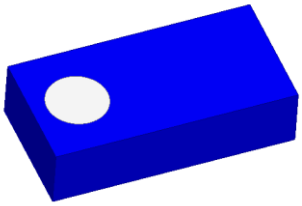
Pulse | LARSEN Antennas
A YAGEO Company

TECHNICAL DATA SHEET

Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A



Features:

- Size : 1.6x0.8x0.4 mm
- Working Frequency : 2.4~2.5GHz
- Omni-directional Radiation
- Tape & reel automatic mounting
- Reflow process compatible
- RoHS compliant

Applications:

- 2.4GHz WiFi device
- Bluetooth device
- Zigbee device
- ISM band equipment

All dimensions are in mm / inches

RoHS COMPLIANT

Pulse Worldwide Headquarters
15255 Innovation Drive #100
San Diego, CA 92128
USA
Tel:1-858-674-8100

Pulse/Larsen Antennas
18110 SE 34th St Bldg 2 Suite 250
Vancouver, WA 98683
USA
Tel: 1-360-944-7551

Europe Headquarters
Pulse GmbH & Do, KG
Zeppelinstrasse 15
Herrenberg, Germany
Tel: 49 7032 7806 0

Pulse (Suzhou) Wireless Products Co, Inc.
99 Huo Ju Road(#29 Bldg,4th Phase
Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

ELECTRICAL SPECIFICATIONS

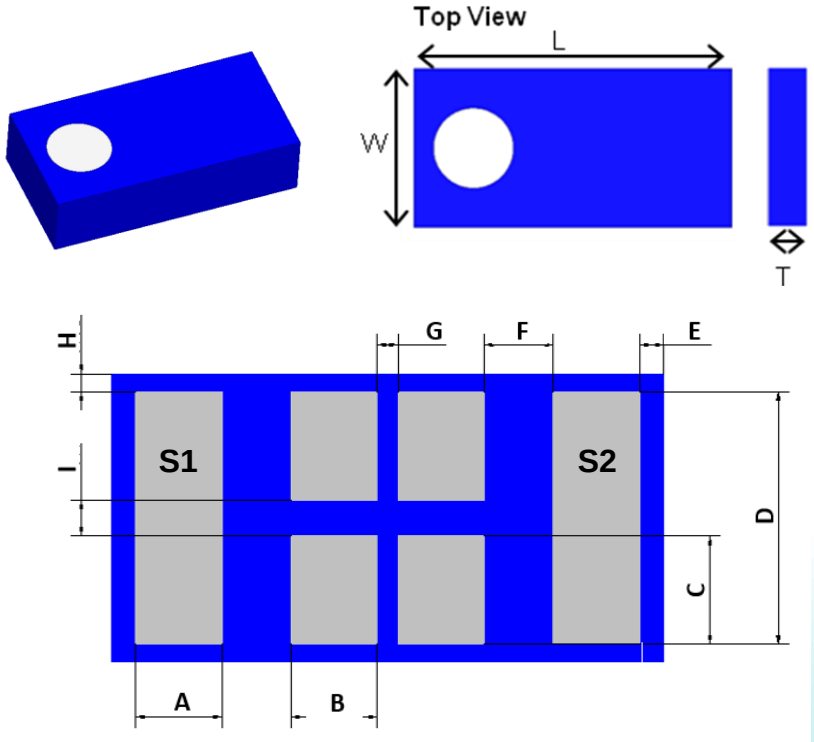
Working Frequency	2.4 ~ 2.484 GHz
Bandwidth	150 MHz(Typ.)
Return Loss	6.0 dB Max
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Peak Gain	2.0 dBi(Typ.)
Impedance	50 Ω
Operating Temperature	- 40~105 ℃
Maximum Power	1 W
Termination	Ag (Environmentally-Friendly Leadless)
Peak Reflow Temperature	260℃ , 5sec.

