

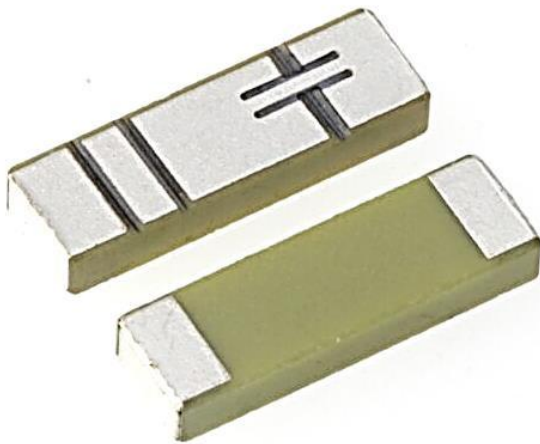
**Description: 2.4-2.5/5.15-5.85GHz Dual band
Ceramic 10x3.2x1.5mm**

PART NUMBER: W3006

Series: Chip Antenna

Features:

- 2.4-2.5 / 5.15-5.85GHz
- Peak gain 2.2 / 5.2 dBi
- Efficiency 60 / 70 %
- Compact size W x L x H (10 x 3.2 x 1.5 mm)
- Low weight: 240 mg
- Fully SMD compatible
- Tape and reel packing
- RoHS Compliant Product
- Moisture Sensitivity Level: MSL1



Applications:

- IEEE 802.11a/b/g/n
- 5 GHz WLAN
- 2.4 GHz WLAN
- 2.4 GHz ISM Band Systems
- 5GHz ISM Band Systems
- ZigBee IEEE 802.15.4

All dimensions are in inches/mm

Issue: 1919

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ELECTRICAL SPECIFICATIONS

Frequency1	2.4-2.5GHz
Frequency2	5.15-5.85GHz
Nominal Impedance	50Ω
Return Loss Frequency1	-8 dB max
Return Loss Frequency2	-10 dB max
Efficiency Frequency1	60 %
Efficiency Frequency2	70 %
Peak Gain Frequency1	2.2dBi
Peak Gain Frequency2	5.2dBi
Polarization	Linear
Interface	SMD mount ceramic antenna

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MECHANICAL SPECIFICATIONS

Weight	0.24g
Size	10 x 3.2 x 1.5 mm

ENVIRONMENTAL SPECIFICATIONS

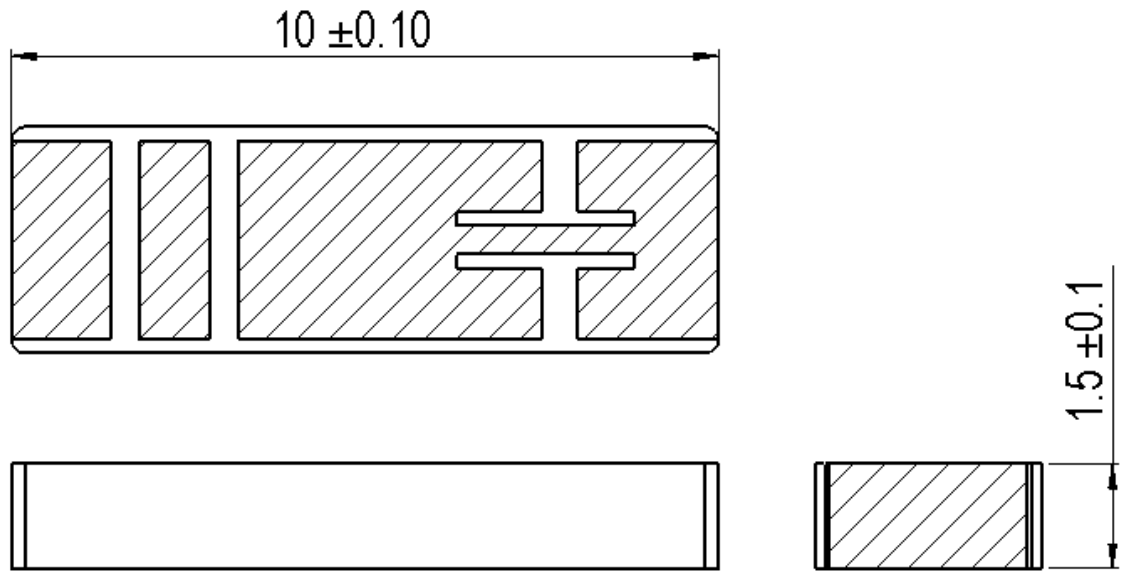
Operating temperature	-40~+85 °C
Temperature	-40~+85 °C
Humidity	Cyclic 6 +25 °C/+55 °C 95%
Vibration	
Sinusoidal 2-8Hz	7.5 mm
Sinusoidal 8-200Hz	20 m/s ²
Shocks	0.5 m/s
Salt mist	96 hours

