PulseLARSEN Antennas

TECHNICAL DATA SHEET

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

Issue: 1821

RoHS COMPLIANT

For more information:

Pulse Worldwide Headquarters
15255 Innovation Drive #100
San Diego, CA 92128
USA
Tel:1-858-674-8100

Pulse/Larsen Antennas
18110 SE 34th St Bldg 2 Suite 250
Vancouver, WA 98683
USA
Tel: 1-360-944-7551

Europe Headquarters
Pulse GmbH & Do, KG
Zeppelinstrasse 15
Herrenberg, Germany
Tel: 49 7032 7806 0

Pulse (Suzhou) Wireless Products Co, Inc.
99 Huo Ju Road(#29 Bldg,4th Phase
Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

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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	4.5dBi
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/s²
Shocks	0.5 m/s
Salt mist	96 hours

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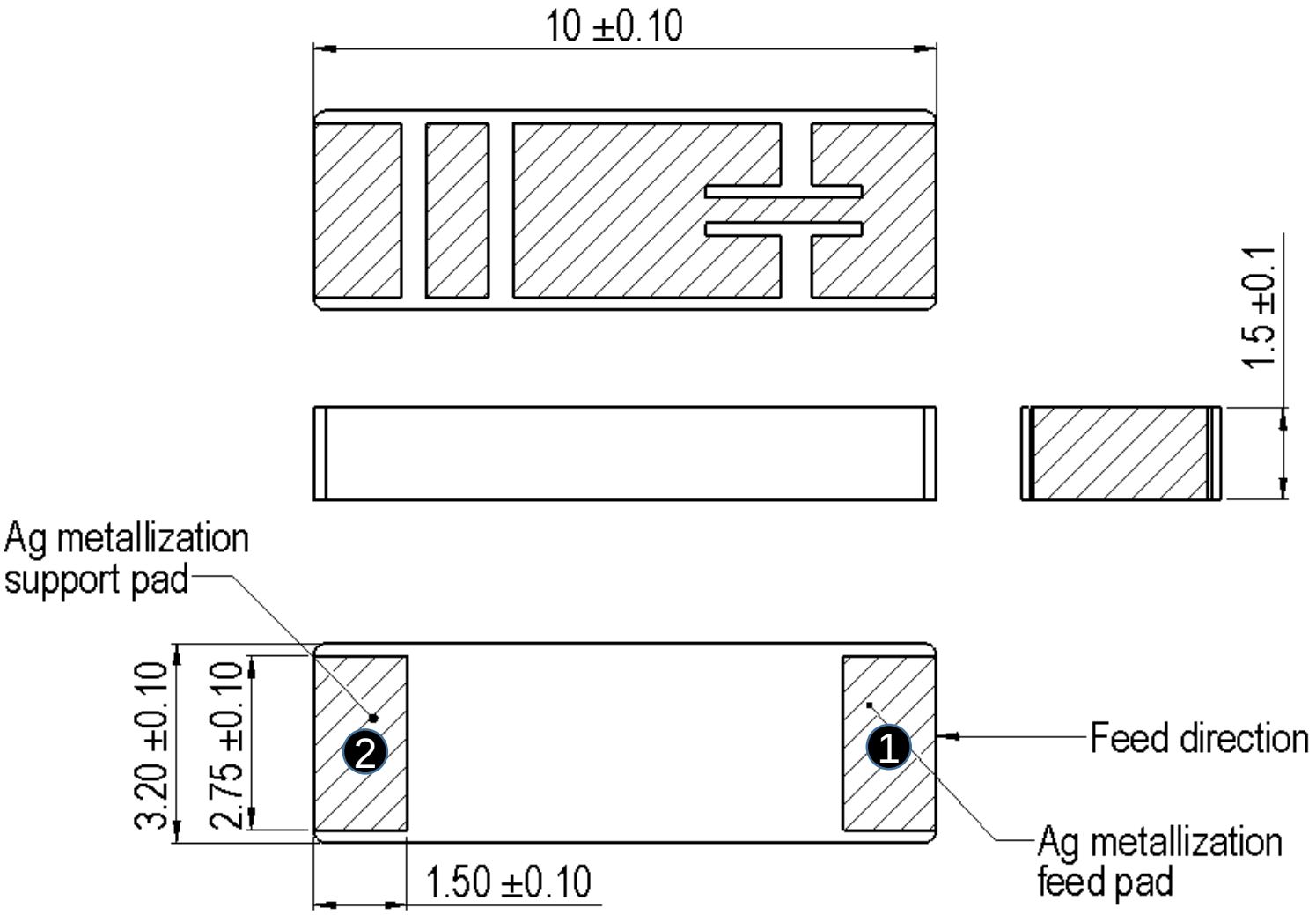
MECHANICAL DRAWING AND TERMINAL CONFIGURATION



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		

RoHS COMPLIANT

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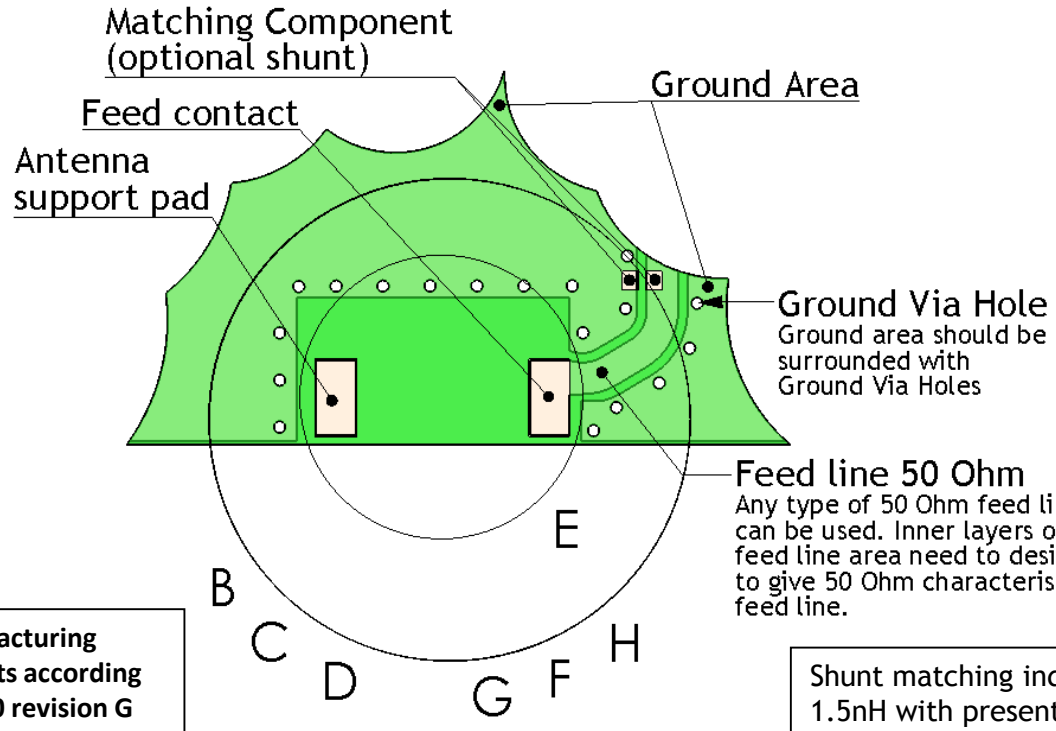
Series: Chip Antenna

