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[TDK Corporation](#)

[ANT016008LCD1575MA1](#)

For any questions, you can email us directly:

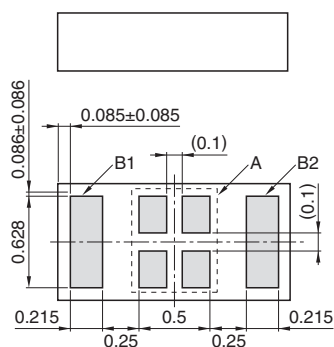
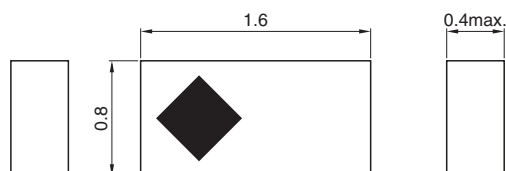
sales@integrated-circuit.com

Multilayer Chip Antennas For GPS/2.4 GHz ISM Band

Conformity to RoHS Directive
Halogen-free

ANT Series ANT016008LCD1575MA1

SHAPES AND DIMENSIONS



A: Feed point
B1: Radiator electrode for GPS
B2: Radiator electrode for 2.4GHz ISM
Tolerance: ± 0.1 mm

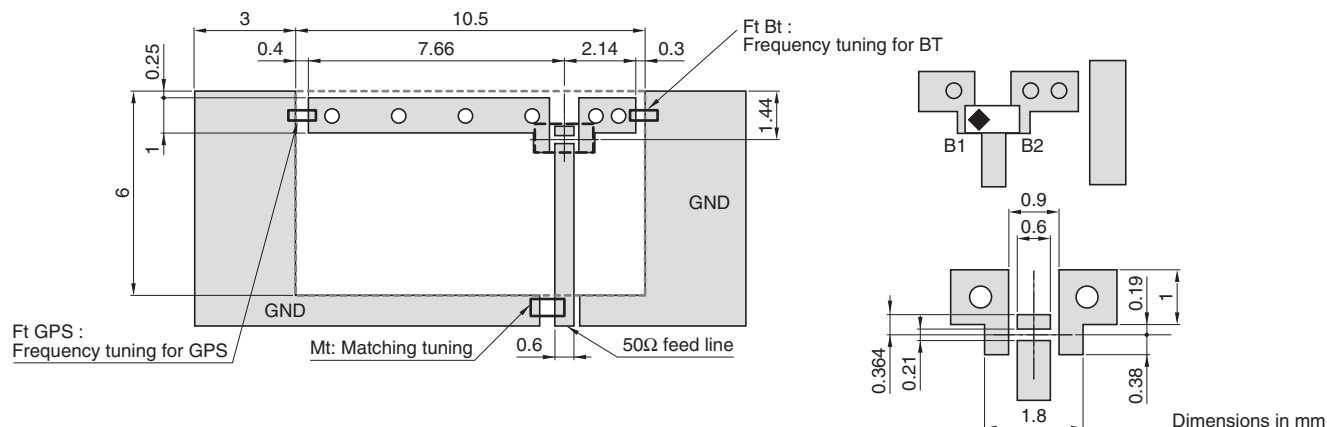
Dimensions in mm

- **Conformity to RoHS Directive:** This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
- **Halogen-free:** Indicates that Cl content is less than 900ppm, Br content is less than 900ppm, and that the total Cl and Br content is less than 1500ppm.

