

RF Ceramic Chip Antenna

2.4GHz 1W 1.6x0.8mm

AT16082G41622Y

MERITEK

FEATURE

- Operating Temperature: -40°C ~ +105°C
- Omin-directional Radiation
- Tape and Reel for Automatic Surface Mounting
- Reflow Process Compatible
- Application: Bluetooth gadget, Zigbee device, ISM band equipment



PART NUMBERING SYSTEM

AT 1608 2G4 1 6 22Y
(1) (2) (3) (4) (5) (6)

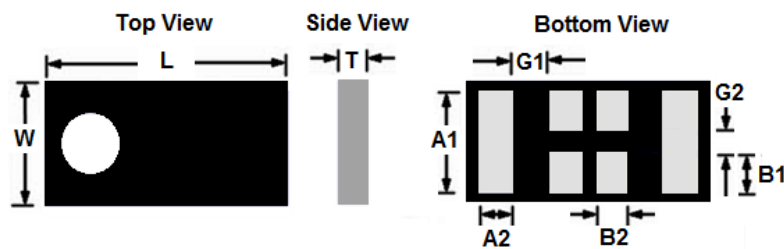


No	Item	Code	Description	Series Reference
(1)	Meritek Series	AT	RF Antenna	SMD Ceramic Chip type
(2)	Size Code	1608	1608: 1.6 x 0.8 x 1.10 mm	Length x Width x Height mm
(3)	Working Frequency	2G4	2G4: 2.4GHz	M: MHz, G:GHz
(4)	Maximum Power	1	1: 1W	At -40°C ~ +105°C
(5)	Terminal	6	6: 6 terminals	Number of terminals
(6)	Internal Code	22Y	Internal Reference	Internal Control or Project Reference

ELECTRICAL CHARACTERISTICS

Item	Characteristic
Working Frequency	2.4GHz
Bandwidth	150 MHz(Typ.)
Return Loss	6.0 dB max
Polarization	Linear
Azimuth Bandwidth	Omni-Directional
Peak Gain	2.0 dBi (Typ.)
Impedance	50Ω
Operating Temperature	-40°C ~ +105°C
Maximum Power	1W
Termination	Ag (Environmentally-Friendly Leadless)
Resistance to Soldering Heats	260°C / 5 sec

DIMENSION



Unit: mm

Size Code	L±0.15	W±0.15	T max	A1±0.15	A2±0.15	B1±0.15	B2±0.15	G1±0.05	G2±0.15
1608	1.6	0.8	0.4	0.7	0.25	0.3	0.25	0.2	0.1

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TESTING BOARD AND LAND PATTERN (SCENARIO 1)

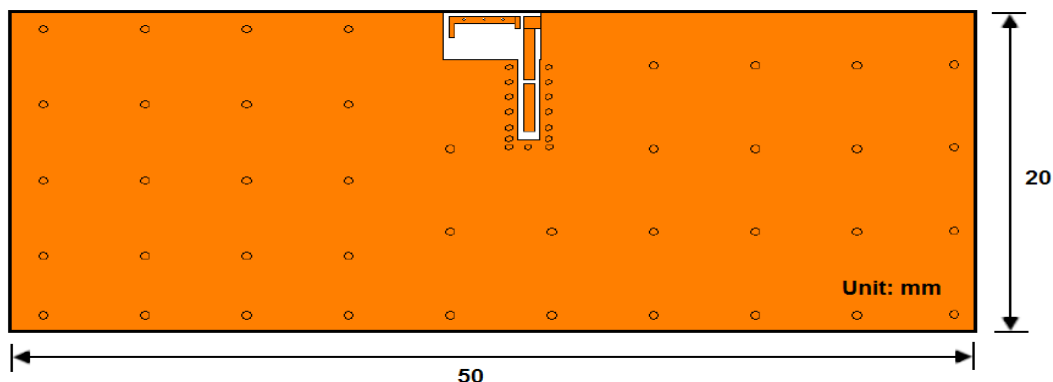


Fig.1 Outlook and dimension of testing board (Scenario 1)