PART NUMBER: W3006

MECHANICAL DRAWING AND TERMINAL CONFIGURATION

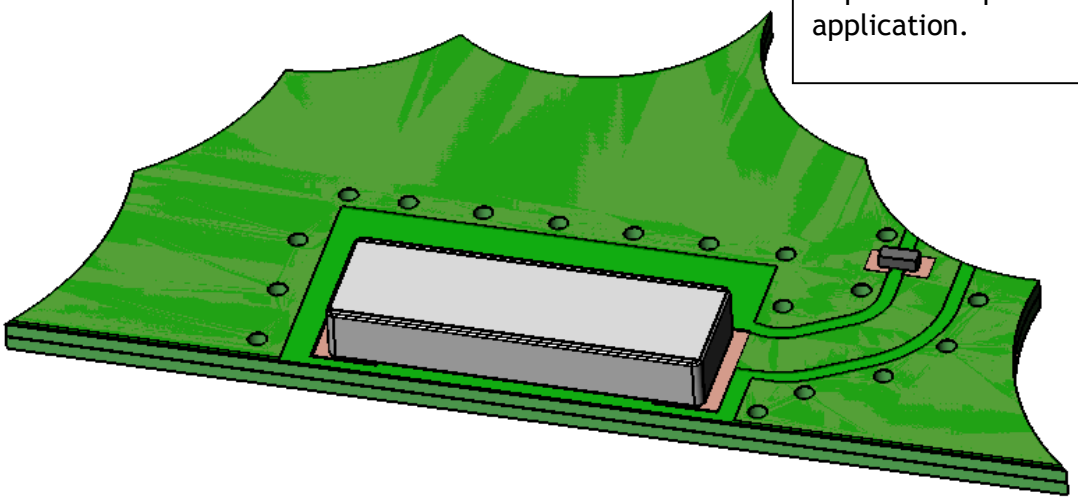
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm



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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Series: Chip Antenna

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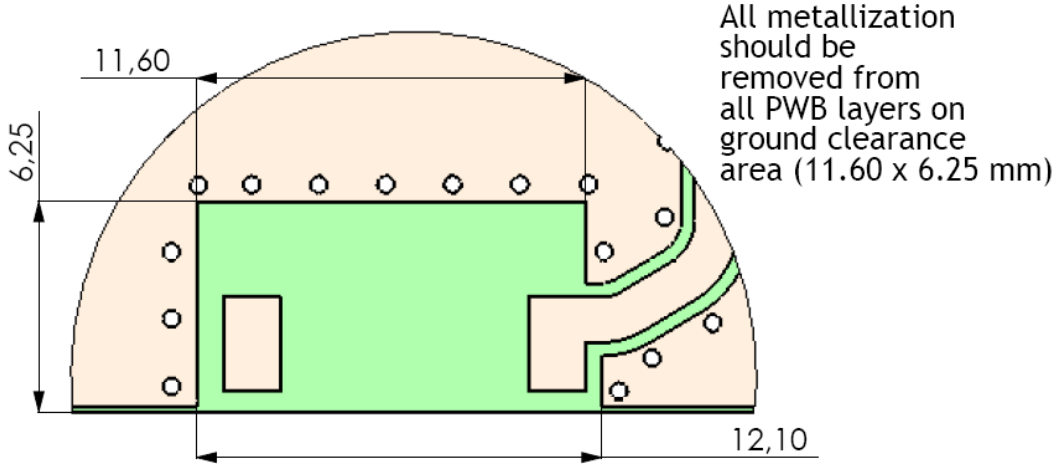
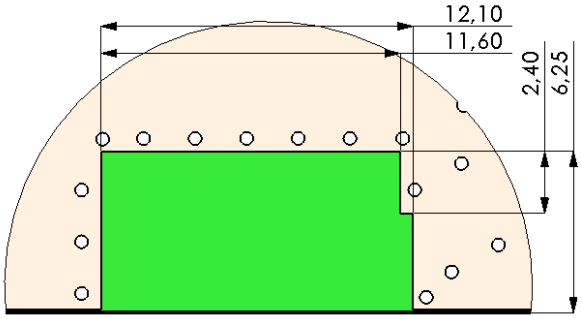
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

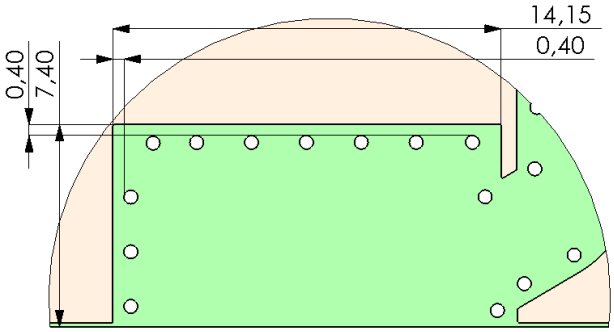
Ground clearance area (11.60 x 6.25 mm)



Opening in bottom/inner ground layers



Opening in other layers (no ground/ RF)