NOTE
1. The specification is defined on Pulse evaluation board

MECHANICAL DRAWING

	Dimension
L (mm)	1.60 ±0.15
W (mm)	0.80 ±0.15
T (mm)	0.40 (Max.)
A (mm)	0.25 ±0.15
B (mm)	0.25 ±0.15
C (mm)	0.30 ±0.15
D (mm)	0.70 ±0.15
E (mm)	0.07 ±0.07
F (mm)	0.20 ±0.10
G (mm)	0.06 ±0.05
H (mm)	0.05 ±0.05
I (mm)	0.10 ±0.05

Terminal name	Function
S1	Soldering Pad
S2	Feeding Pad



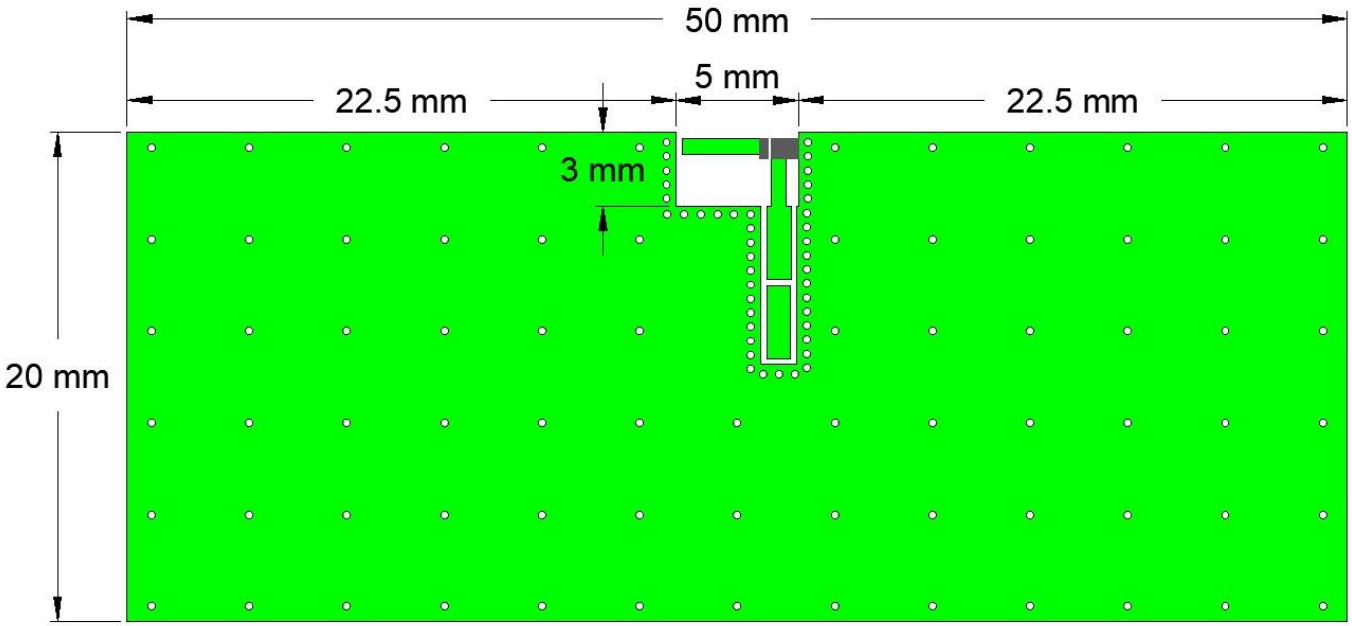
RoHS COMPLIANT

Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

REFERENCE DESIGN OF EVALUATION BOARD (SCENARIO 1)

