Pulse A YAGEO Company | LARSEN Antennas

TECHNICAL DATA SHEET

Description: 1003 GPS &2.4GHz Chip Antenna

PART NUMBER: ANT1003LL15R1524A

Features:

- Size : 9.90x3.20x1.47 mm
- Cover dual frequency bands in 2.4 & 1.575 GHz
- Omni-directional Radiation
- Tape & reel automatic mounting
- Reflow process compatible
- RoHS compliant

Applications:

- Tablet
- Navigation device
- Telematics box
- Fleet management
- 2.4 GHz WiFi device
- Bluetooth gadget
- Zigbee device
- ISM band equipment

ELECTRICAL SPECIFICATIONS

Working Frequency	1.575 GHz / 2.45 GHz
Bandwidth	15 MHz(Typ.) / 84 MHz (Typ.)
Gain	6.49 dBi Min.
Polarization	Linear
Azimuth Beamwidth	Omni-directional
	1.15 dBi / 2.90 dBi
Impedance	50 Ω
Operating Temperature	- 40~105 ℃
Maximum Power	1 W
Termination	Ni / Sn (Environmentally-Friendly Leadless)
Resistance to Soldering Heats	260℃ , 10sec.

NOTE
1. The specification is defined on Pulse evaluation board

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Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

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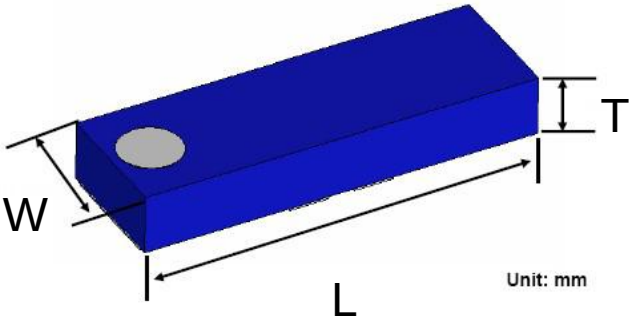
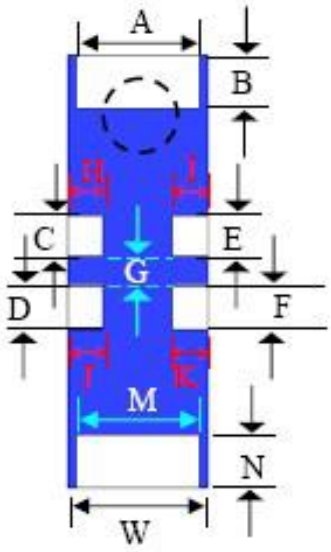
MECHANICAL DRAWING

	Dimension
L (mm)	9.90 ±0.15
W (mm)	3.20 ±0.15
T (mm)	1.47 ±0.15
A (mm)	2.81 ±0.15
B (mm)	1.23 ±0.15
C (mm)	1.03 ±0.15
D (mm)	1.03 ±0.15
E (mm)	1.03 ±0.15
F (mm)	1.03 ±0.15
G (mm)	0.60 ±0.15
H (mm)	0.83 ±0.15
I (mm)	0.83 ±0.15
J (mm)	0.83 ±0.15
K (mm)	0.83 ±0.15
L (mm)	0.83 ±0.15
M (mm)	2.81 ±0.15
n (mm)	1.23 ±0.15





