

**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

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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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### MECHANICAL SPECIFICATIONS

Weight	0.005 g
Size	2.0x1.2x0.55 mm

### 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

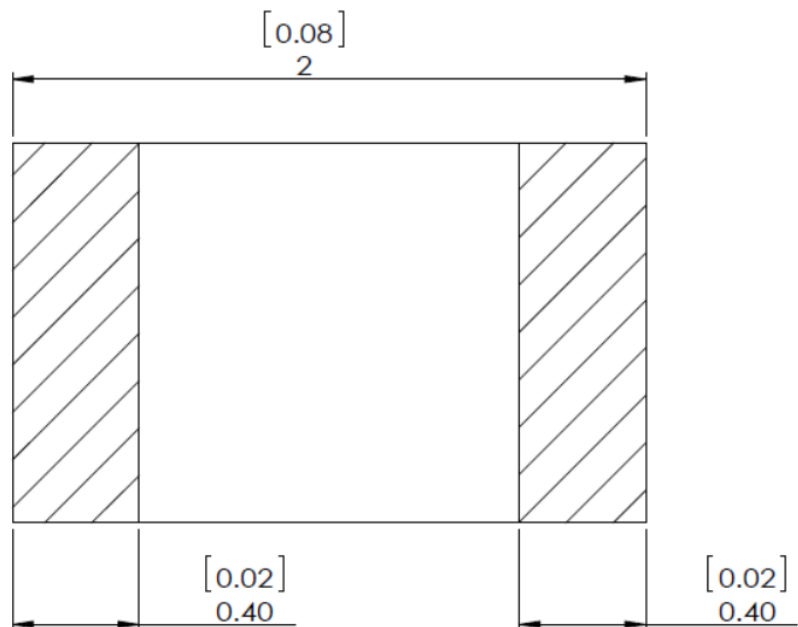
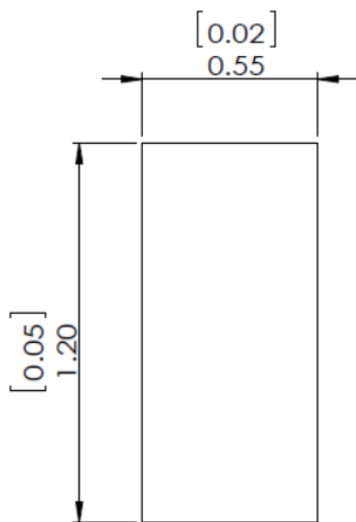
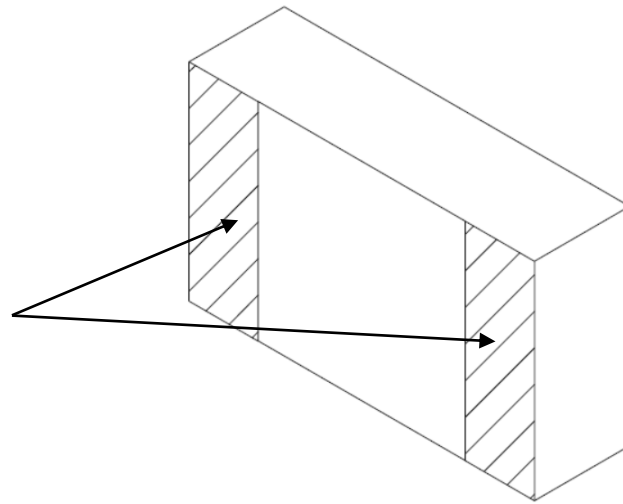
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MECHANICAL DRAWING

Pad for SMT process



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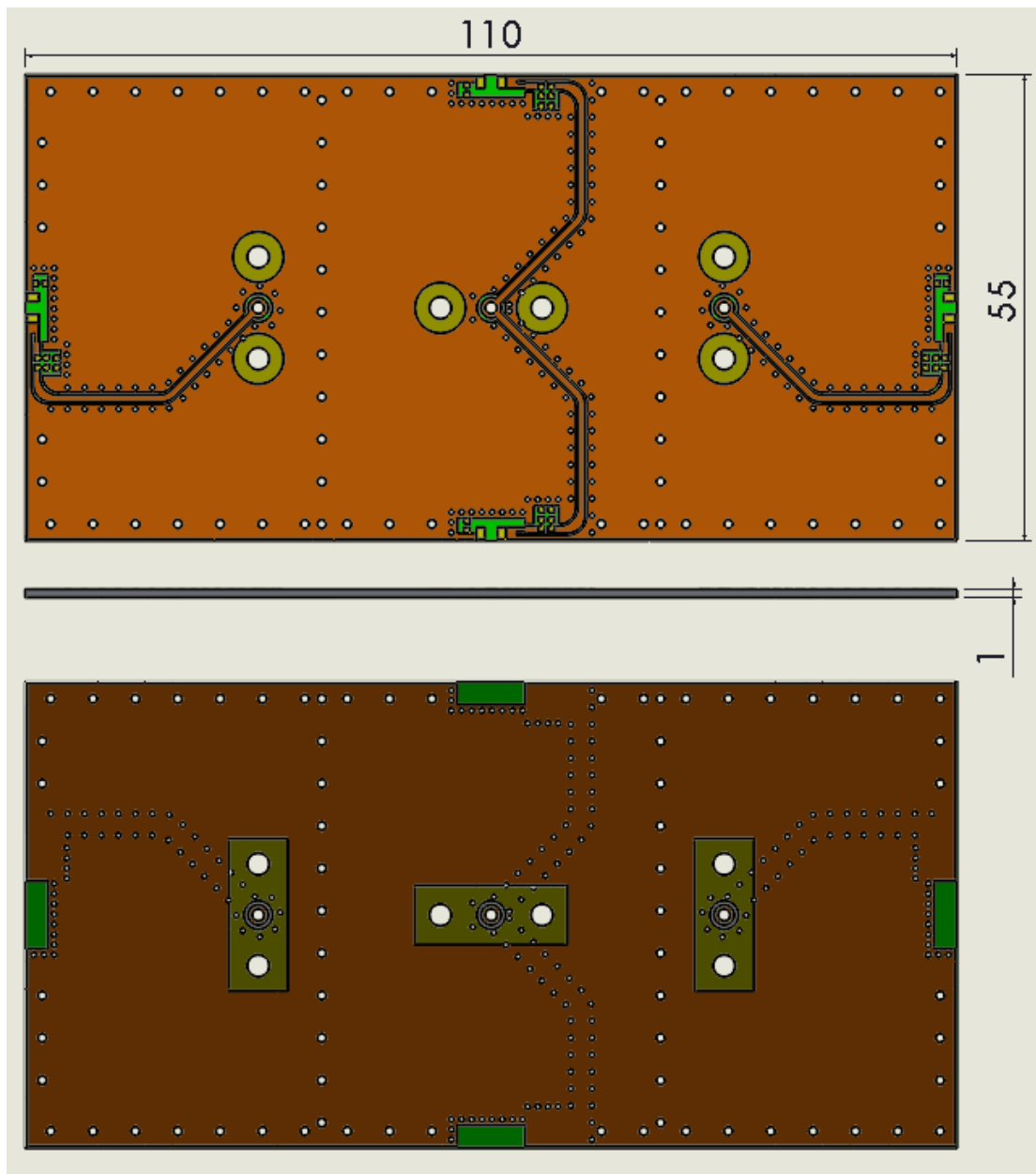
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OTHER SPECIFICATIONS

