

**Description:** ISM868/915MHz, 2.4GHz Antenna

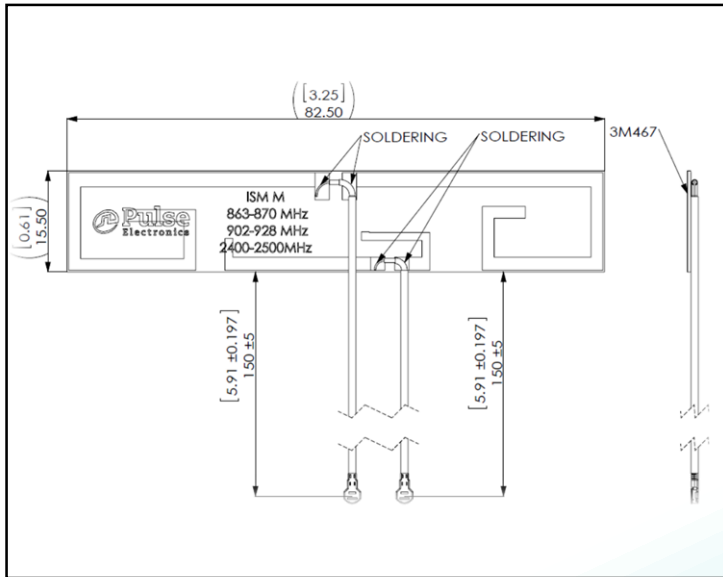
**Series:** Internal

**PART NUMBER:** W3332B0150



**Features:**

- Tri-band dual feed ISM antenna
- PCB radiator with two pigtail coax feeds (815/915MHz and 2.4GHz)
- Size 15.5x82.5x0.5mm
- U.FL compatible connectors



**Applications:**

- Devices using ISM band radios 868MHz, 915MHz, 2.4GHz
- Machine to Machine, IoT
- Data terminals and routers using ISM bands
- 2.4-2.5GHz band also applicable for Bluetooth, BLE Zigbee. WiFi

All dimensions are in mm / inches

Issue: 1649

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**ELECTRICAL SPECIFICATIONS**

Cable 1

Frequency	863-928	MHz
Nominal Impedance	50	$\Omega$
Return loss(max)	-5	dB
Peak Gain	0.2	dBi
Average Efficiency	55	%

Cable 2

Frequency	2400-2500	MHz
Nominal Impedance	50	$\Omega$
Return loss(max)	-10	dB
Peak Gain	4.1	dBi
Average Efficiency	64	%

Isolation between cable 1 and cable 2

@863-928MHz	-16	dB
@2400-2500MHz	-11	dB

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### MECHANICAL SPECIFICATIONS

PCB material	FR4
PCB thickness	0.5 mm
Adhesive	3M467
Cable type	OD 1.13mm coax
Cable length	150 mm
Connector	U.FL compatible

### ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40/+85 ° C
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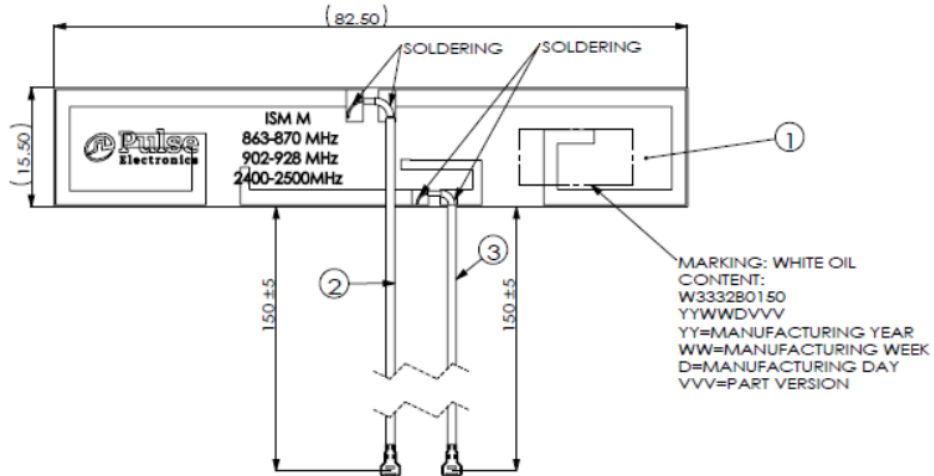
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MECHANICAL DRAWING

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ITEM	P/N	DESCRIPTION	QUANTITY	NOTE
1	025-6139.001	PCB WITH 3M467 ADHESIVE	1	
2	055-2240.001	CABLE 1	1	
3	055-2241.001	CABLE 2	1	



NOTES:

1. RoHS COMPLIANT.
2. NORMAL IMPEDANCE 50Ω.
3. CABLE1: 863-928 MHz, RETURN LOSS (MAX.)-5dB, PEAK GAIN:0.2dBi,AVERAGE EFFICIENCY:55%  
CABLE2:2400-2500MHz,ETURN LOSS (MAX.)-10dB, PEAK GAIN:4.1dBi,AVERAGE EFFICIENCY:64%
4. ISOLATION BETWEEN CABLE 1 AND CABLE 2:  
@863-928MHz, -16dB  
@2400-2500MHz, -11dB
5. ANTENNA MOUNTING METHOD: ADHESIVE
5. VISUAL QUALITY PER PULSE PQ5.030.000 CLASS III

