

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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ELECTRICAL SPECIFICATIONS

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

Description: Bluetooth, WiFi Antenna**Series:** The Blue Dot**PART NUMBER:** W3092**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., should be used <1 year
On board	-40 ~85 ° C, <85%R.H

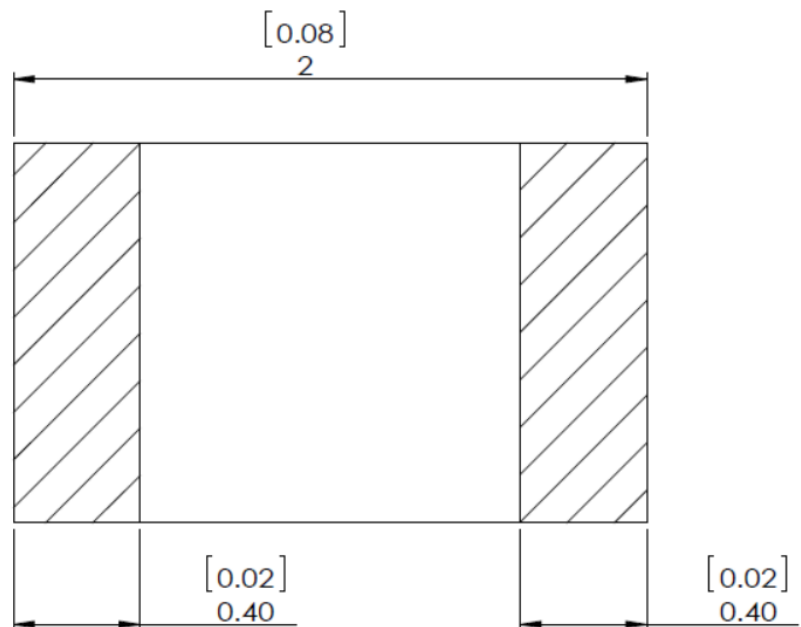
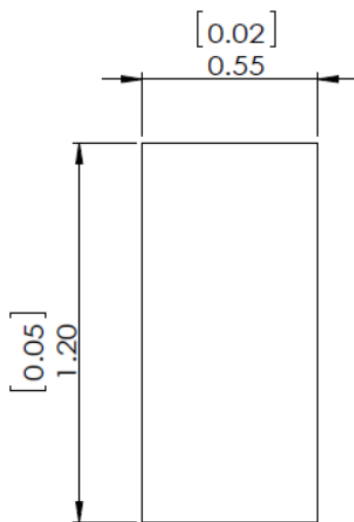
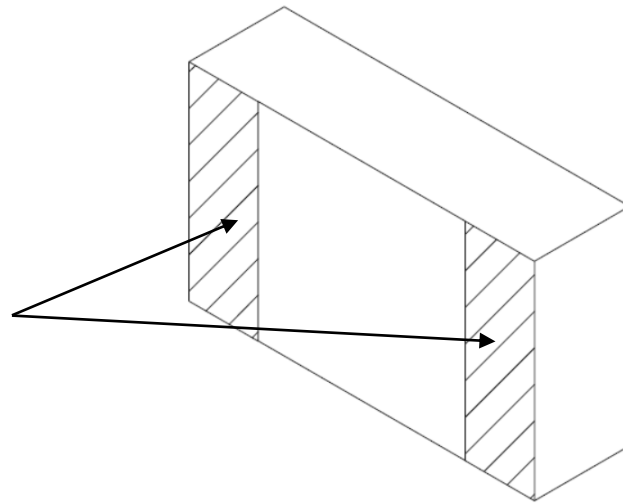
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MECHANICAL DRAWING