RoHS COMPLIANT

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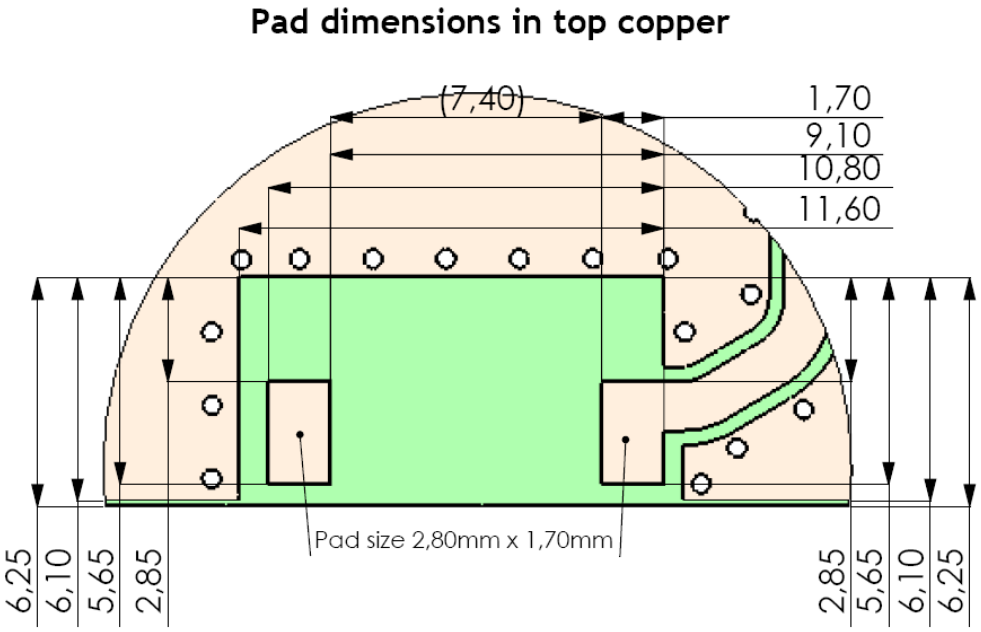
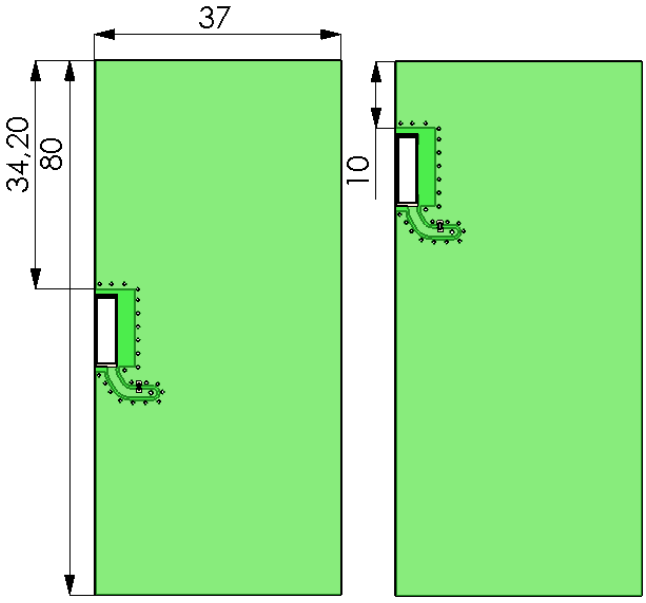
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

Recommended Antenna Pad Dimensions on PWB Layout (top surface)



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



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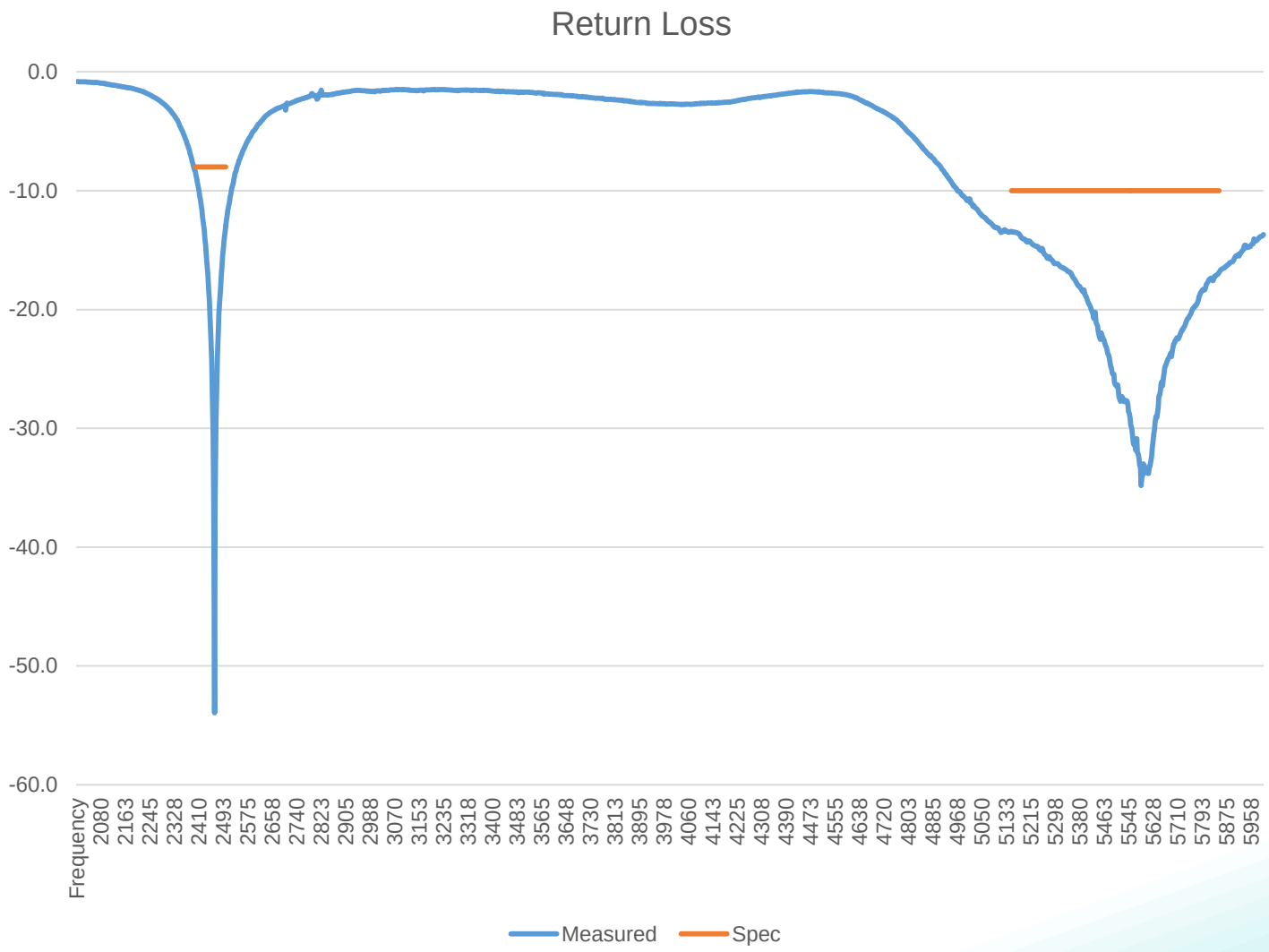
CHARTS

