

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

Series: Chip Antenna

PART NUMBER: W3006

Features:

- 2.4-2.5 / 5.15-5.8 5GHz
- Gain 2.2 / 4.5 dBi
- Efficiency 60 / 70 %
- Compact size WxLxH (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: MSL3

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

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**Description: 2.4-2.5/5.15-5.85GHz Dualband
Ceramic 10x3.2x1.5mm****Series: Chip Antenna****PART NUMBER: W3006****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	4.5dBi
Polarization	Linear
Interface	SMD mount ceramic antenna

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Weight	0.24g
Size	10 x 3.2 x 1.5 mm

ENVIRONMENTAL SPECIFICATIONS

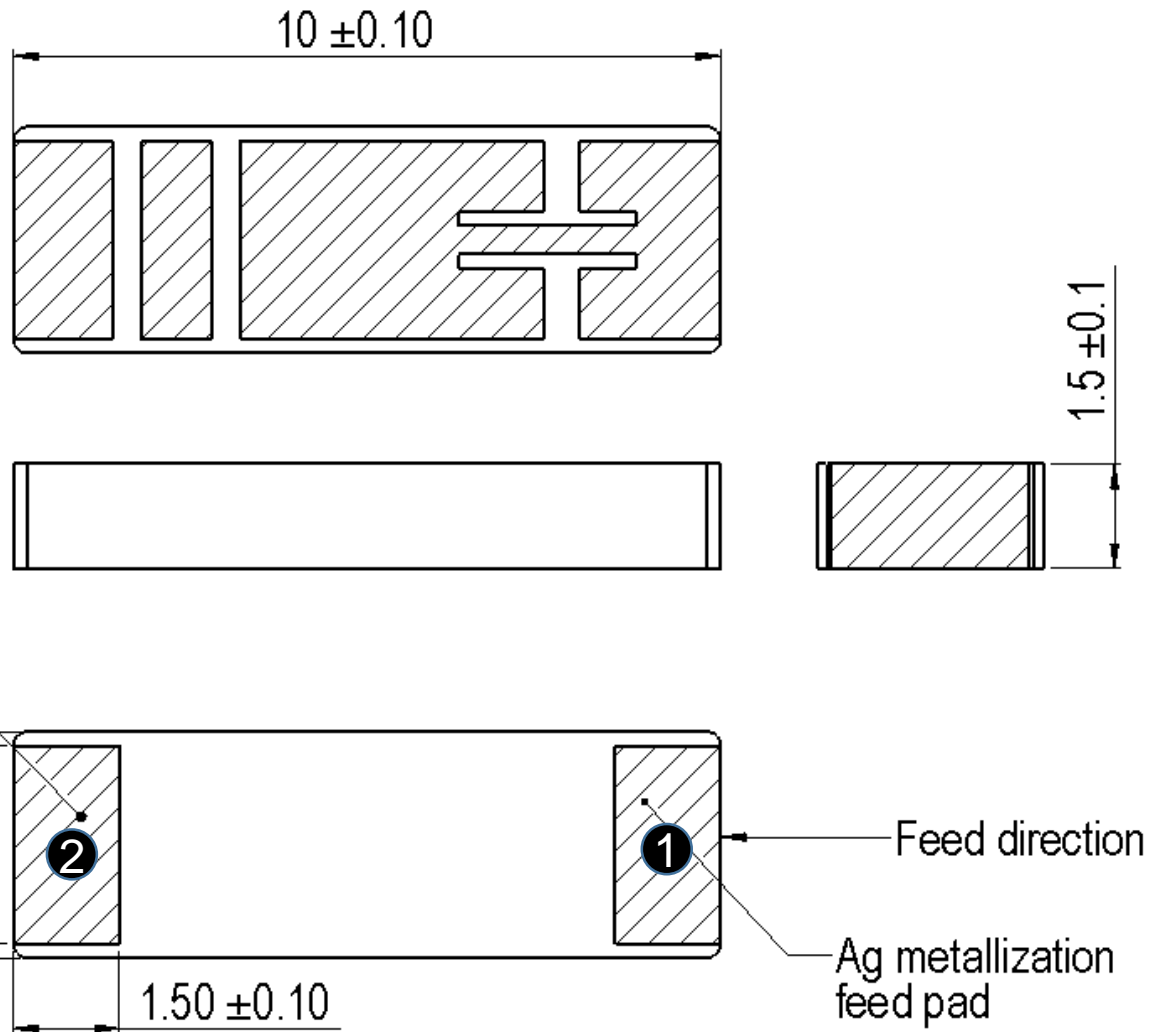
Operating temperature	-40~+85° C
Temperature	-40~+85° C
Humidity	Cyclic 6 +25° C/+55° C 95%
Vibration	
Sinusoidal 2-8Hz	7.5 mm
Sinusoidal 8-200Hz	20 m/s ²
Shocks	0.5 m/s
Salt mist	96 hours