Terminal name	Function
A	Feed BT / GND
B	Feed BT / GND
C	GND
D	GND
E	GND
F	GND

Terminal name	Function
H	GND
I	GND
J	GND
K	GND
M	Feed GPS / GND
N	Feed GPS / GND

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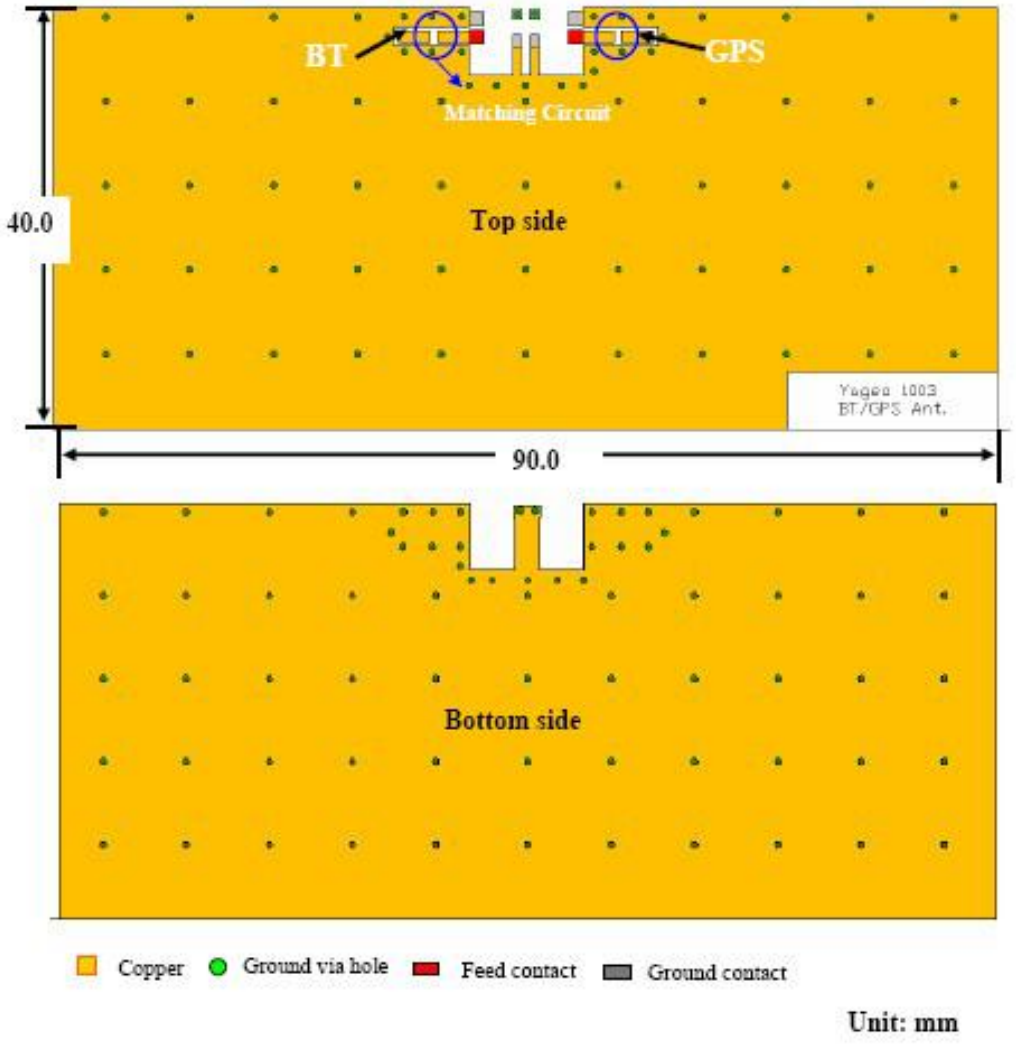
REFERENCE DESIGN OF EVALUATION BOARD



Outlook and dimension of evaluation board

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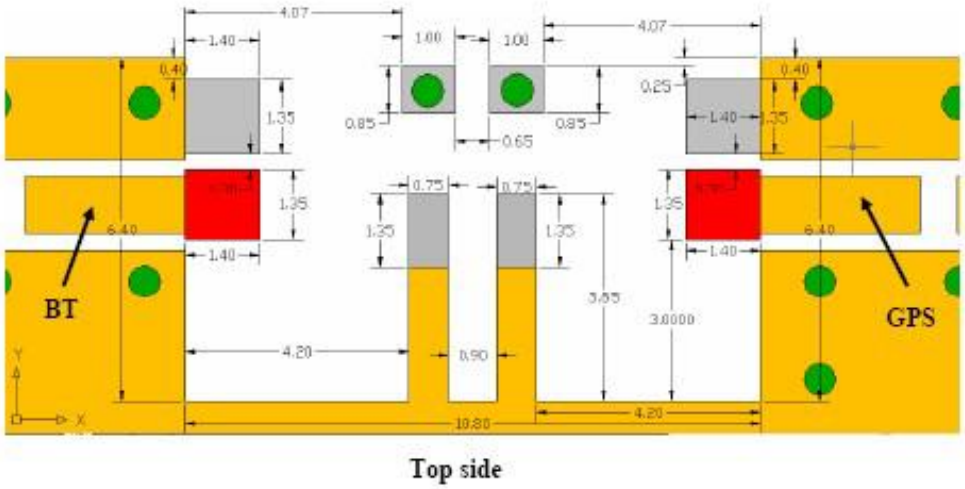
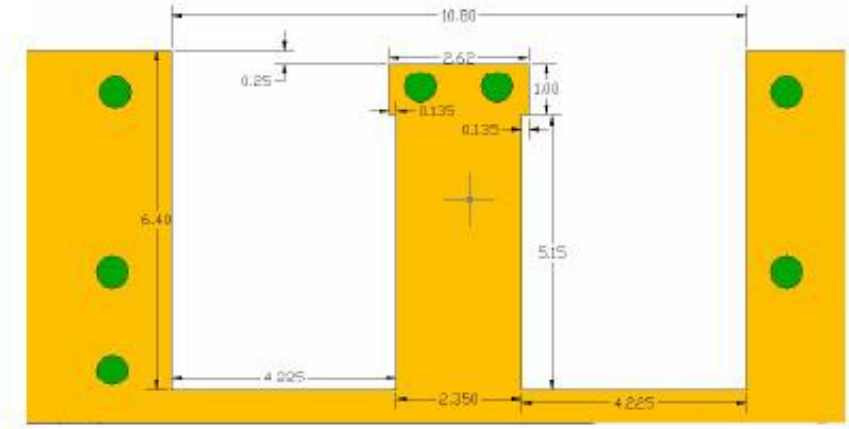