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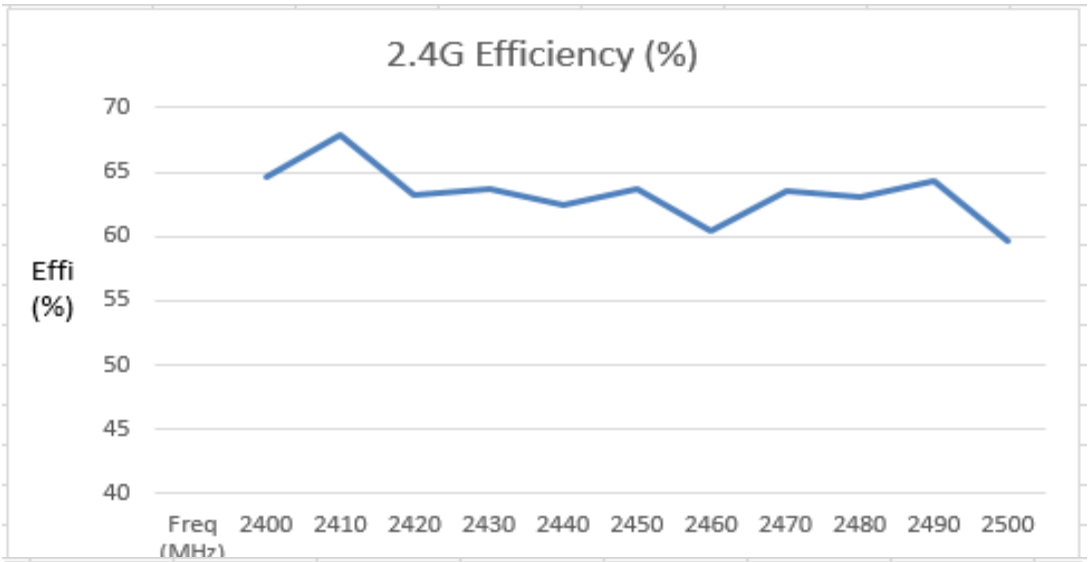
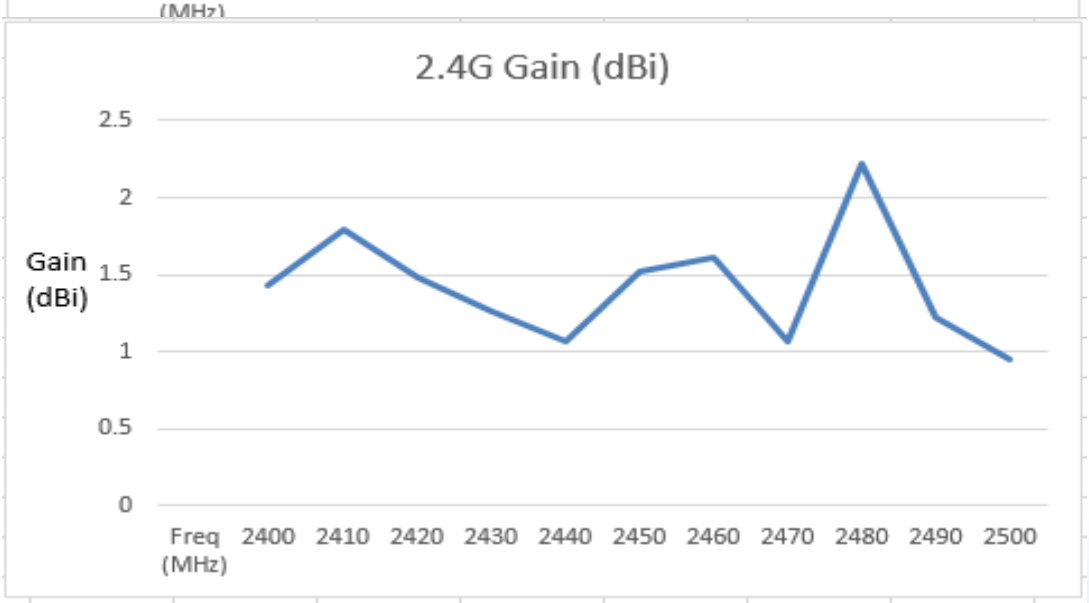
Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

Free space efficiency and maximum gain for 2.4G





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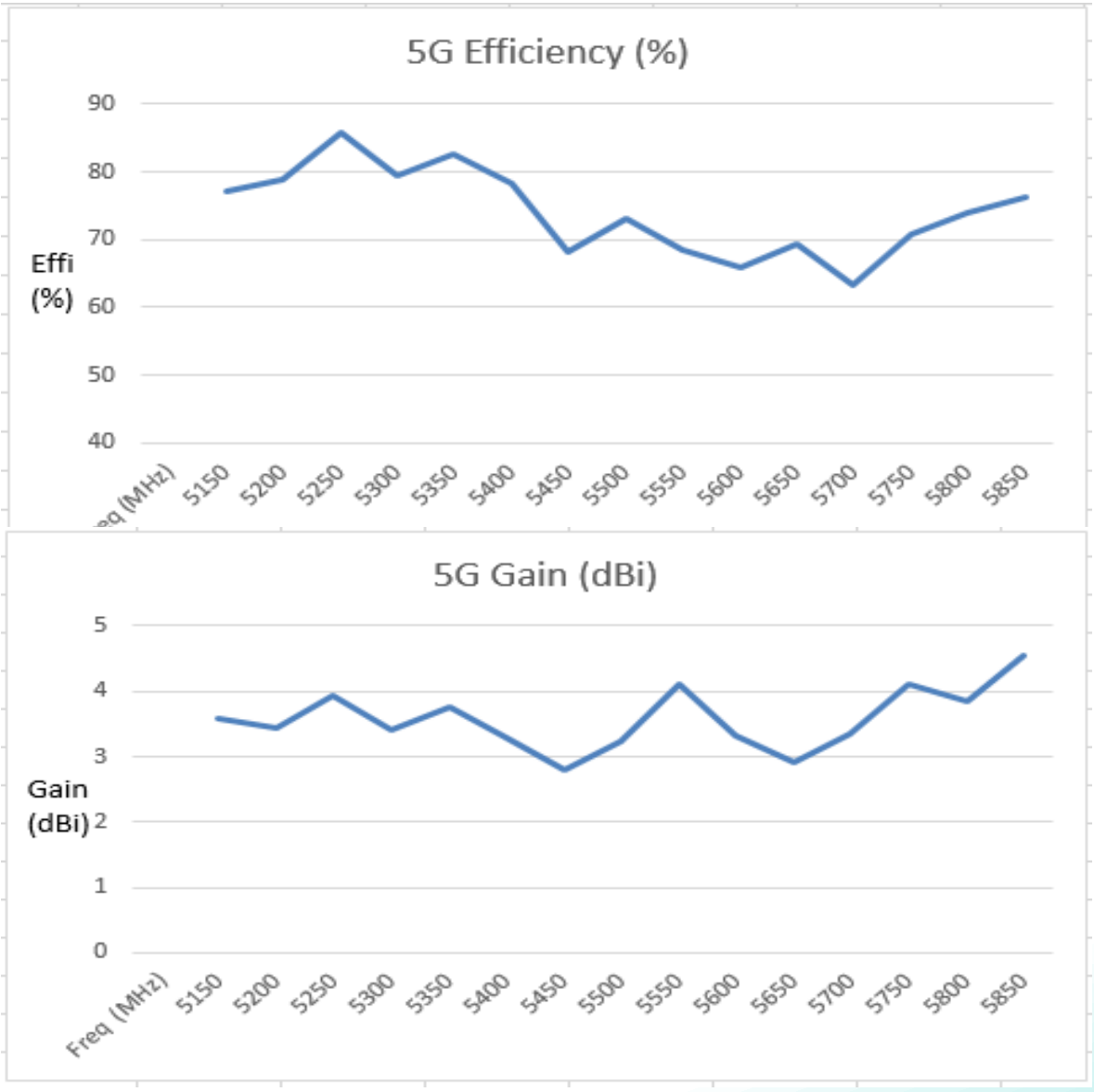
Series: Chip Antenna

