

**Description:** Bluetooth, WiFi Antenna**Series:** The Blue Dot**PART NUMBER:** W3092**Features:**

- Chip Antenna
- Frequency:  
2400MHz ~ 2483MHz
- Low profile  
2.0mm(Length) x 1.2mm(Width)  
x 0.55mm(Thickness)

**Applications:**

- WLAN
- 802.11b/g
- Bluetooth
- Zigbee, ISM 2.4GHz

All dimensions are in mm / inches

Issue: 2049

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**Description:** Bluetooth, WiFi Antenna**Series:** The Blue Dot**PART NUMBER:** W3092**ELECTRICAL SPECIFICATIONS**

Frequency	2400-2483	MHz
Nominal Impedance	50	$\Omega$
VSWR	3	max
Gain (Typ.)	0.89	dBi
Efficiency(Typ.)	50	%
Polarization	Linear	

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**Description:** Bluetooth, WiFi Antenna**Series:** The Blue Dot**PART NUMBER:** W3092**MECHANICAL SPECIFICATIONS**

Weight	0.005 g
Size	2.0x1.2x0.55 mm
MSL Level	1

**ENVIRONMENTAL SPECIFICATIONS**

Operating temperature	-40/+105 ° C
High temperature resistance	150 ° C, 1000 hours
Low temperature resistance	-40 ° C, 1000 hours
Humidity	85%R.H. 85±5 ° C, 1000 cycles
Soldering heat resistance	260 ° C 10s
Thermal shock	-40/+105 ° C
Storage condition	
At warehouse	0-30 ° C, <60%R.H.,shoule be used<1 year
On board	-40 ~85 ° C, <85%R.H

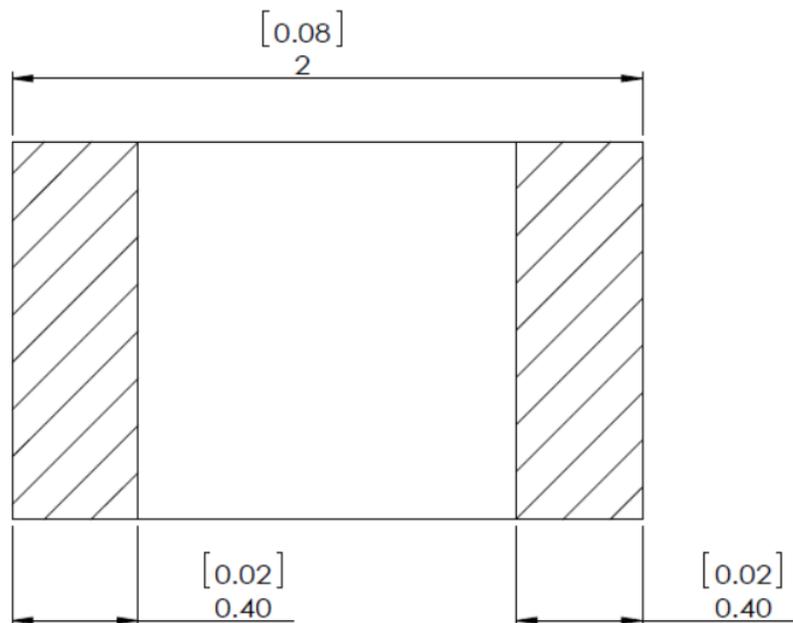
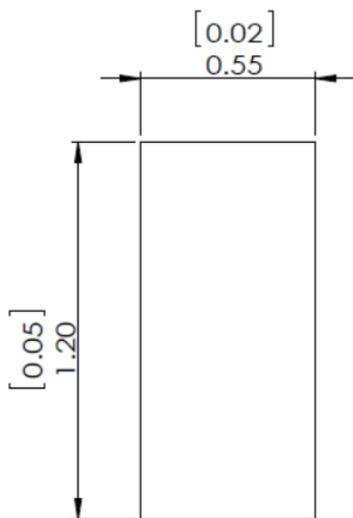
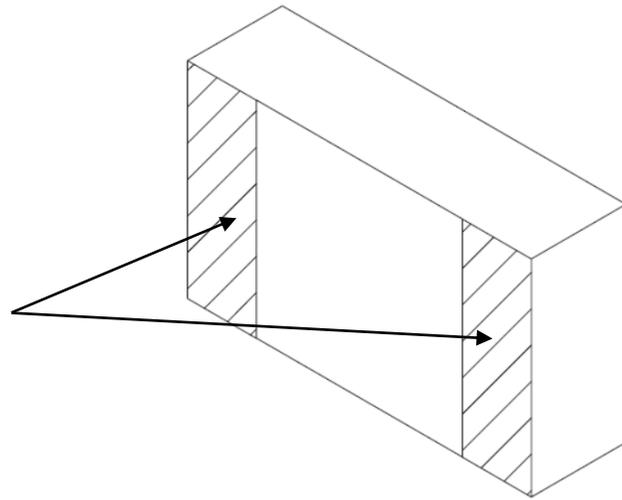
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## MECHANICAL DRAWING