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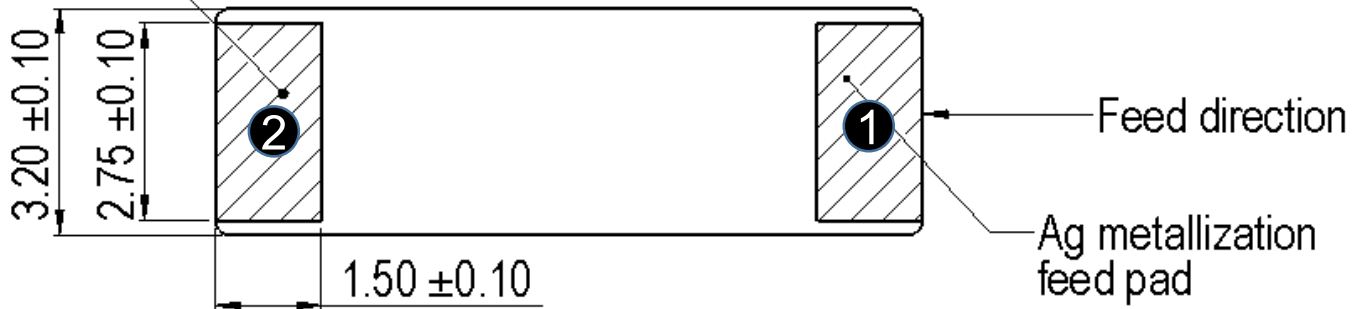
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MECHANICAL DRAWING AND TERMINAL CONFIGURATION



Ag metallization
support pad



No.	Terminal Name	Terminal Dimensions
1	Feed	1.5 x 2.75 mm
2	Support pad	1.5 x 2.75 mm

Antenna feed pad can be identified by looking top surface metallization pattern

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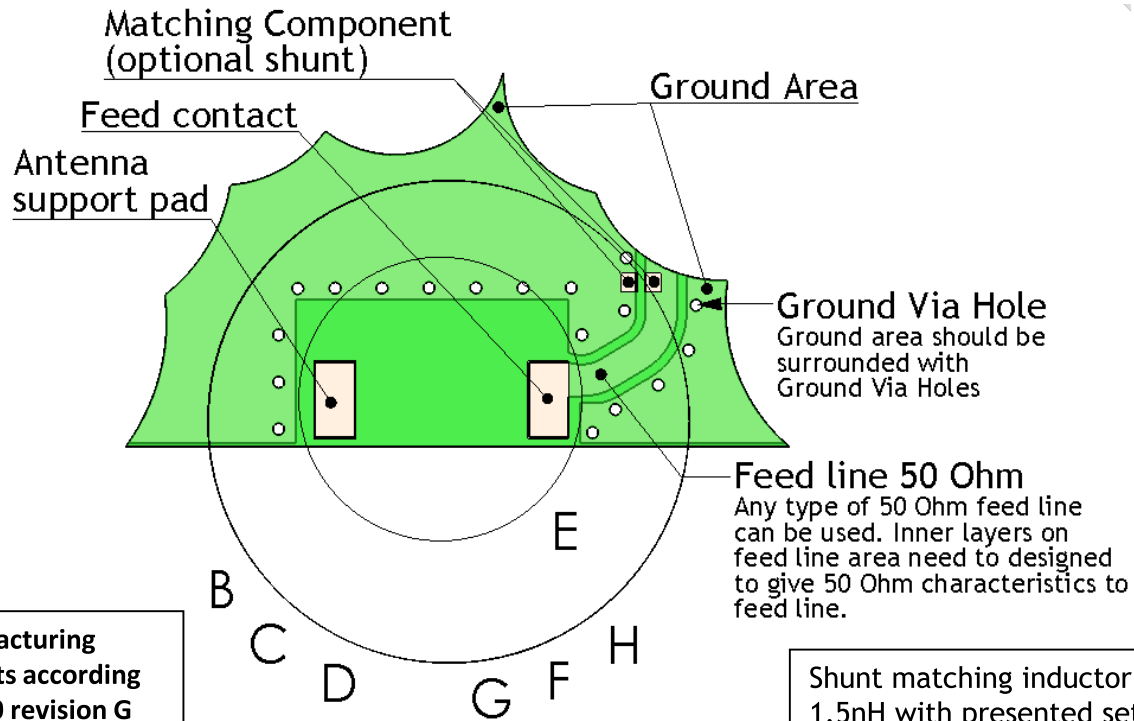
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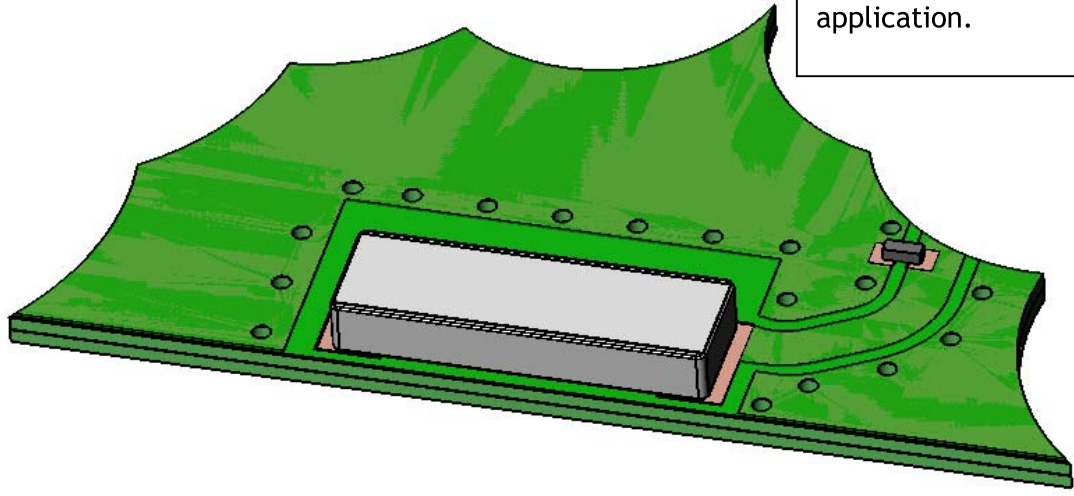
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm



PWB manufacturing requirements according to IPC-A-600 revision G or similar

Shunt matching inductor, 1.5nH with presented setup.

Exact inductor value depends on specific application.



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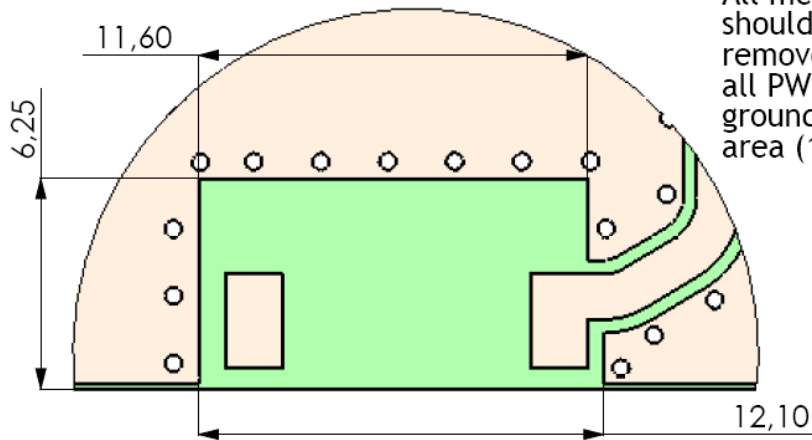
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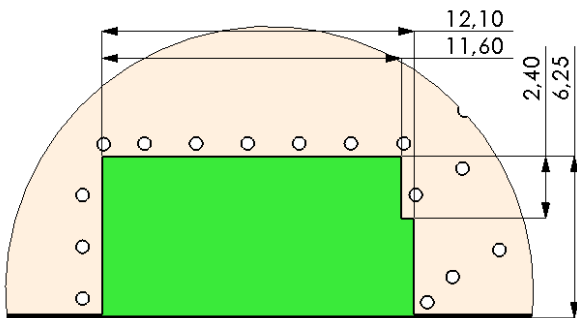
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

Ground clearance area (11.60 x 6.25 mm)