Recommended PCB layout(Unit:mm)

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



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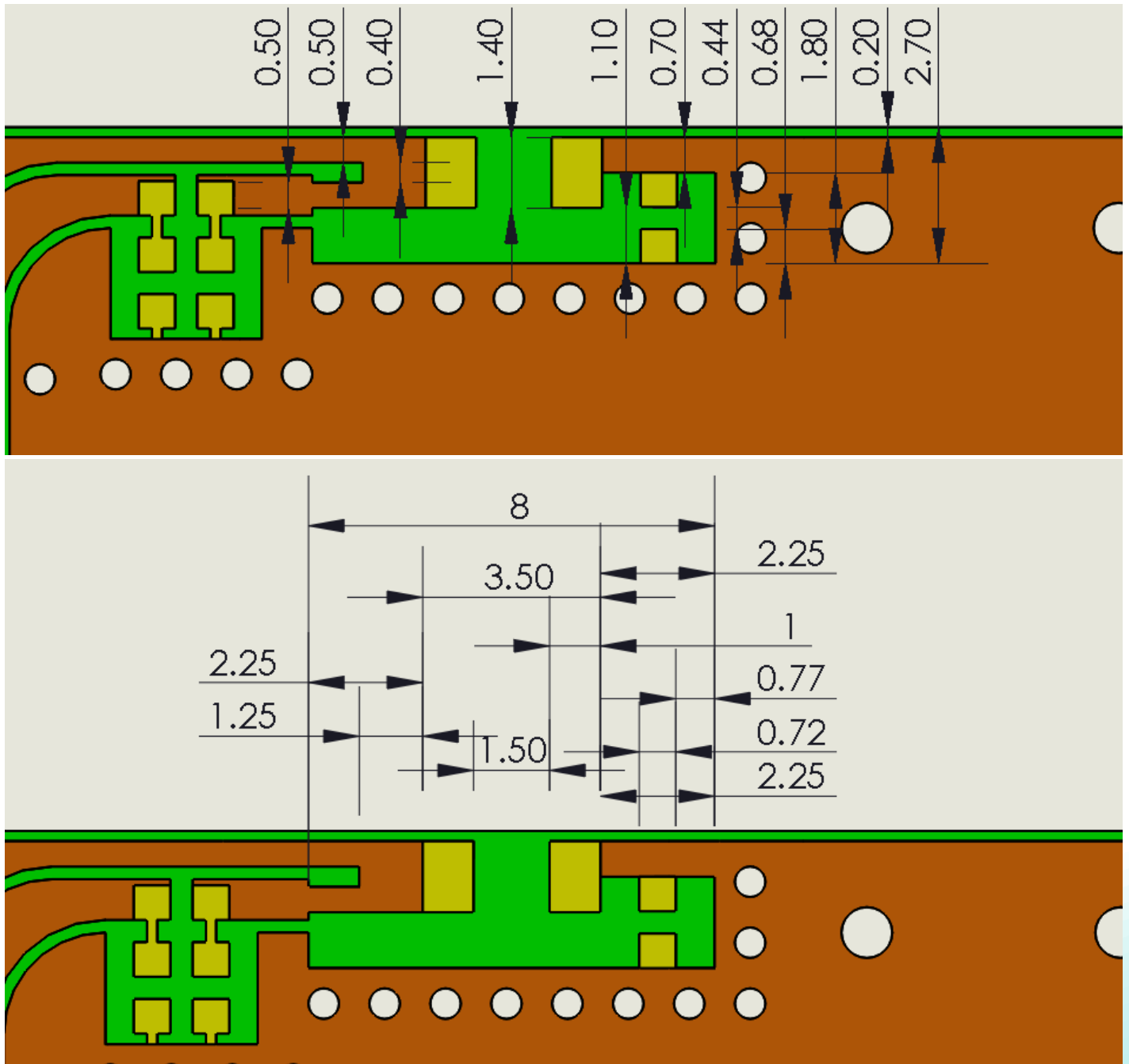
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**OTHER SPECIFICATIONS**