BOTH CONNECTOR FACE DOWN

Mod	Explication
01	COPY FROM W3332 REV12 AND FIRST RELEASE

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Sheet number	1/1		
General Tolerance			
Customer number			
Scale	2:1 (A3)	Drawn	WinZhu
Document number	W3332B0150	Appr	20160905
Part Version	P01	Document Version	01
Mod	01	Date	05-Sep-16
Name		Name	WinZhu

Issue: 1649

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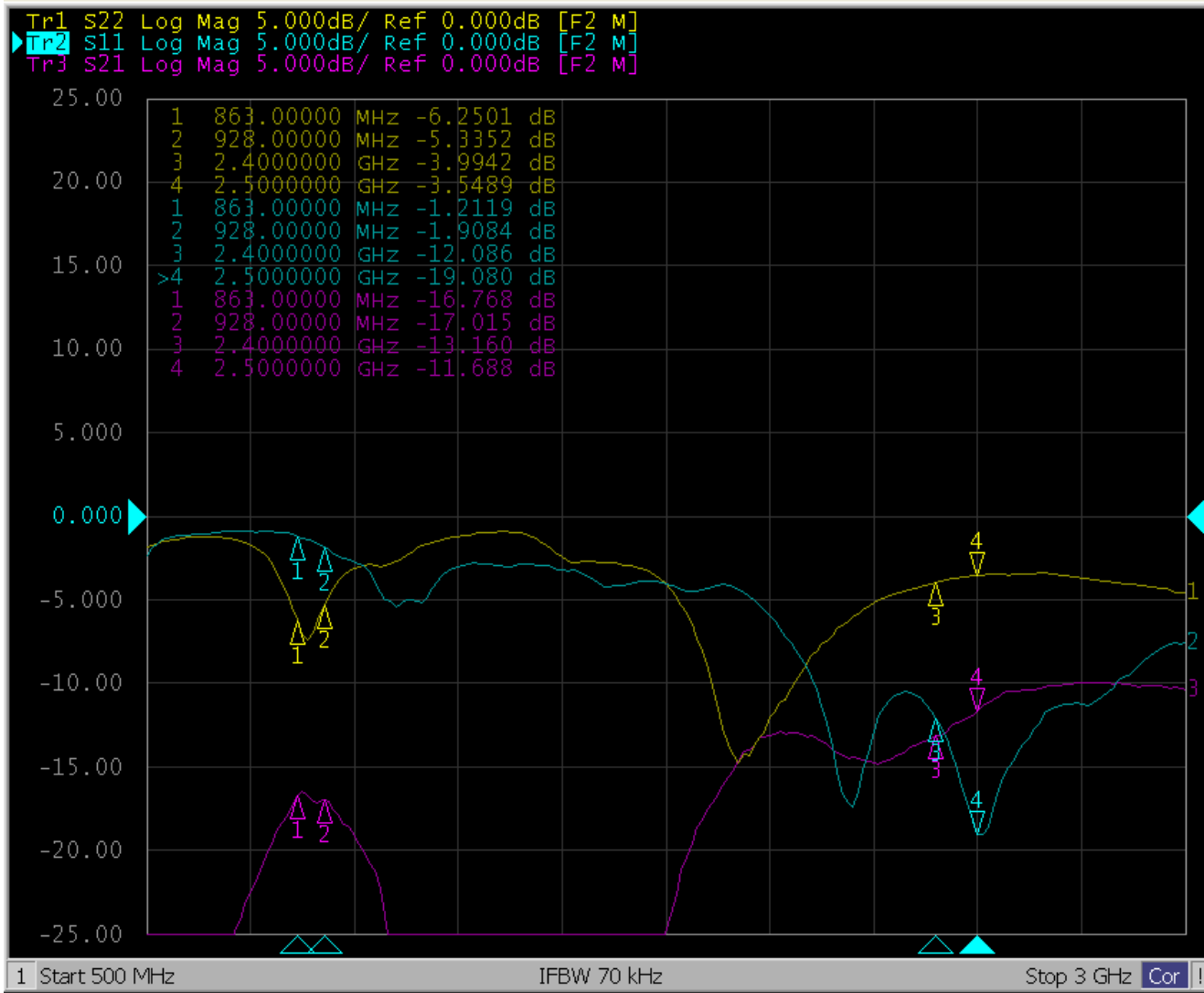
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CHARTS