Pad for SMT process



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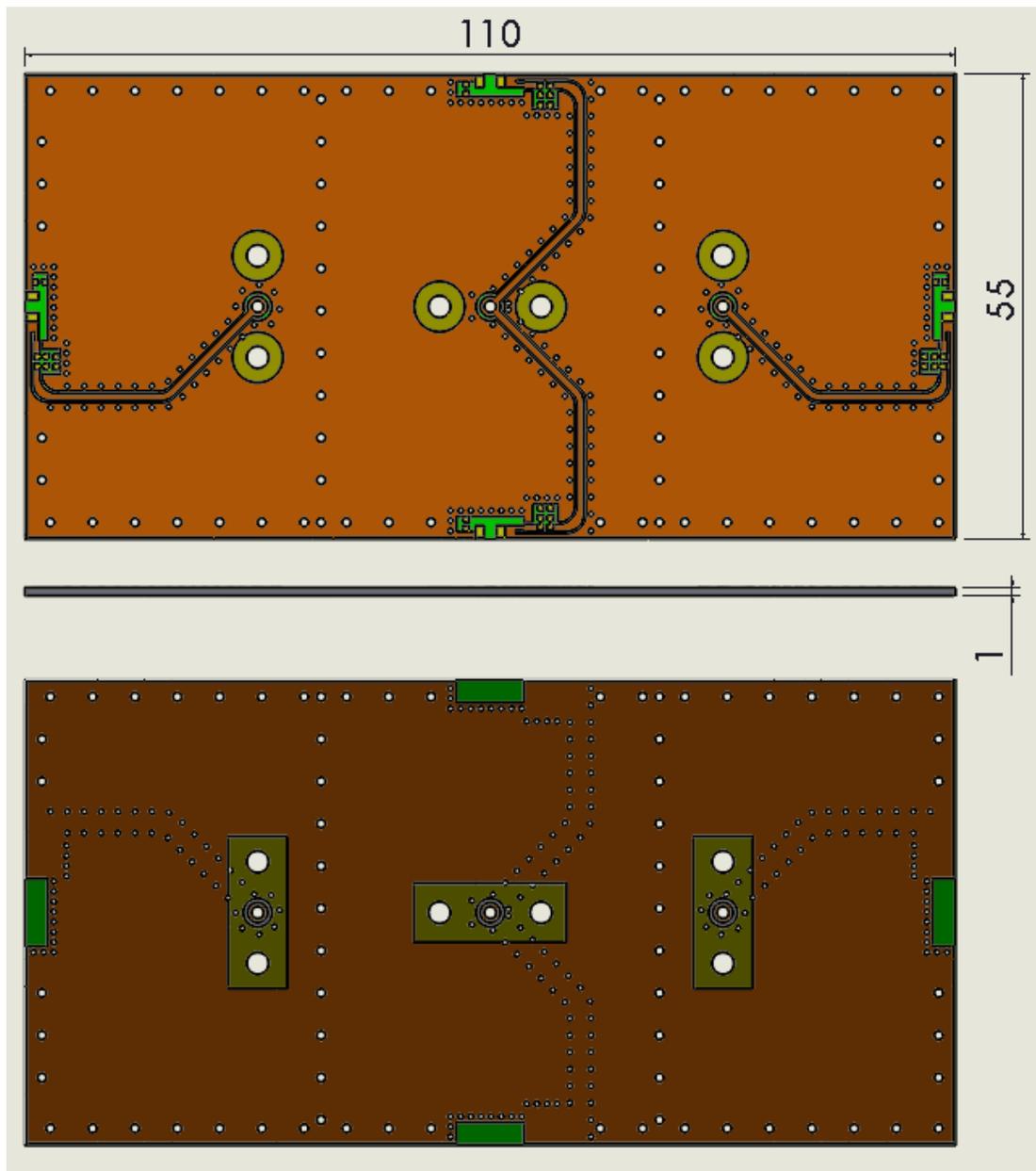
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## OTHER SPECIFICATIONS

### Recommended PCB layout(Unit:mm)

PCB size(L X W X T): 110 X 55 X 1mm



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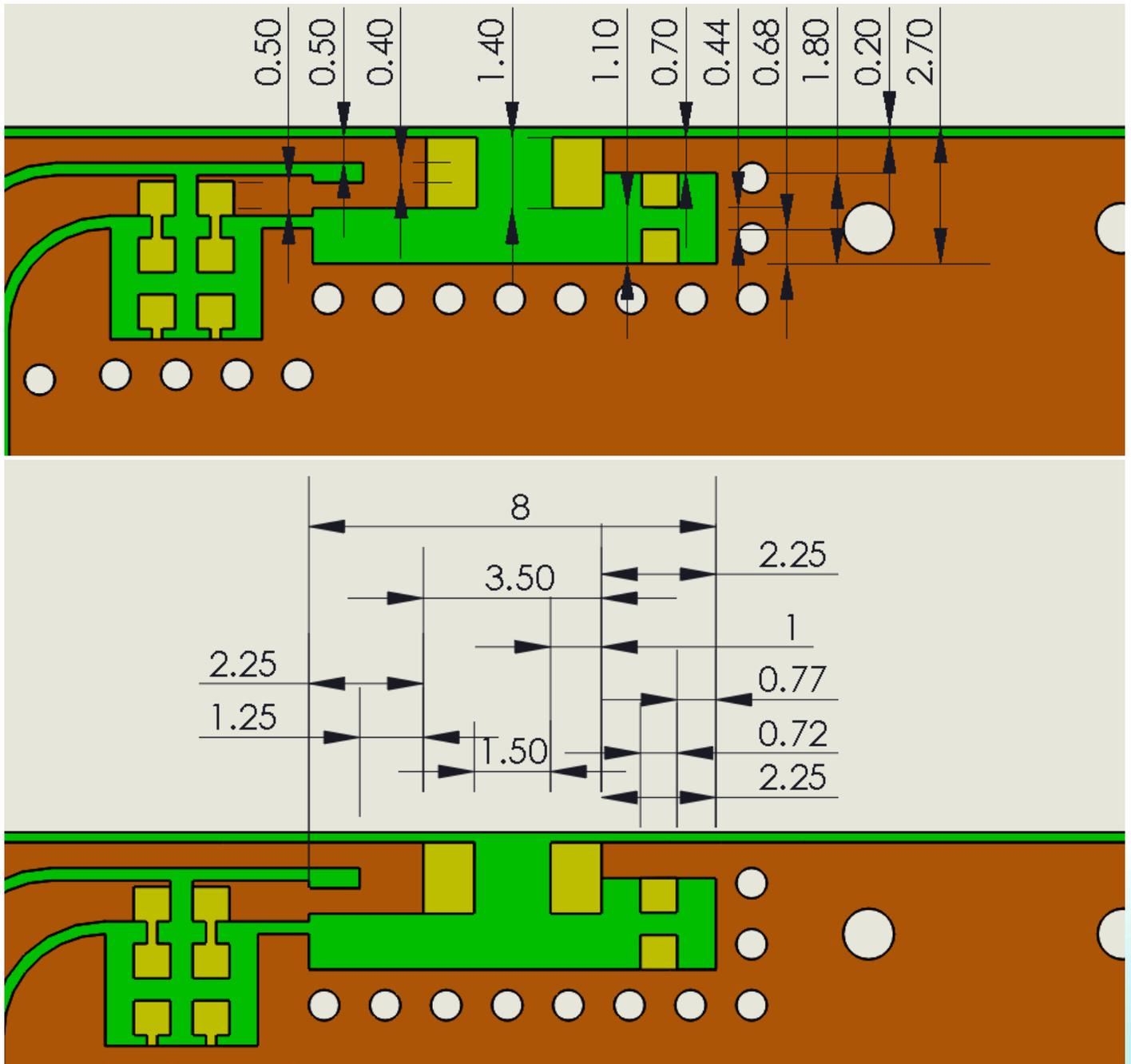
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## OTHER SPECIFICATIONS