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MECHANICAL DRAWING AND TERMINAL CONFIGURATION



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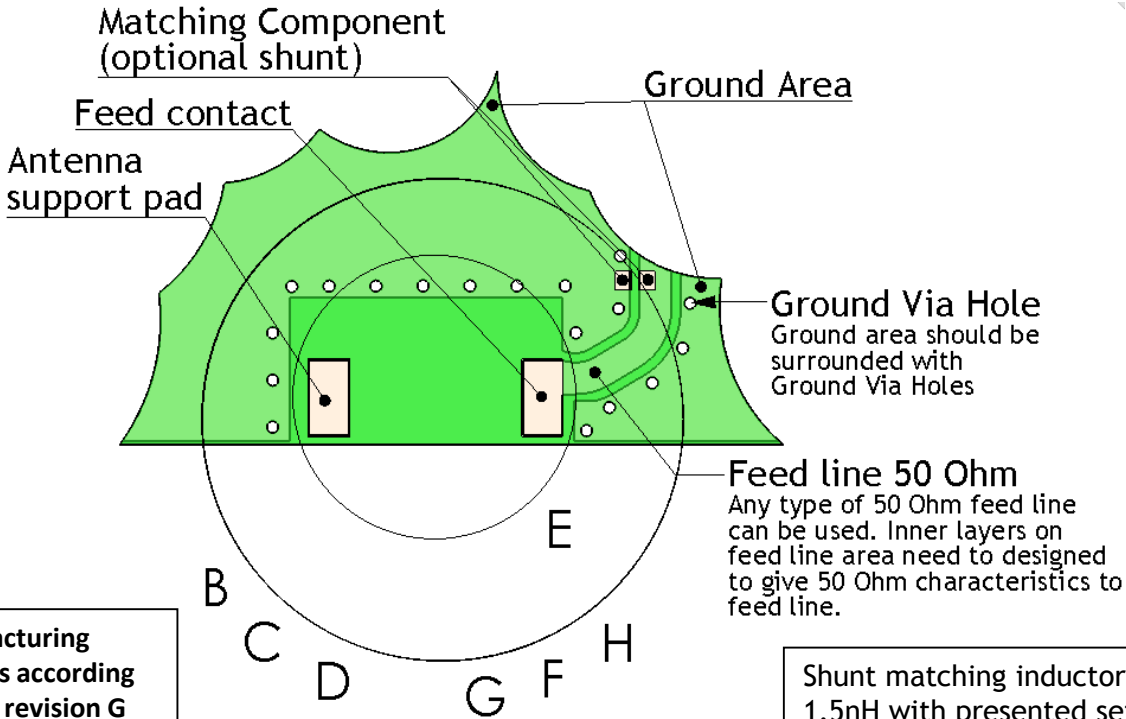
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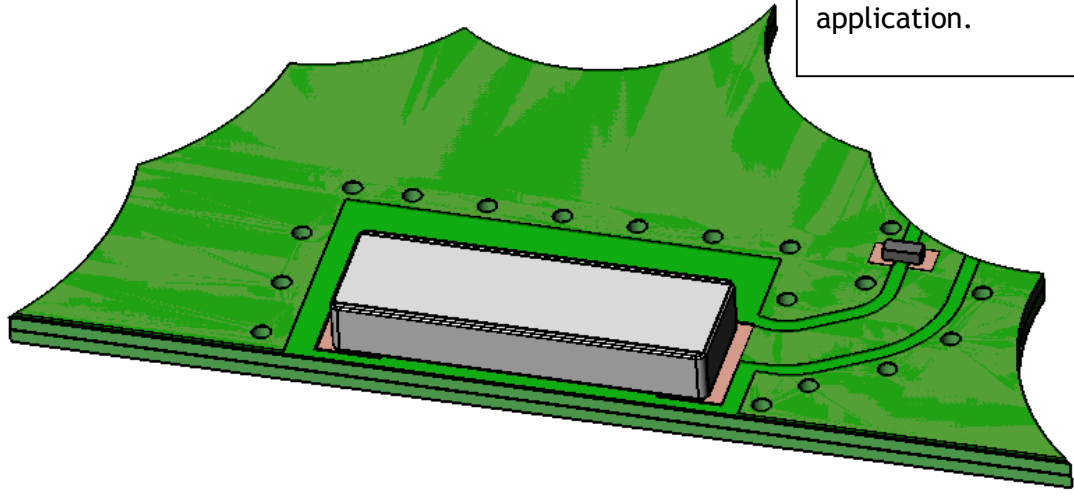
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm



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.



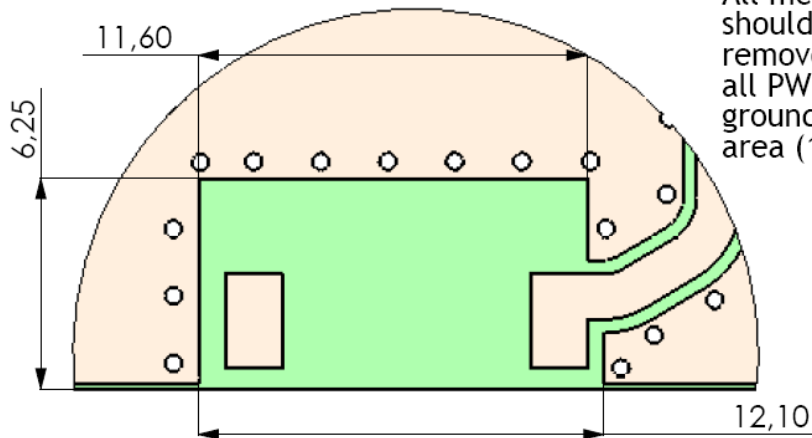
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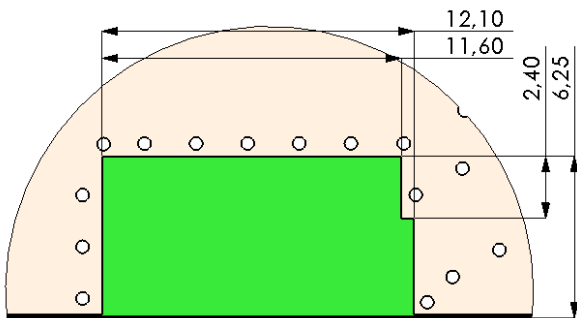
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MECHANICAL DRAWING AND TERMINAL CONFIGURATION

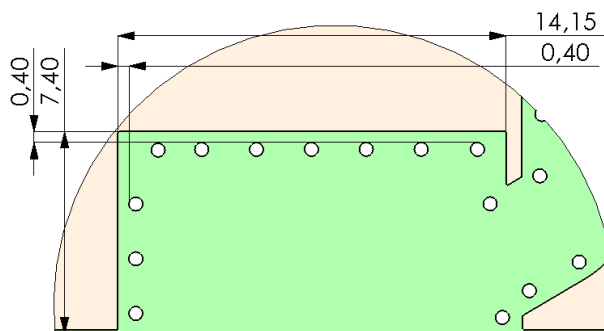
Ground clearance area (11.60 x 6.25 mm)



Opening in bottom/inner ground layers



Opening in other layers (no ground/ RF)