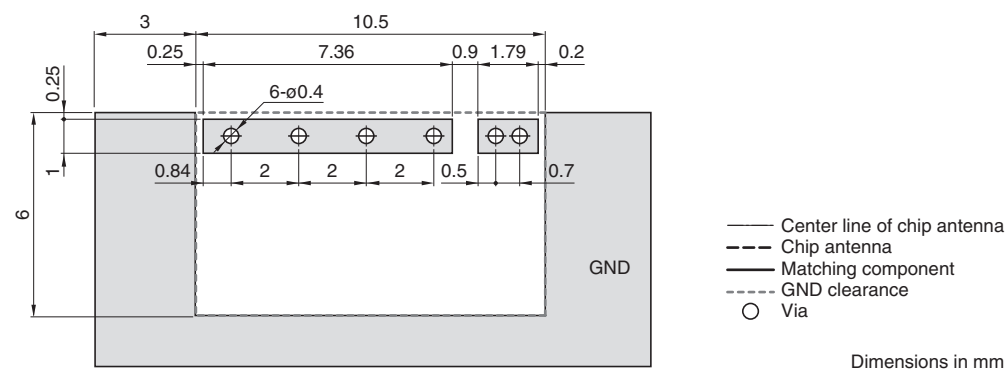
RECOMMENDED PC BOARD PATTERNS

ELECTRODE

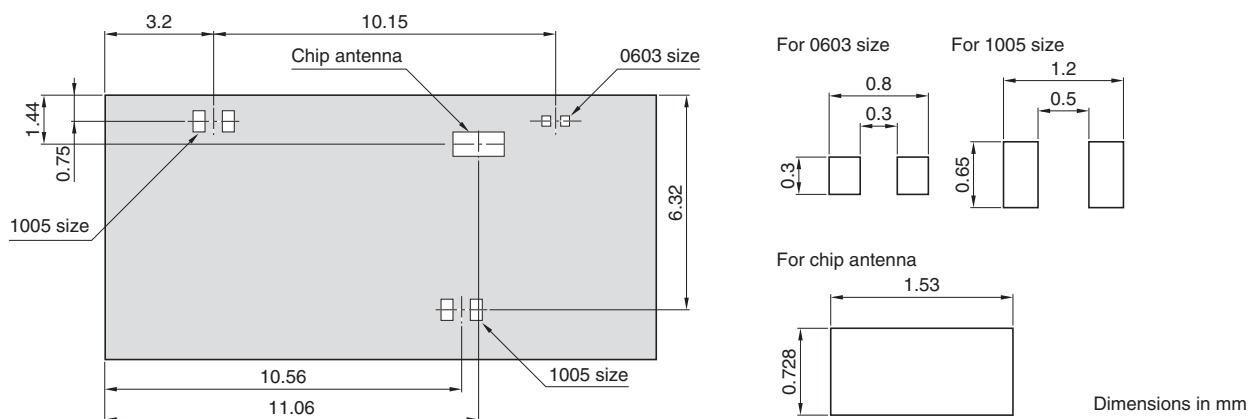
Front side



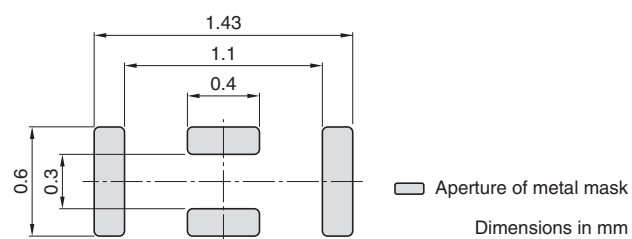
Back side



SOLDER RESIST



RECOMMEND APERTURE SIZE OF METAL MASK FOR SOLDER PRINTING



ELECTRICAL CHARACTERISTICS

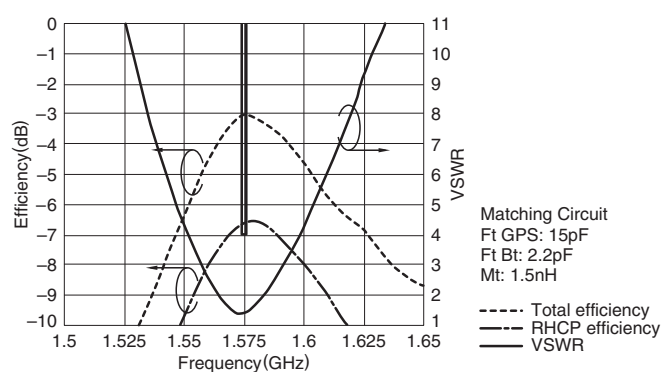
Center frequency (F _{GPS} , F _{BT})		F _{GPS} 1575MHz, F _{BT} 2442MHz
Band width(BW) (F _{GPS} , F _{BT})		F _{GPS} ±1MHz, F _{BT} ±42MHz
VSWR (at BW)		4max.
Polarization		Linear
Impedance		50Ω
PCB size		120×65×1.0mm
Temperature range	Operating	−40 to +85°C
	Storage	−40 to +85°C

• This is typical antenna performance with the standard PCB.