PART NUMBER: W3006

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

Free space efficiency and maximum gain for 5G



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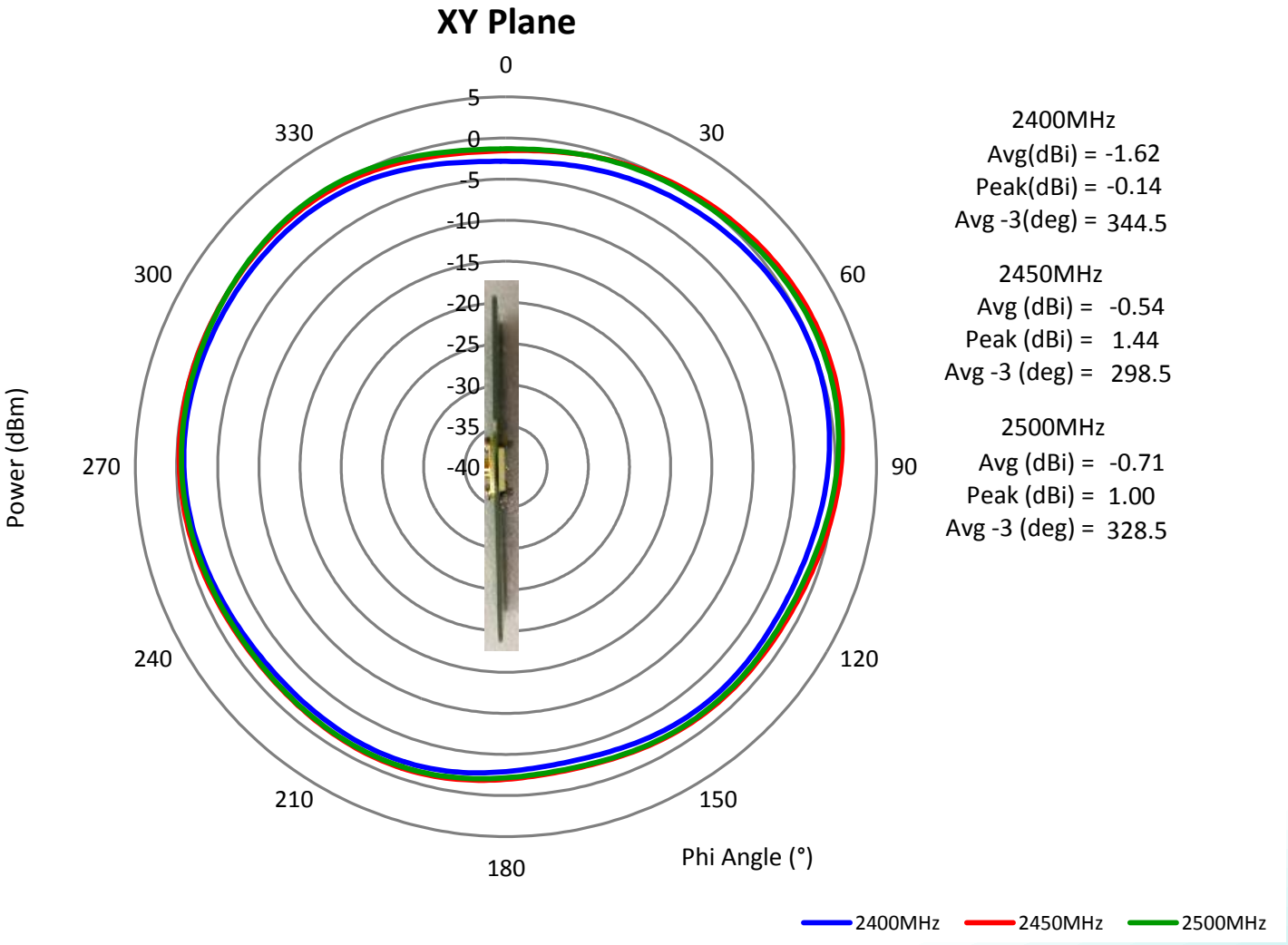
2.4 GHz Typical Free Space Radiation Patterns