Return loss



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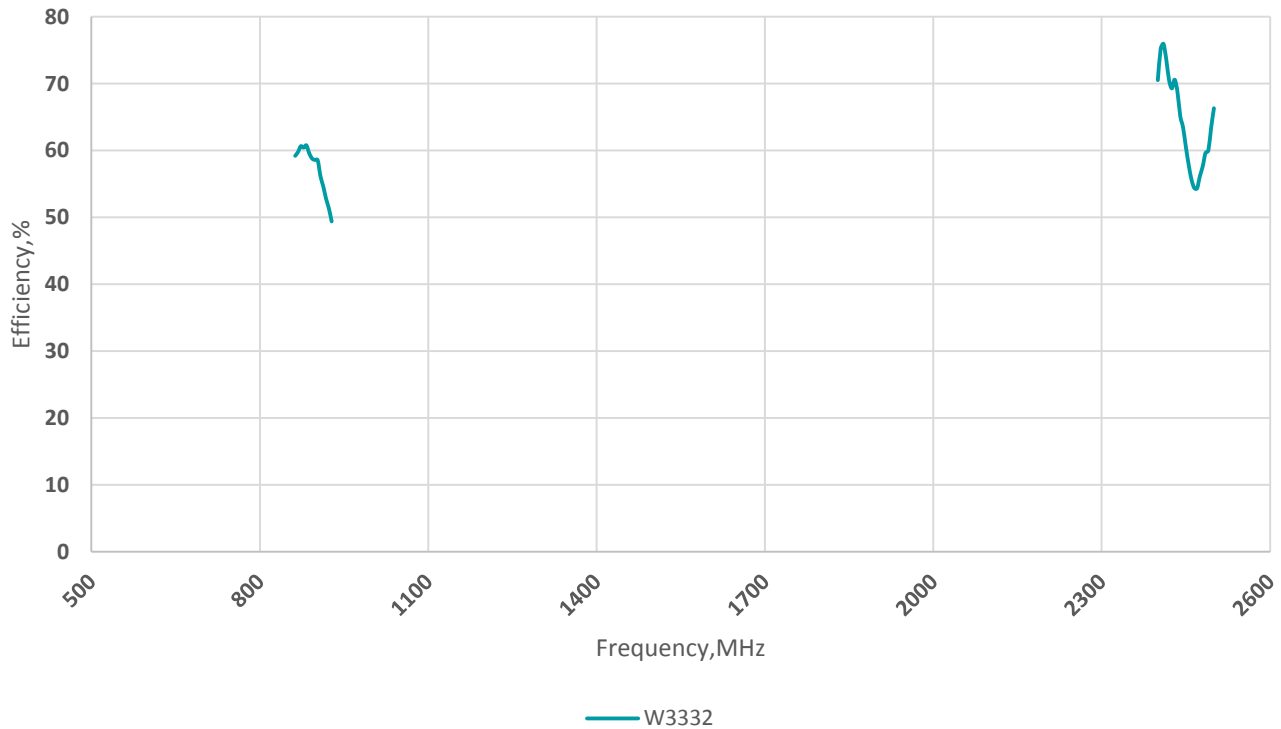
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CHARTS

Efficiency

Efficiency vs Frequency measured in free space  
W3332 measured in PSU



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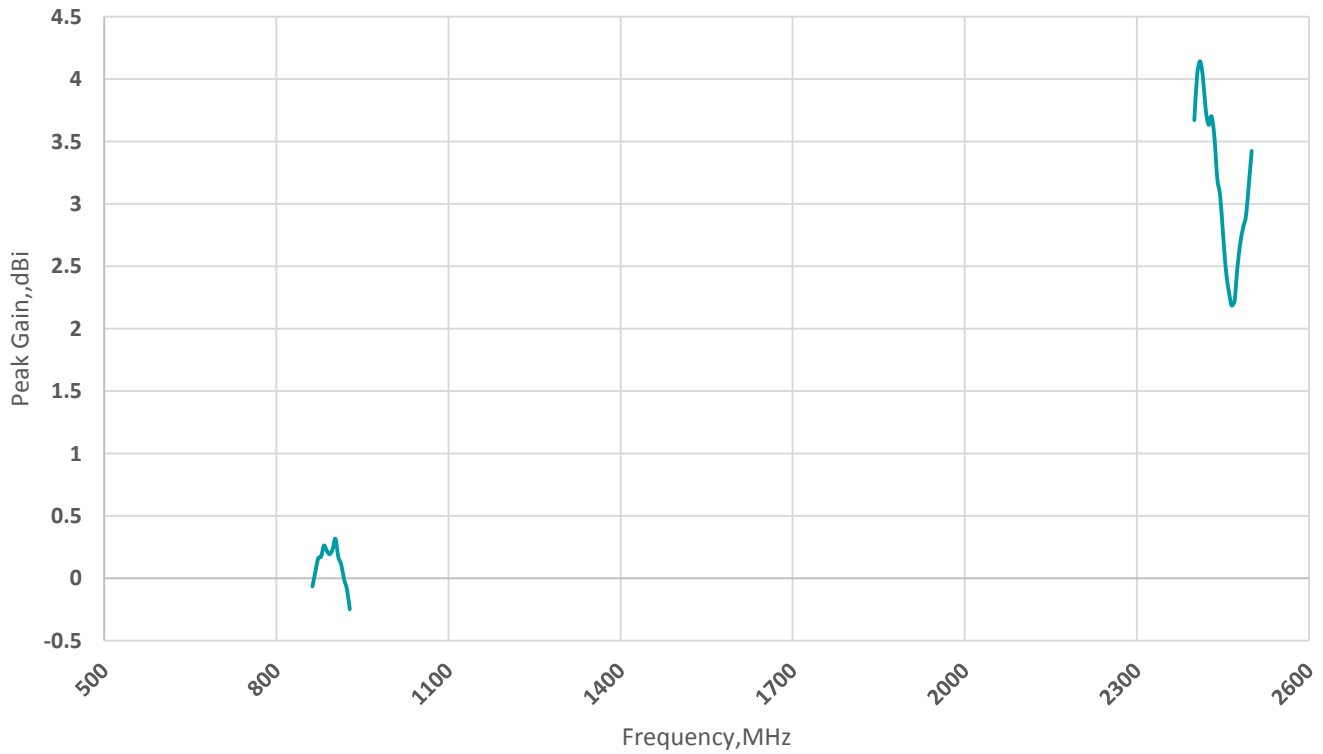
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CHARTS