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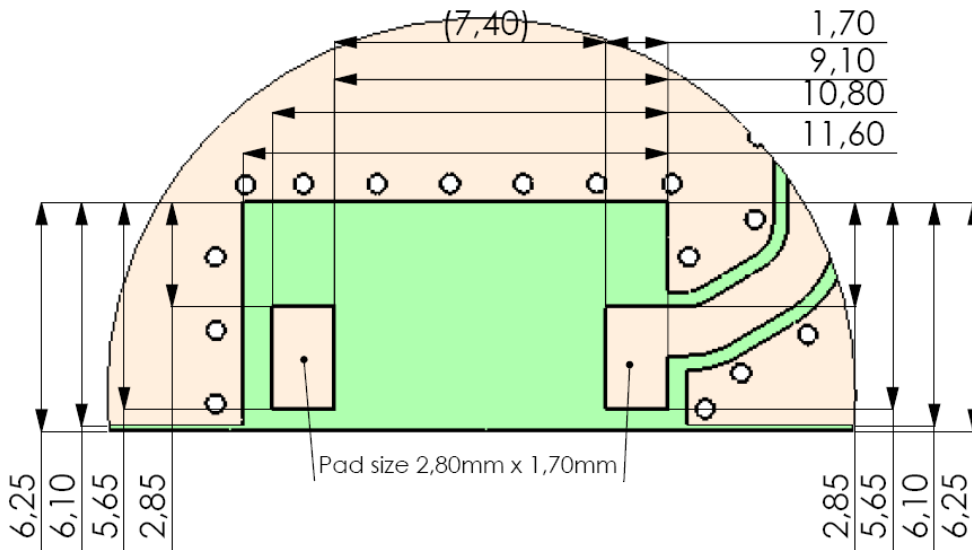
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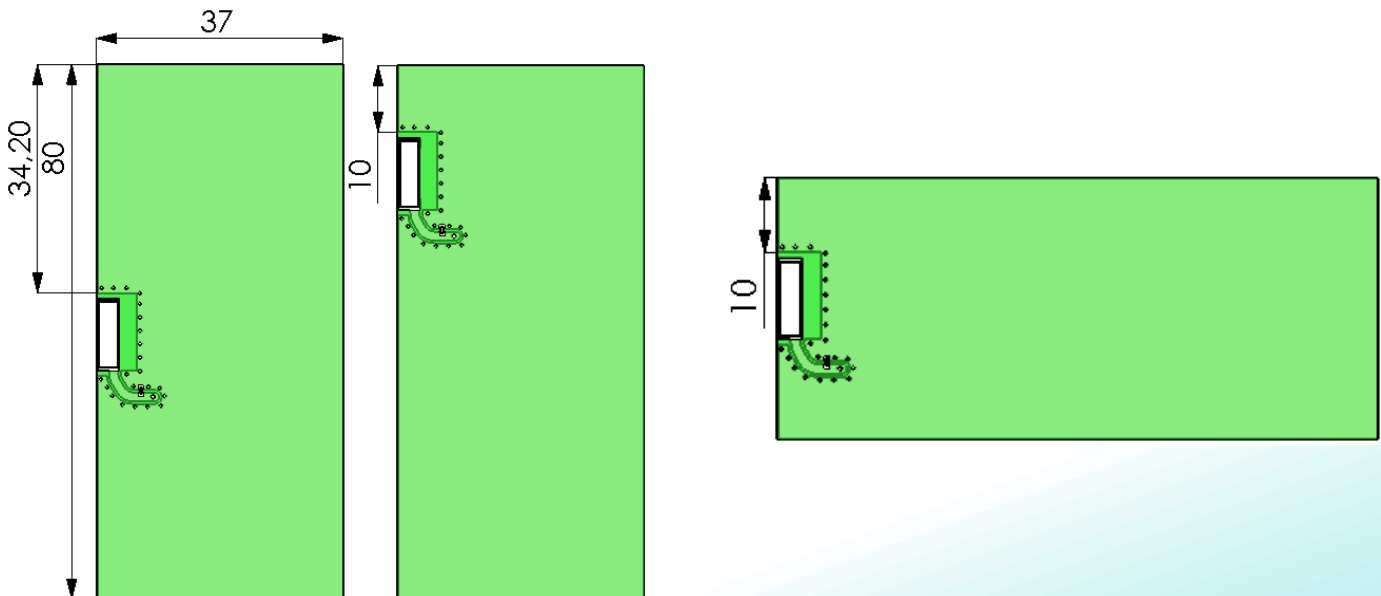
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

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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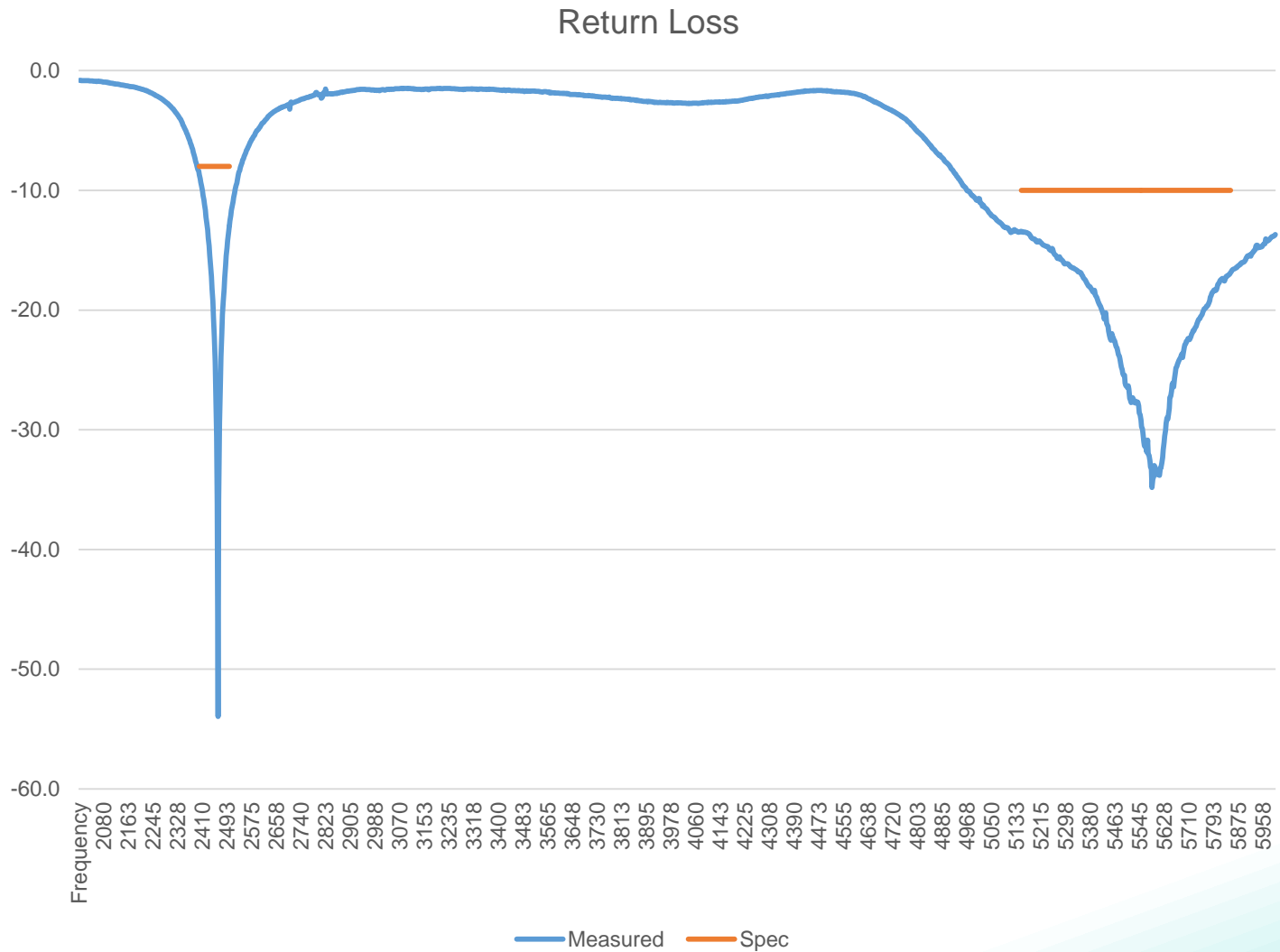
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CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