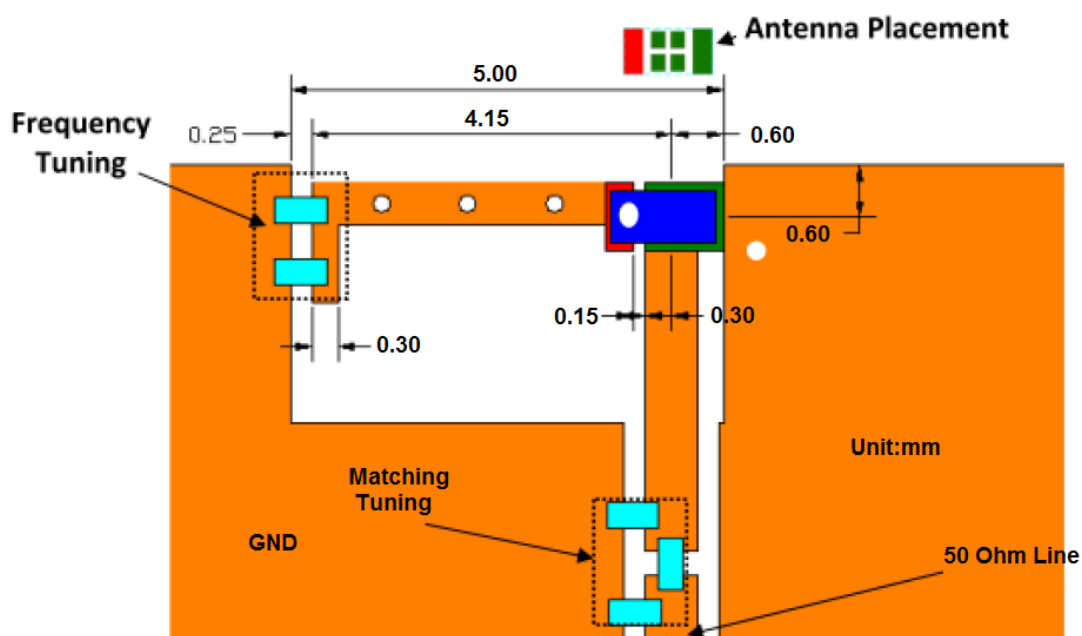


Fig.2 Top Layer

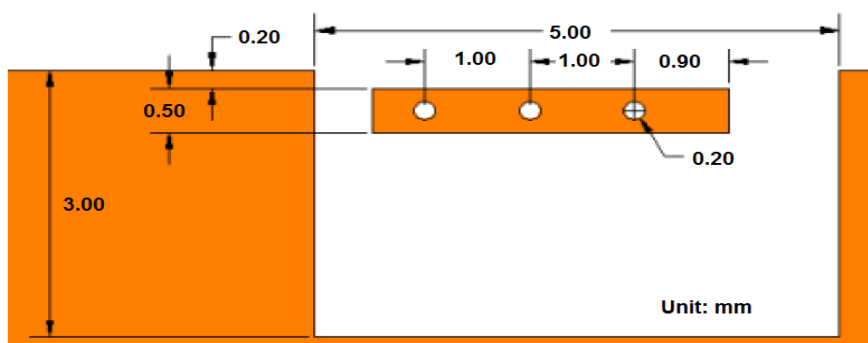


Fig.3 Bottom Layer

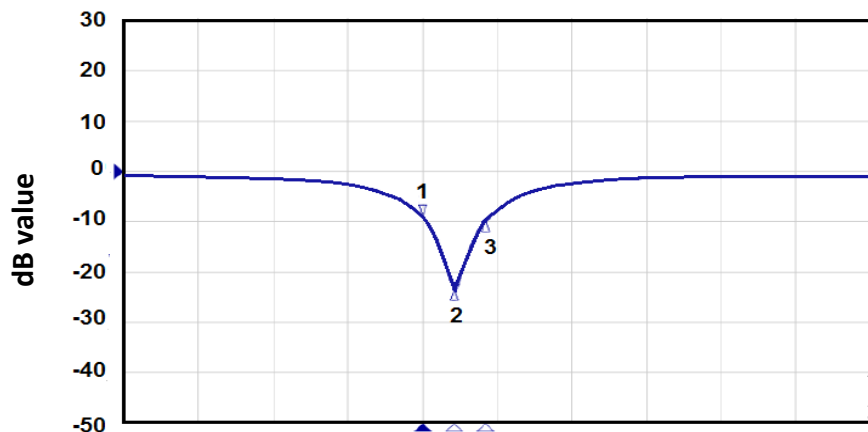
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ELECTRICAL PERFORMANCE



