



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Description: ISM868/915MHz, 2.4GHz Ant

Series: PCB Embedded

PART NUMBER: W3331

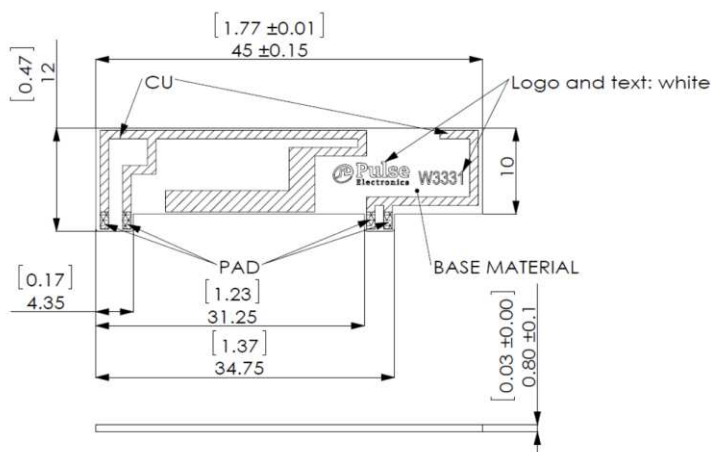


Features:

- Small clearance needed (about 4mm)
- Test PCB size 118.5\*102mm
- High efficiency
- Small compact form factor
- Low profile
- Multi-band (ISM and 2.4 GHz)
- Board Mountable
- 2 connection points
- Lead free materials
- RoHS Compliant Product

Applications:

- Data transmission for IoT applications
- High speed data terminals
- Routers using ISM frequencies
- ISM and WiFi dual applications
- Hot Spots
- Radio modules
- WiFi / BLE / Zigbee



All dimensions are in mm / inches

Issue: 1612

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For more information:

Pulse Worldwide Headquarters  
12220 World Trade Drive  
San Diego, CA 92128  
USA  
Tel: 1-858-674-8100

Pulse/Larsen Antennas  
3611 NE 112<sup>th</sup> Ave  
Vancouver, WA 98682  
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,4<sup>th</sup> Phase  
Suzhou New District  
Jiangsu Province, Suzhou 215009 PR China  
Tel: 86 512 6807 9998



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**ELECTRICAL SPECIFICATIONS**

Frequency port1	863-928MHz
Frequency port2	2400-2500MHz
Nominal Impedance	50Ω
Return Loss	-6dB max@ISM868/915MHz -12dB max@ISM2.4GHz
Isolation between port1 & port2	-15dB
Average efficiency	65% @ISM868/915MHz 75%@ISM2.4GHz
Gain	2 +/- 1 dBi@ISM868/915MHz 3.5 +/- 1 dBi@ISM2.4GHz
Radiation Pattern	Omni
Polarization:	linear
Power withstanding	3W

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Description: ISM868/915MHz, 2.4GHz Ant

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PART NUMBER: **W3331****MECHANICAL SPECIFICATIONS**

PCB material	FR4
Color	Black
Weight	0.75g
Overall Length	1.77 INCHES
Overall width	0.47 INCHES

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Description: ISM868/915MHz, 2.4GHz Ant

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MECHANICAL DRAWING

Mod	Explication
11	ADD PORT DESCRIPTION
10	CLASS A RELEASE

Functional Characteristic key:  
Process capability studies required, total 1 pcs.  
Process capability studies required and ongoing statistical process control required, total 0 pcs.

No recycling plastics allowed to use. Please follow Pulse Limits of hazardous substances (RoHS, halogens) in the document "Pulse Hazardous Substances (HS) Limits" and "Vendor Survey Questionnaire, Material Composition (LCM-SAF-10040)"

**Notes:**

1. Material: FR4, thickness 0.8mm.
2. Copper 0.5Oz, plating Ni 2-4 um min., Au immersion 0.05um min.
3. Logo and text on silkscreen layer, white
4. Visual quality according to PG5.030.000 Class III.
5. On PWB outline the maximum burr is 0,2mm.
6. Solder mask must be black.
7. Immersion GOLD+ Openings in solder mask.
8. All numbered dimenions must be measured and data collected.

 Pulse Finland Oy Takajärvi 6 PO4440 Kempele, Finland Tel: +358 207 935 500 Fax: +358 207 935 501 www.pulseelectronics.com/antennas		Sheet number	1/1		
	2:1 (A4)	General Tolerance	ISO-2768-f		
Product(s)		Customer number	10	19-Jul-16	WinZhu
W3331		Drawn	WinZhu	26-Jan-16	01 06-Apr-16 WinZhu
Item Name		Chkd			0.4 22-Mar-16 WinZhu
PCB		Apprd			0.3 09-Mar-16 WinZhu
		Document number	W3331	0.2 24-Feb-16 WinZhu	
		Part Version	V01	0.1 26-Jan-16 WinZhu	
		Document Version	11	Mod	Date Name

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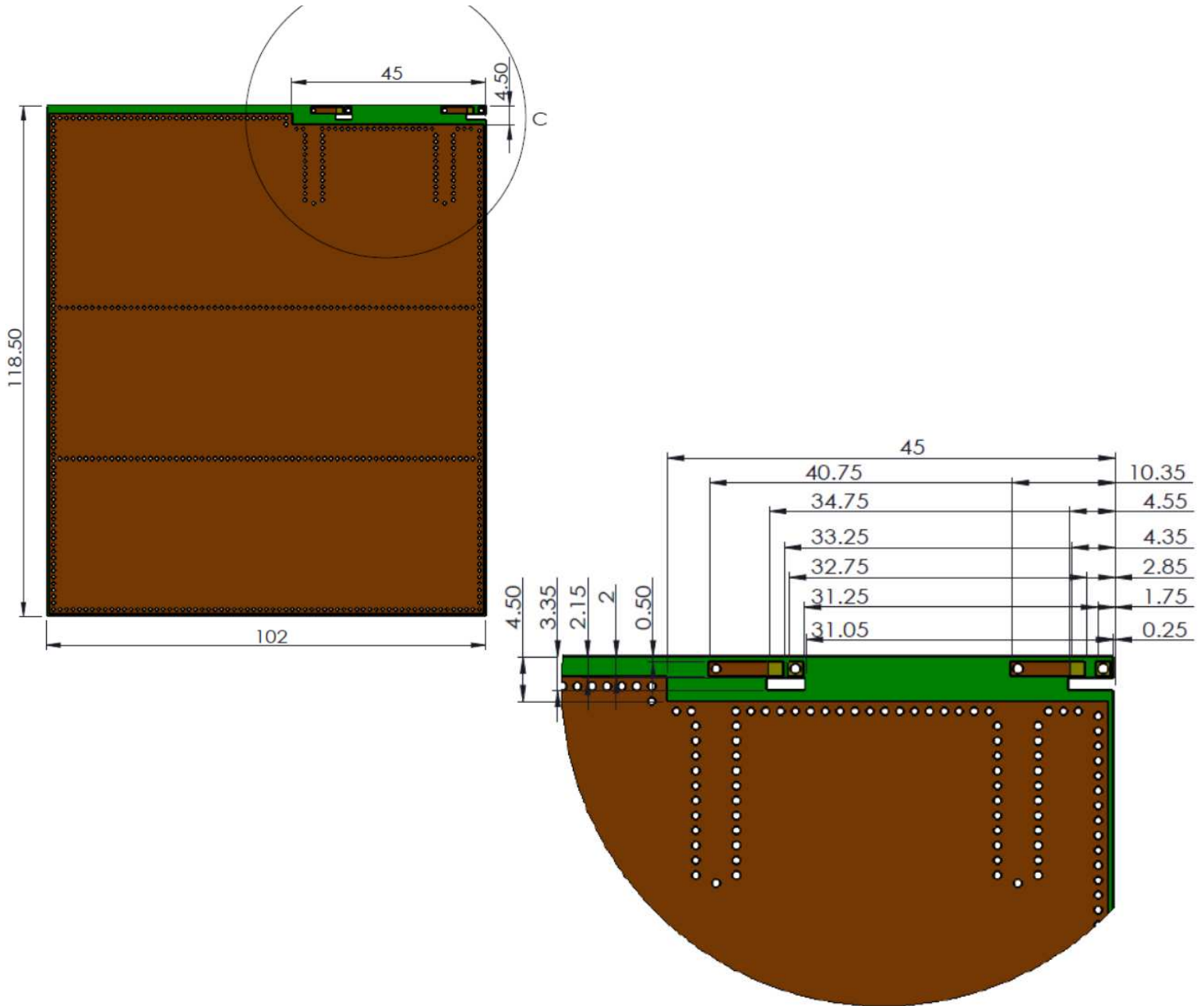
Description: ISM868/915MHz, 2.4GHz Ant