Return loss



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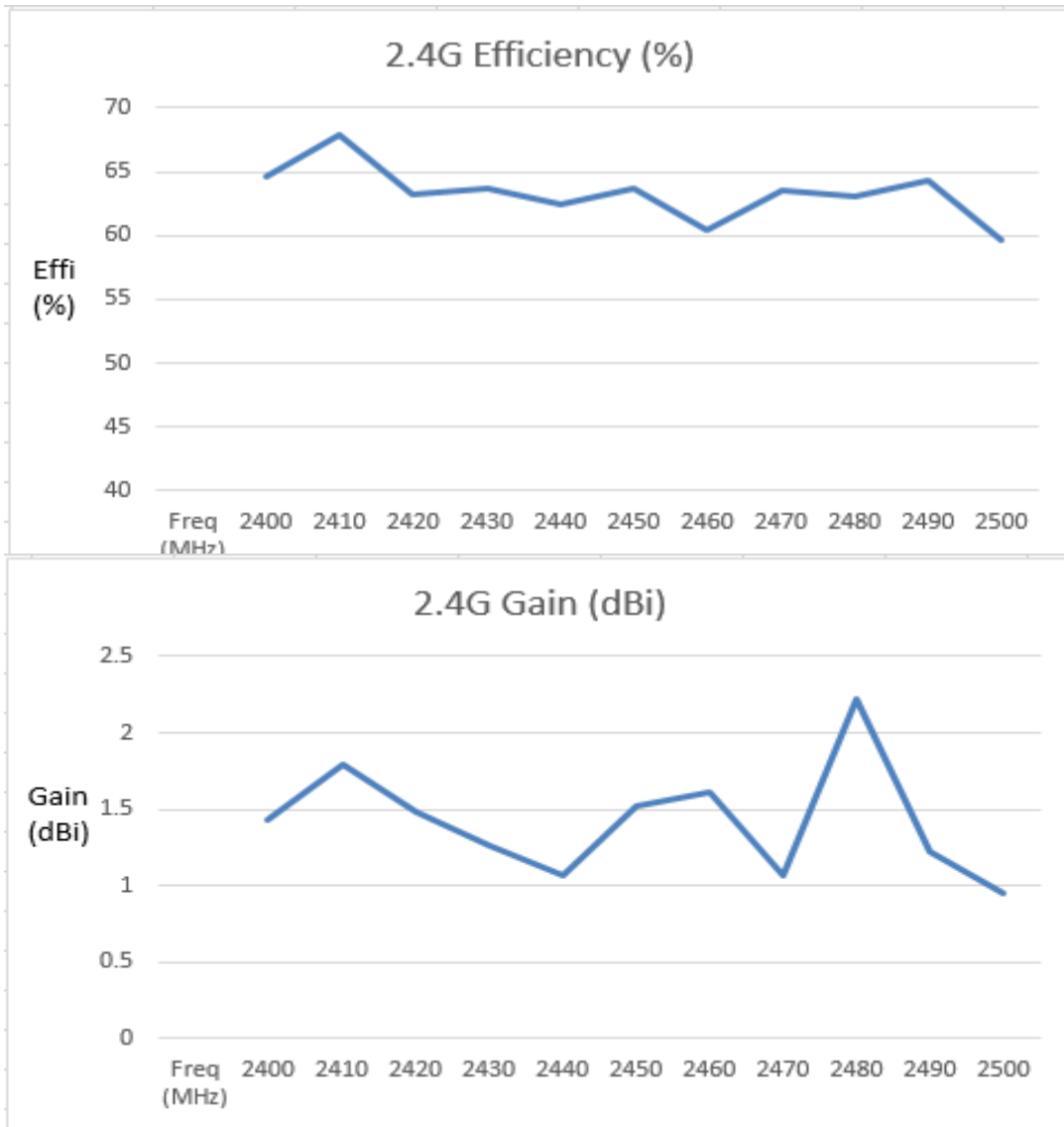
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CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor
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Free space efficiency and maximum gain for 2.4G



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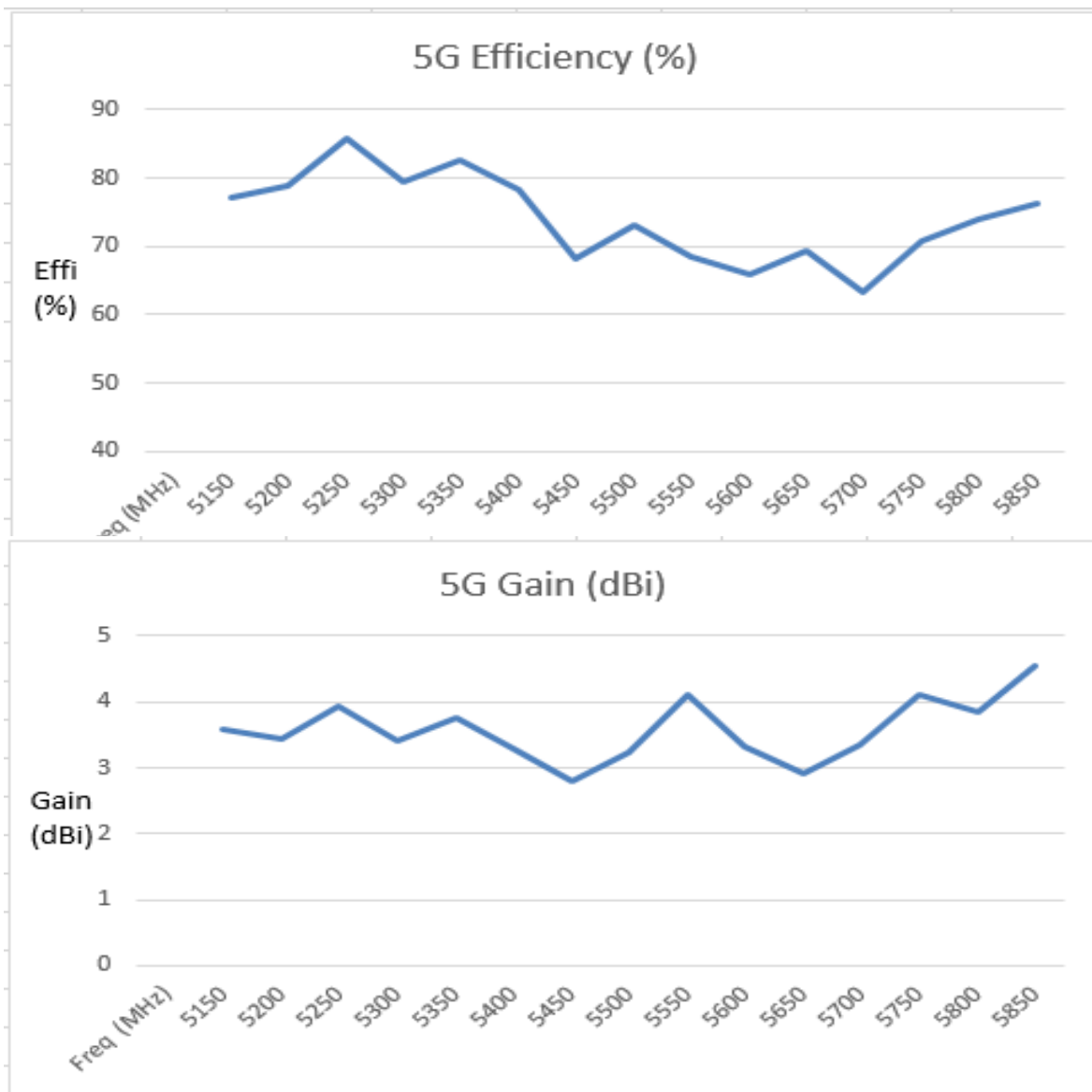
Series: Chip Antenna