Frequency (MHz)
Fig.4 Return Loss Data:
1. 2.4GHz/-8.8693dB,
2. 2.442GHz/-23.418dB,
3. 2.484GHz/-9.8627dB

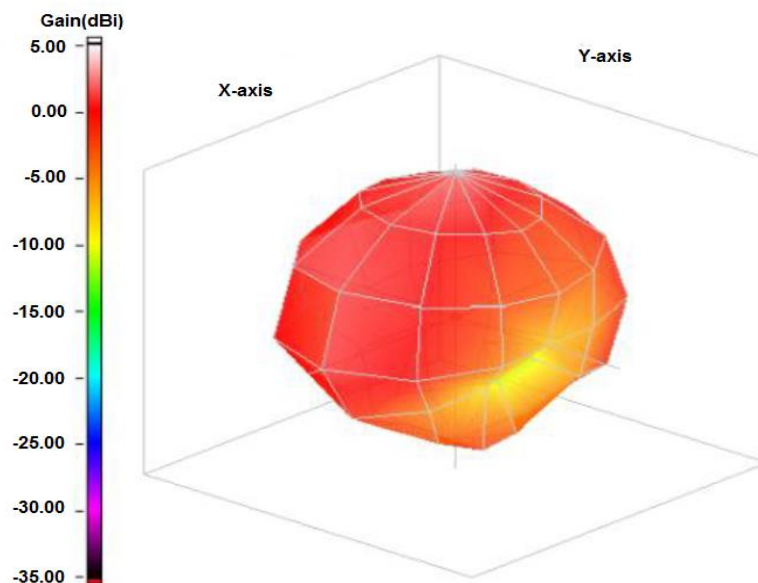


Fig.5 XYZ Direction on Testing board and Radiation Pattern
Max Gain 2.03dBi
Efficiency -2.06dB, 61.88%

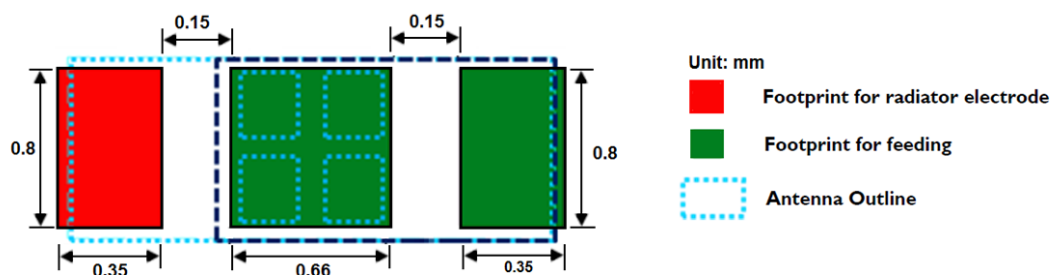


Fig.6 Details of Soldering Land pattern

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TESTING BOARD AND LAND PATTERN (SCENARIO 2)

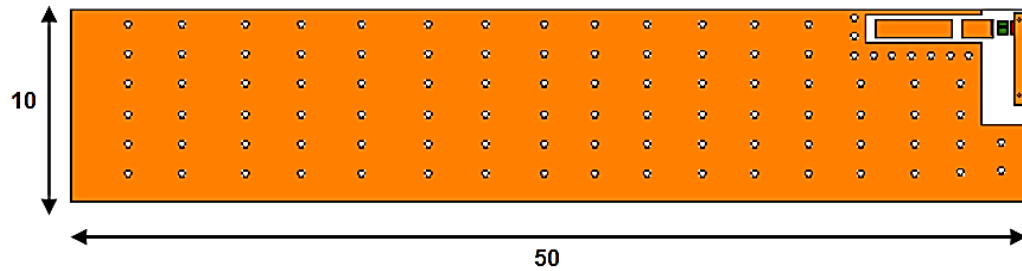


Fig.7 Outlook and dimension of testing board (Scenario 2)