◇SCENARIO 1



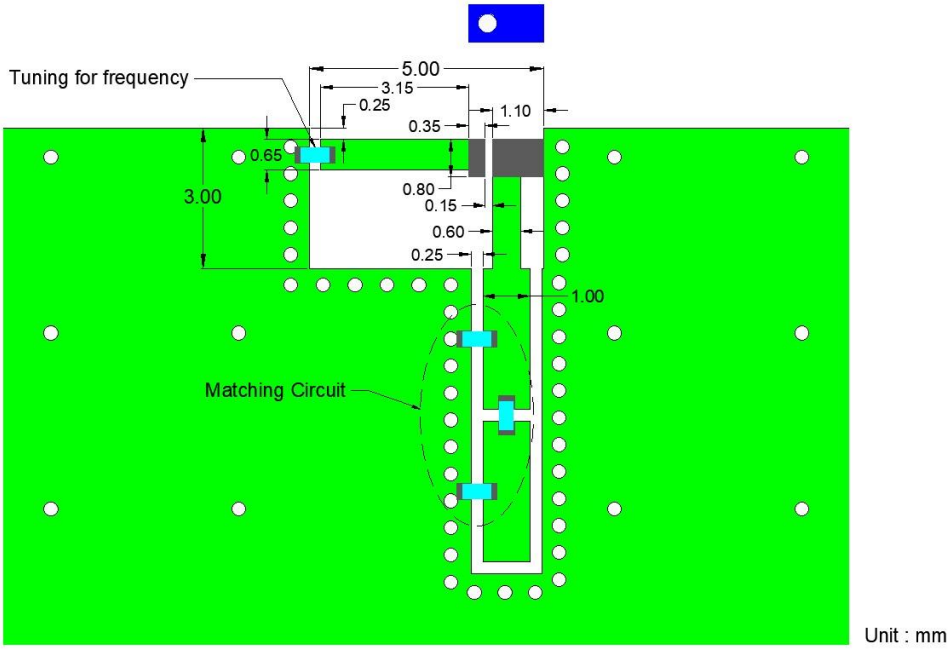
Outlook and dimension of evaluation board

RoHS COMPLIANT

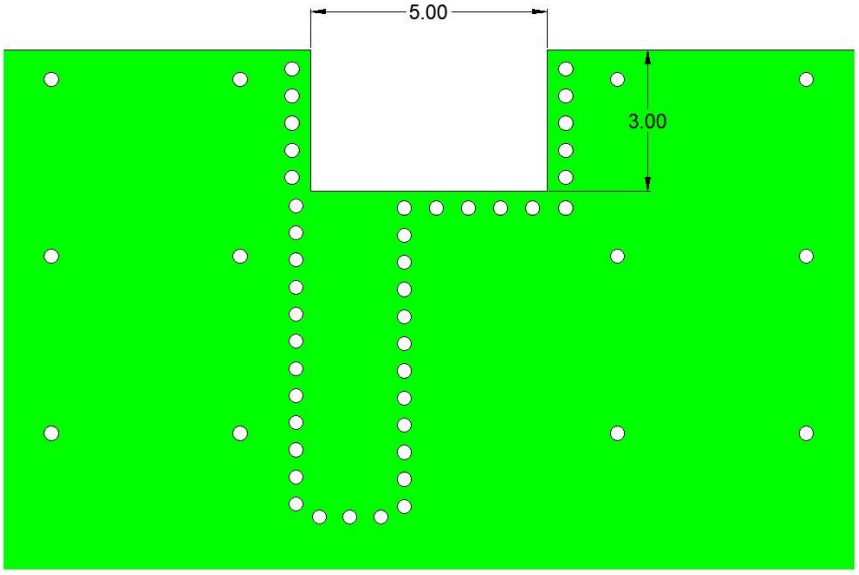
Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

REFERENCE DESIGN OF EVALUATION BOARD (SCENARIO 1)



Top layer



Bottom layer

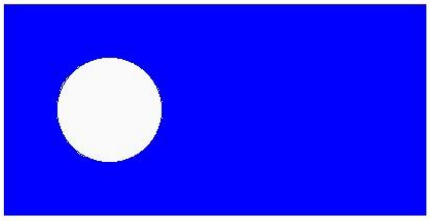
Details of clearance

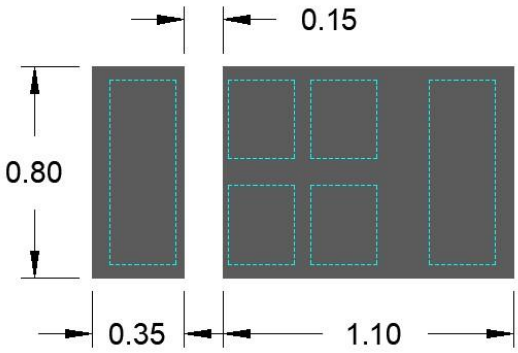
RoHS COMPLIANT

Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

REFERENCE DESIGN OF EVALUATION BOARD (SCENARIO 1)





