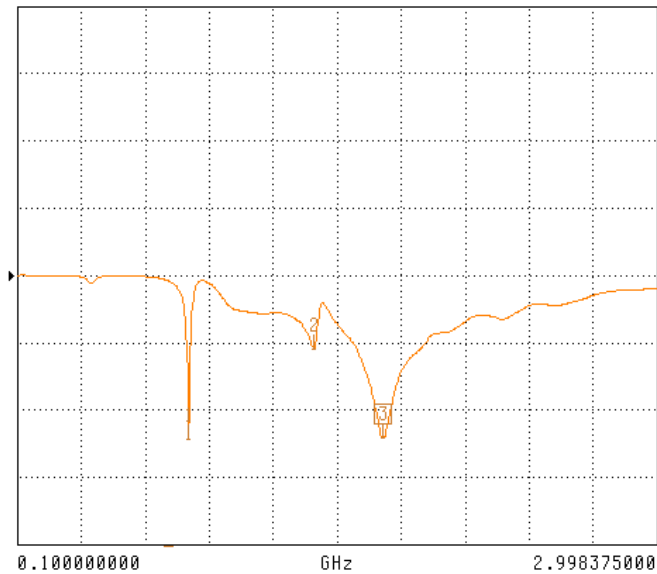
The test board dimension and it's layout is the same as Fig-1.

Typical Electrical Characteristics

Return loss

S11 FORWARD REFLECTION

POWER OUT REF=0.000 dBm 10.000 dB/DIV



CH 1 - S11
0.0000 mm REF
0.000 dB OFFSET
0.00° OFFSET

MARKER 3
1.759375000 GHz
-24.100 dBm

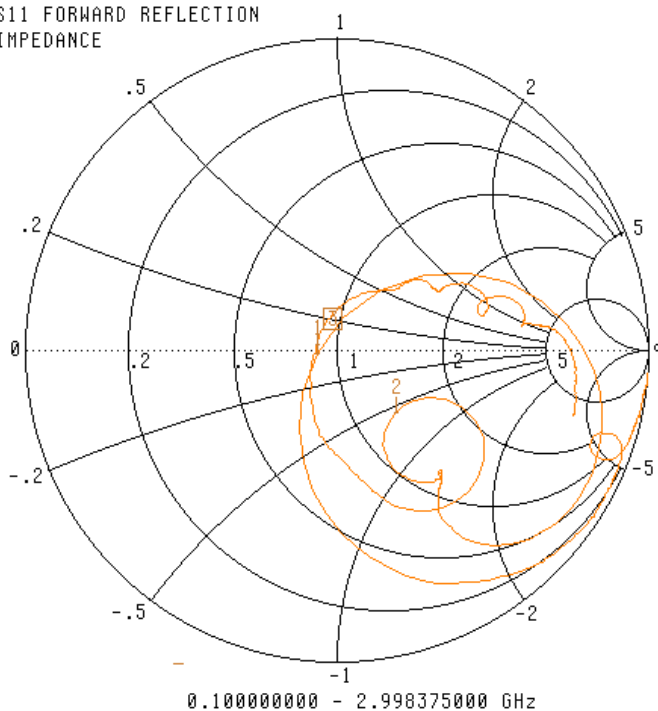
MARKER TO MAX
▶ MARKER TO MIN

- 1 0.878062500 GHz
-24.371 dBm
- 2 1.445937500 GHz
-11.001 dBm

MARKER READOUT
FUNCTIONS

Smith Chart

S11 FORWARD REFLECTION
IMPEDANCE



CH 1 - S11
0.0000 mm REF
0.000 dB OFFSET
0.00° OFFSET

MARKER 3
1.759375000 GHz
44.271 Ω
1.323 jΩ

MARKER TO MAX
▶ MARKER TO MIN

- 1 0.878062500 GHz
44.442 Ω
-1.310 jΩ
- 2 1.445937500 GHz
66.975 Ω
-29.449 jΩ

MARKER READOUT
FUNCTIONS