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OTHER SPECIFICATIONS

Recommended PCB layout(Unit:mm)



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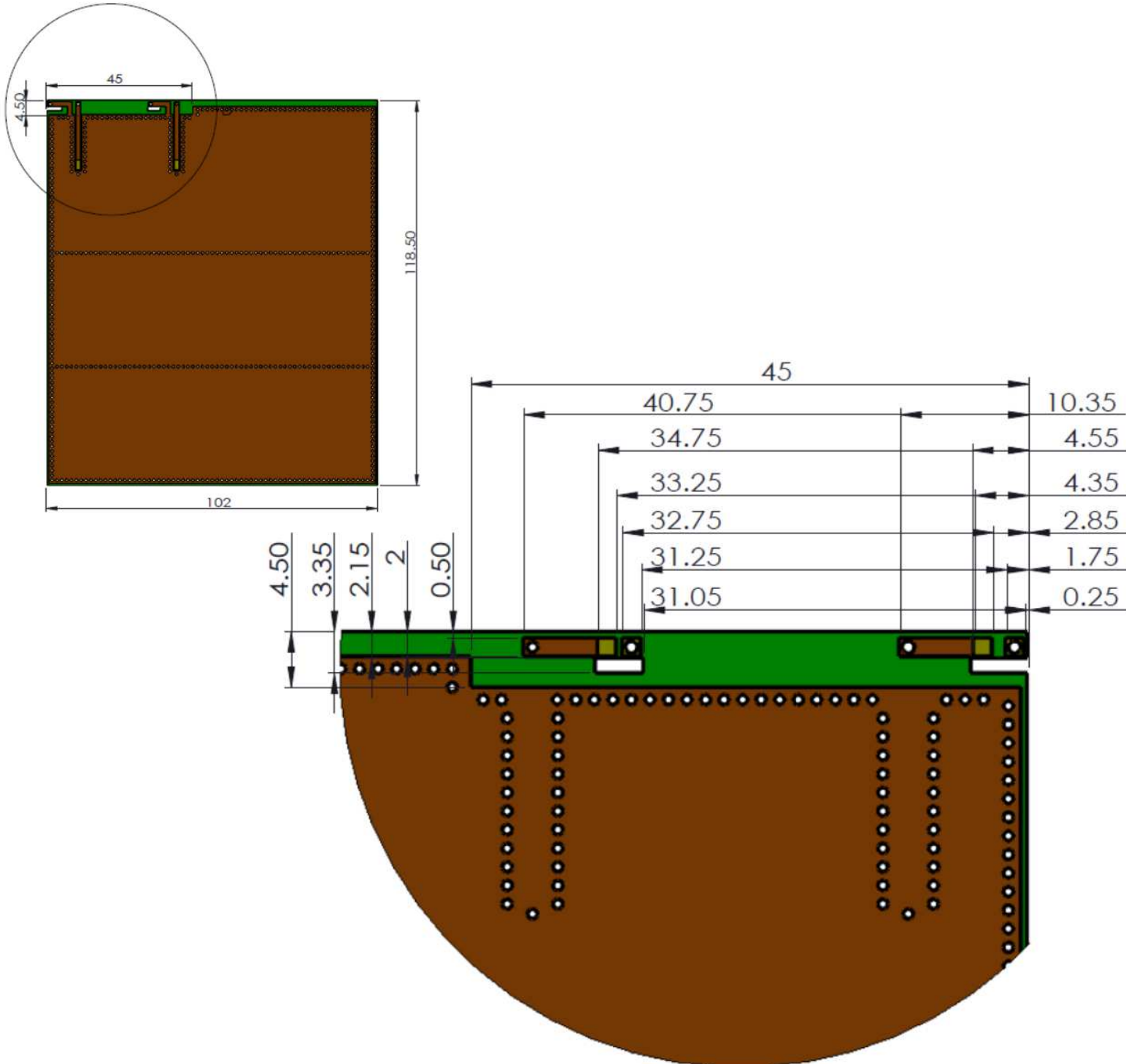
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OTHER SPECIFICATIONS