**PCB top side layout**



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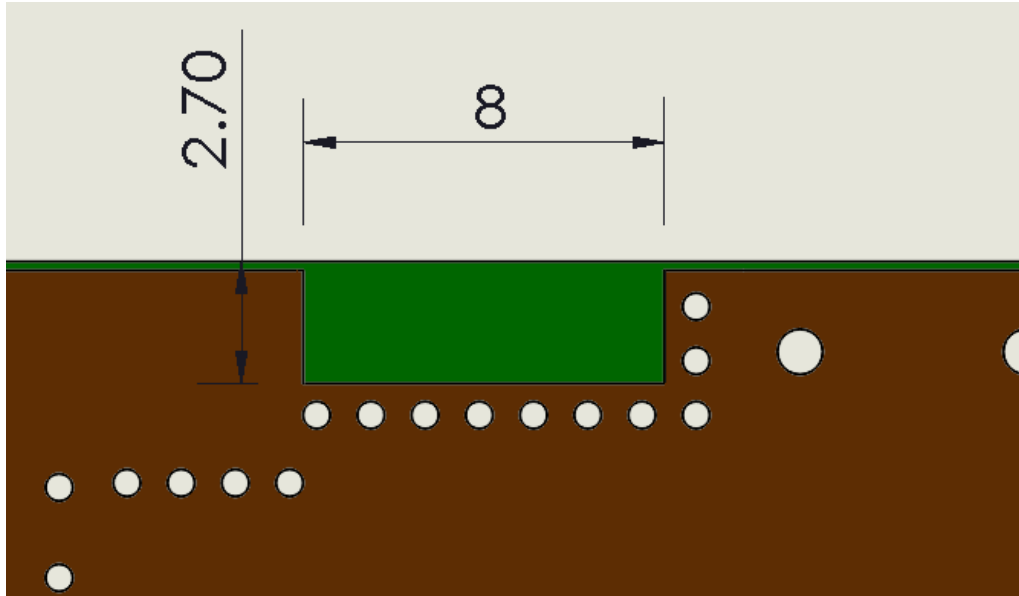
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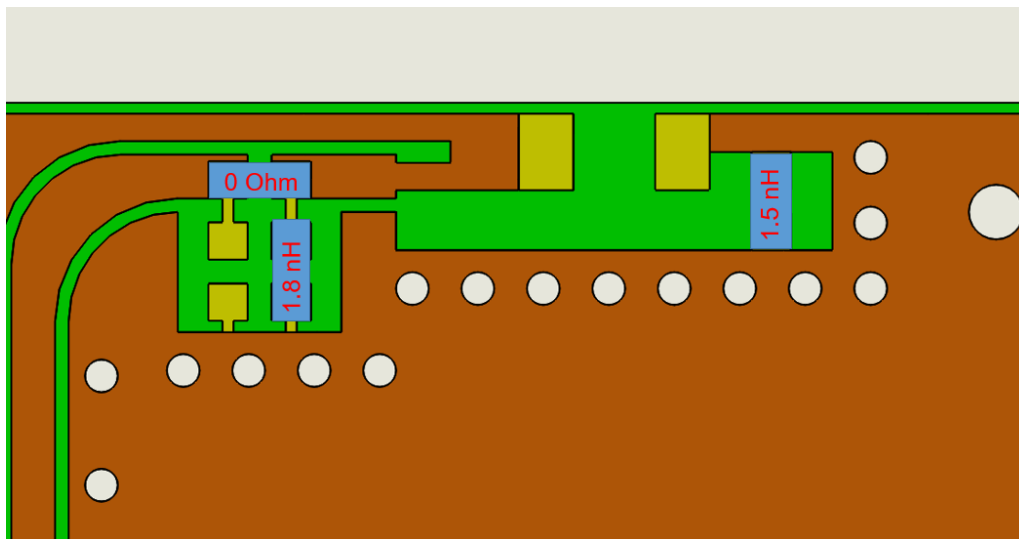
OTHER SPECIFICATIONS

PCB bottom side layout



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

Recommended matching circuit



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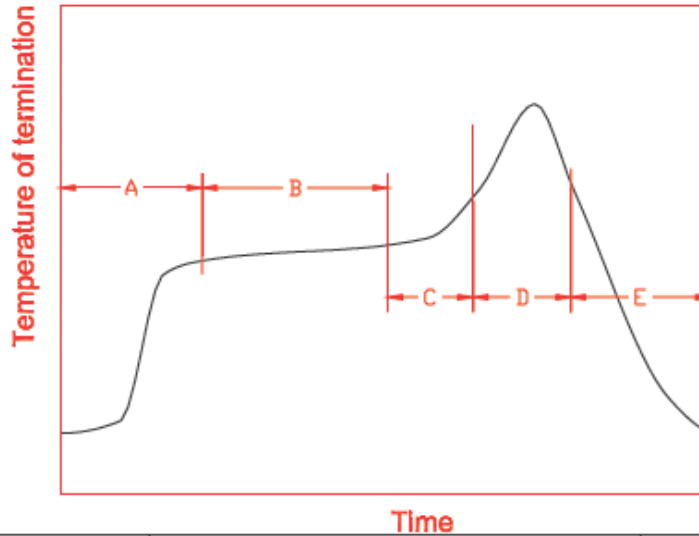
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**OTHER SPECIFICATIONS**