Peak Gain

Peak Gain vs Frequency measured in free space  
W3332 measured in PSU



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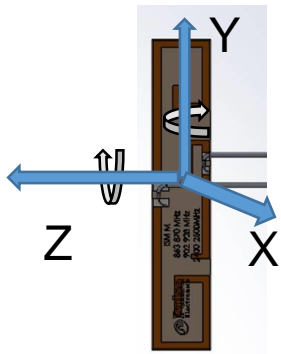
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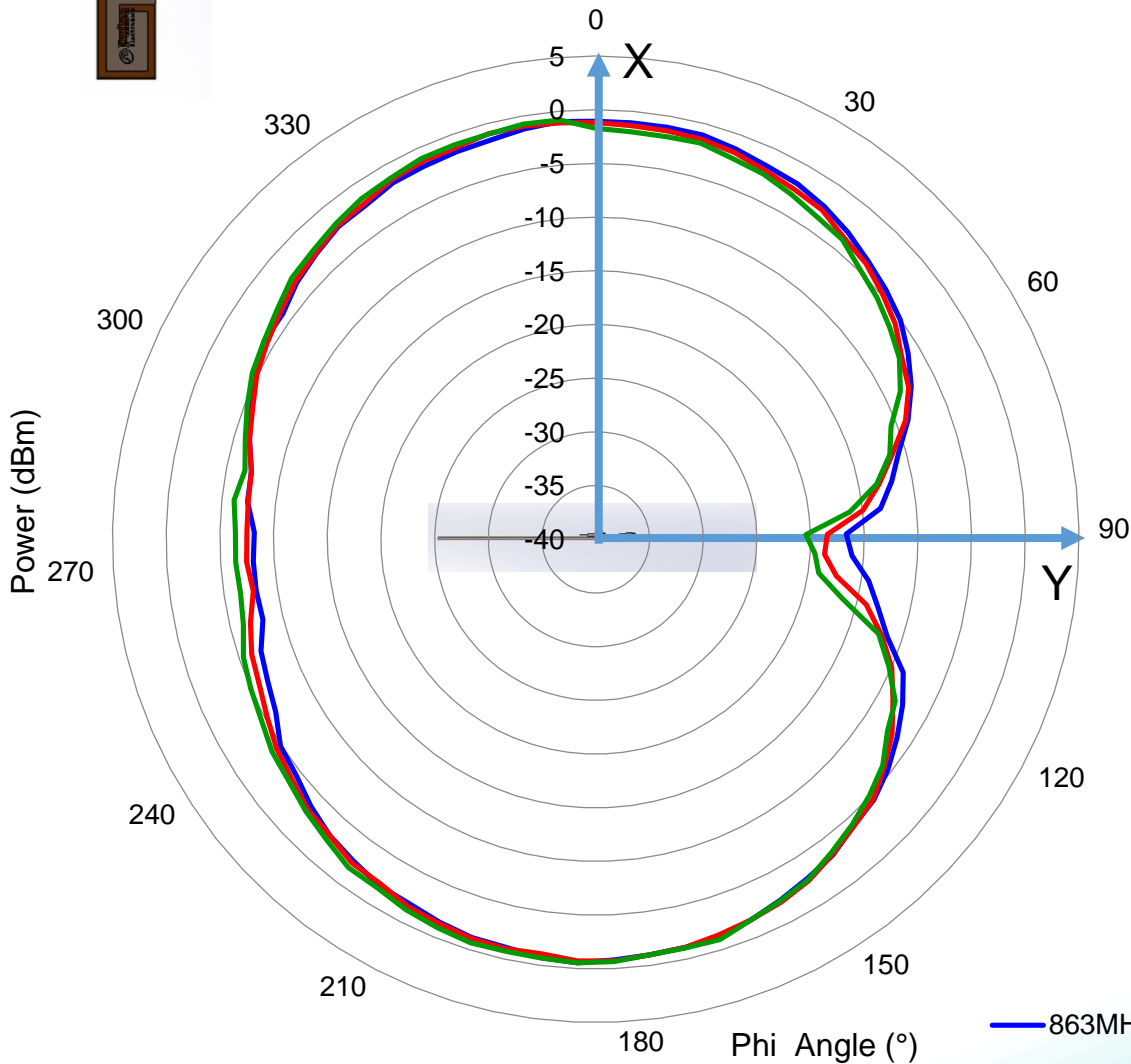
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CHARTS



Radiation Pattern  
863-928MHz

XY Plane



863MHz  
Avg (dBi) = -4.71  
Peak (dBi) = -0.52  
Avg -3 (deg) = 175

902MHz  
Avg (dBi) = -4.88  
Peak (dBi) = -0.7  
Avg -3 (deg) = 180

928MHz  
Avg (dBi) = -4.91  
Peak (dBi) = -0.52  
Avg -3 (deg) = 175

— 863MHz — 902MHz — 928MHz

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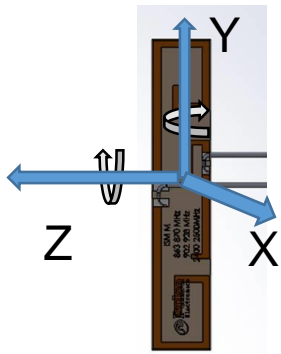