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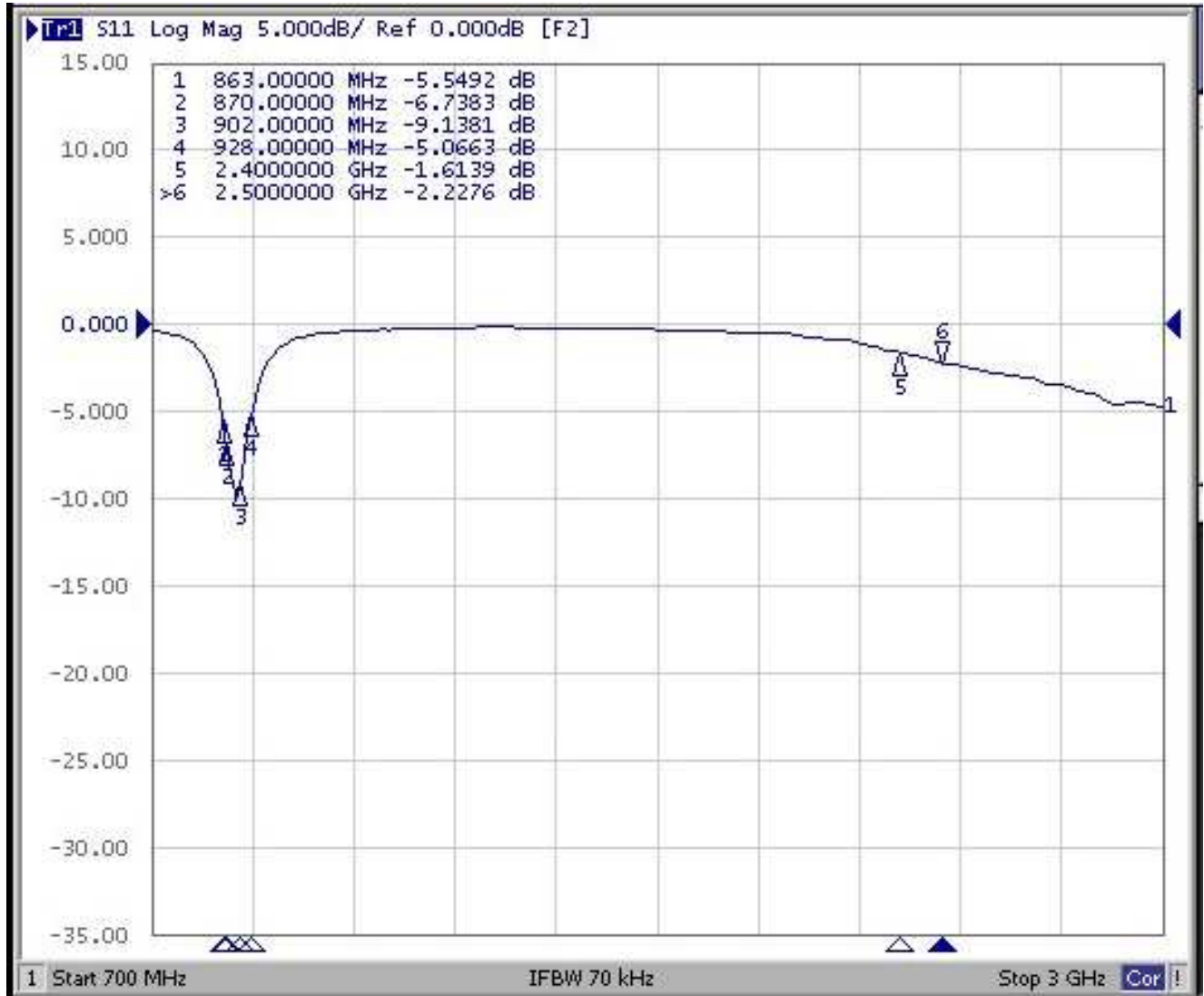
Description: ISM868/915MHz, 2.4GHz Ant

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PART NUMBER: W3331

CHARTS

ISM868/915MHz band Return Loss



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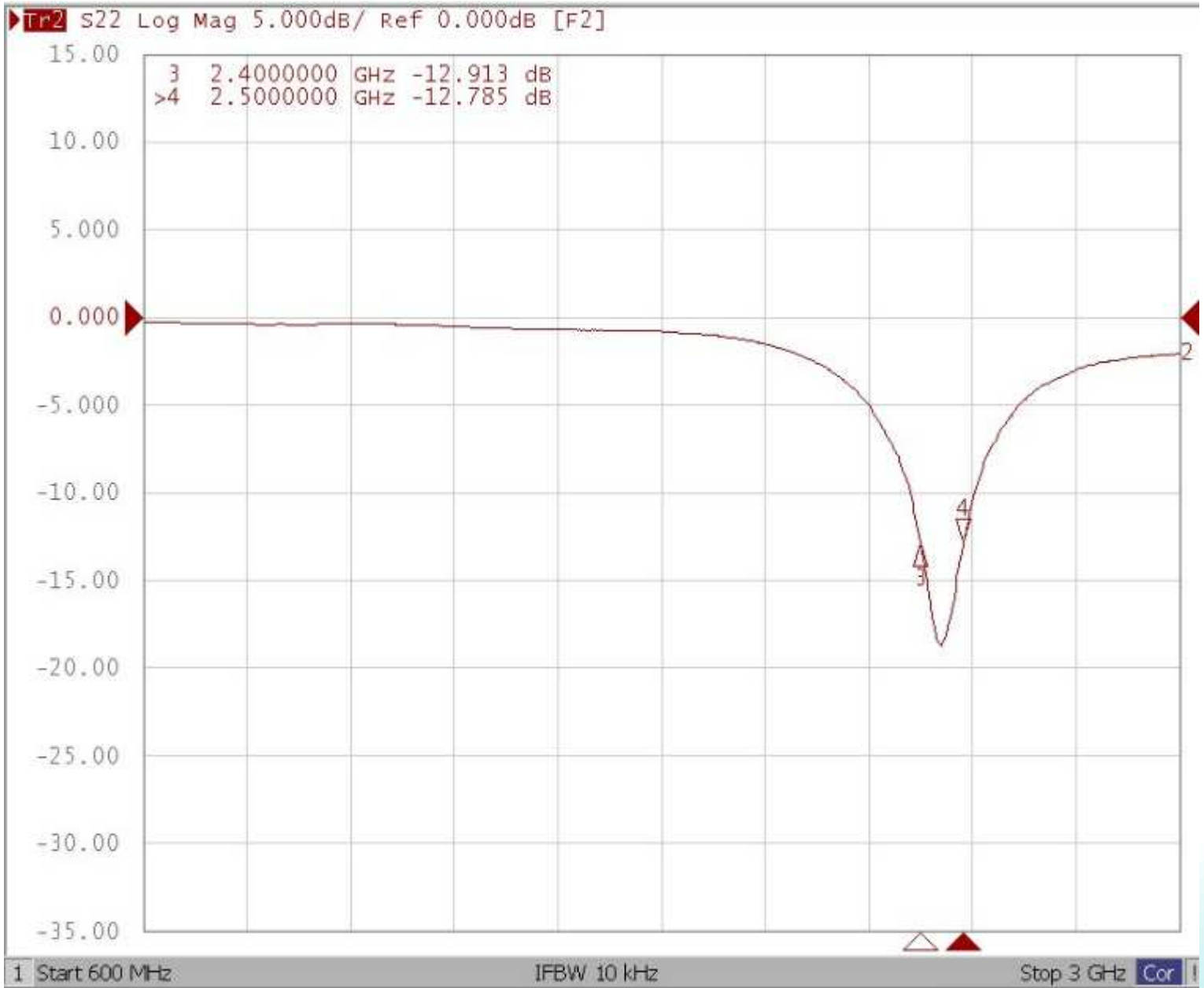
Description: ISM868/915MHz, 2.4GHz Ant