Pad for SMT process



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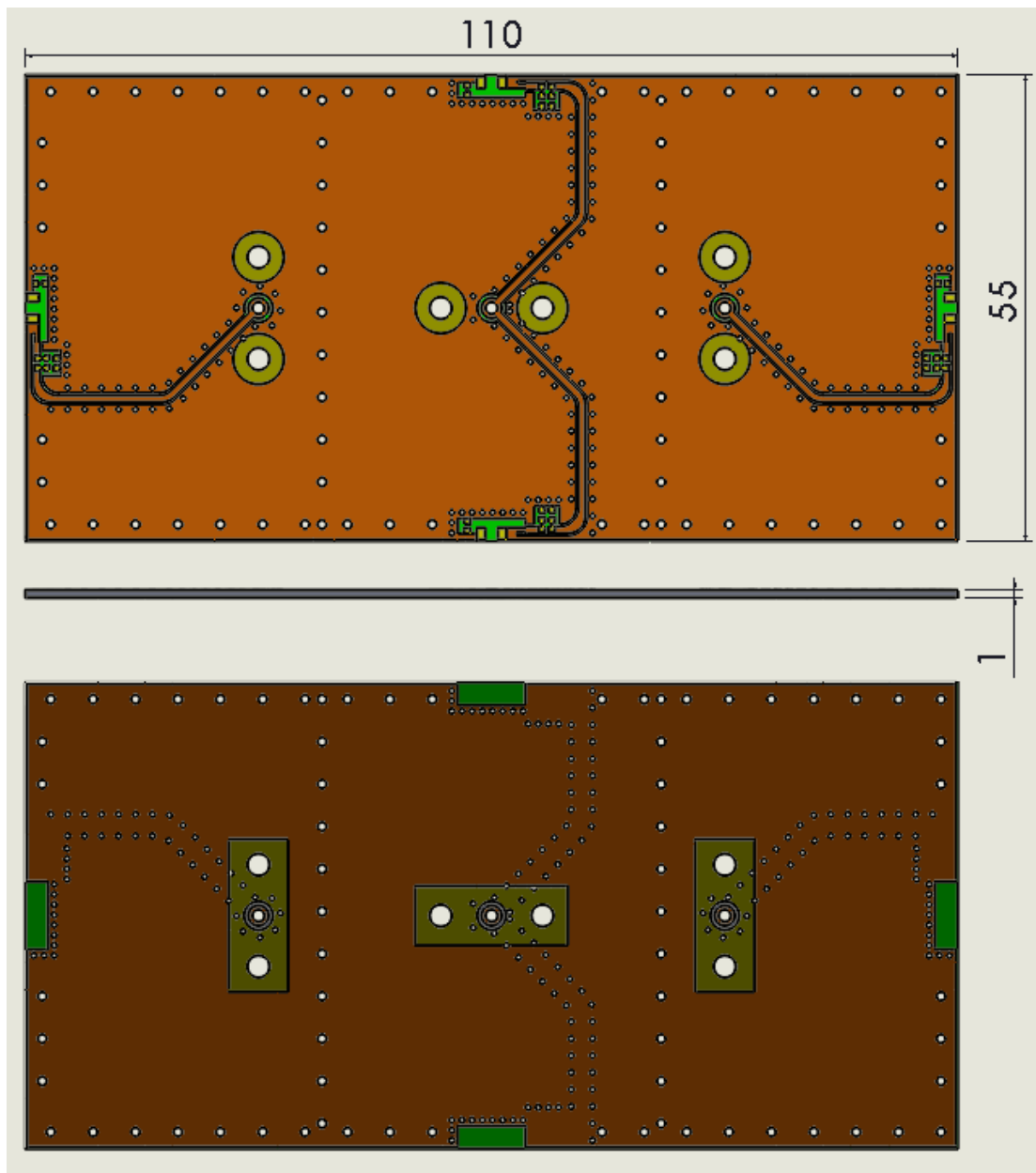
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OTHER SPECIFICATIONS

Recommended PCB layout(Unit:mm)