**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
E	Regular cooling	if 260°C	20s~40s
		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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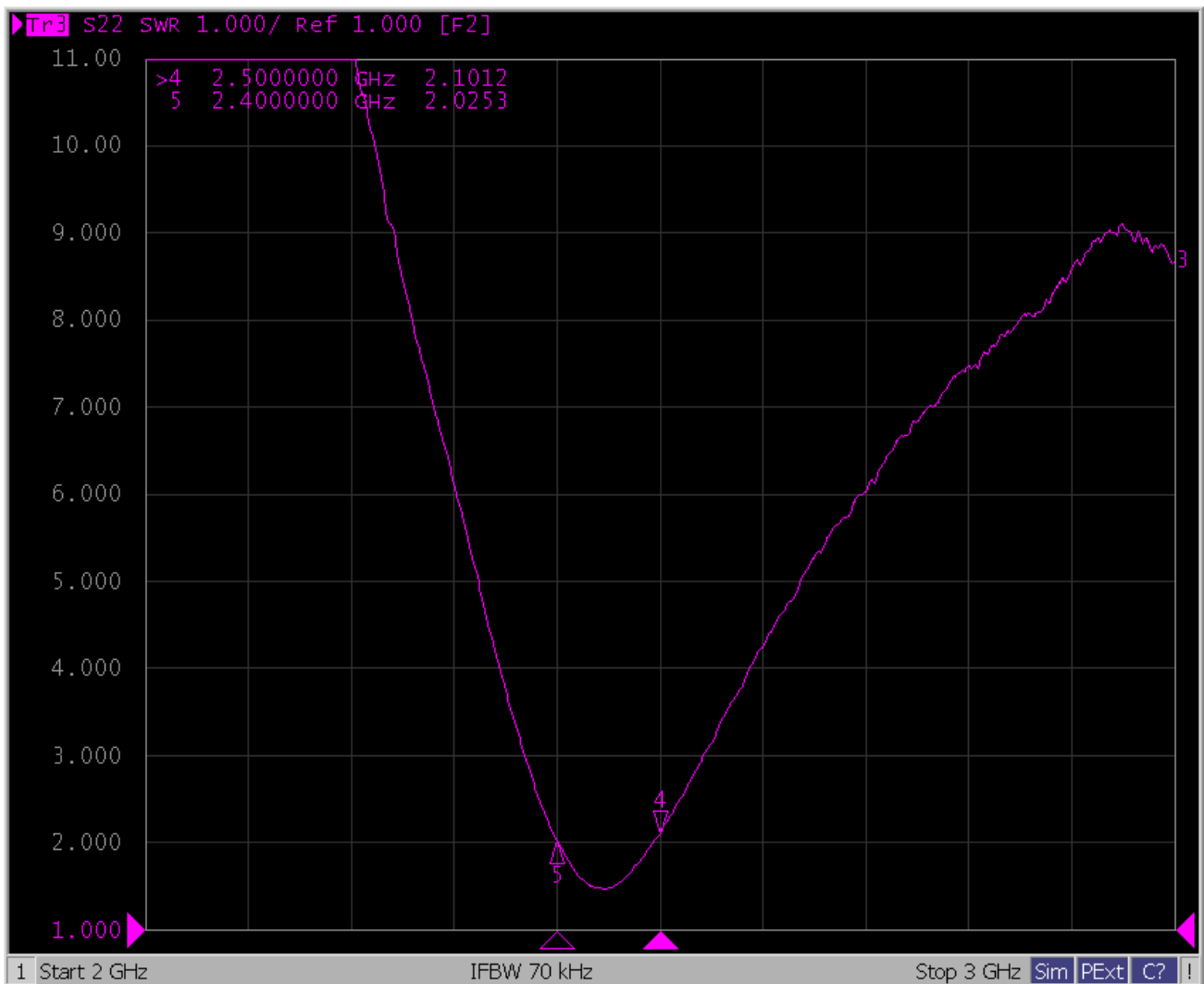
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CHARTS