### PCB top side layout



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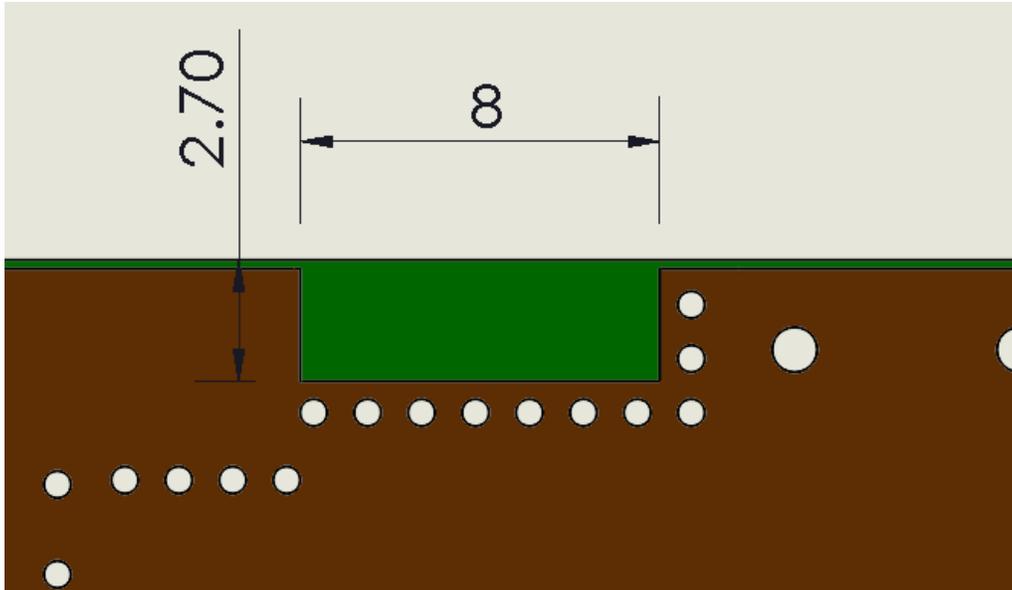
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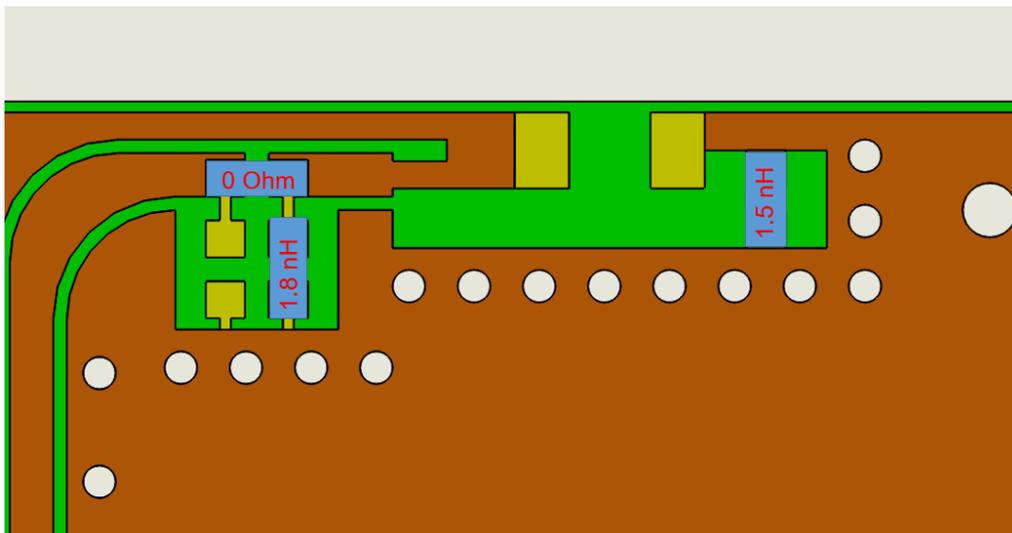
## OTHER SPECIFICATIONS

### PCB bottom side layout



\*Clearance 8mm × 2.7mm : All metallization should be removed from all PCB layers.