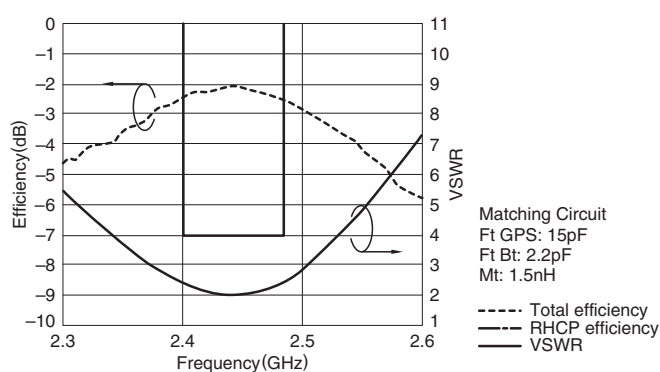
FREQUENCY CHARACTERISTICS

EFFICIENCY AND VSWR

GPS Band



2.4GHz ISM



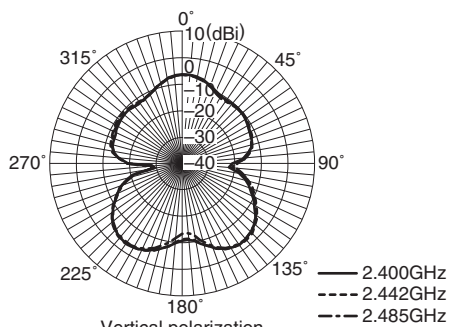
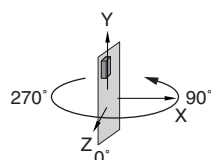
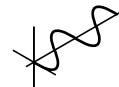
RADIATION PATTERNS

Directivity angle

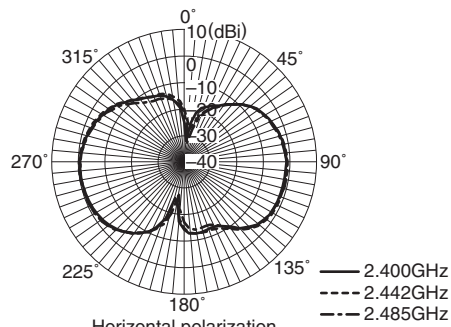
Vertical polarization



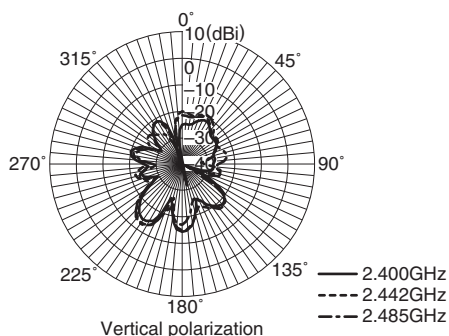
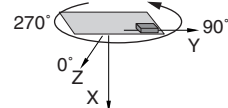
Horizontal polarization



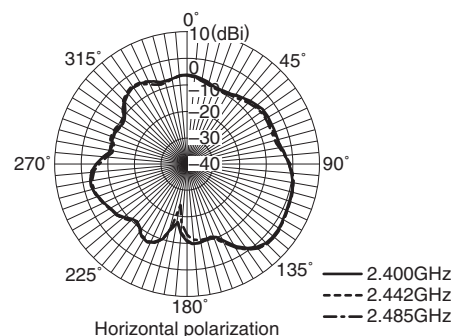
Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	-8.22	-8.02	-8.47
Maximum(dBi)	-2.59	-2.31	-2.68
Minimum(dBi)	-29.47	-29.14	-29.11