VSWR



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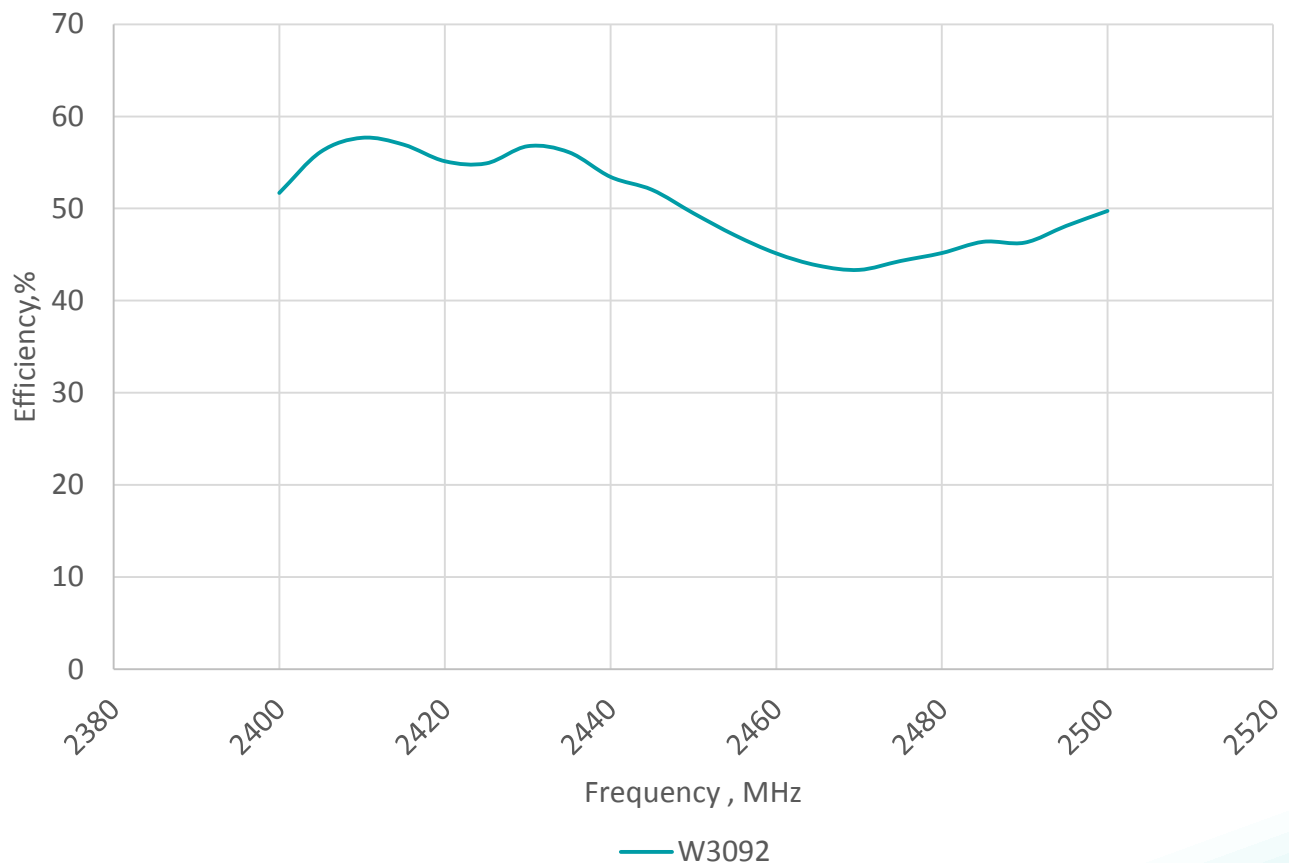
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**CHARTS**

**Efficiency**

Efficiency vs Frequency measured with demo board



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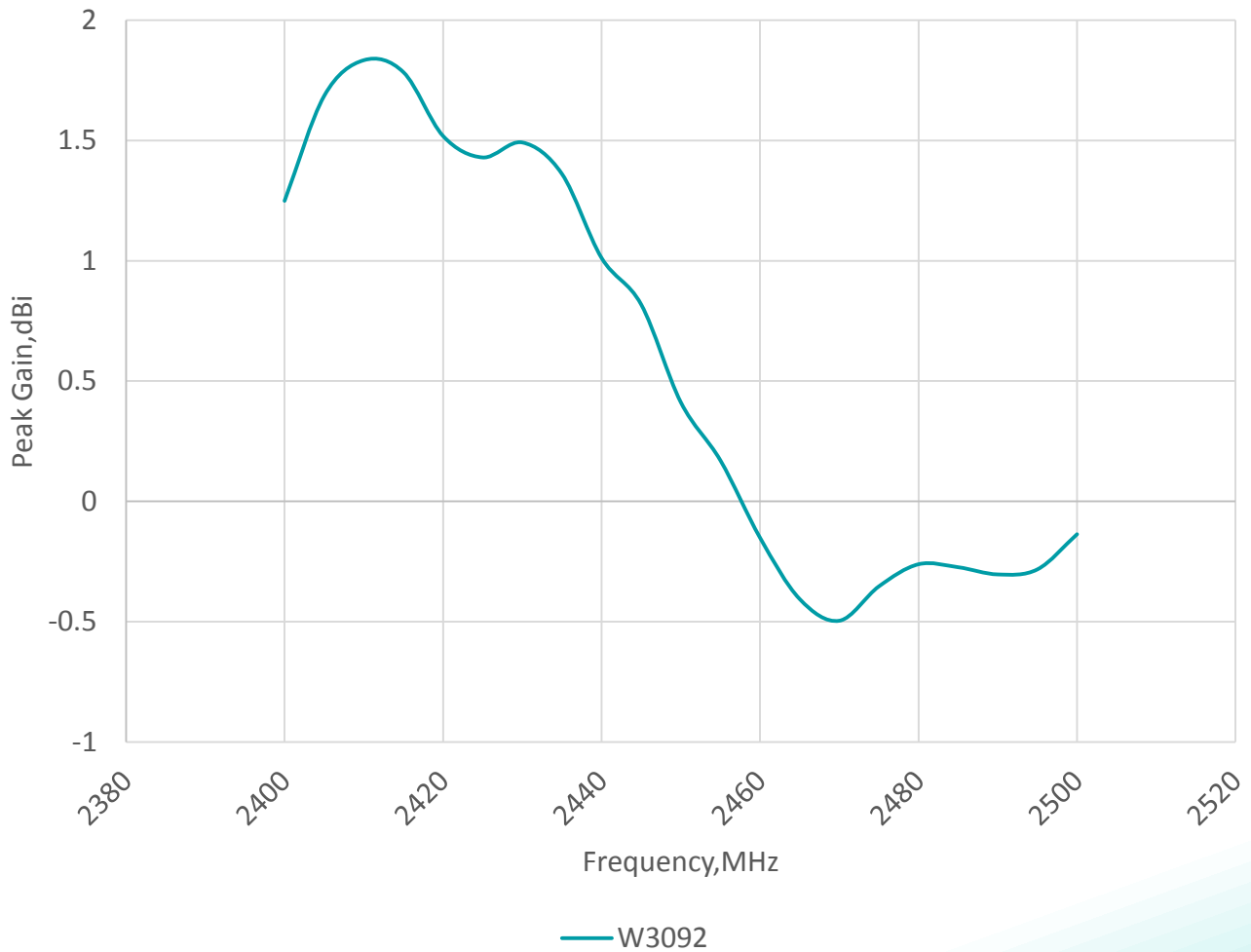
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**CHARTS**