Top side



Bottom side

Copper Ground via hole Feed contact Ground contact

Tol : ±0.1
Unit: mm

Details of soldering Pad

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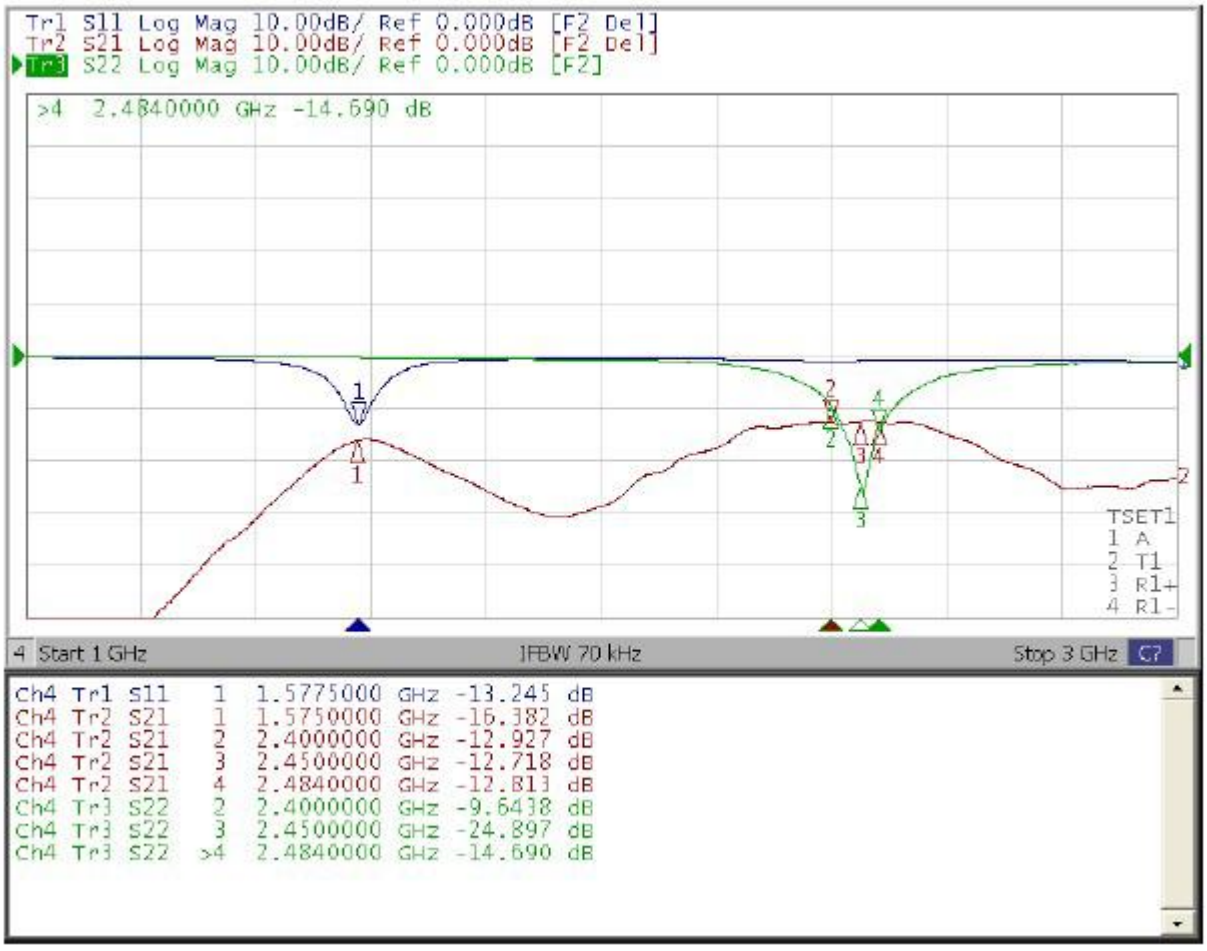
ELECTRICAL PERFORMANCES