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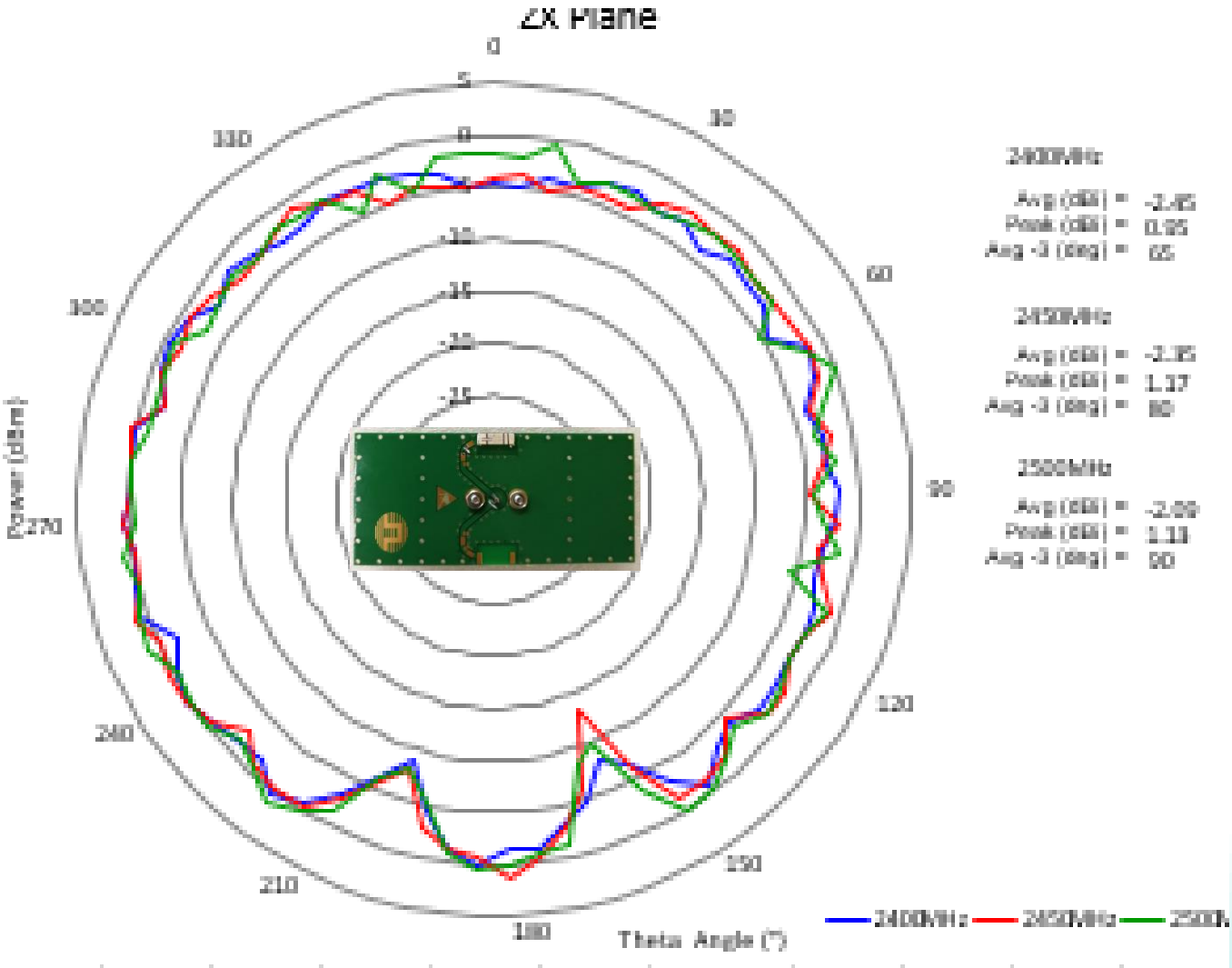
2.4 GHz Typical Free Space Radiation Patterns



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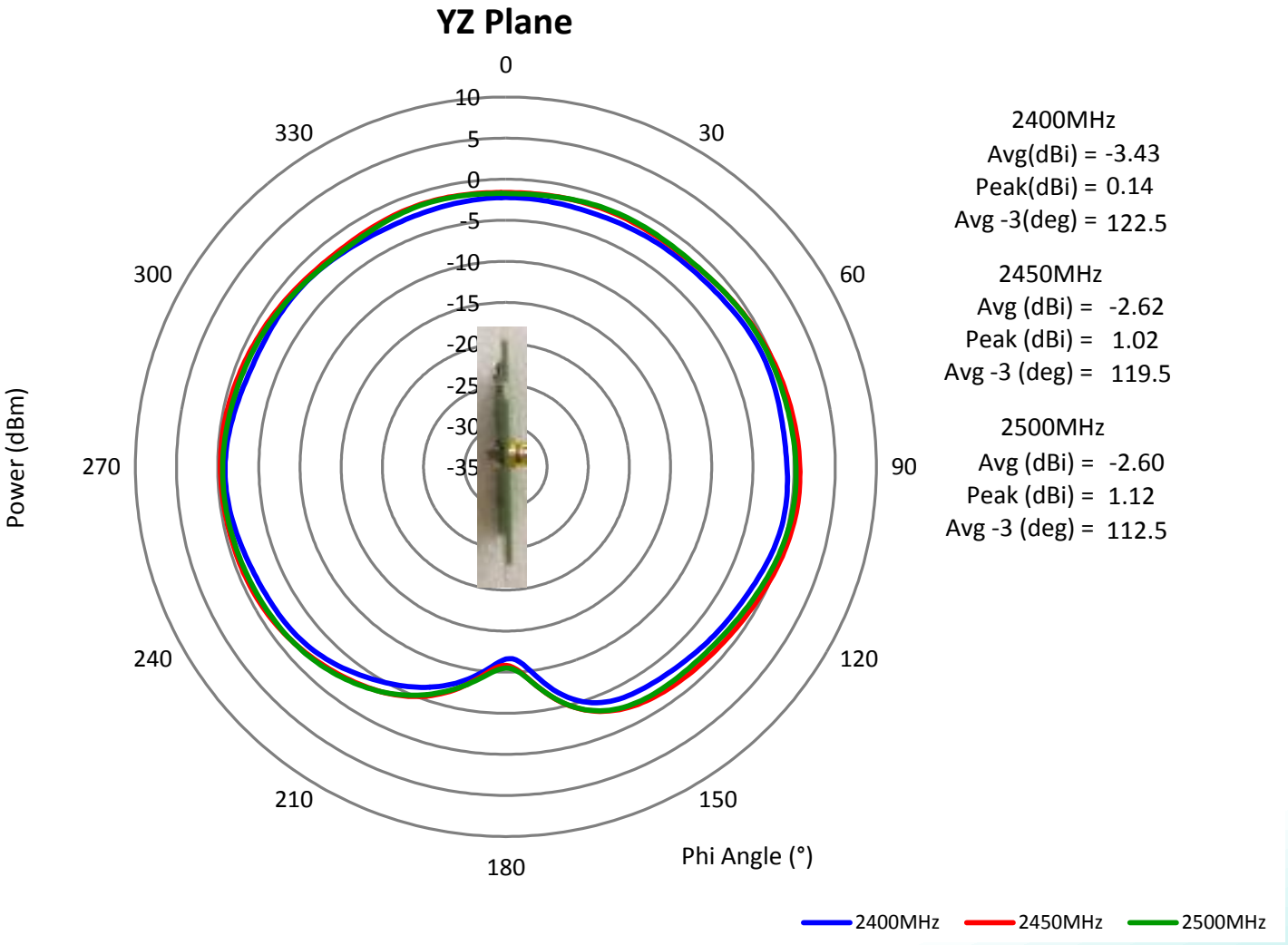
2.4 GHz Typical Free Space Radiation Patterns