**Peak Gain**

Peak Gain vs Frequency measured with demo board



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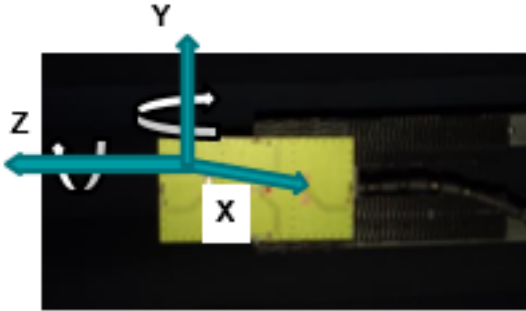
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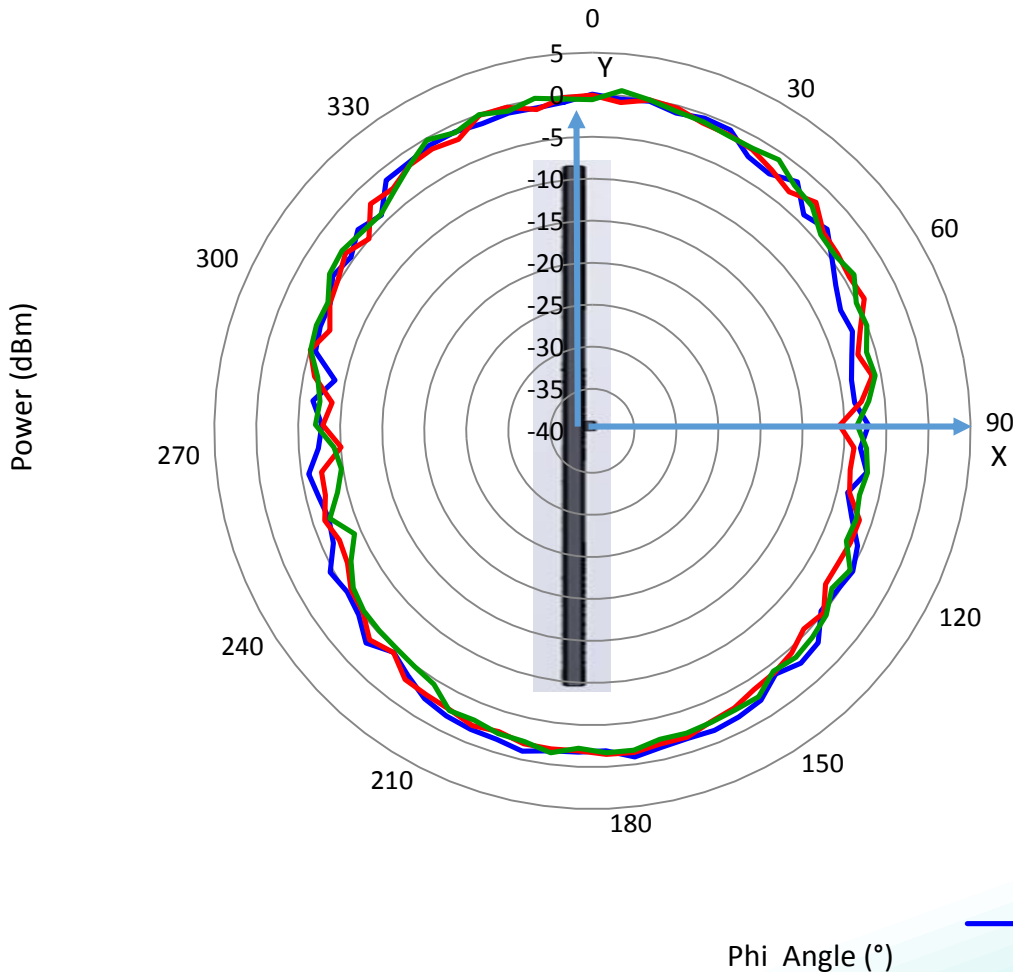
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**CHARTS**