PART NUMBER: W3006

CHARTS

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

Free space efficiency and maximum gain for 5G



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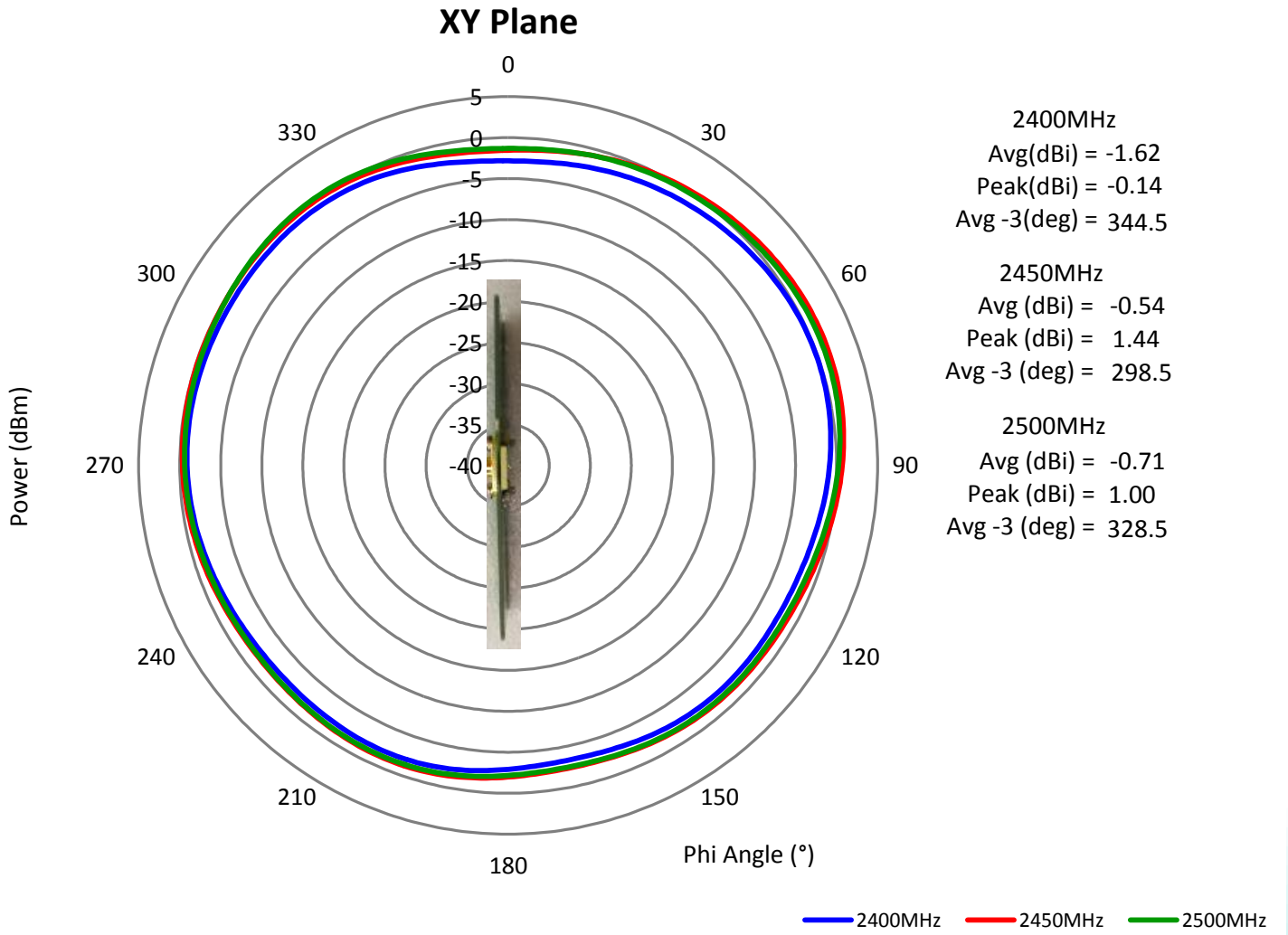
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CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor
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2.4 GHz Typical Free Space Radiation Patterns