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



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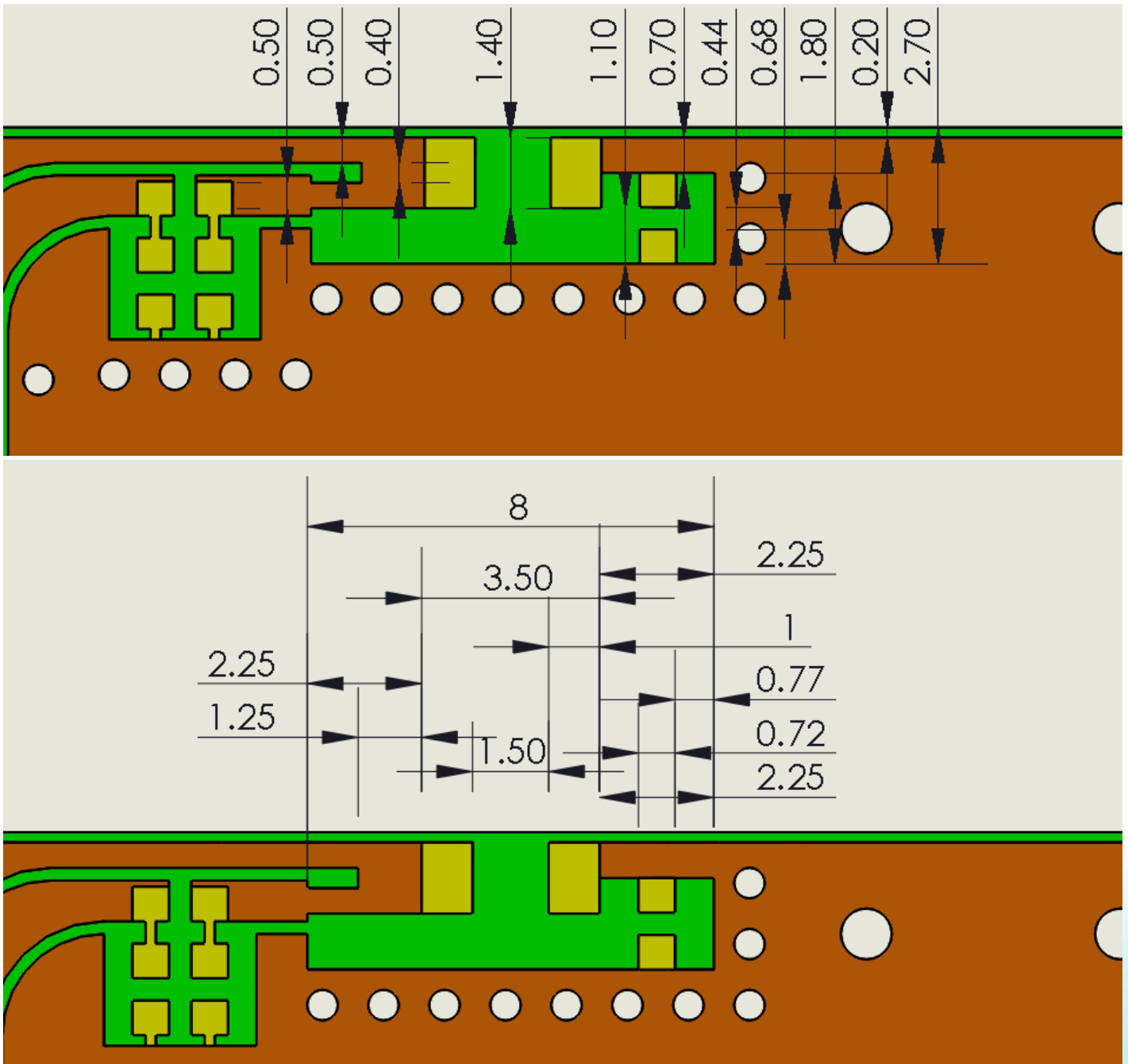
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OTHER SPECIFICATIONS