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CHARTS

ISM2.4GHz Return Loss



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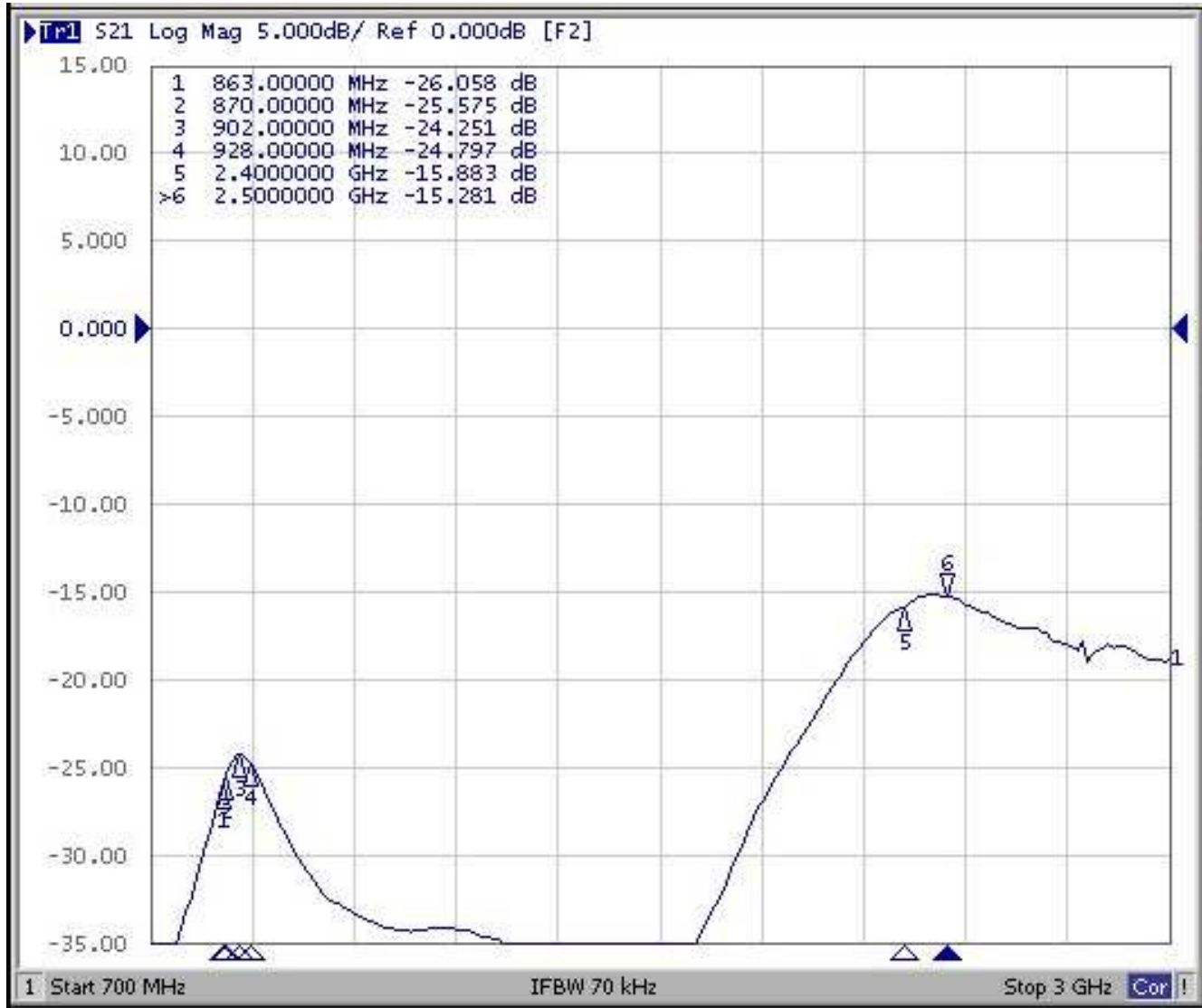
Description: ISM868/915MHz, 2.4GHz Ant

Series: PCB Embedded

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CHARTS

Isolation



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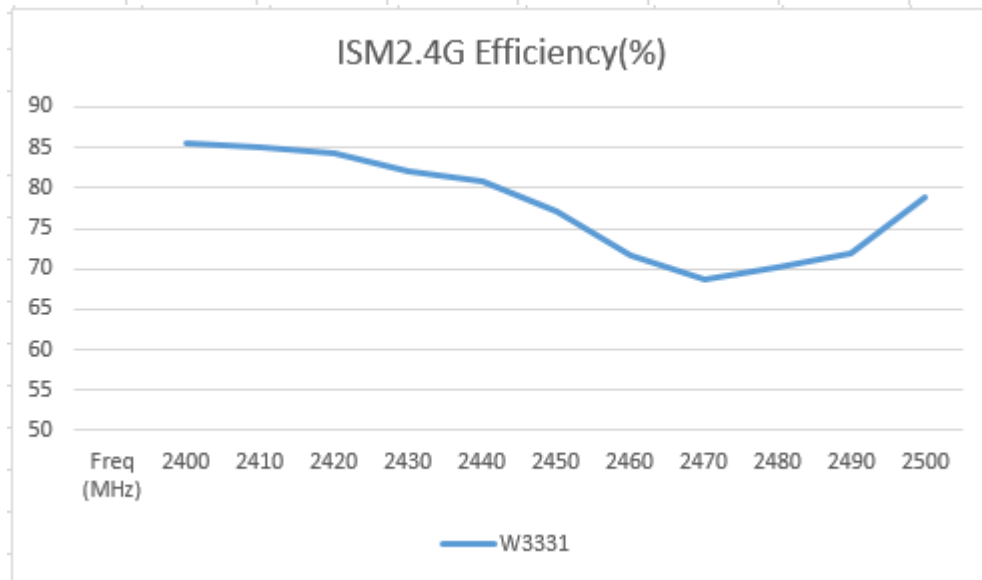
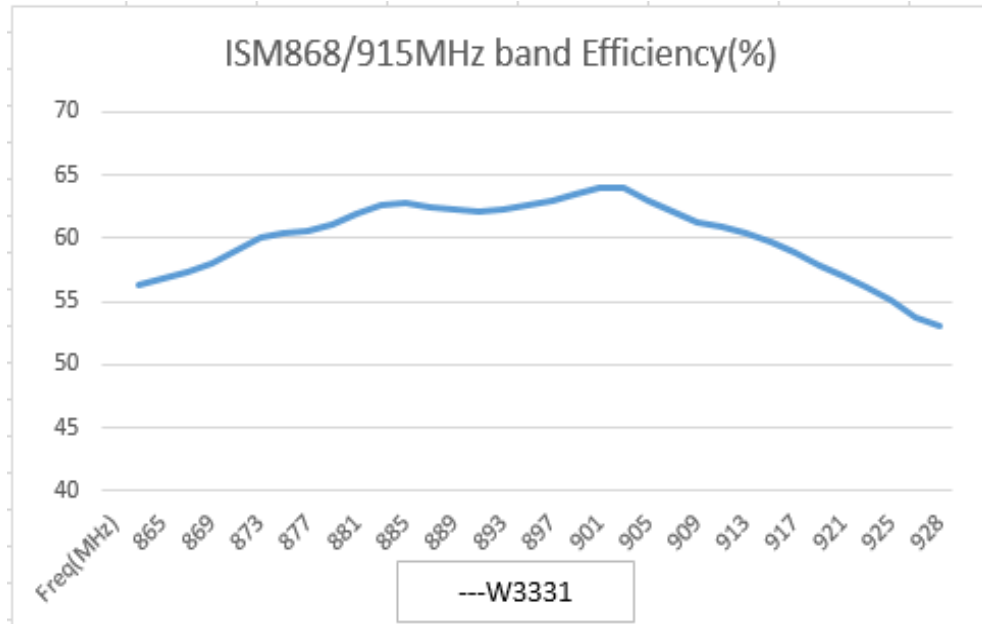
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CHARTS