: Footprint

: Antenna pad

Unit : mm

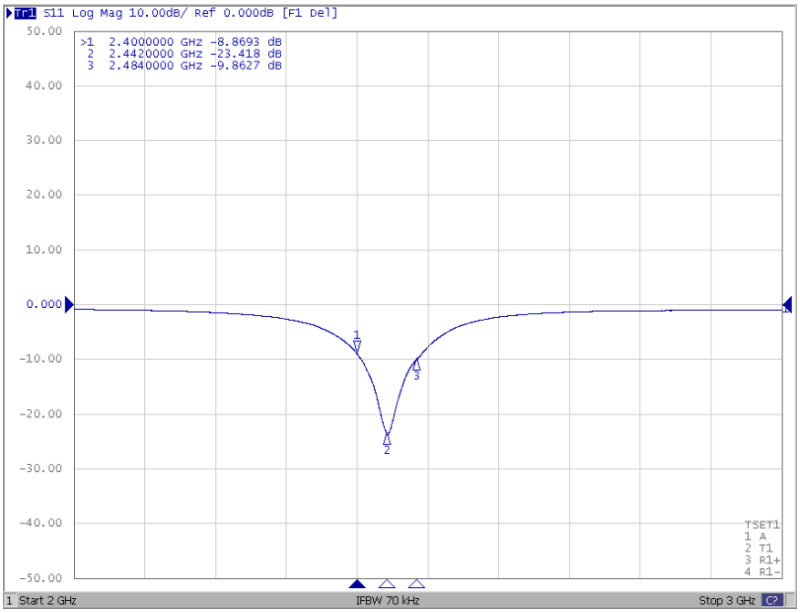
Footprint

RoHS COMPLIANT

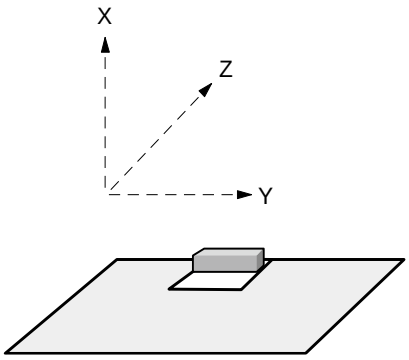
Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

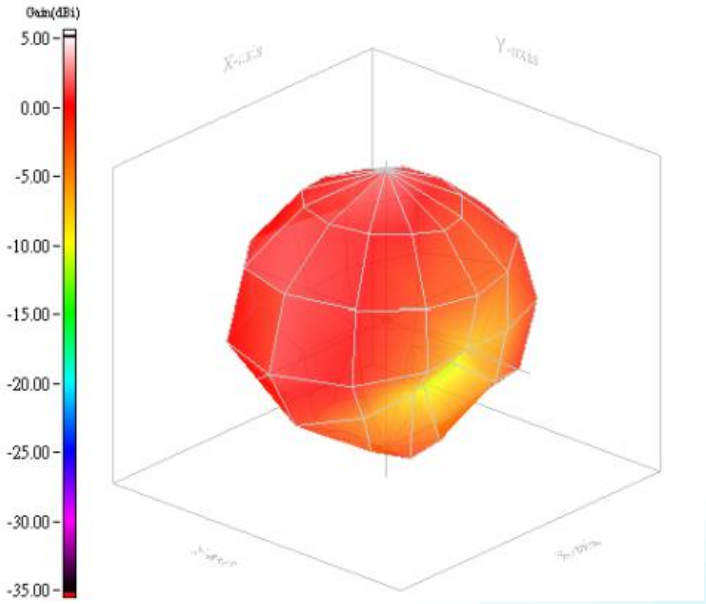
ELECTRICAL PERFORMANCES (SCENARIO 1)