### Recommended matching circuit



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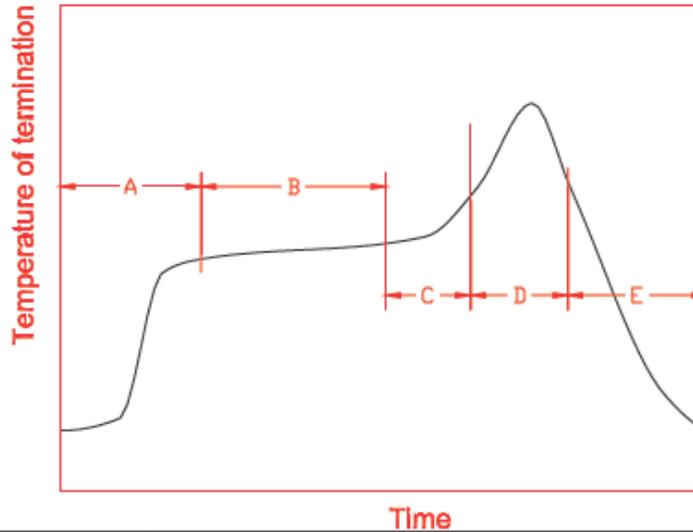
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OTHER SPECIFICATIONS

Recommended reflow soldering



			Time
A	1 <sup>st</sup> rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	140°C to 160°C	60s to 120s
C	2 <sup>nd</sup> rising temperature	Preheating to 200°C	20s to 40s
D	Main heating	if 220°C	50s~60s
		if 230°C	40s~50s
		if 240°C	30s~40s
		if 250°C	20s~40s
		if 260°C	20s~40s
E	Regular cooling	200°C to 100°C	1°C/s ~ 4°C/s

\*reference: J-STD-020C

(1) Soldering gun procedure

Note the follows, in case of using solder gun for replacement.

(a) The tip temperature must be less than 350°C for the period within 3 seconds by using soldering gun under 30 W.

(b) The soldering gun tip shall not touch this product directly.

(2) Soldering volume

Note that excess of soldering volume will easily get crack the body of this product.

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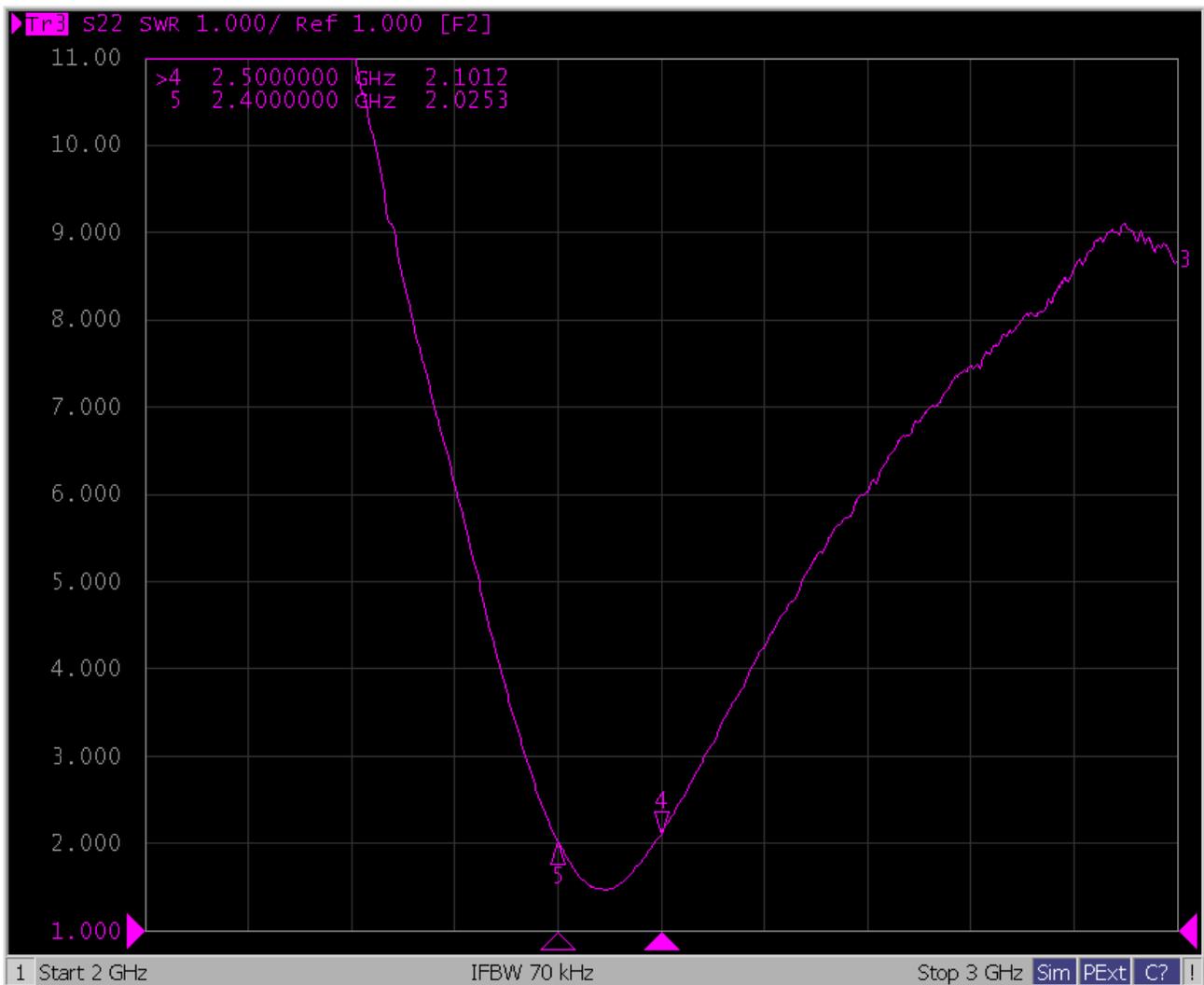
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## CHARTS