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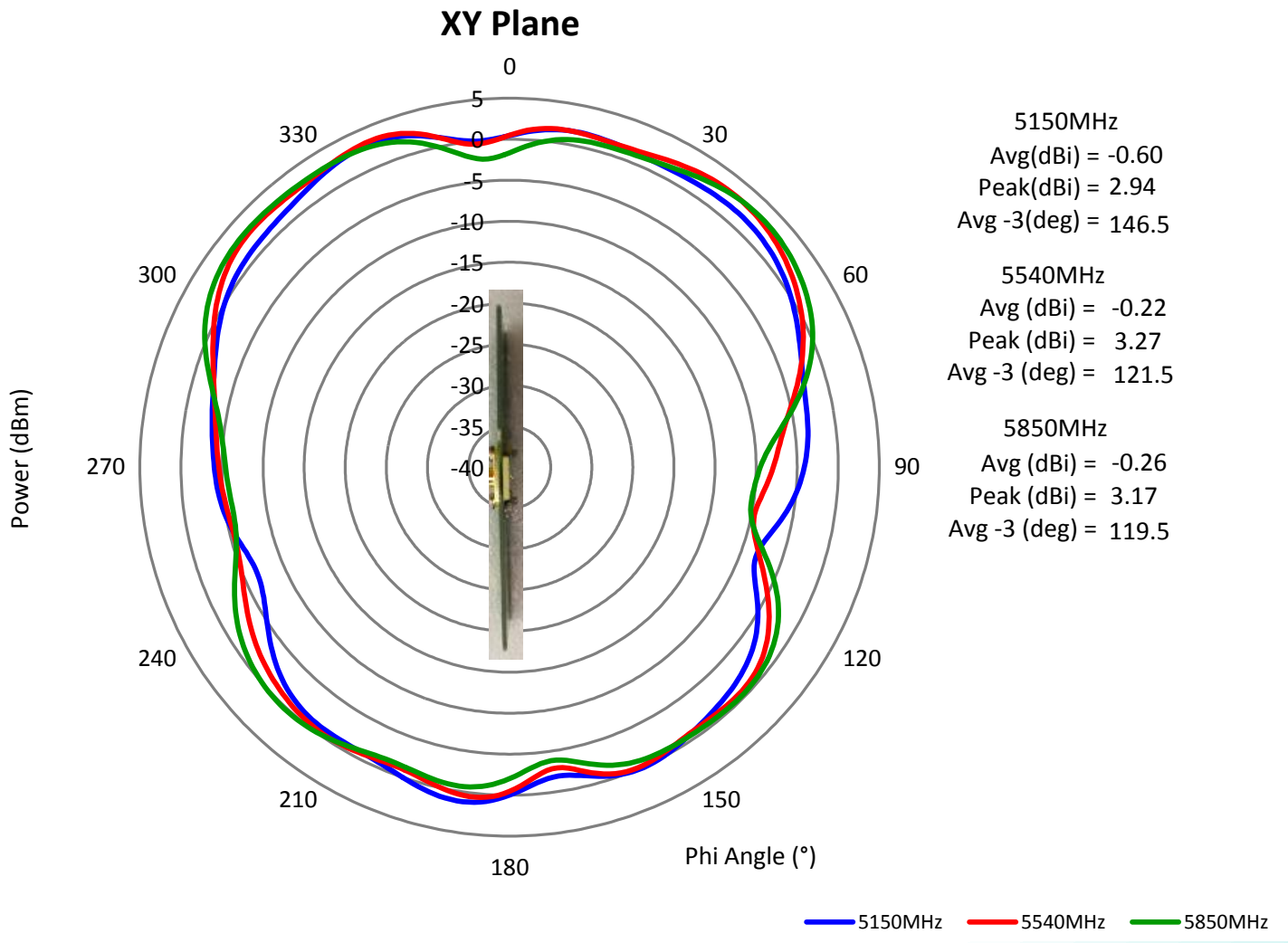
5GHz Typical Free Space Radiation Patterns



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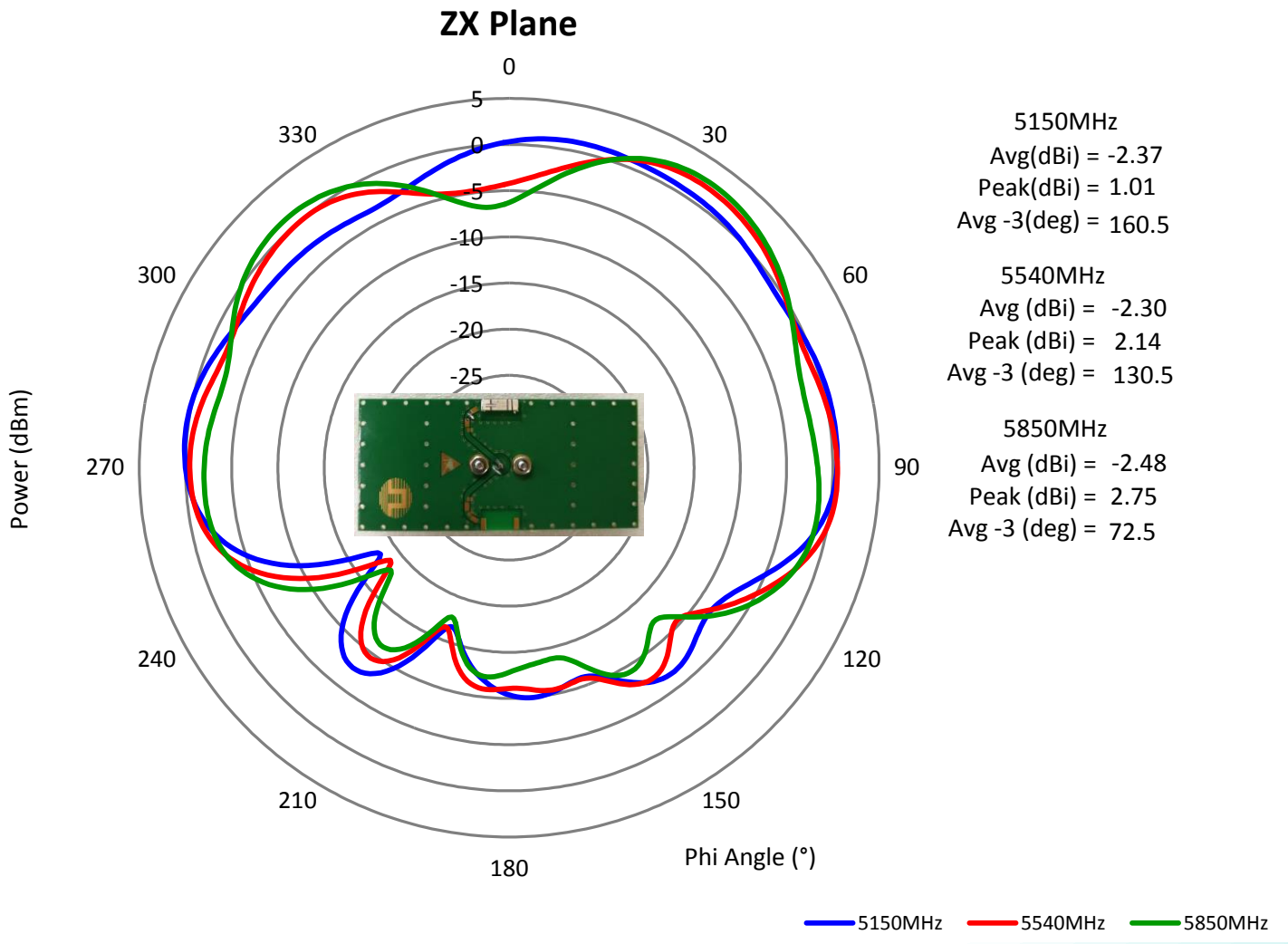
5GHz Typical Free Space Radiation Patterns