Return loss



Evaluation board and XYZ direction



Max Gain = 2.03dBi
Efficiency = -2.08dB, 61.88%

Radiation pattern

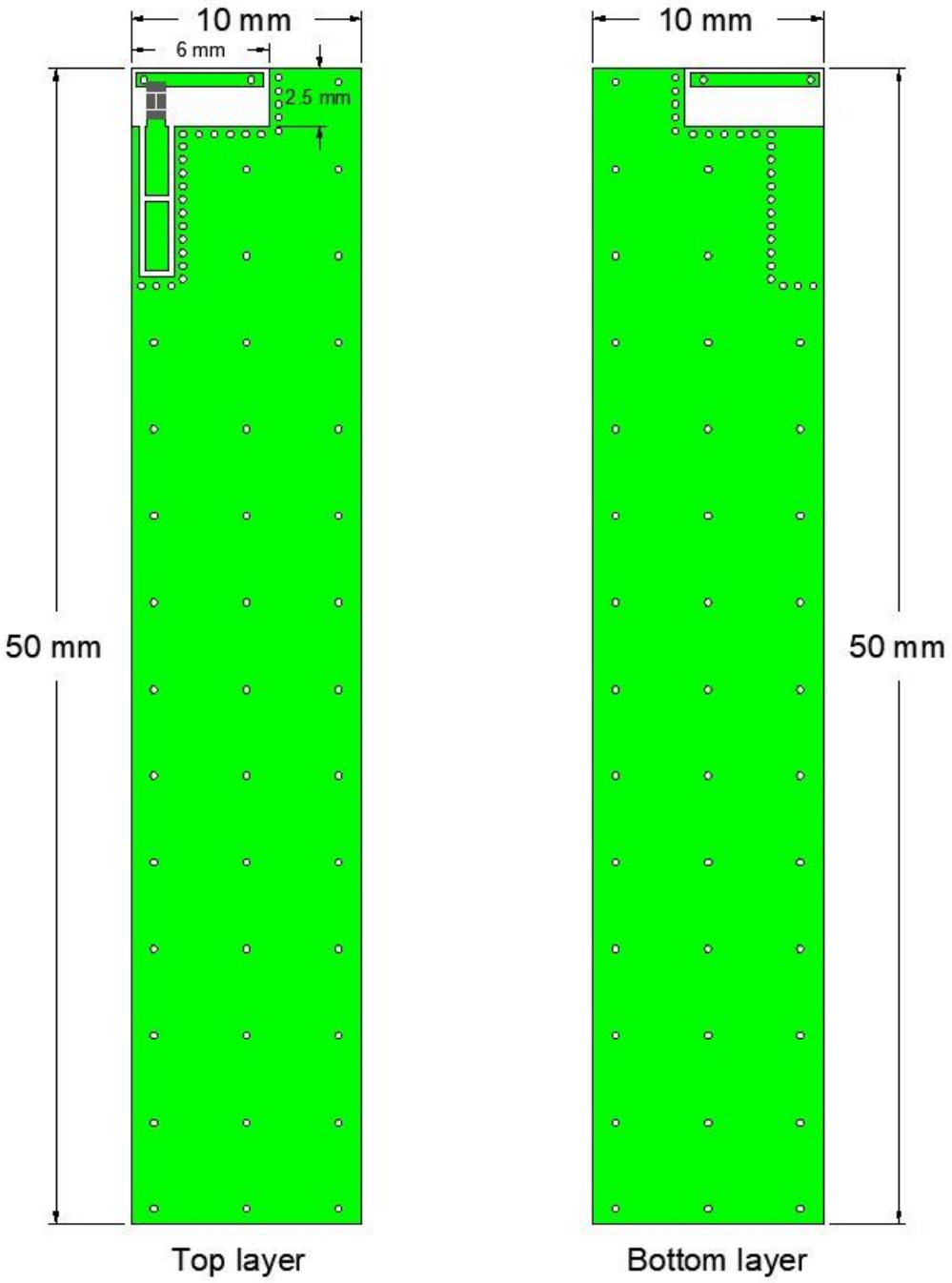
RoHS COMPLIANT

Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

REFERENCE DESIGN OF EVALUATION BOARD (SCENARIO 2)