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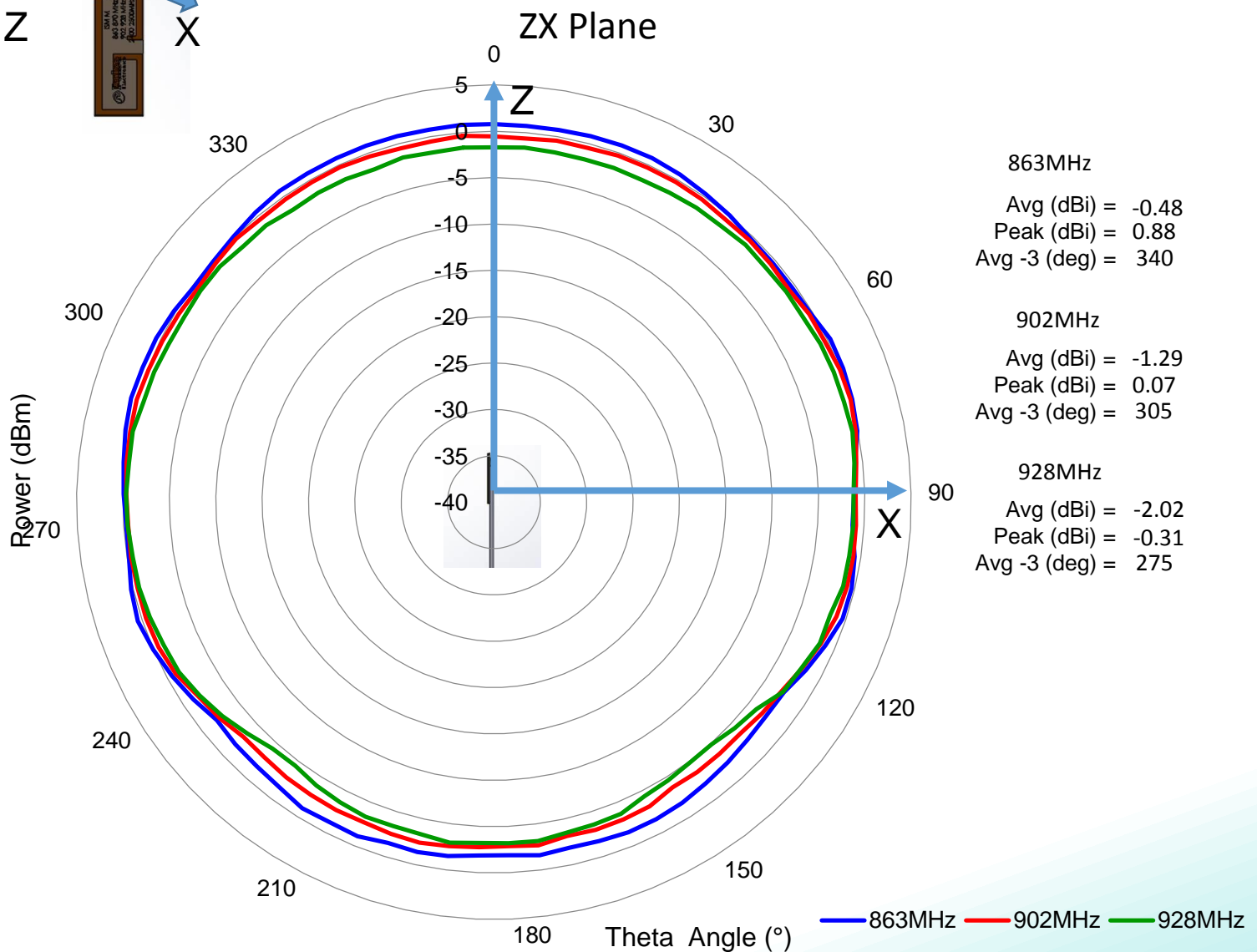
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CHARTS