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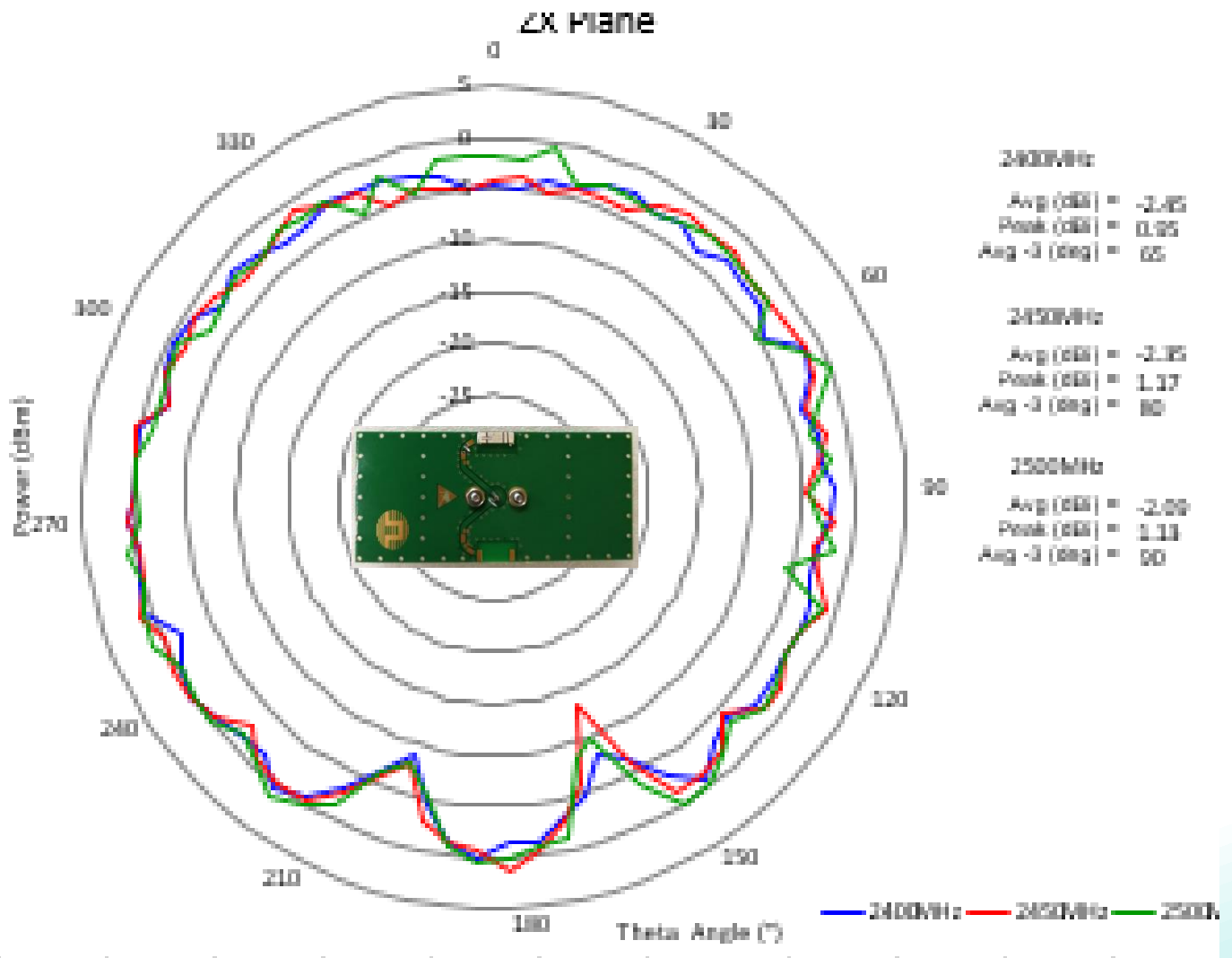
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2.4 GHz Typical Free Space Radiation Patterns



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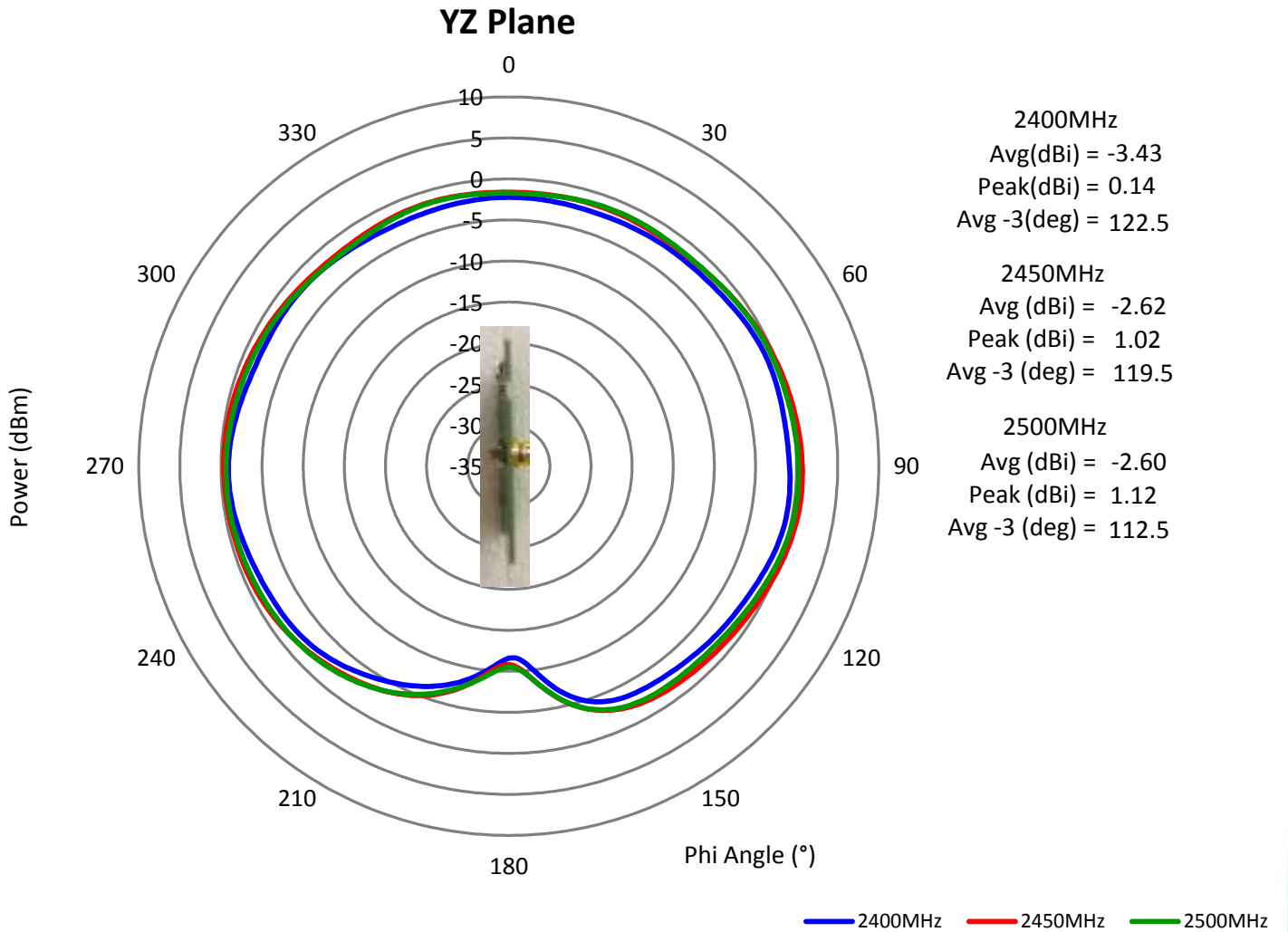
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CHARTS

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2.4 GHz Typical Free Space Radiation Patterns