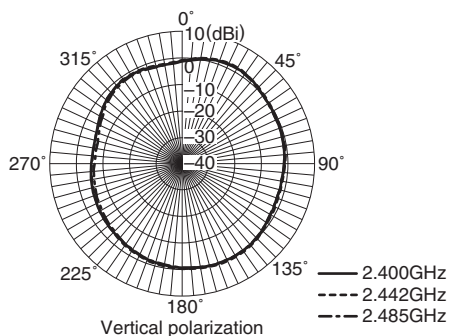
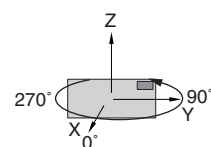
Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	-4.93	-4.55	-4.89
Maximum(dBi)	-0.51	-0.17	-0.54
Minimum(dBi)	-32.16	-27.46	-32.81



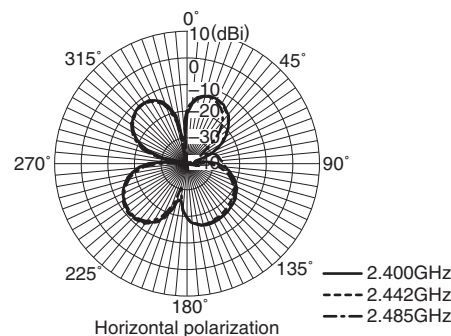
Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	-21.39	-20.54	-20.87
Maximum(dBi)	-14.42	-12.97	-12.63
Minimum(dBi)	-48.20	-39.75	-37.58



Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	-4.18	-3.87	-4.13
Maximum(dBi)	2.41	2.97	2.95
Minimum(dBi)	-17.78	-17.90	-24.44



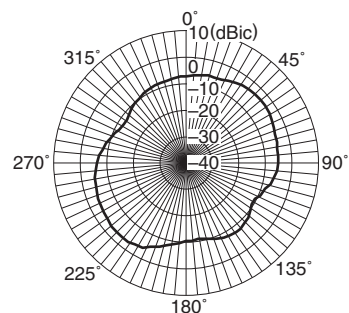
Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	-1.40	-1.12	-1.54
Maximum(dBi)	1.44	1.79	1.55
Minimum(dBi)	-6.03	-6.19	-7.17



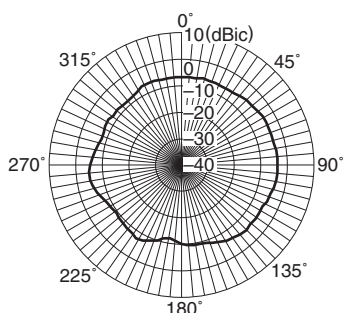
Frequency(GHz)	2.400	2.442	2.485
Average(dBi)	-16.24	-16.42	-16.73
Maximum(dBi)	-11.34	-11.01	-11.71
Minimum(dBi)	-44.47	-43.07	-42.83

- Tested antenna has been soldered. Evaluation board size is 120x65x1 mm.

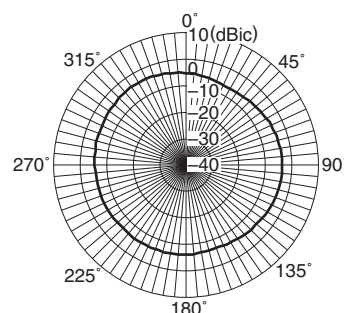
RHCP



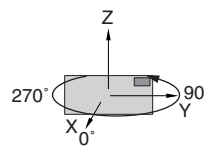
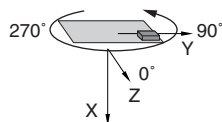
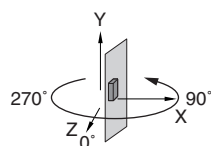
Frequency(GHz)	1.575
Average(dBic)	-6.3
Maximum(dBic)	-2.9
Minimum(dBic)	-12.2



Frequency(GHz)	1.575
Average(dBic)	-6.5
Maximum(dBic)	-3.7
Minimum(dBic)	-12.1



Frequency(GHz)	1.575
Average(dBic)	-5.3
Maximum(dBic)	-3.7
Minimum(dBic)	-6.7



- Tested antenna has been soldered. Evaluation board size is 120x65x1 mm.