Radiation Pattern  
863-928MHz



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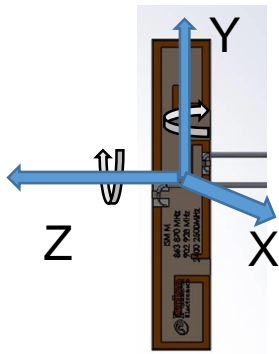
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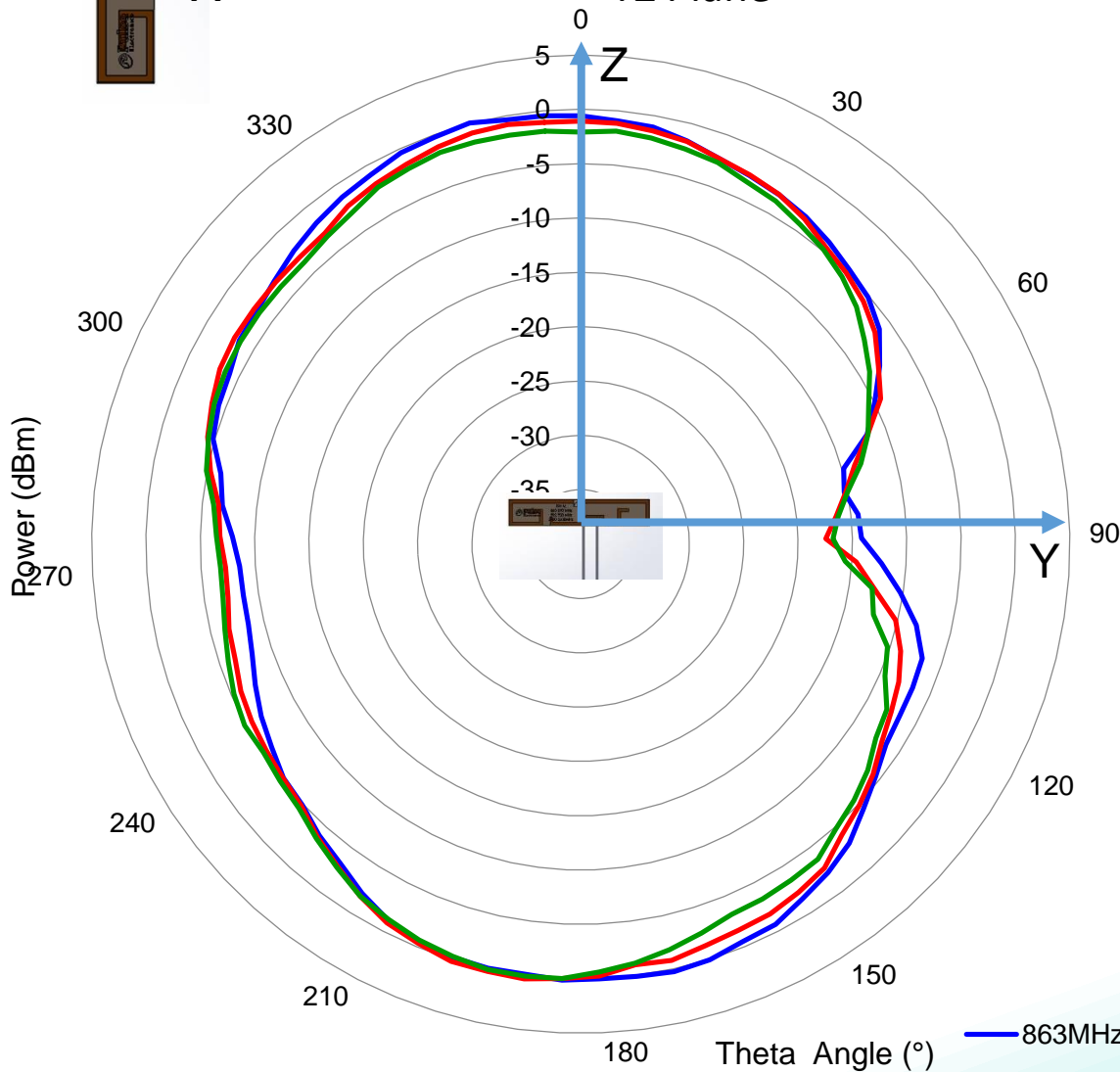
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CHARTS



Radiation Pattern  
863-928MHz

YZ Plane



863MHz
Avg (dBi) = -4.40
Peak (dBi) = 0.25
Avg -3 (deg) = 145
902MHz
Avg (dBi) = -4.66
Peak (dBi) = 0.33
Avg -3 (deg) = 130
928MHz
Avg (dBi) = -5.08
Peak (dBi) = 0.08
Avg -3 (deg) = 110

— 863MHz — 902MHz — 928MHz

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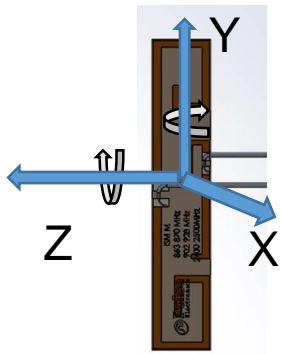
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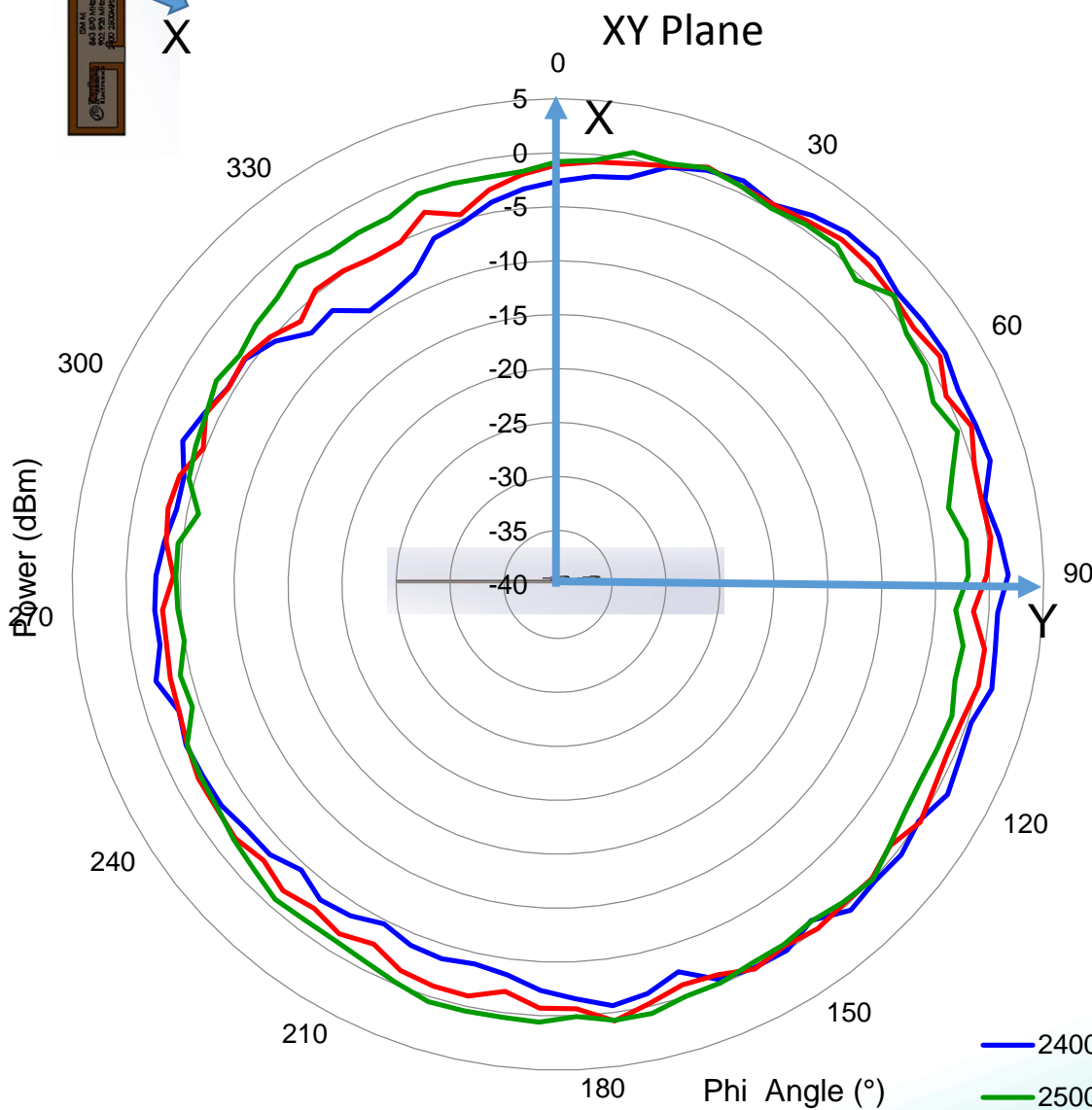
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CHARTS