Efficiency(%)



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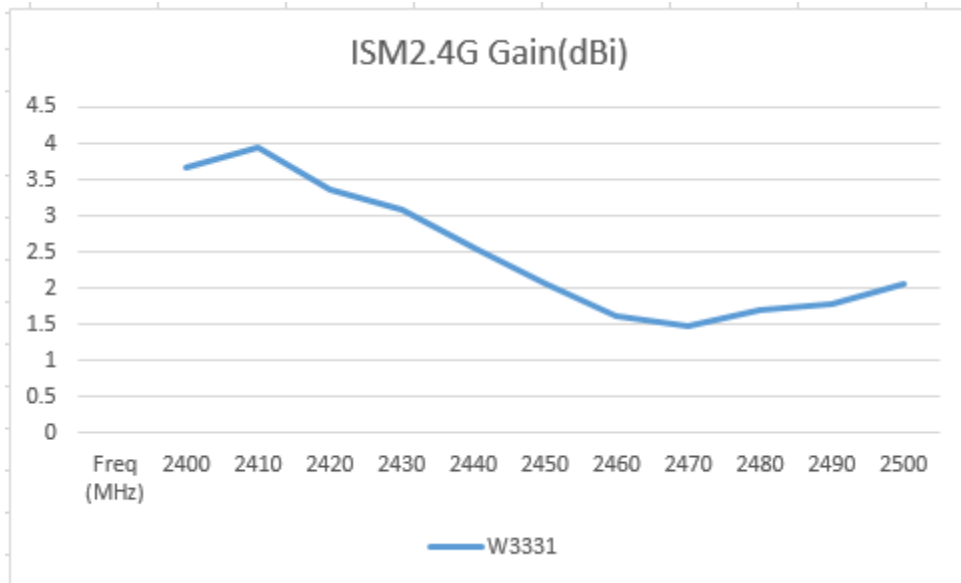
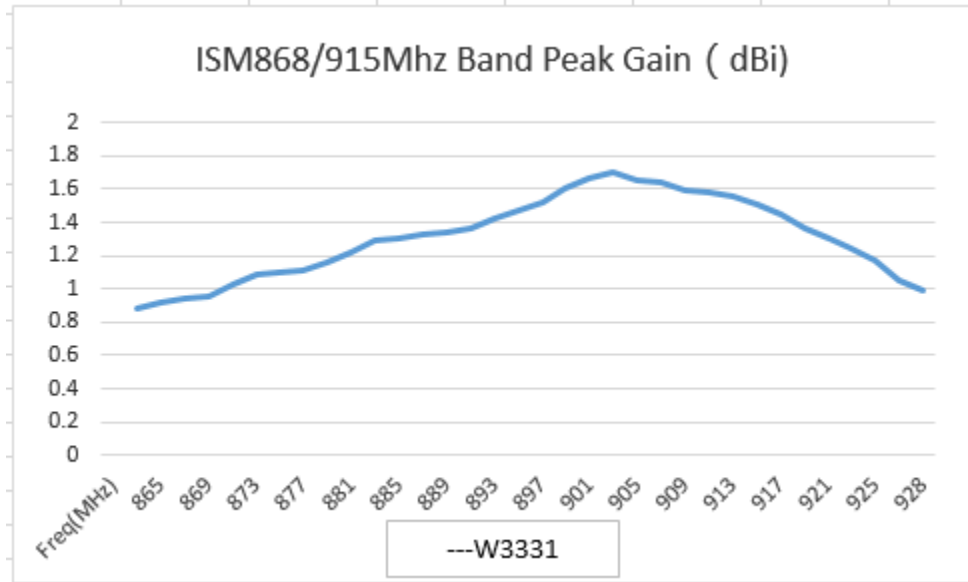
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CHARTS

Peak Gain ( dBi)



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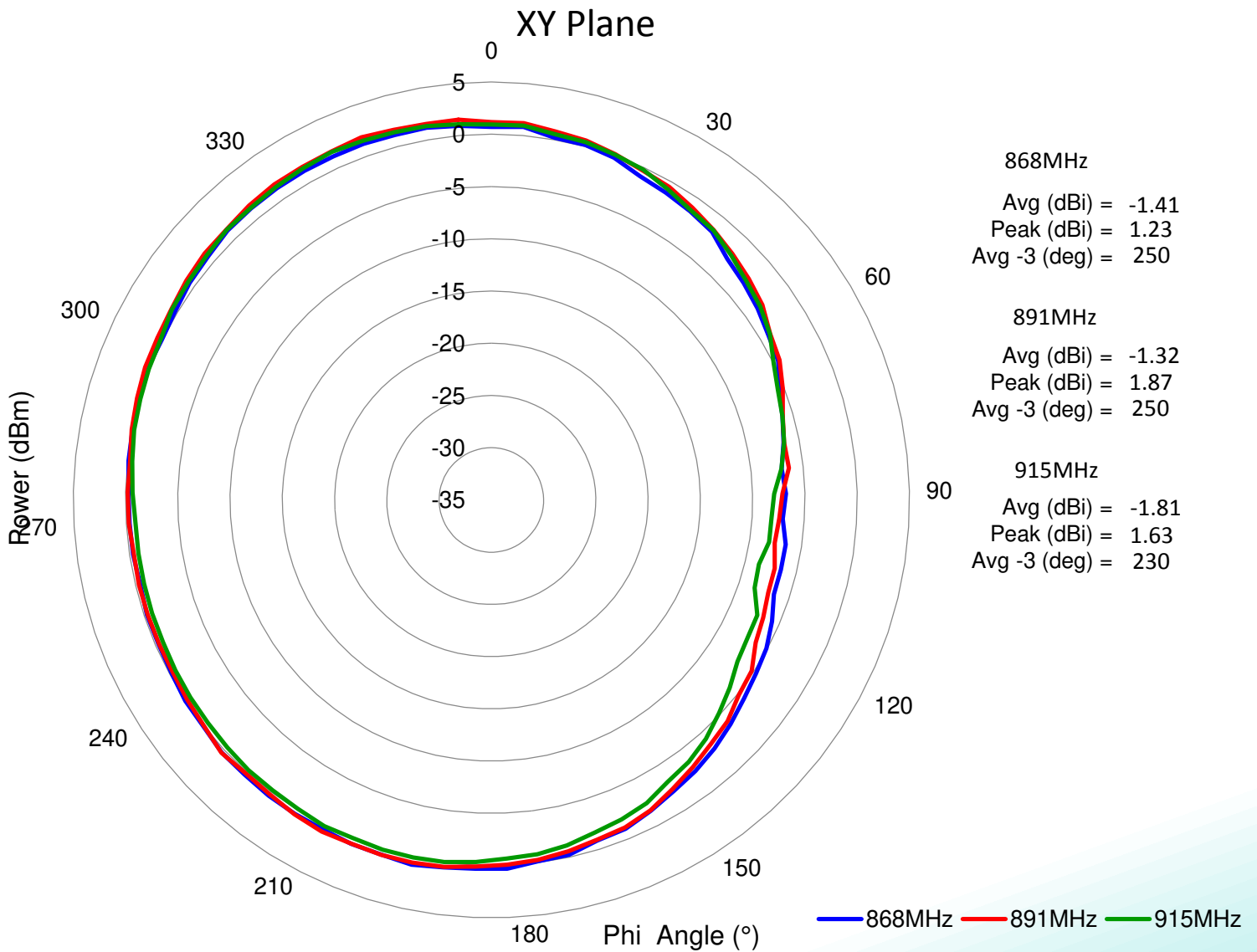
Description: ISM868/915MHz, 2.4GHz Ant