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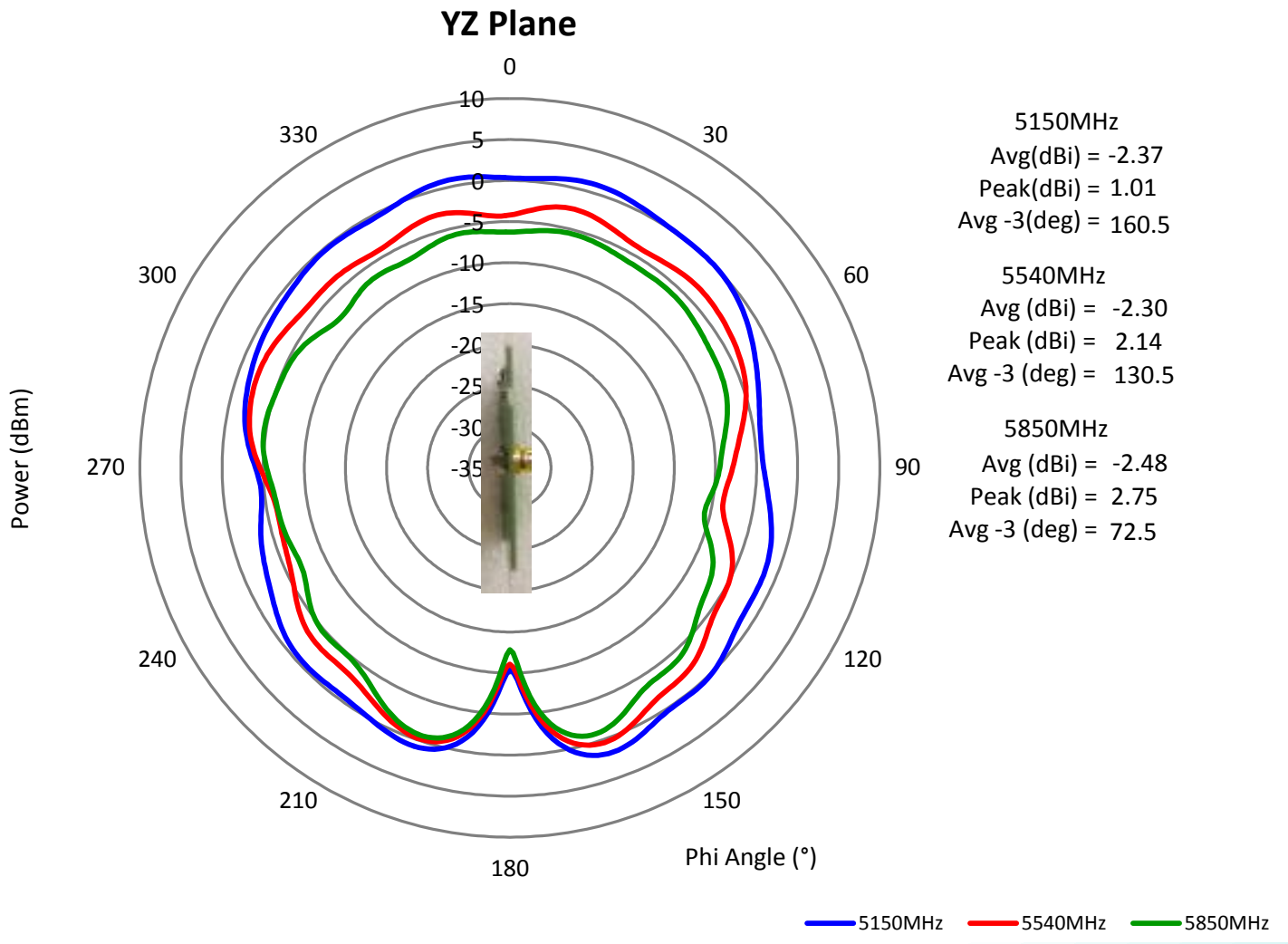
5GHz Typical Free Space Radiation Patterns



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PACKAGING

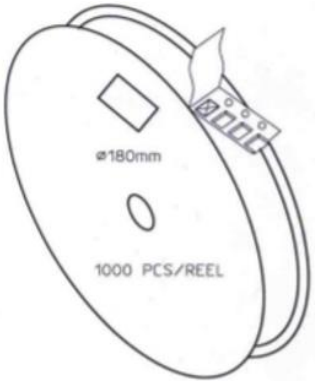
1000pcs antennas per 7” reel

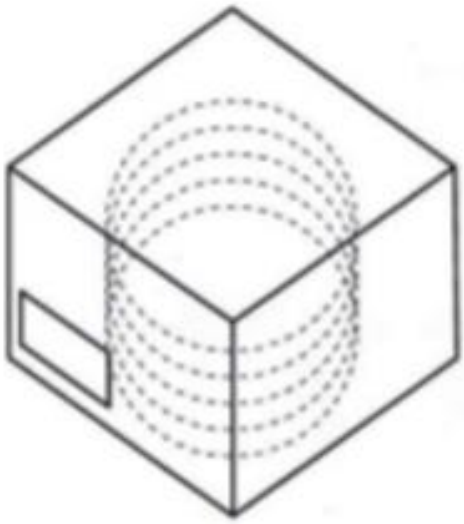
3pcs 7” reel per inner package box

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.

RoHS COMPLIANT

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Pulse:
W3006