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

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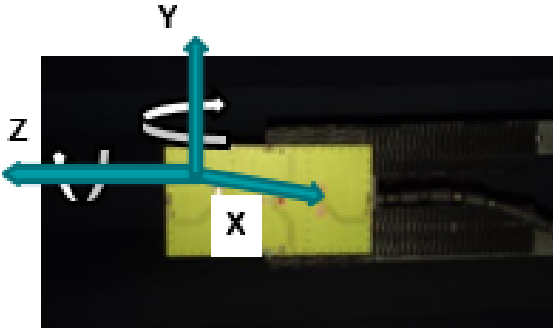
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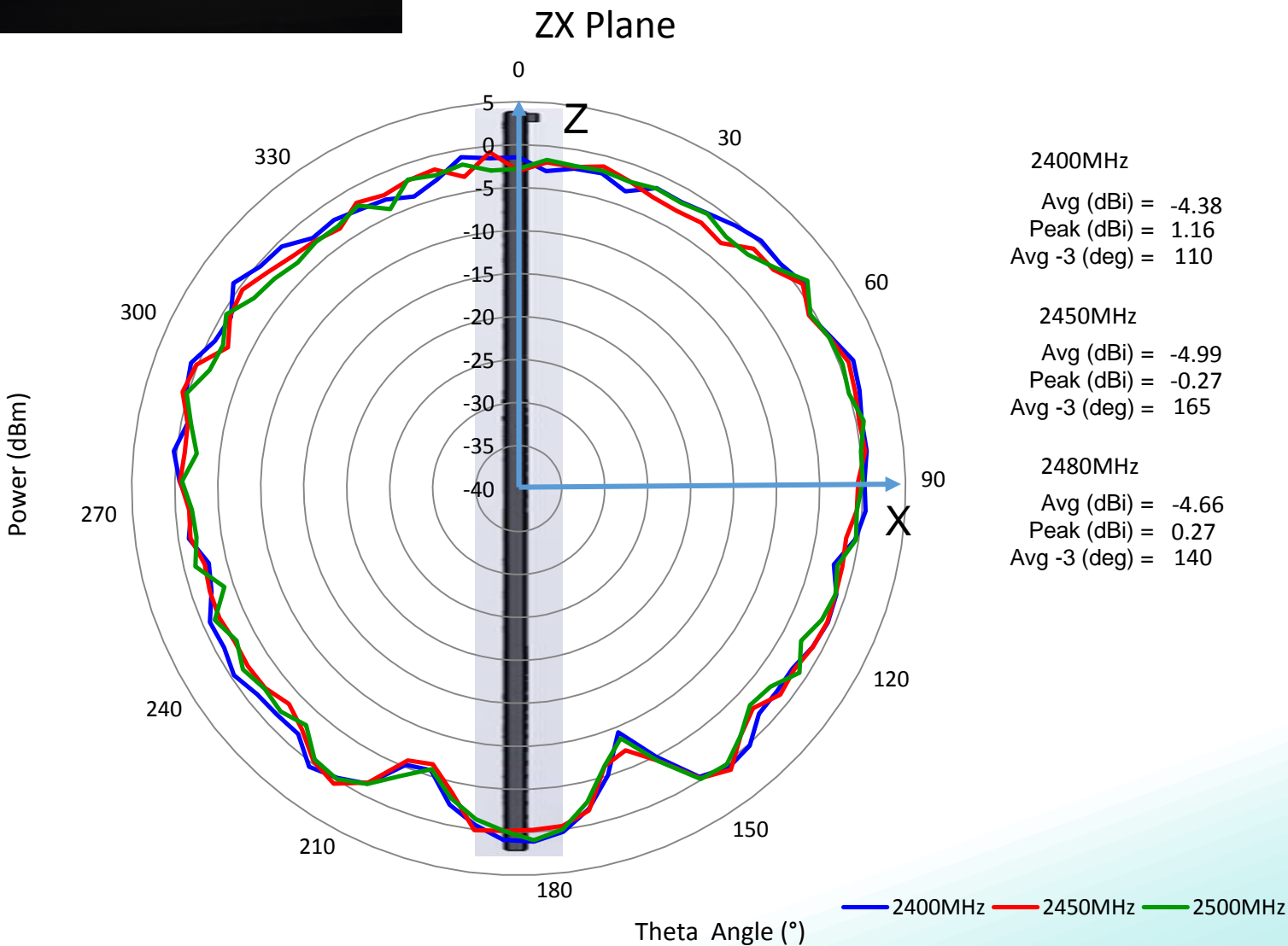
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CHARTS