Radiation Pattern  
2400-2500MHz



2400MHz
Avg (dBi) = -1.91
Peak (dBi) = 2.27
Avg -3 (deg) = 145
2450MHz
Avg (dBi) = -1.54
Peak (dBi) = 1.39
Avg -3 (deg) = 185
2500MHz
Avg (dBi) = -1.52
Peak (dBi) = 1.06
Avg -3 (deg) = 225

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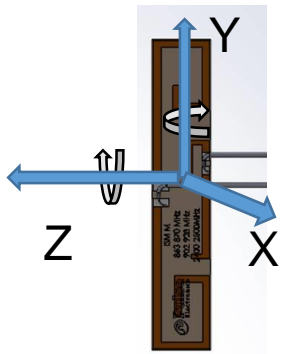
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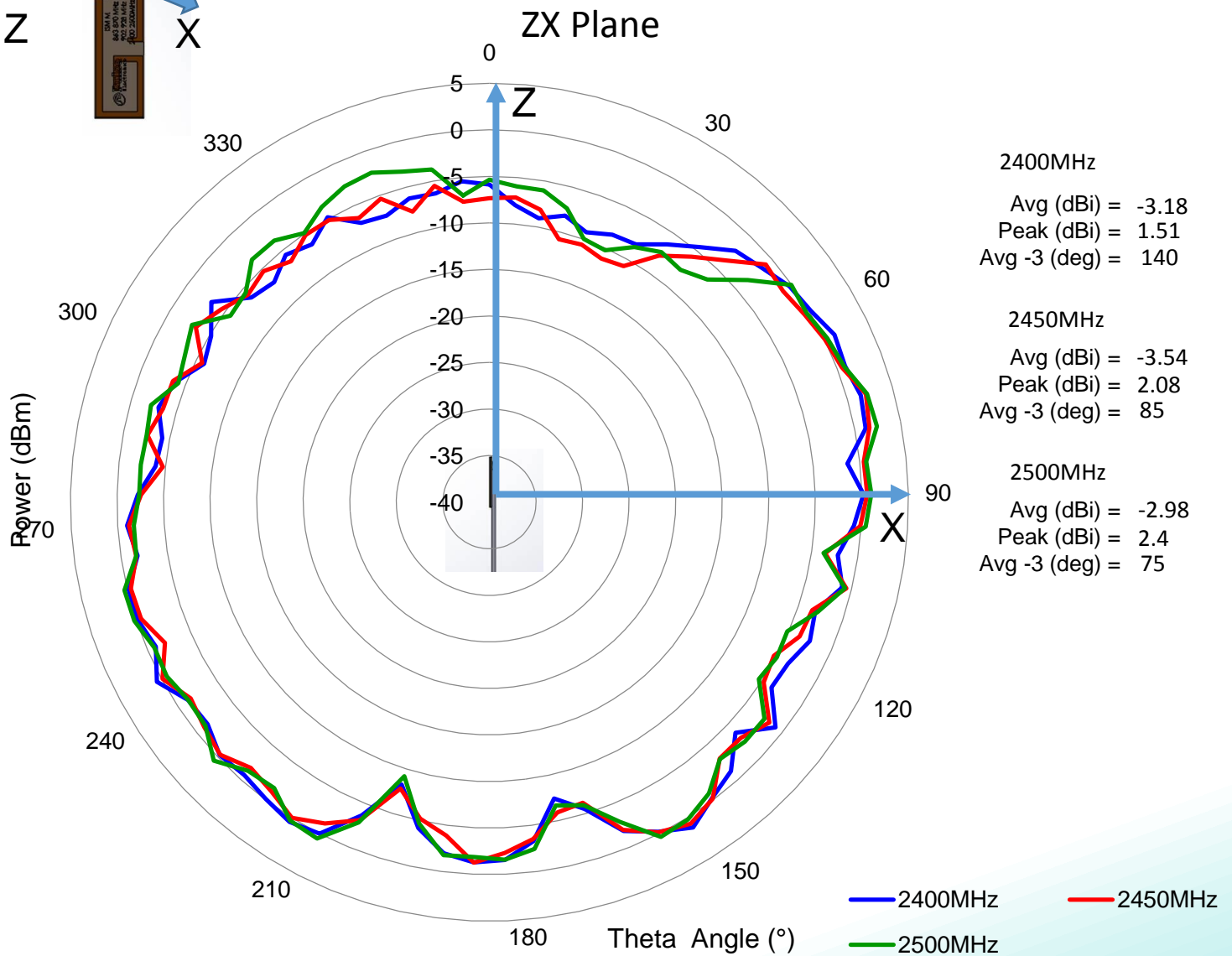
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CHARTS