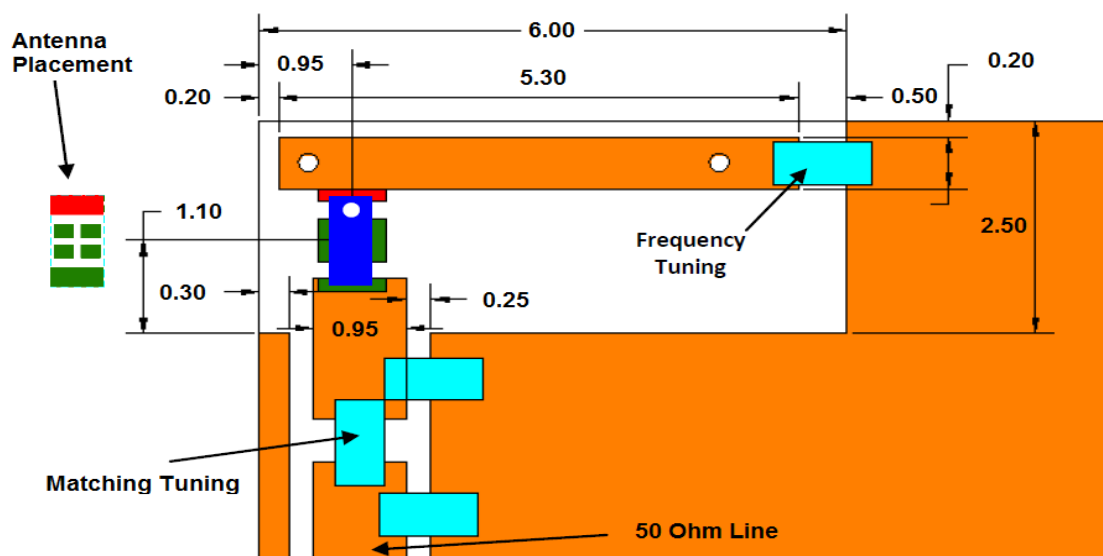


Fig.8 Top Layer

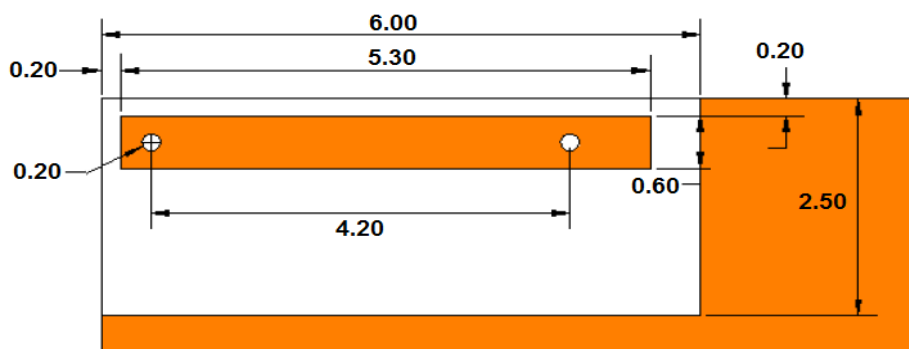


Fig9: Bottom Layer

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ELECTRICAL PERFORMANCE

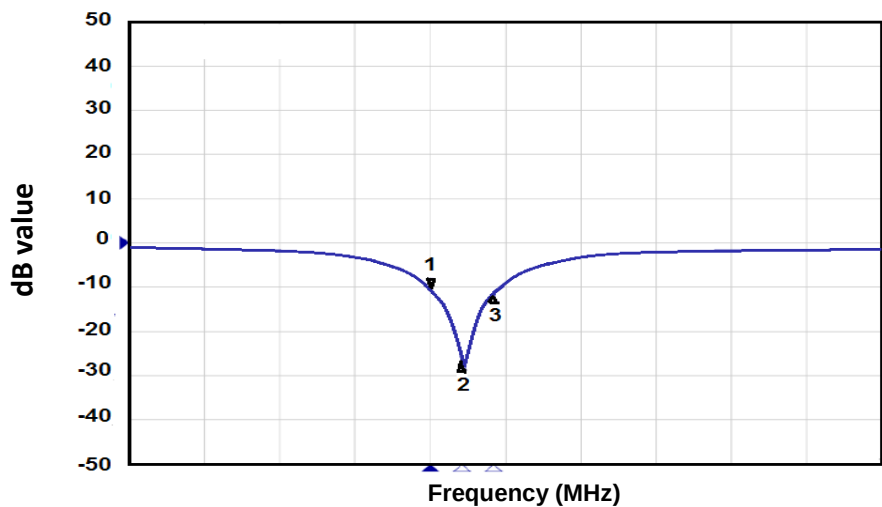


Fig.10 Return Loss Data:

1. 2.4GHz/-10.292dB
2. 2.442GHz/-26.771dB