Series: PCB Embedded

PART NUMBER: W3331

CHARTS

Typical free space radiation pattern  
ISM868/915MHz  
X-Y plane



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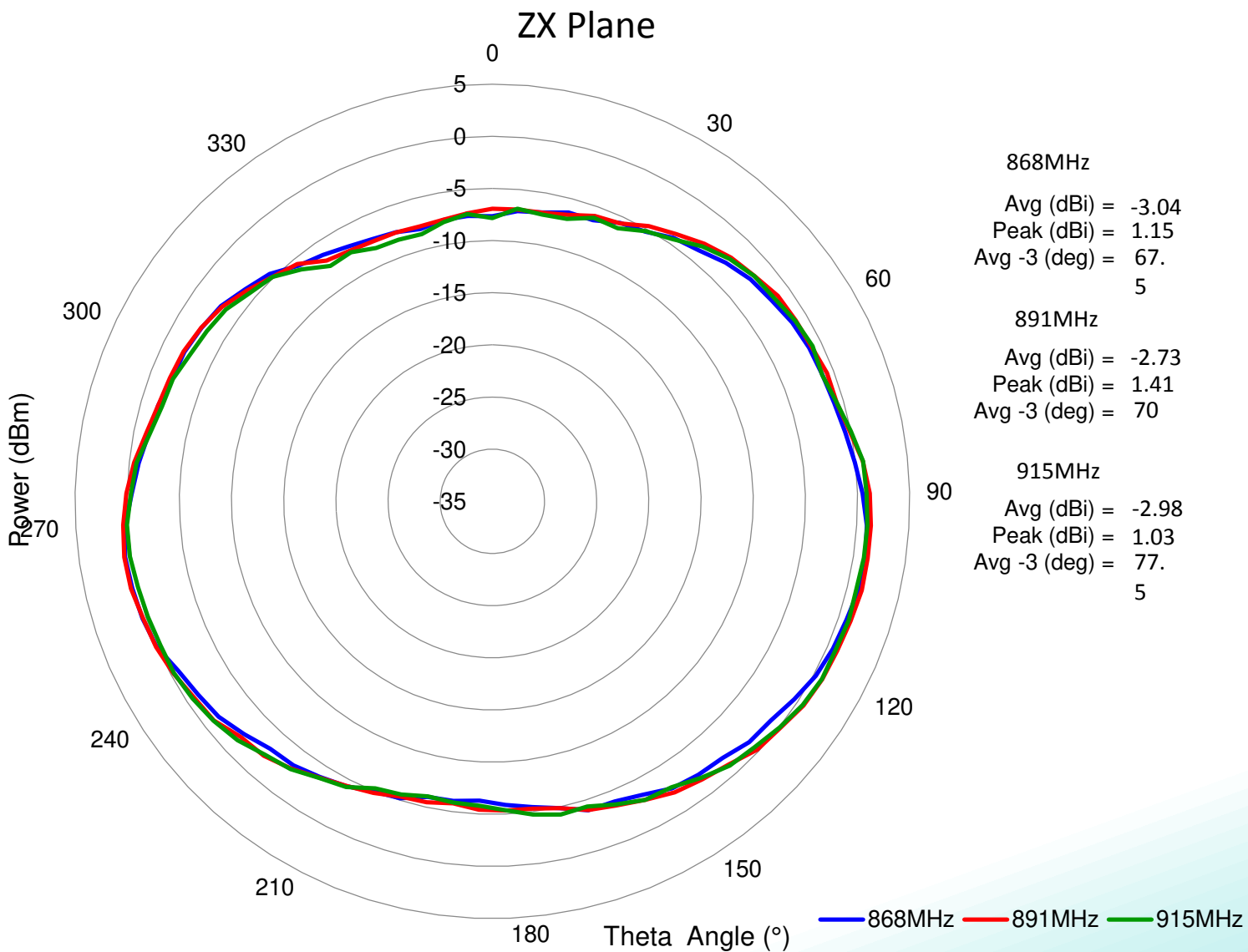
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CHARTS