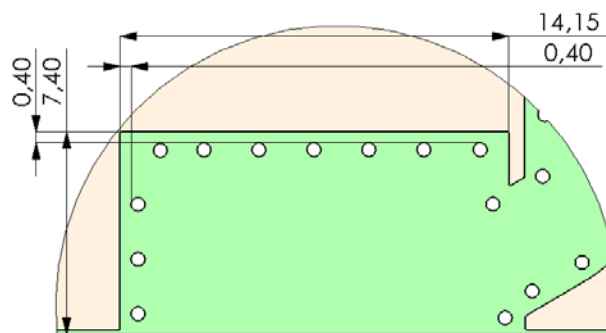


All metallization should be removed from all PWB layers on ground clearance area (11.60 x 6.25 mm)

Opening in bottom/inner ground layers



Opening in other layers (no ground/ RF)



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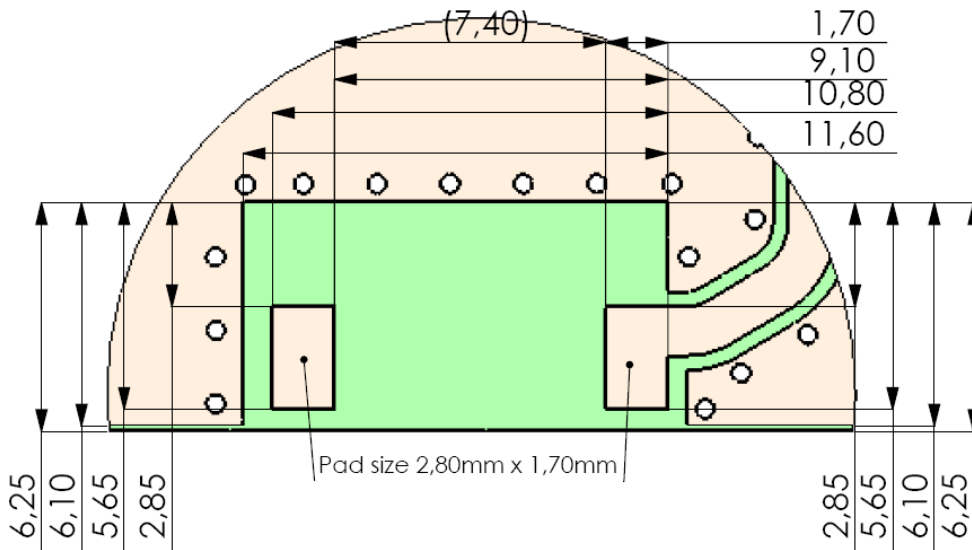
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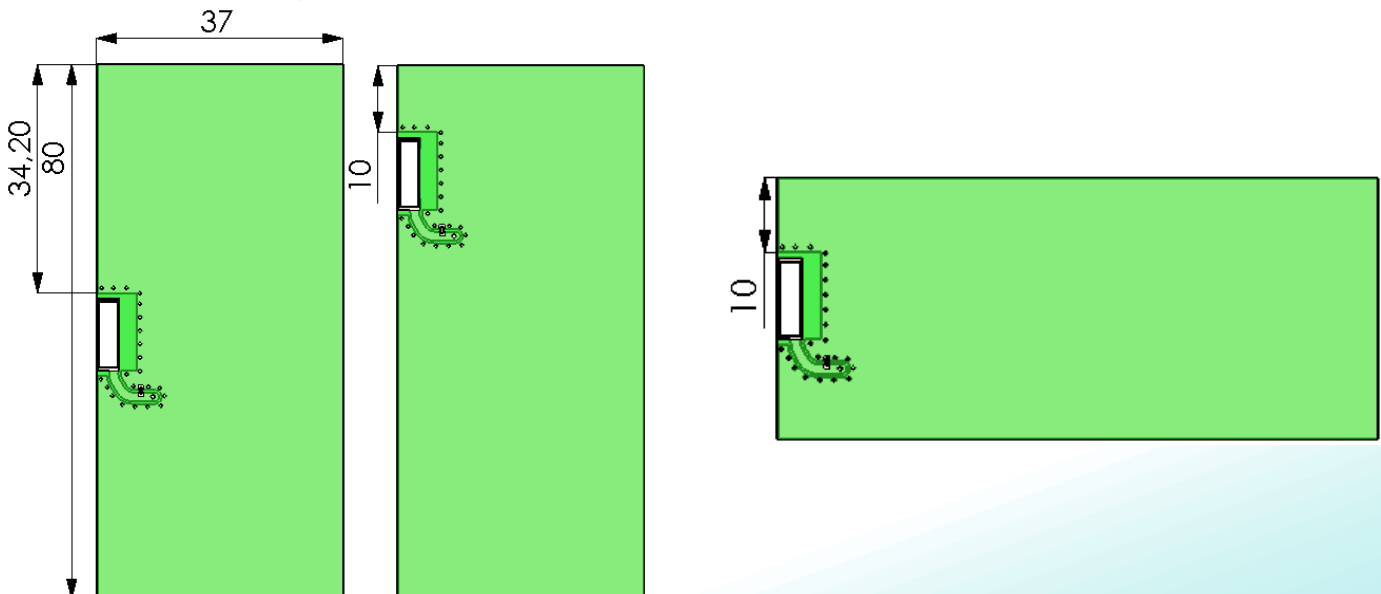
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