### VSWR



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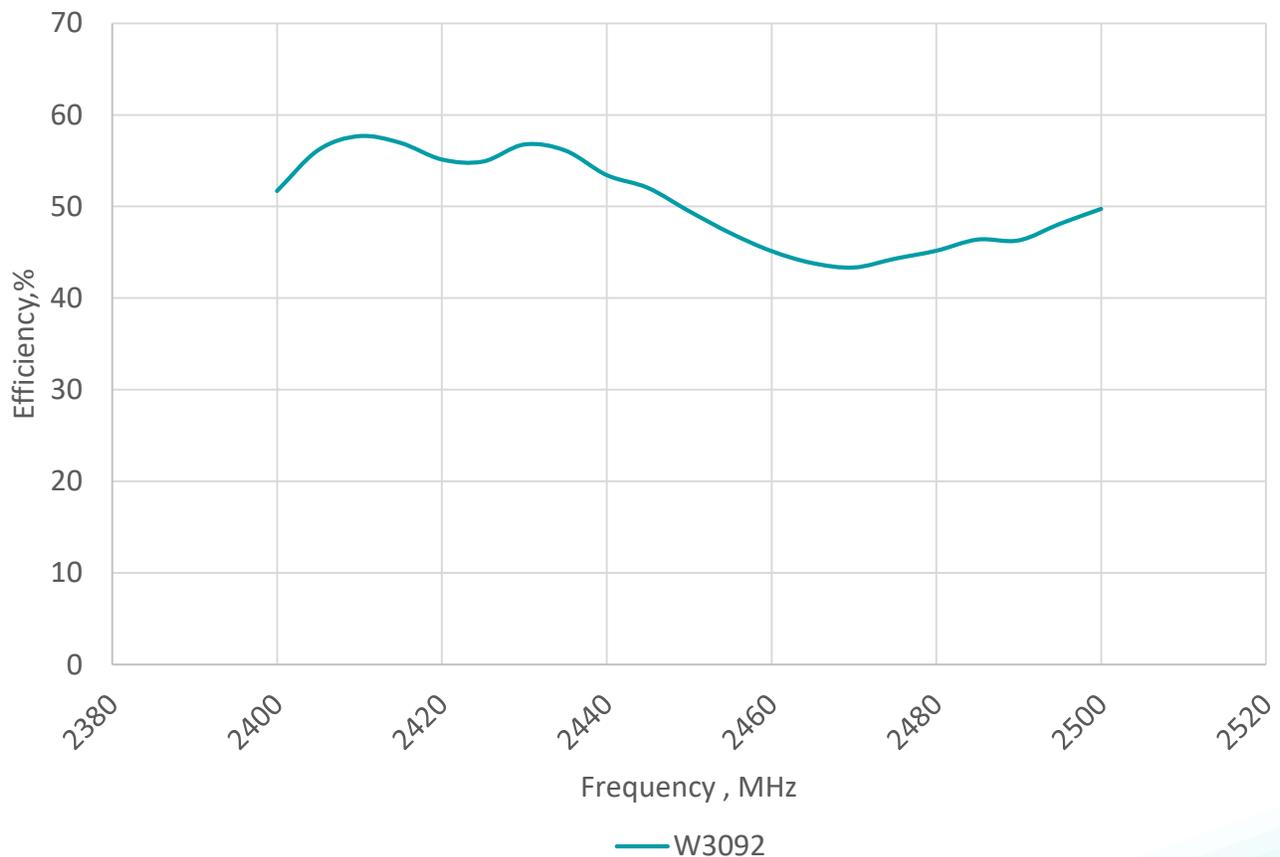
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## CHARTS

### Efficiency

Efficiency vs Frequency measured with demo board



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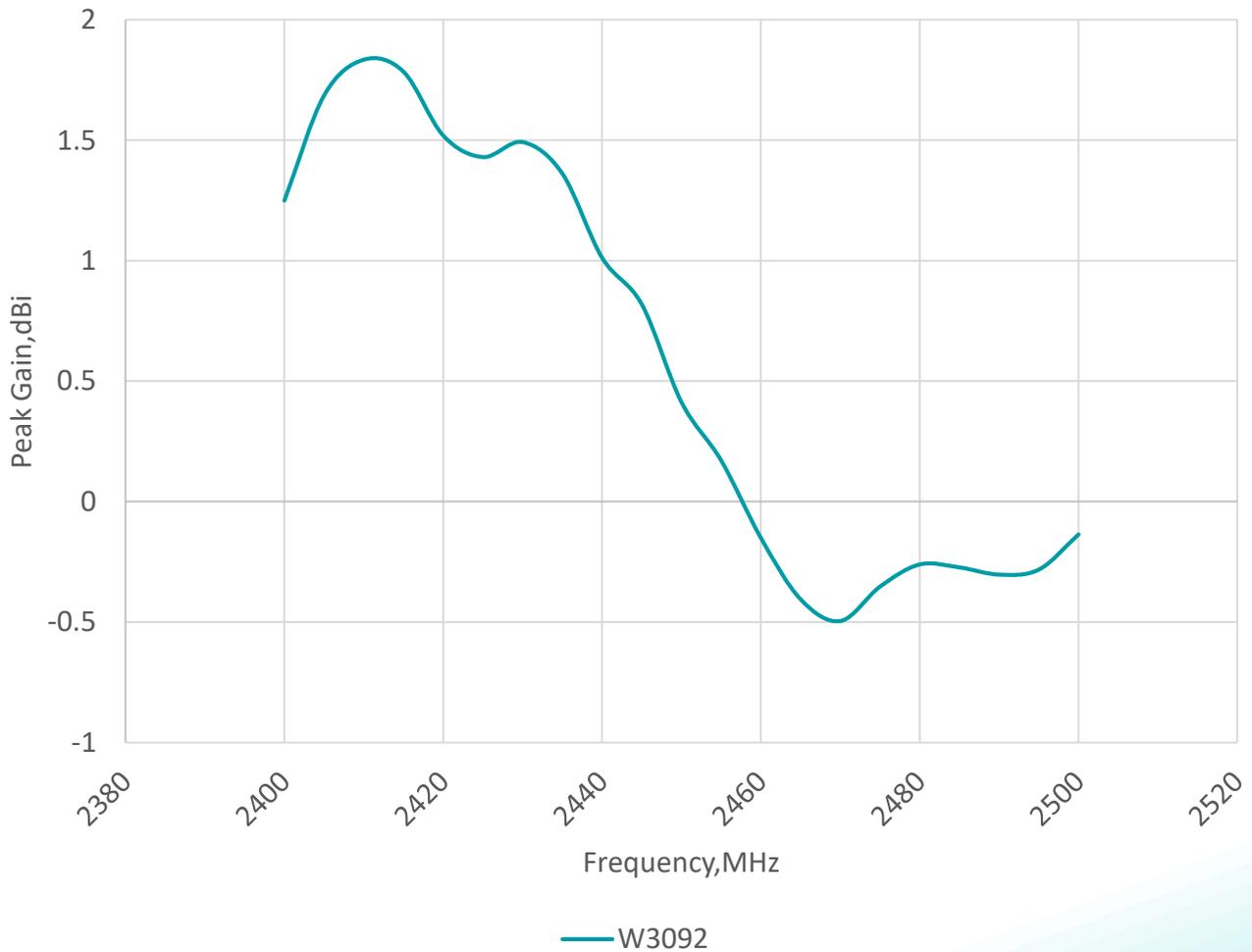
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## CHARTS