3. 2.484GHz/-11.238dB

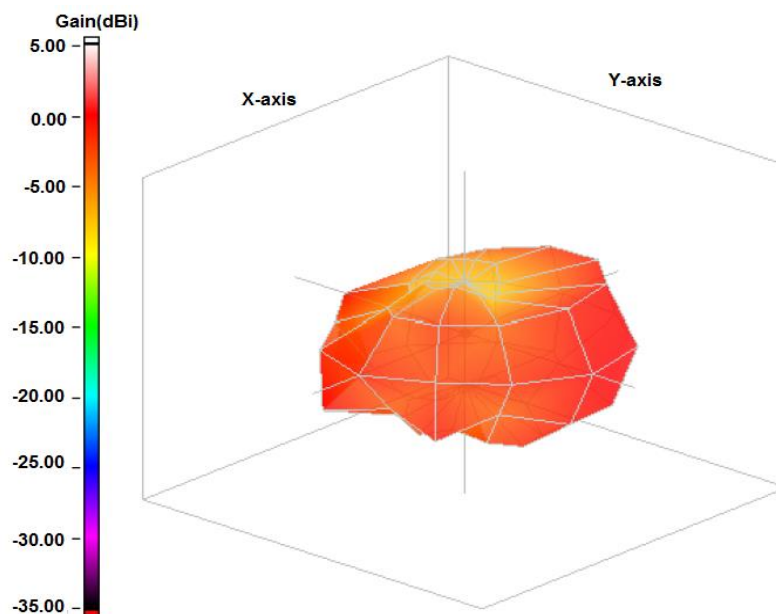


Fig.11 XYZ Direction on Testing board and Radiation Pattern

Max Gain 3.38dBi
Efficiency -2.17db, 60.64%

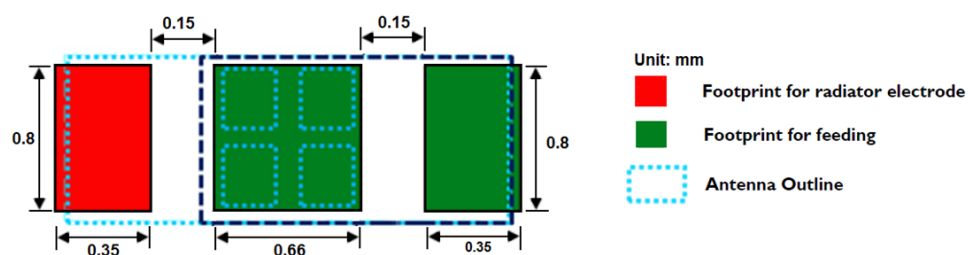


Fig.12 Details of Soldering Land pattern

*Specifications subject to change without notice.