Recommended Antenna Pad Dimensions on PWB Layout (top surface)

Pad dimensions in top copper



Recommended test board layout for electrical characteristic measurement, test board outline size 80 x 37mm



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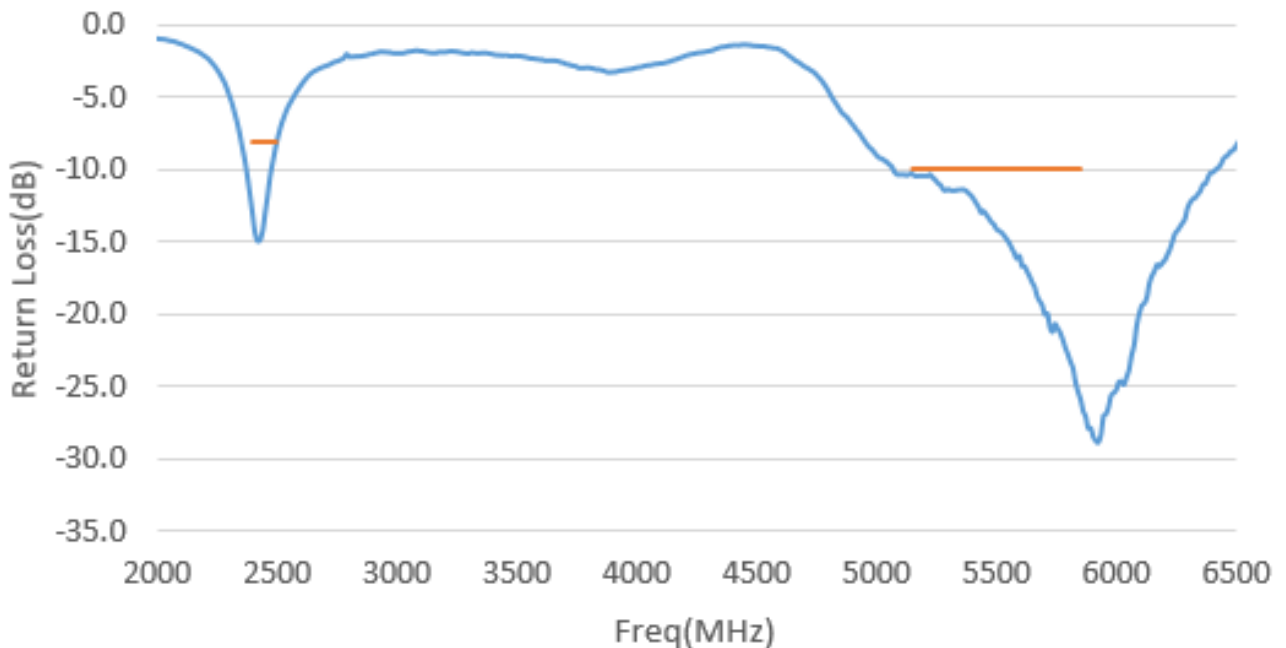
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Test setup