◇SCENARIO 2



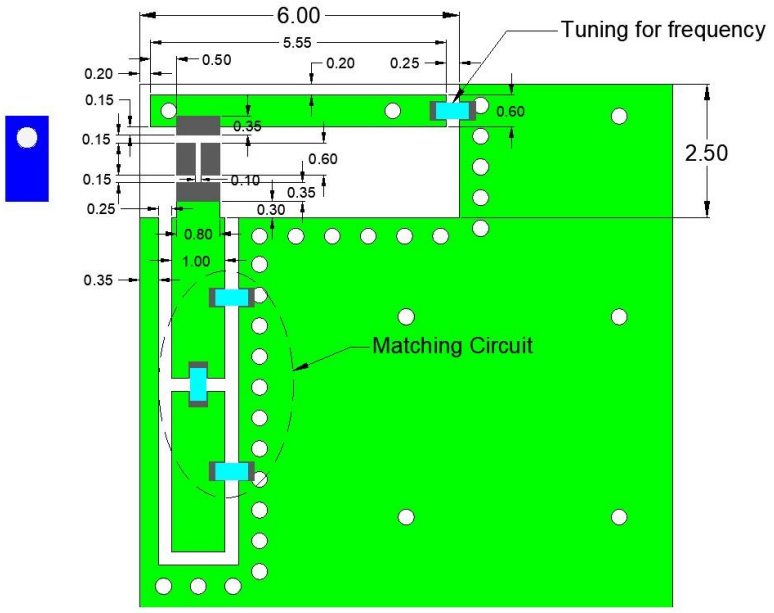
Outlook and dimension of evaluation board

RoHS COMPLIANT

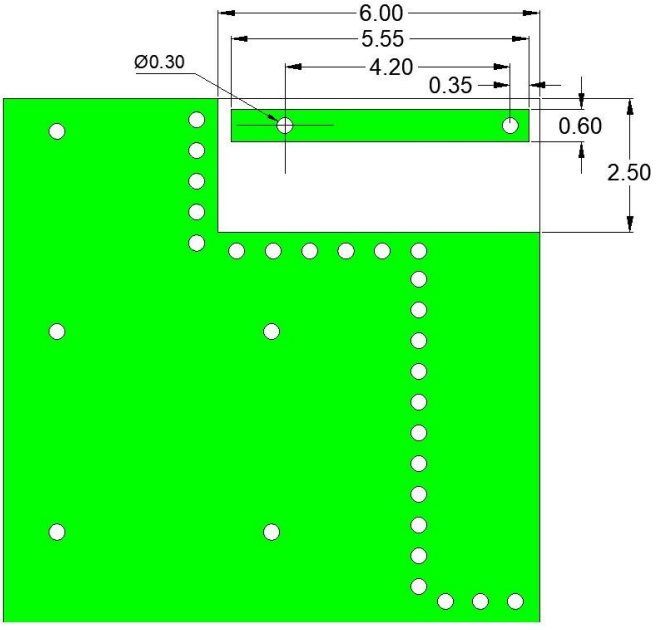
Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

REFERENCE DESIGN OF EVALUATION BOARD (SCENARIO 2)



Top layer



Details of clearance

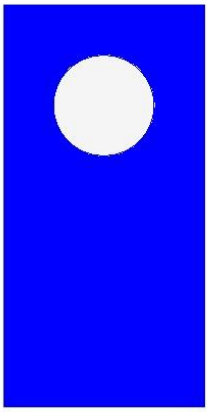
Bottom layer

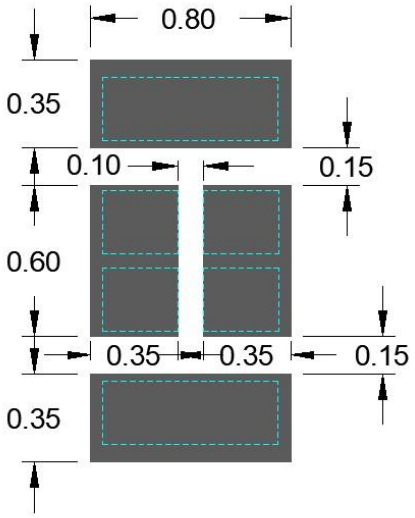
RoHS COMPLIANT

Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

REFERENCE DESIGN OF EVALUATION BOARD (SCENARIO 2)