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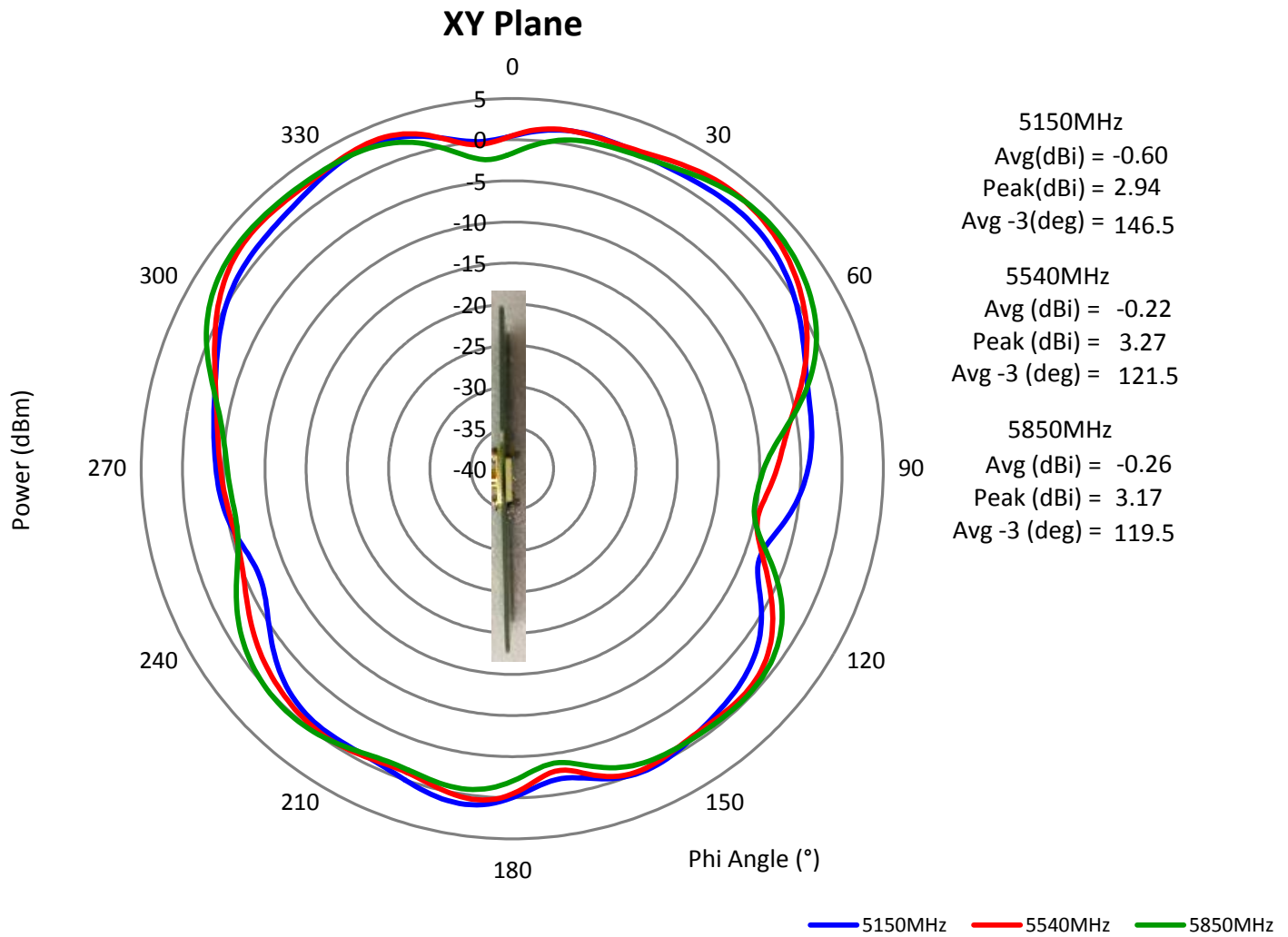
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CHARTS

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5GHz Typical Free Space Radiation Patterns



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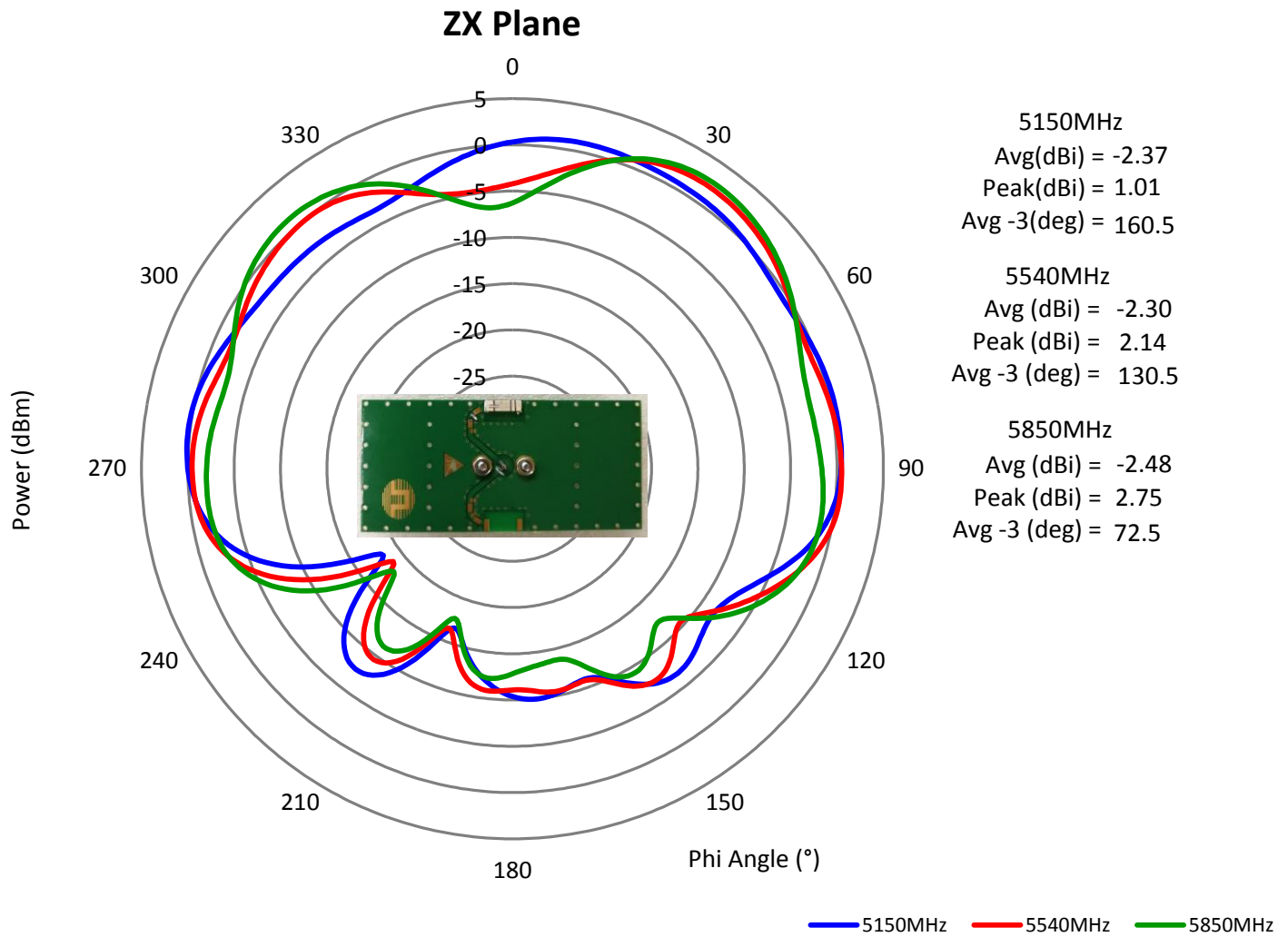
Series: Chip Antenna