Radiation Pattern  
2400-2500MHz



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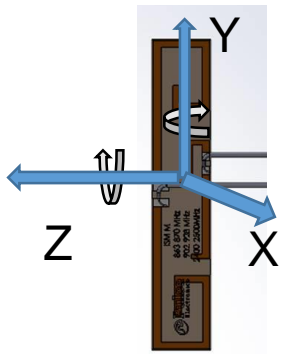
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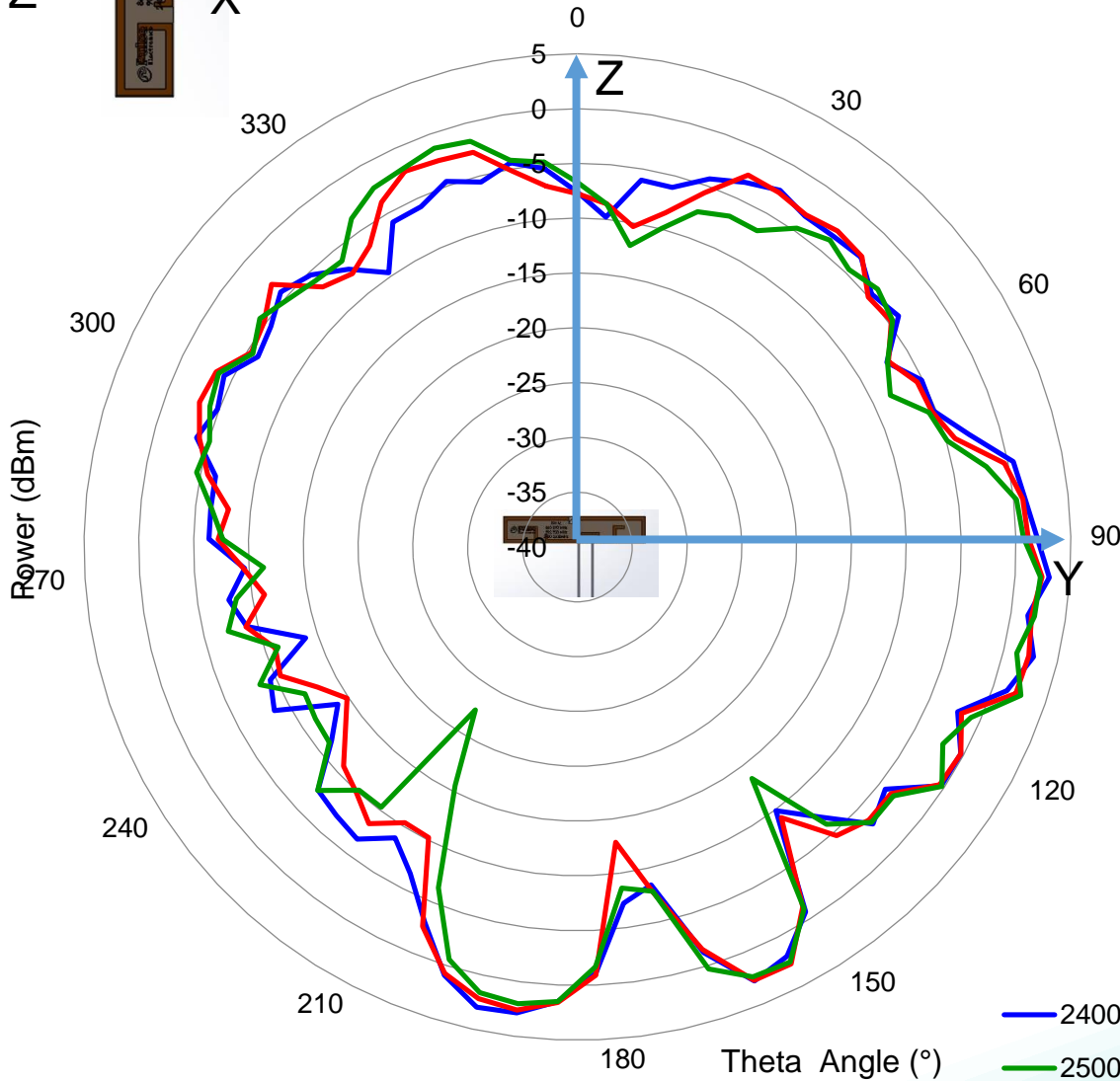
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CHARTS



Radiation Pattern  
2400-2500MHz

YZ Plane



2400MHz	Avg (dBi) = -4.48
	Peak (dBi) = 3.12
	Avg -3 (deg) = 60
2450MHz	Avg (dBi) = -4.77
	Peak (dBi) = 2.73
	Avg -3 (deg) = 60
2500MHz	Avg (dBi) = -5.09
	Peak (dBi) = 2.65
	Avg -3 (deg) = 60

— 2400MHz — 2450MHz  
— 2500MHz

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## PACKAGING

10PCS/PE bag

1000PCS/box



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