### Peak Gain

Peak Gain vs Frequency measured with demo board



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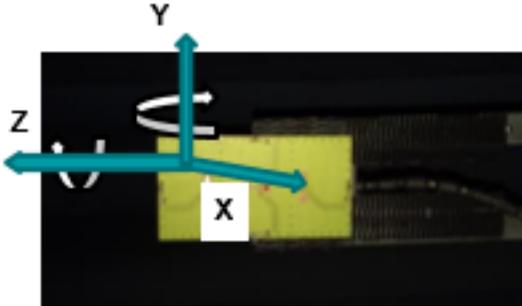
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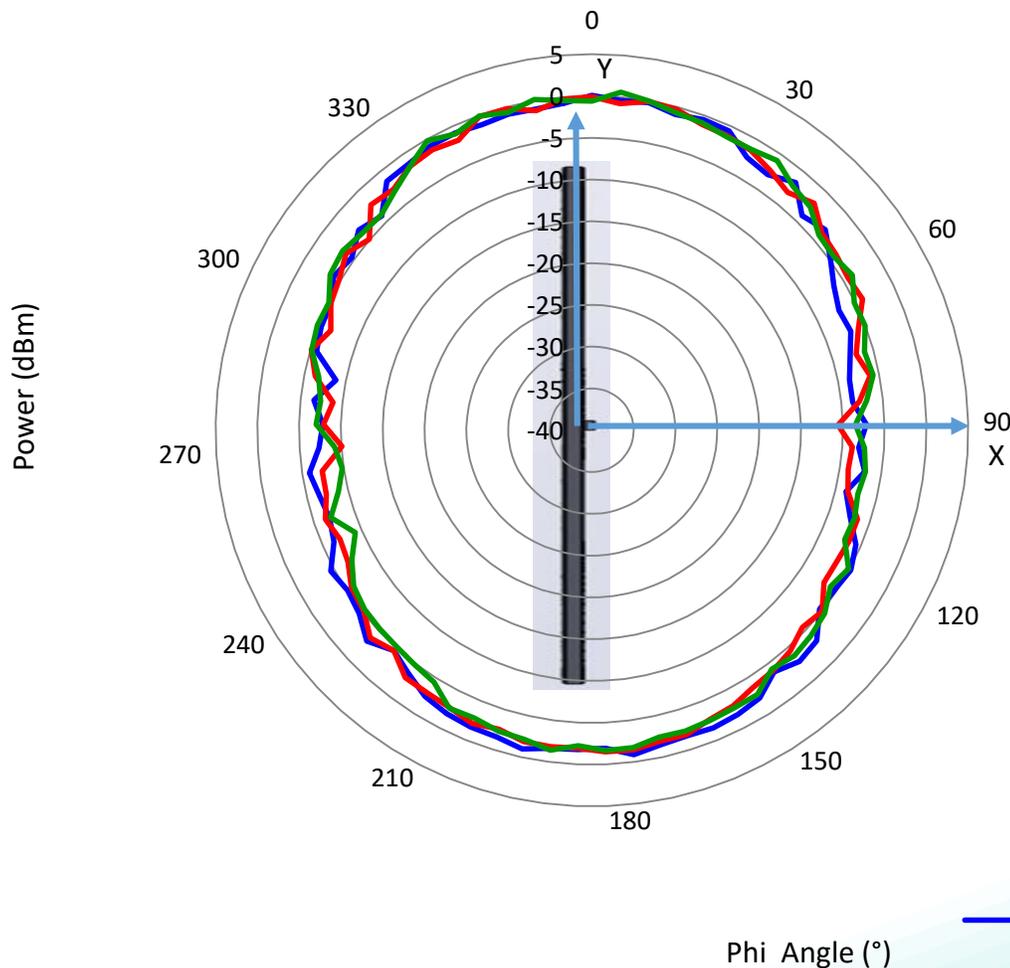
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## CHARTS



Radiation pattern

XY Plane



2400MHz	Avg (dBi) = -4.07
	Peak (dBi) = -2.05
	Avg -3 (deg) = 285
2450MHz	Avg (dBi) = -3.89
	Peak (dBi) = -1.39
	Avg -3 (deg) = 265
2480MHz	Avg (dBi) = -3.32
	Peak (dBi) = -1.32
	Avg -3 (deg) = 265

— 2400MHz — 2450MHz — 2500MHz

Phi Angle (°)