Return loss

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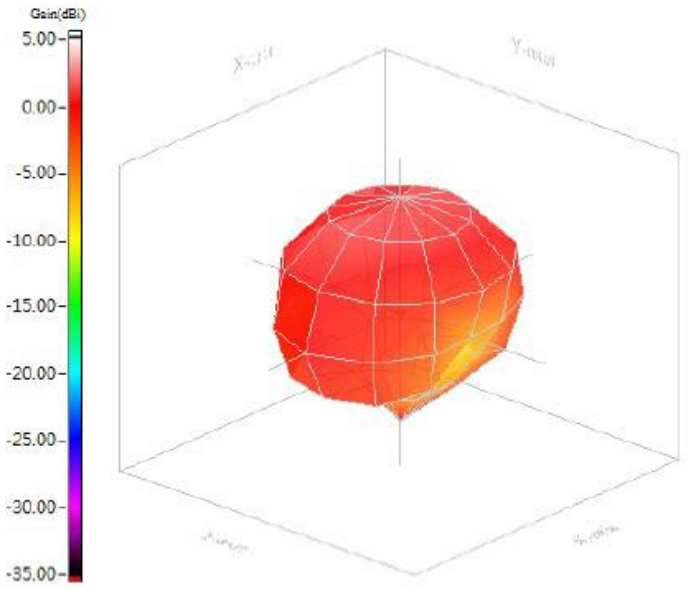
ELECTRICAL PERFORMANCES

Radiation Pattern_1.575z GHz

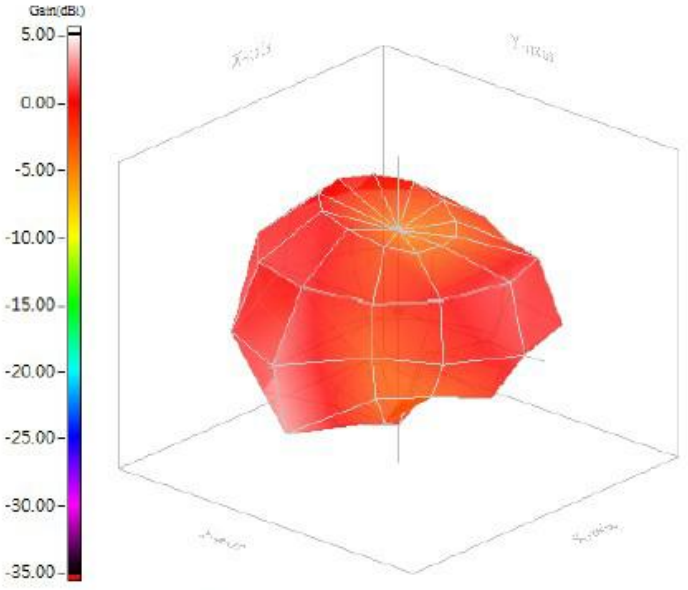
Model name: 1003 GPS
Test mode: 3D
Test frequency / Polarization: 1575.00 MHz / Vector sum
Test date: 2011/12/15



Max gain= 1.15dBi, at (0, 0)
MEG(mean effective gain)= -0.79dBi
Directivity(dB)= 2.90
Efficiency= -1.75dB, 66.83%

Radiation Pzzattern_2.45 GHz

Model name: 1003 BT
Test mode: 3D
Test frequency / Polarization: 2450.00 MHz / Vector sum
Test date: 2011/12/15



Max gain= 2.90dBi, at (120, 0)
MEG(mean effective gain)= -1.41dBi
Directivity(dB)= 3.79
Efficiency= -0.89dB, 81.55%

Radiation pattern

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REVISION HISTORY

Revision	Date	Description
Version 1	Nov. 19, 2020	- New issue