Typical free space radiation pattern  
ISM868/915MHz  
Z-X plane



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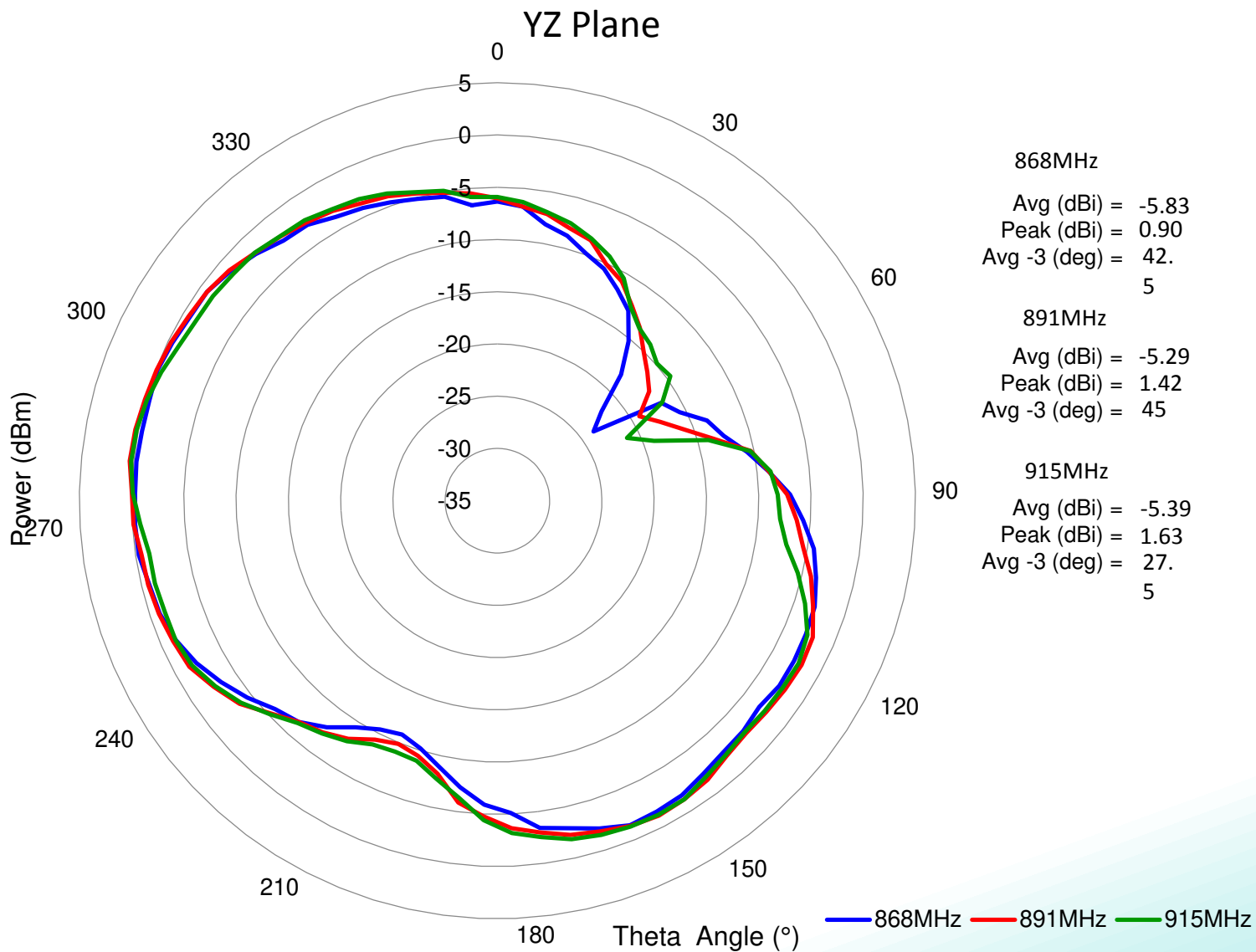
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CHARTS

Typical free space radiation pattern  
ISM868/915MHz  
Z-Y plane



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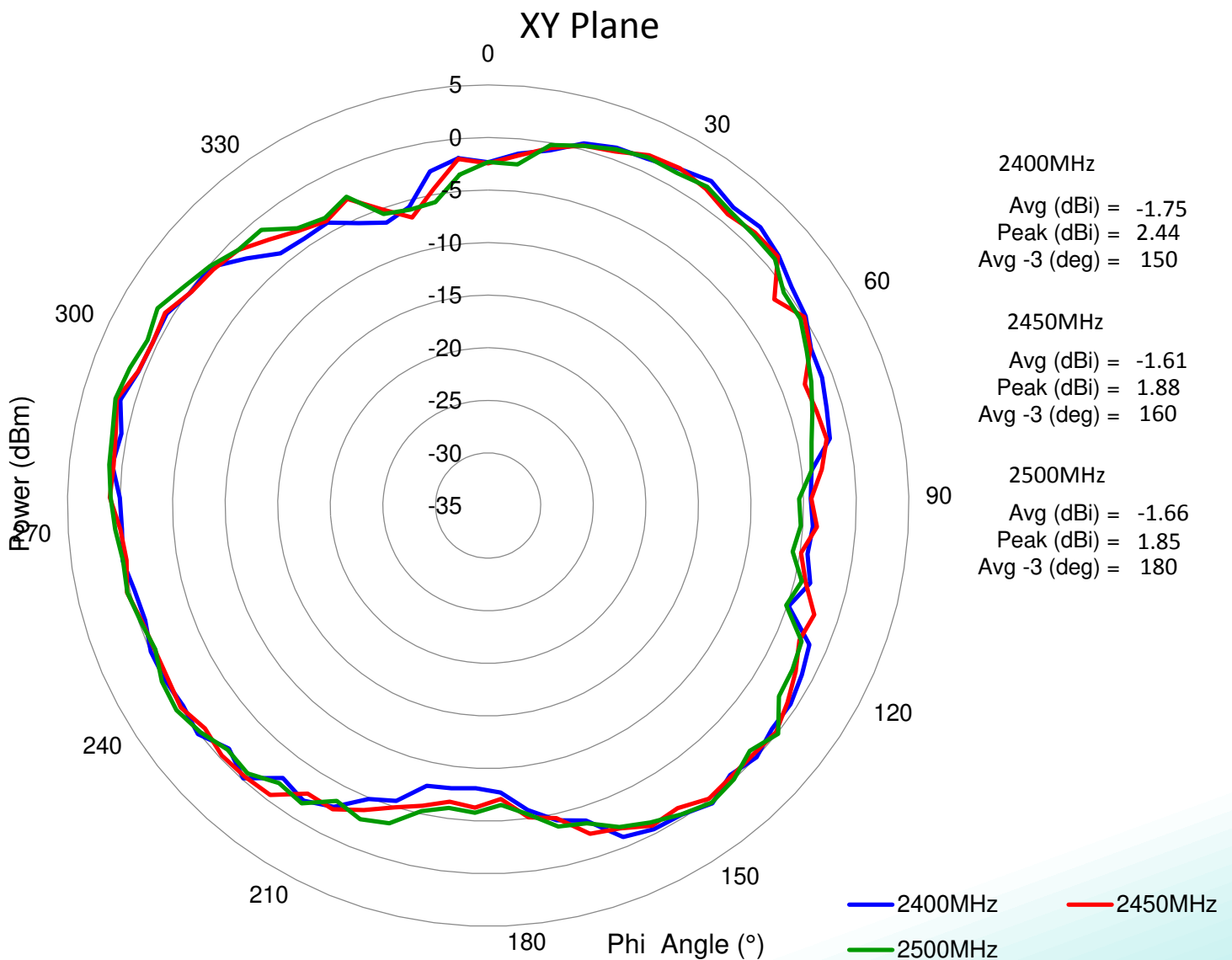
Description: ISM868/915MHz, 2.4GHz Ant