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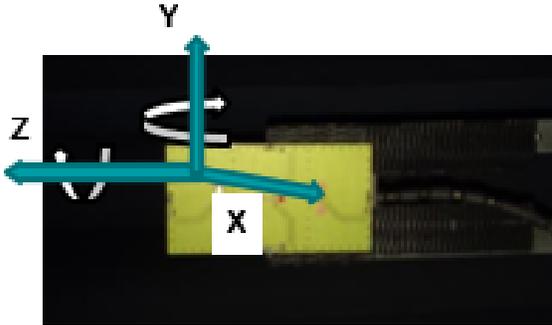
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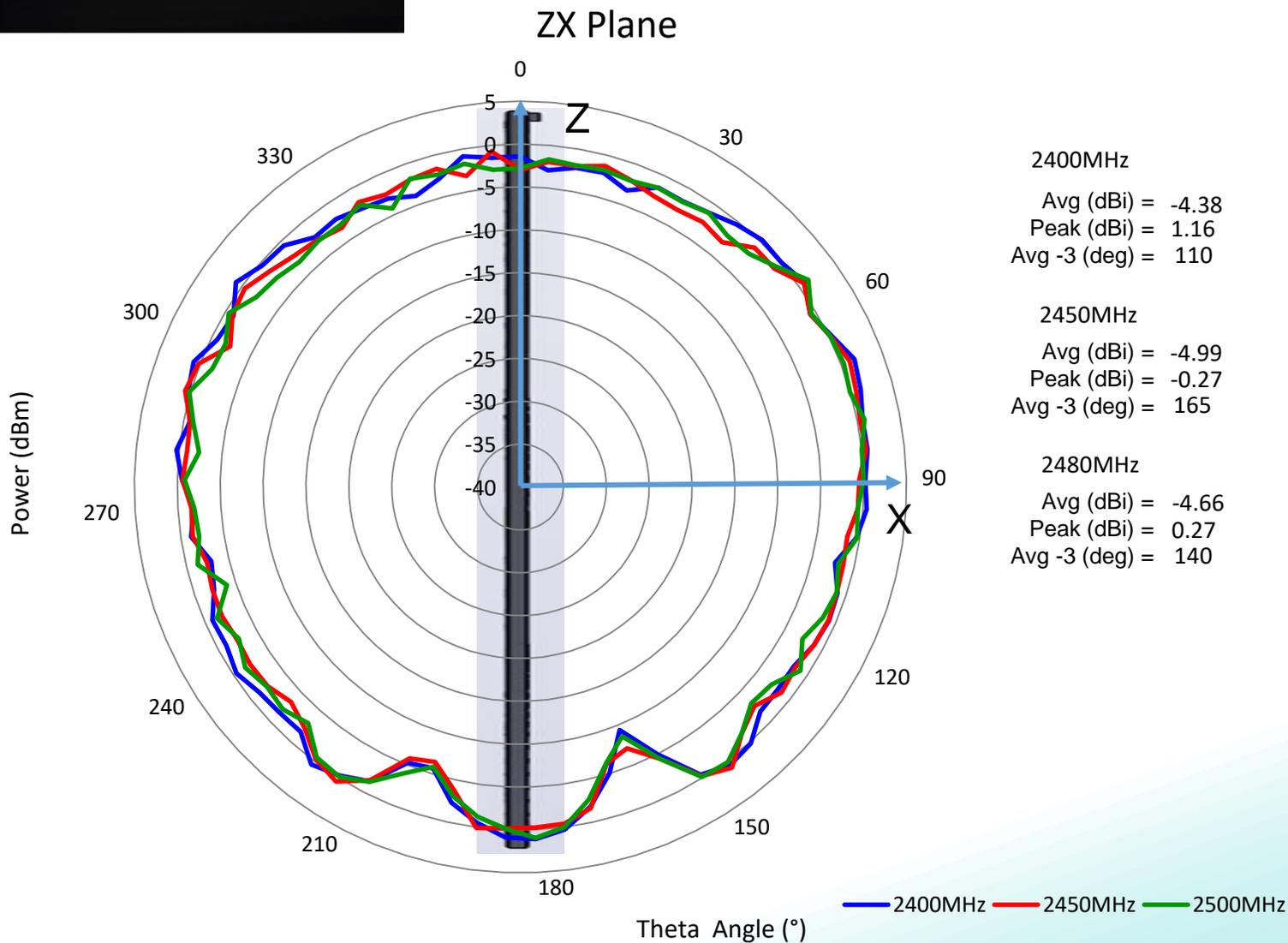
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## CHARTS