Return Loss



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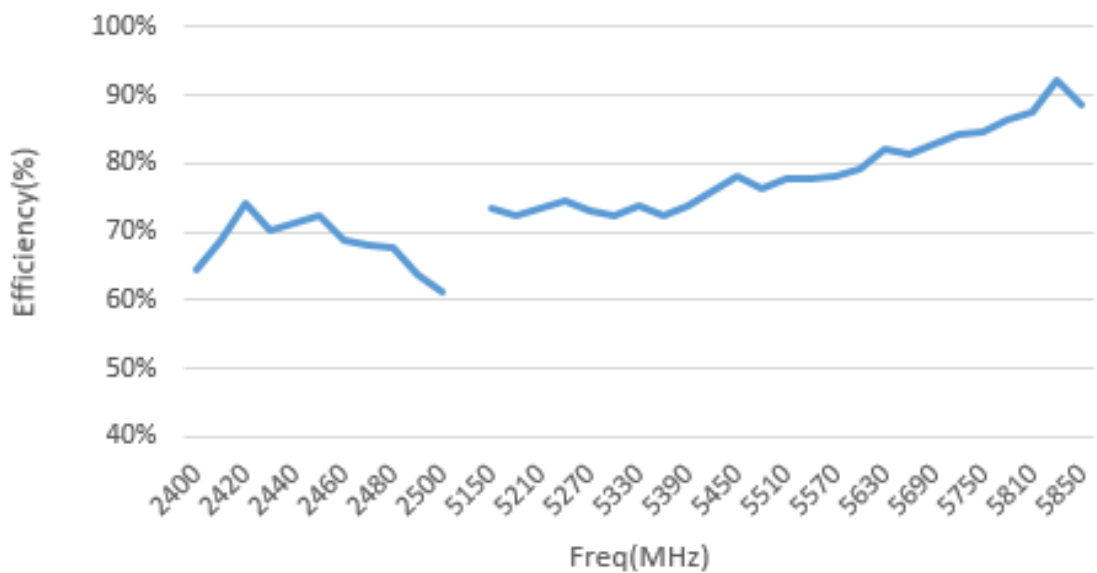
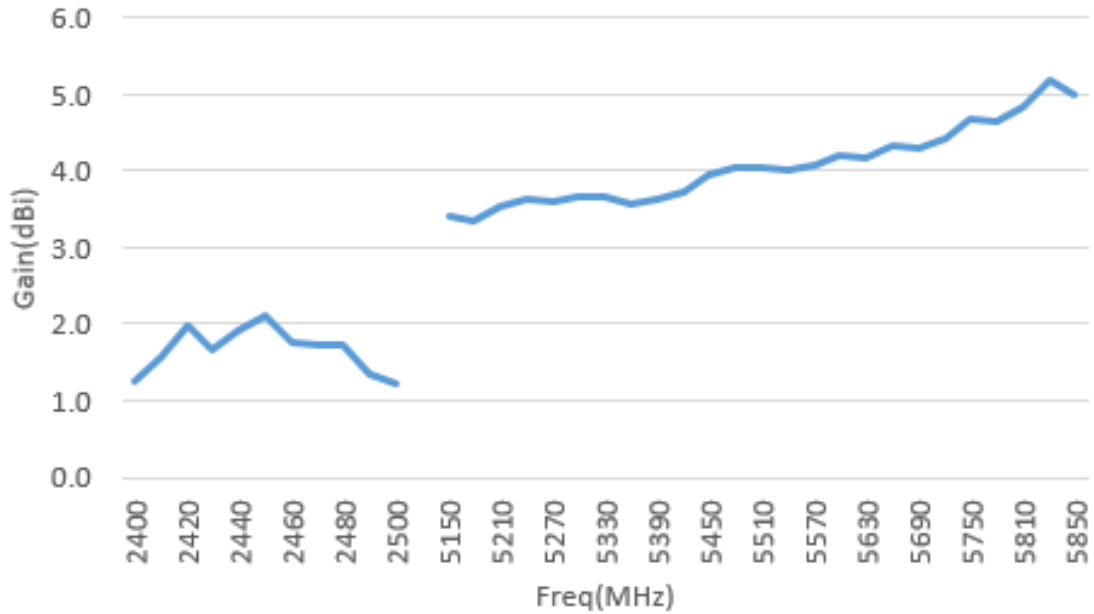
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CHARTS