: Footprint

: Antenna pad

Unit : mm

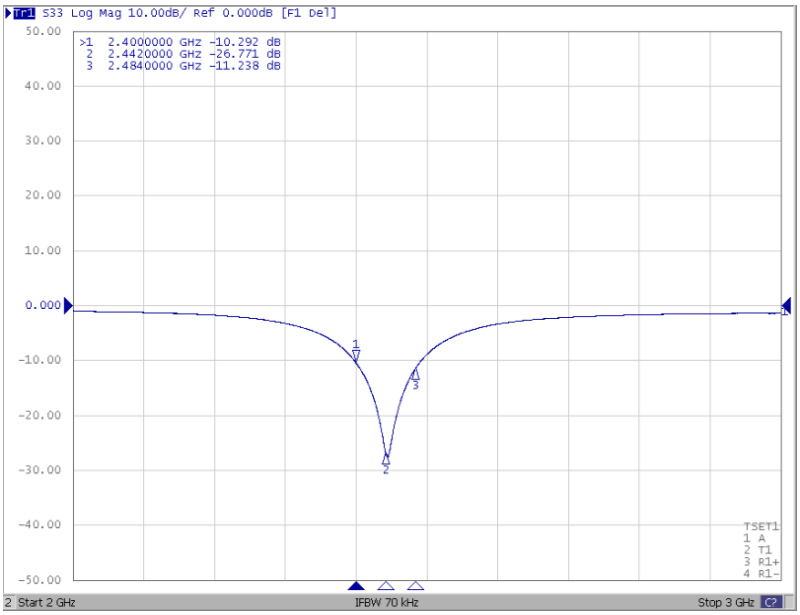
Footprint

RoHS COMPLIANT

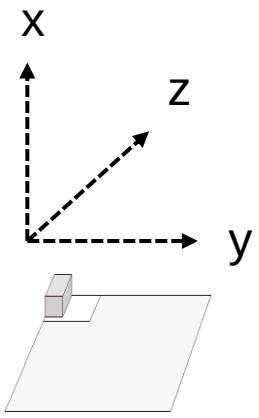
Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

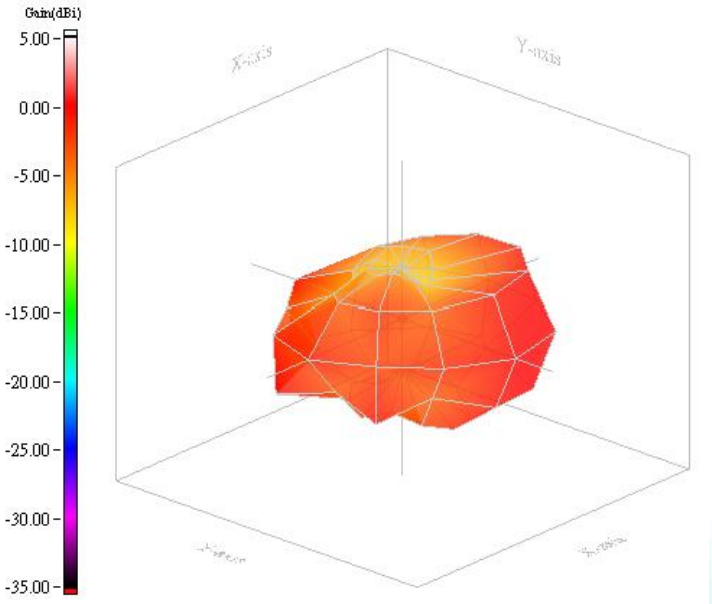
ELECTRICAL PERFORMANCES (SCENARIO 2)



Return loss



Evaluation board and XYZ direction



Max Gain = 3.38dBi
Efficiency = -2.17dB, 60.64%

Radiation pattern

RoHS COMPLIANT

Description : 1608 2.4G Chip Antenna

PART NUMBER : ANT1608LL14R2400A

REVISION HISTORY

Revision	Date	Description
Version 1	Sep. 30, 2020	- New issue
Version 2	Aug. 30, 2021	- Added Dimension E, G, H.
Version 3	Oct. 2023	- Modified EVB drawing and added footprint drawing

RoHS COMPLIANT