Radiation pattern



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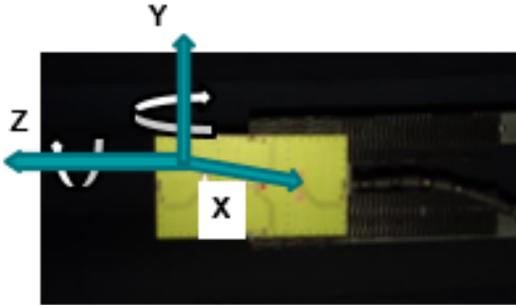
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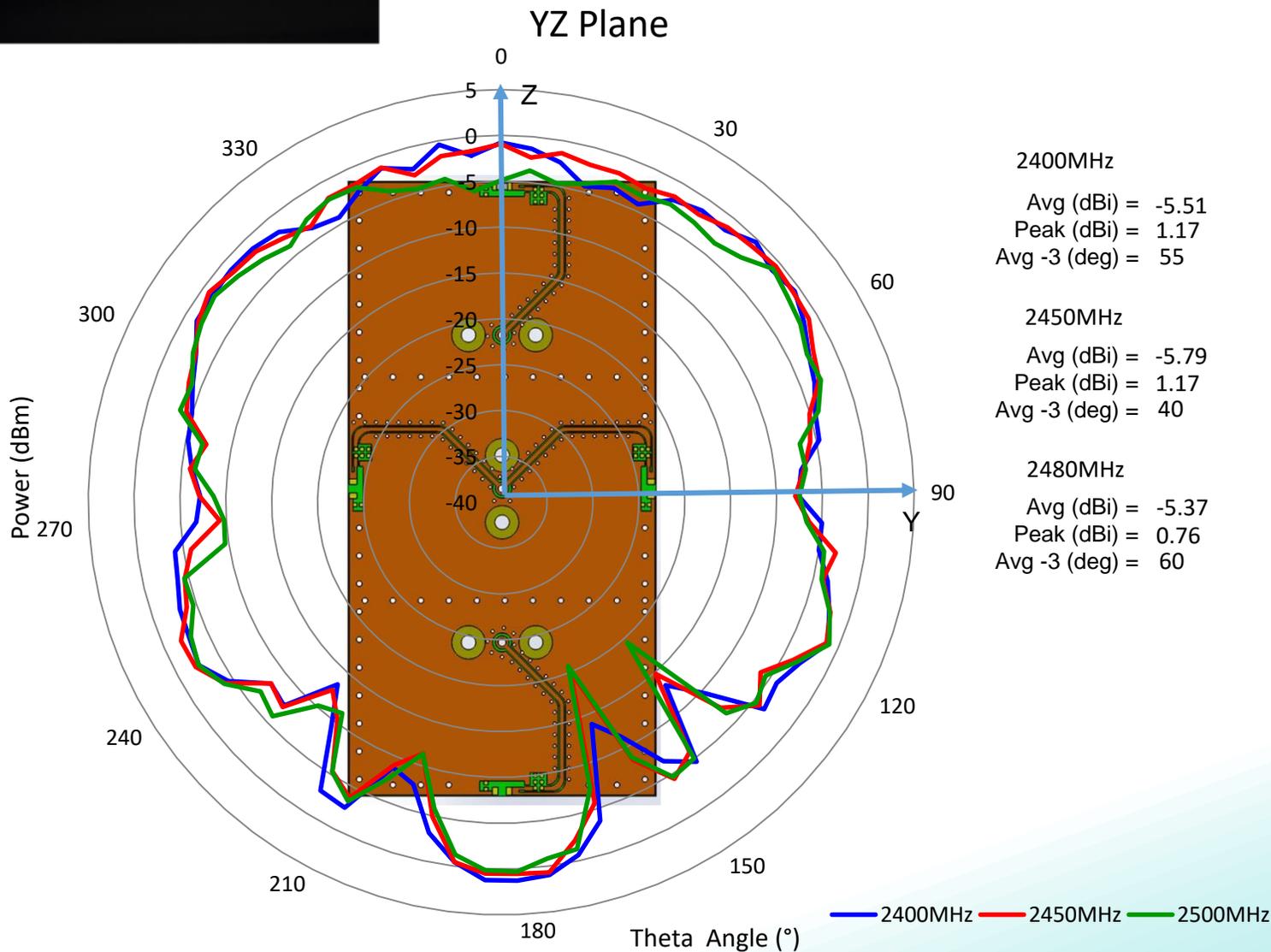
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## CHARTS



Radiation pattern



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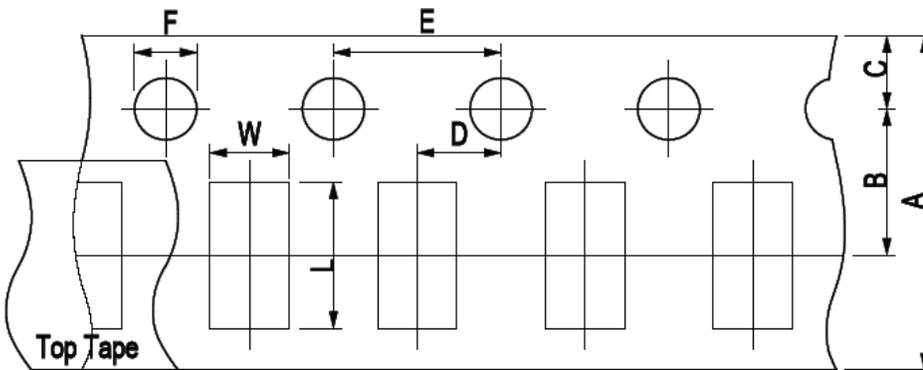
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## PACKAGING

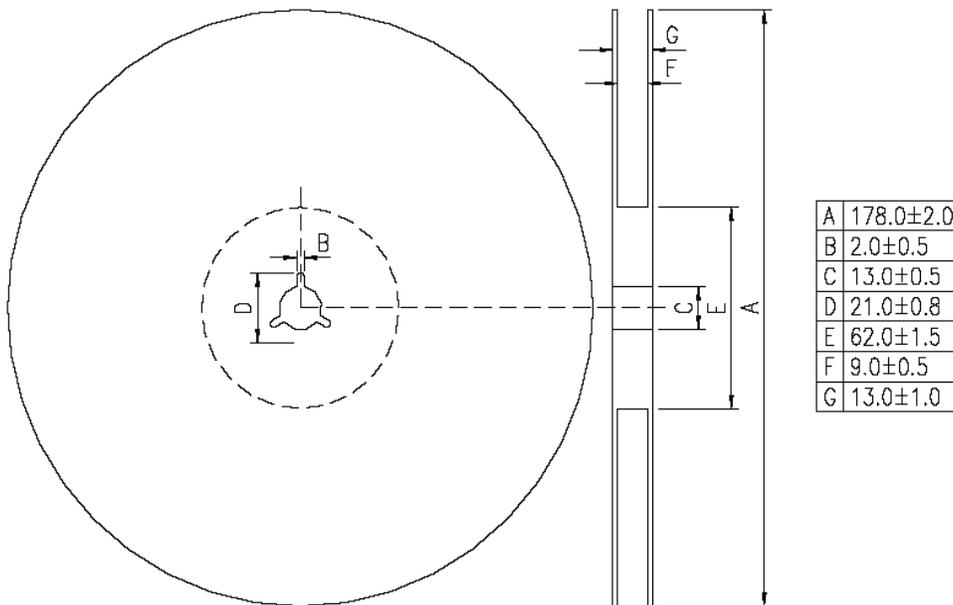
### Taping Package and Label Marking: (unit: mm)

- (1) Quantity/Reel: 5000pcs/Reel
- (2) Carrier tape dimensions



Type	A	B	C	D	E	F	L	W
ACA2012	8.00±0.30	3.50±0.05	1.75±0.10	2.00±0.05	4.00±0.10	1.50±0.10	2.30±0.10	1.55±0.10

- (3) Taping reel dimensions



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