PART NUMBER: W3006

CHARTS

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5GHz Typical Free Space Radiation Patterns



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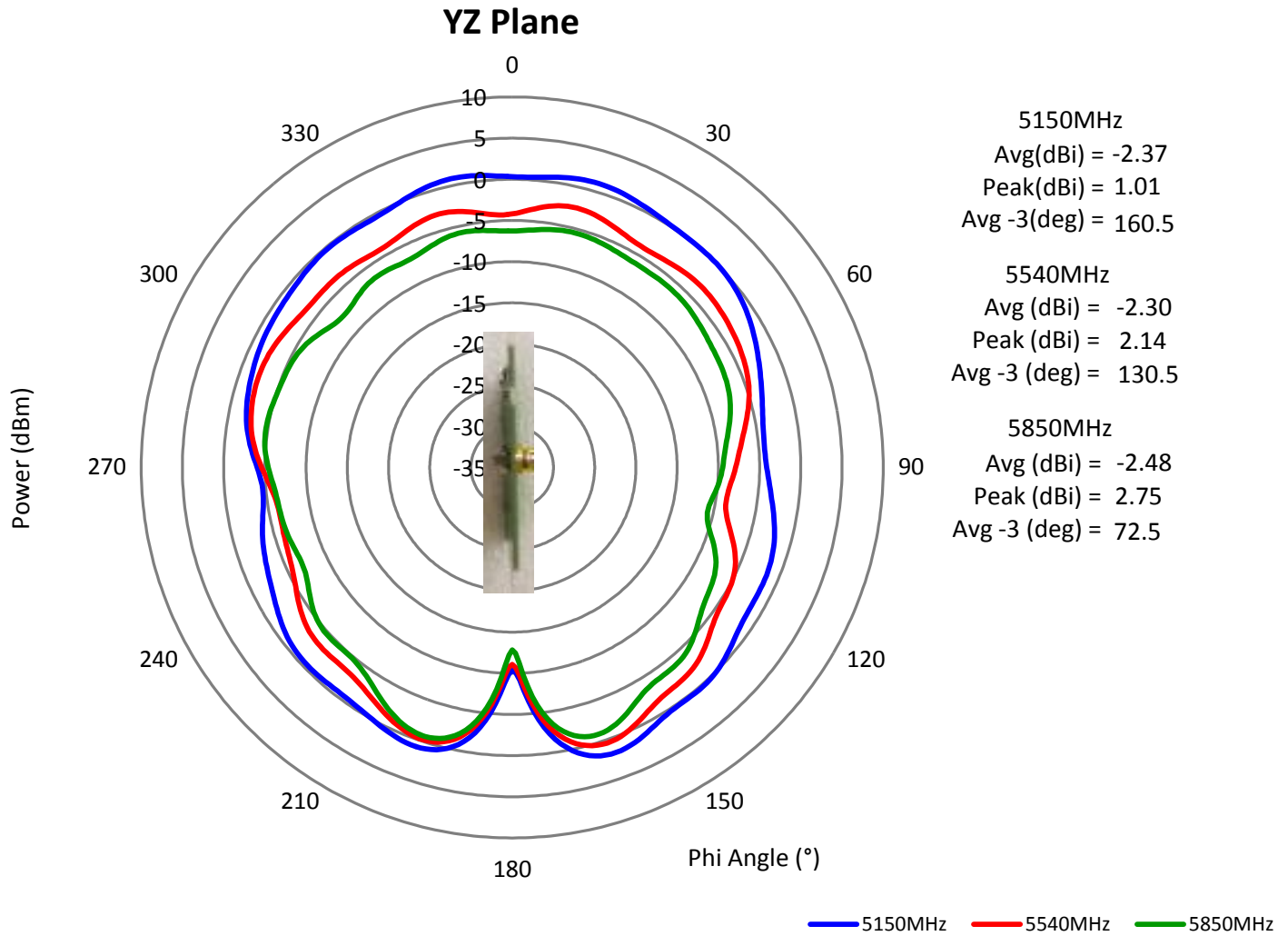
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CHARTS

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5GHz Typical Free Space Radiation Patterns



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PACKAGING

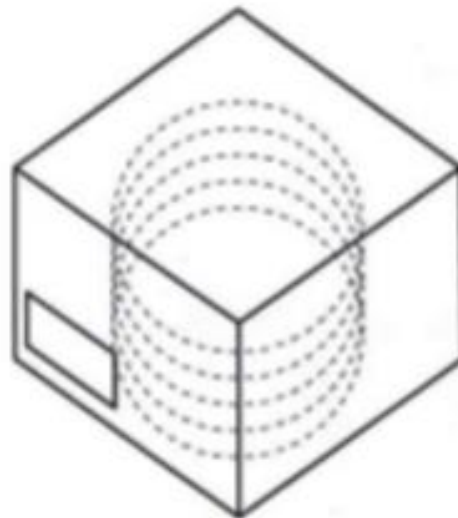
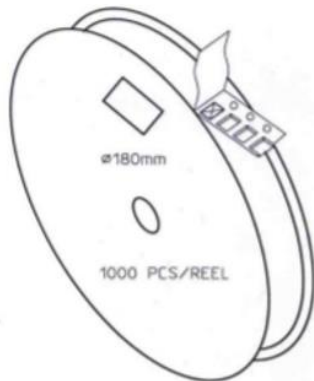
1000pcs antennas per 7" reel

3pcs 7" reel per inner package box

2pcs inner box per out box

Total 6000pcs antenna per out box

Out box size: 390mmx215mmx165mm



According to MSL3 packing requirement, MBB-Moisture Barrel Bag, Desiccant, HIC-Humidity Indicator Card, MSID Label, Caution Label are required.

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