Radiation pattern



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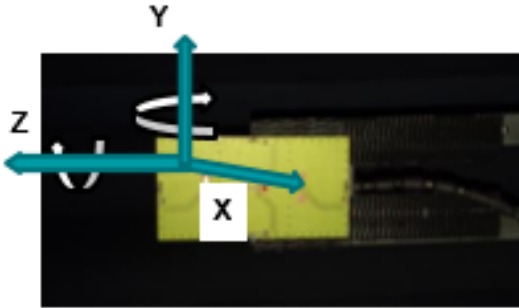
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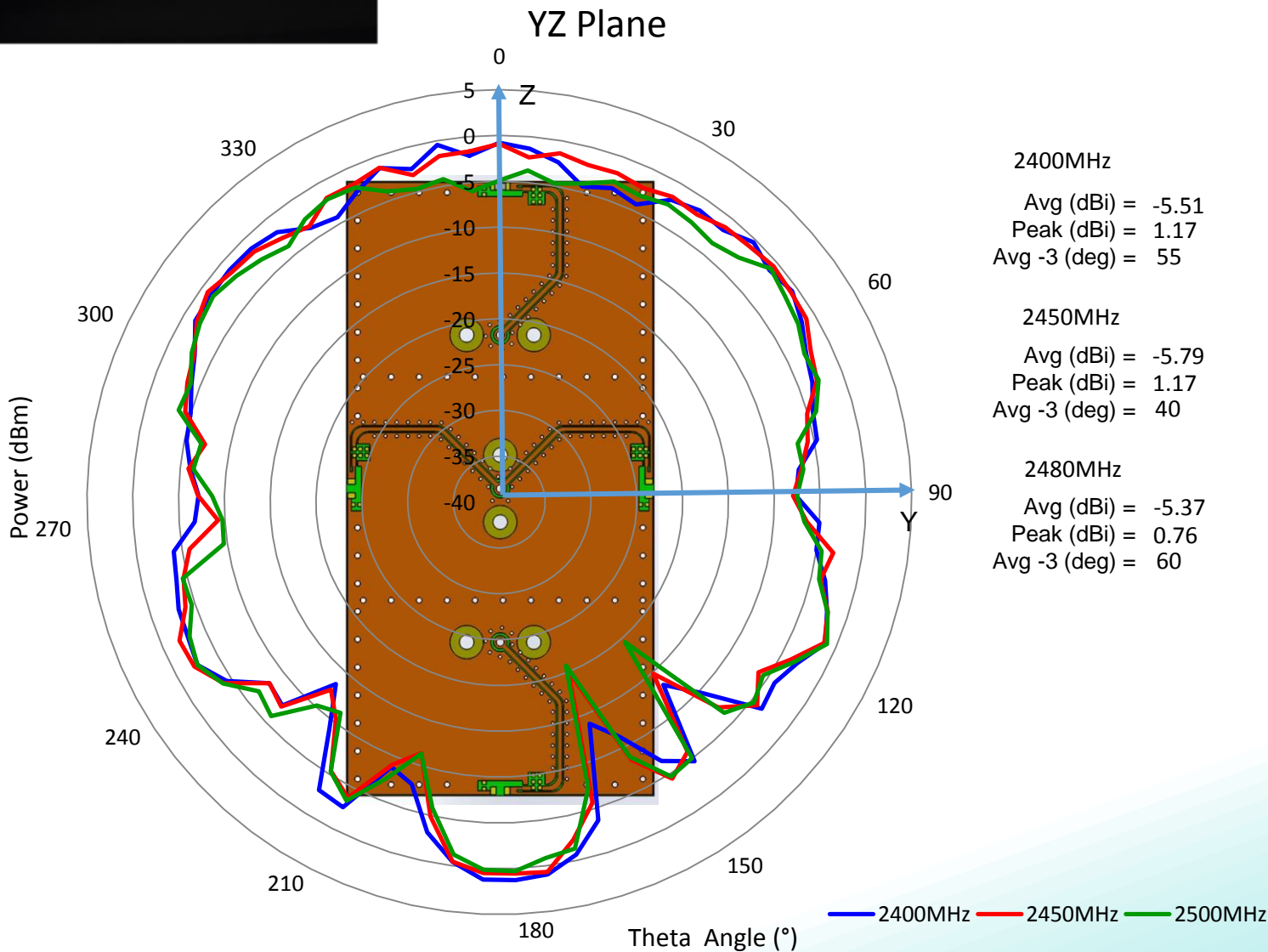
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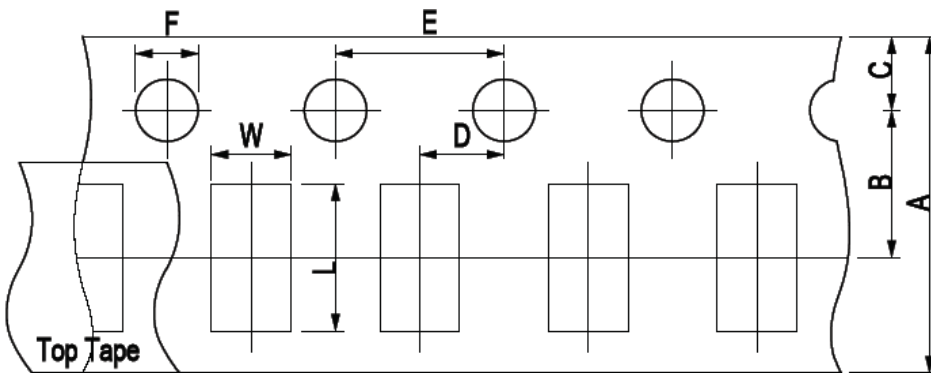
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**PACKAGING**

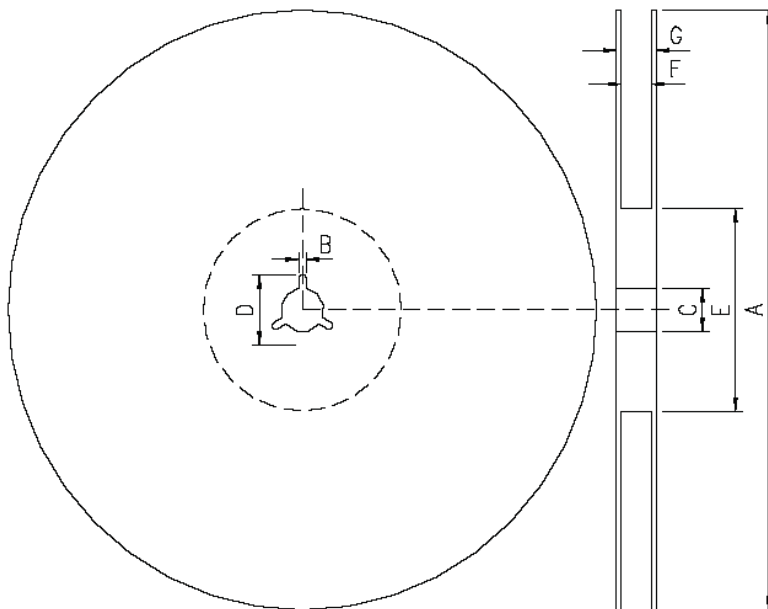
**Taping Package and Label Marking: (unit: mm)**

- (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**



A	178.0±2.0
B	2.0±0.5
C	13.0±0.5
D	21.0±0.8
E	62.0±1.5
F	9.0±0.5
G	13.0±1.0

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