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CHARTS

Typical free space radiation pattern  
ISM2.4GHz  
X-Y plane



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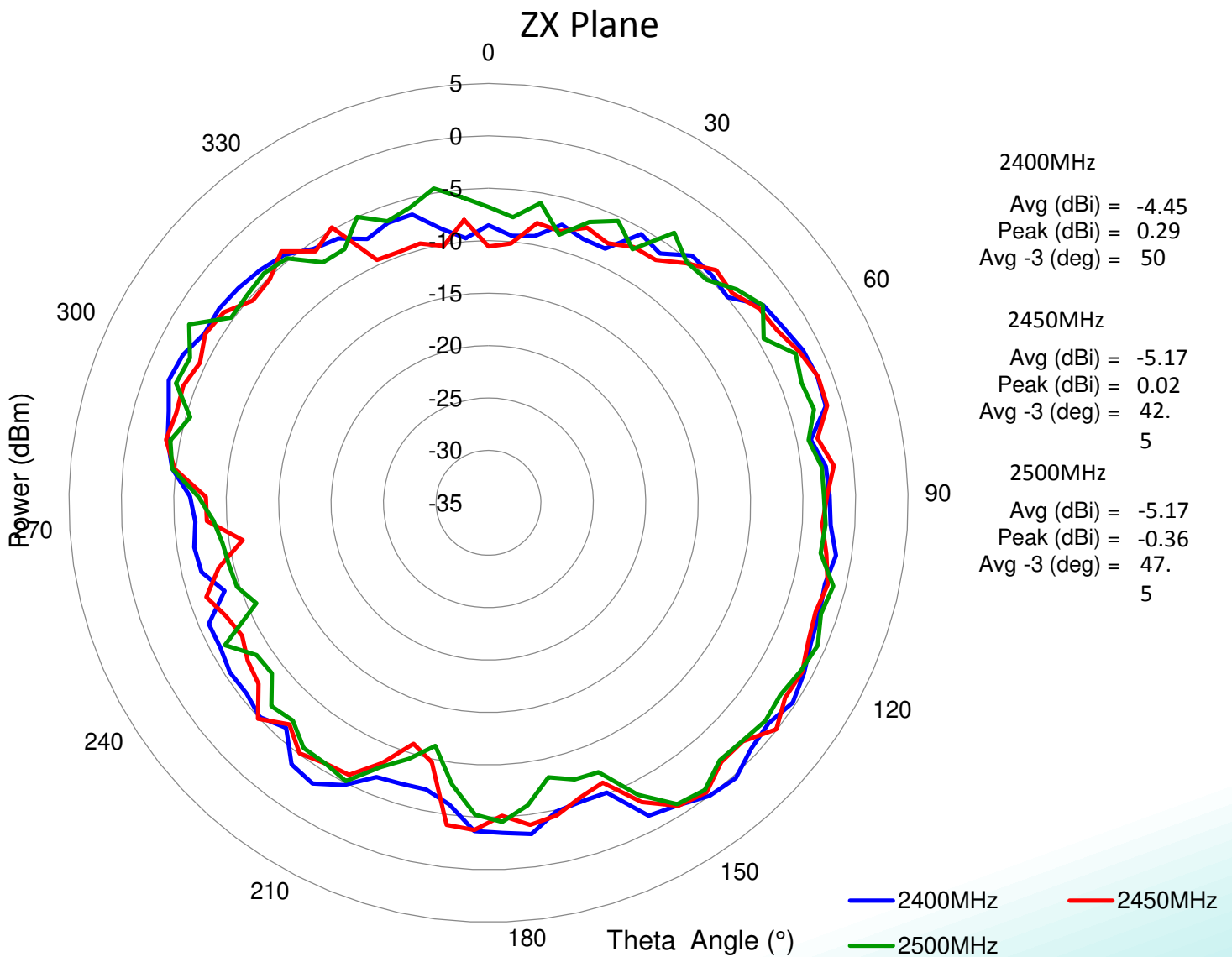
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CHARTS

Typical free space radiation pattern  
ISM2.4GHz  
Z-X plane



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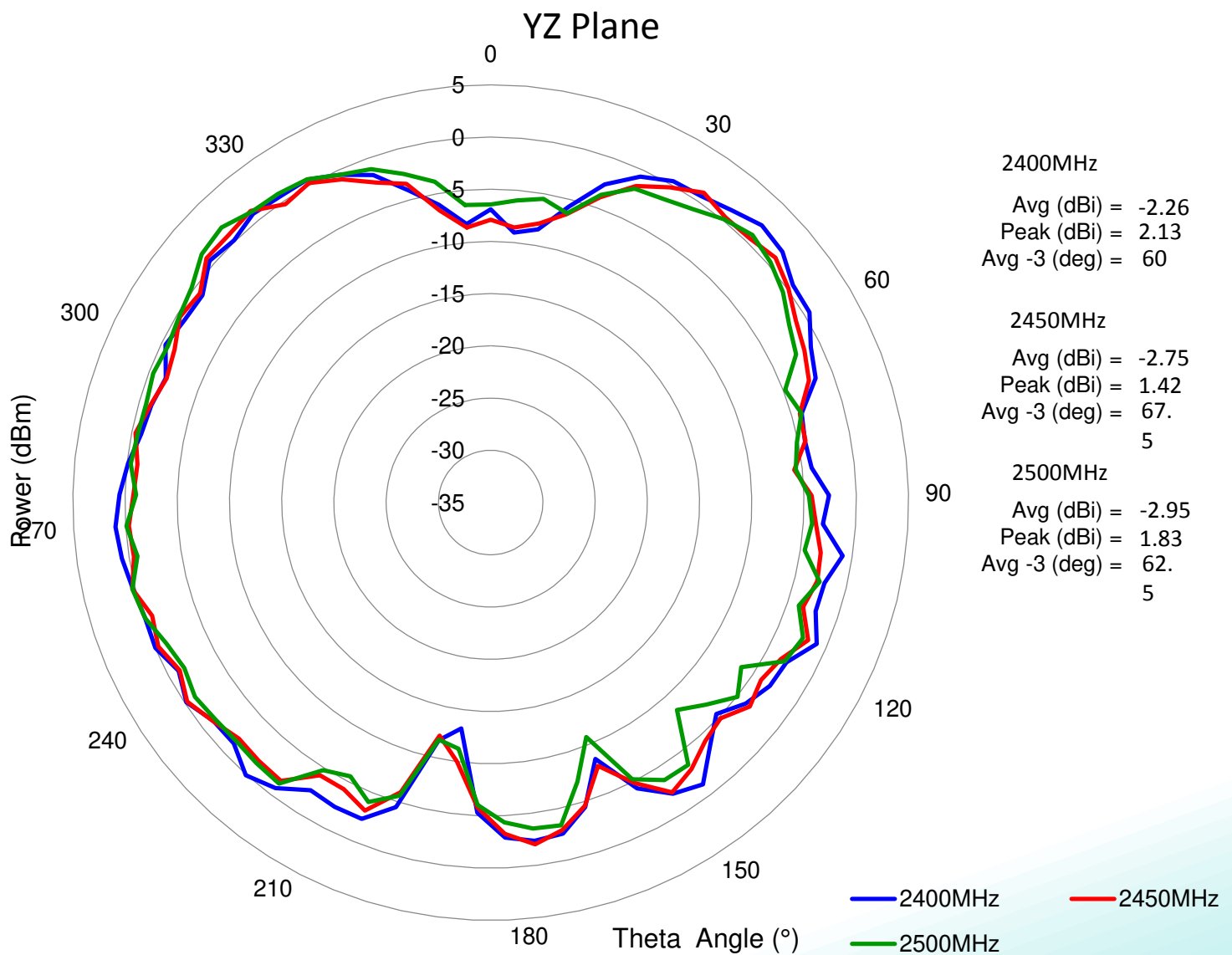
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## PACKAGING

10PCS/PE bag

1000PCS/box

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