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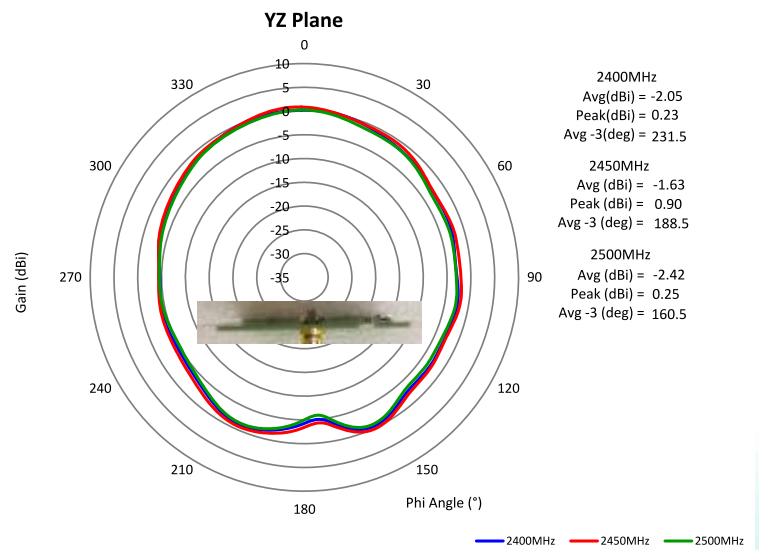
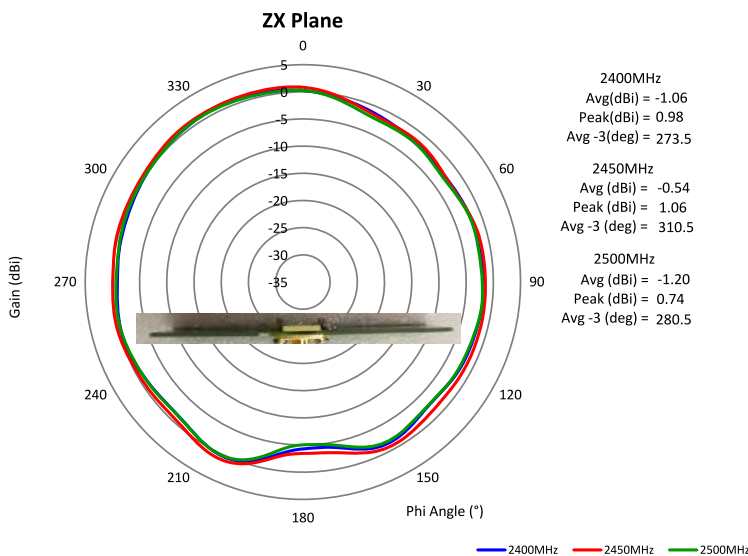
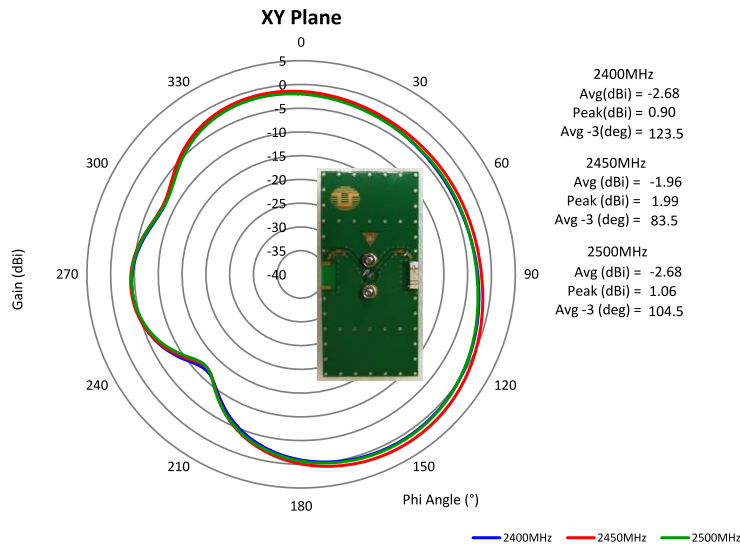
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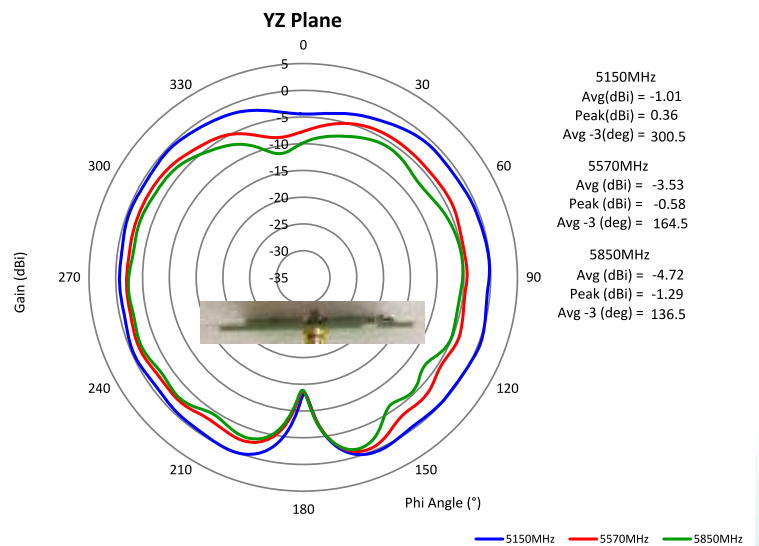
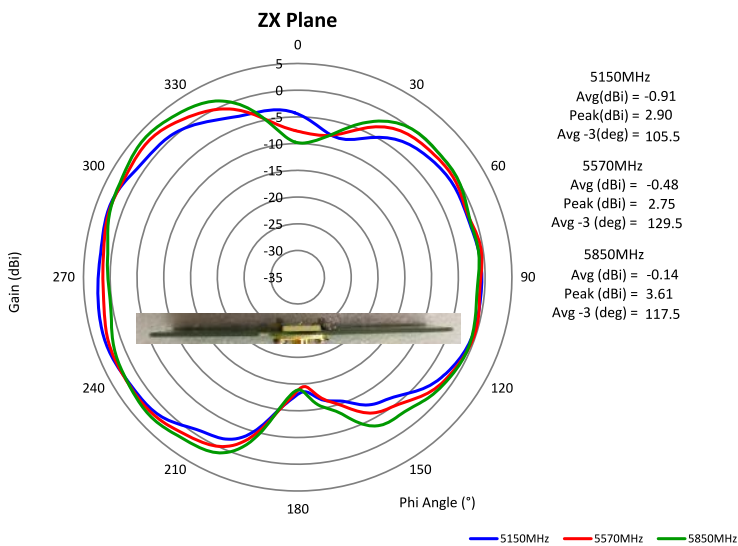
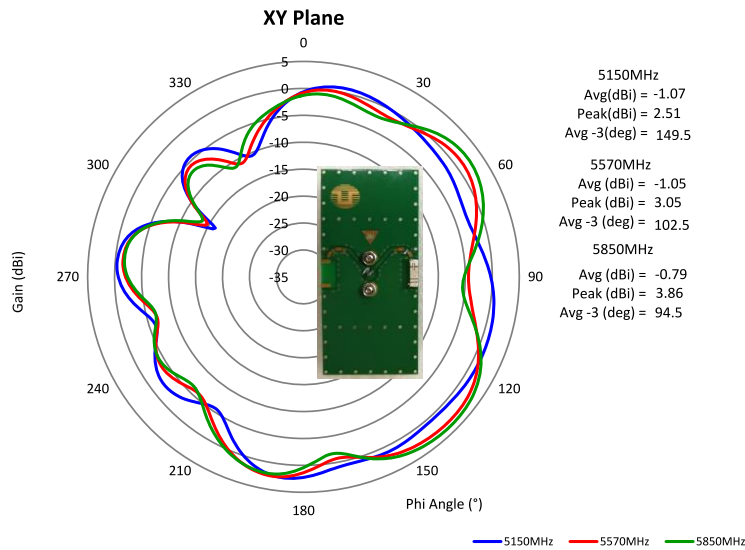
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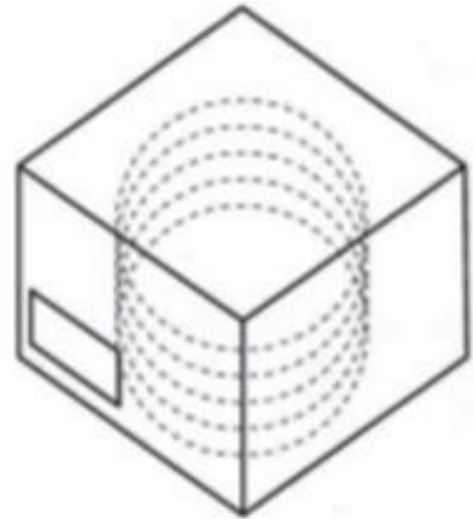
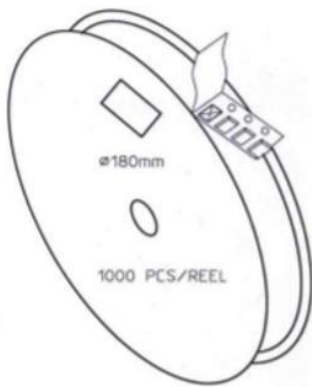
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PACKAGING

- 1000pcs antennas per 7" reel
- 3pcs 7" reel per inner package box
- 2pcs inner box per out box
- Total 6000pcs antenna per out box
- Out box size: 390mmx215mmx165mm



LEVEL

NOT MOISTURE SENSITIVE

1

These Devices do not require special storage conditions provided:

1. They are maintained at conditions equal to or less than 30°C and 85% RH.
2. They are solder reflowed at a peak body temperature which does not exceed 260°C.

Note: Level and body temperature defined by IPC/JEDEC J-STD-020