PCB top side layout



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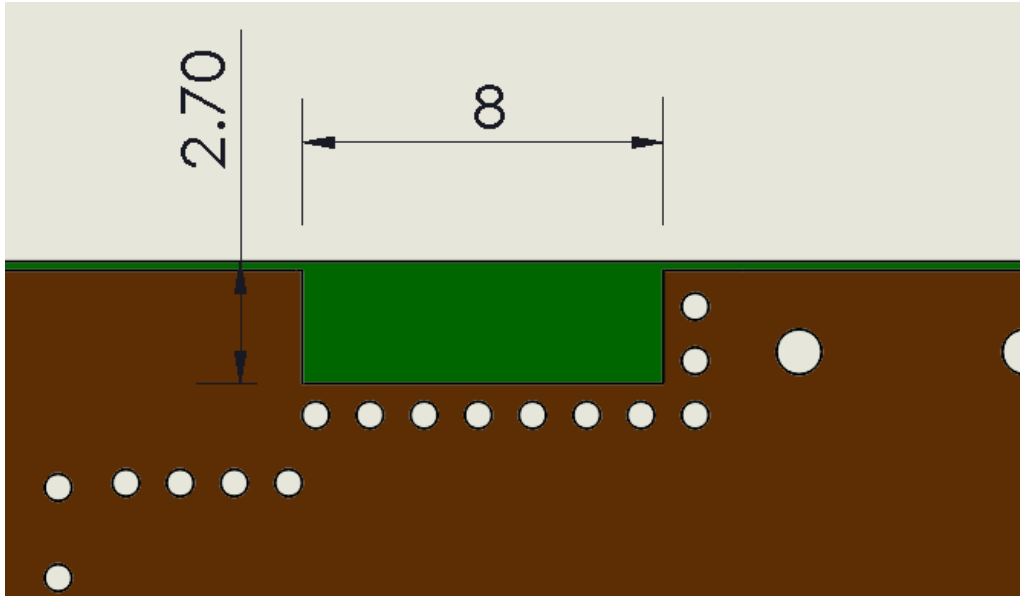
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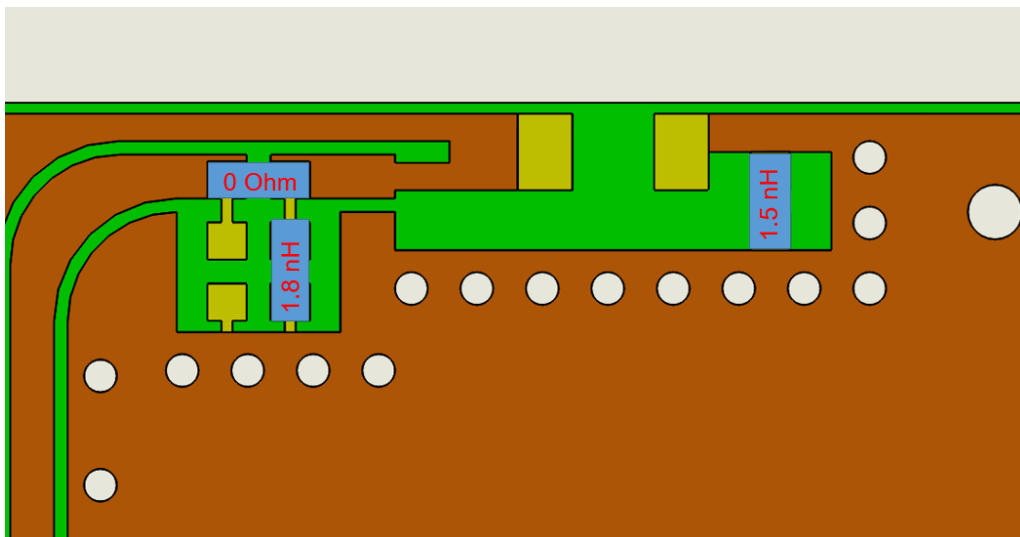
OTHER SPECIFICATIONS

PCB bottom side layout



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

Recommended matching circuit



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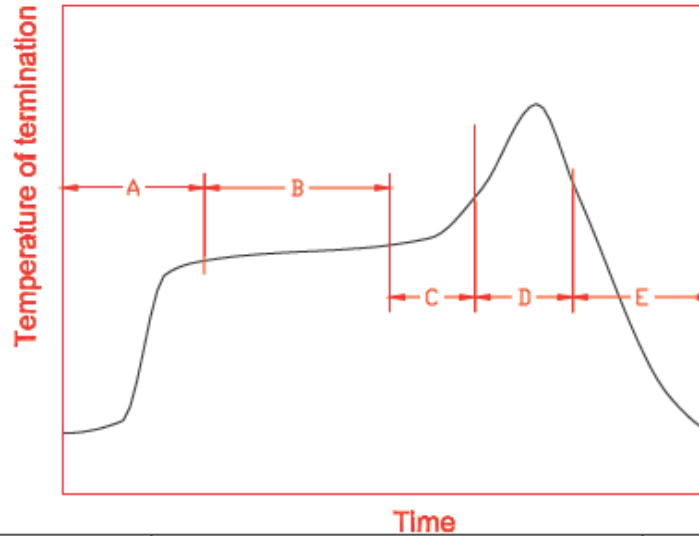
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OTHER SPECIFICATIONS

Recommended reflow soldering



A	1 st rising temperature	The normal to Preheating temperature	30s to 60s
		140°C to 160°C	60s to 120s
B	Preheating	Preheating to 200°C	20s to 40s
C	2 nd rising temperature	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
D	Main heating	200°C to 100°C	1°C/s ~ 4°C/s
E	Regular cooling		

*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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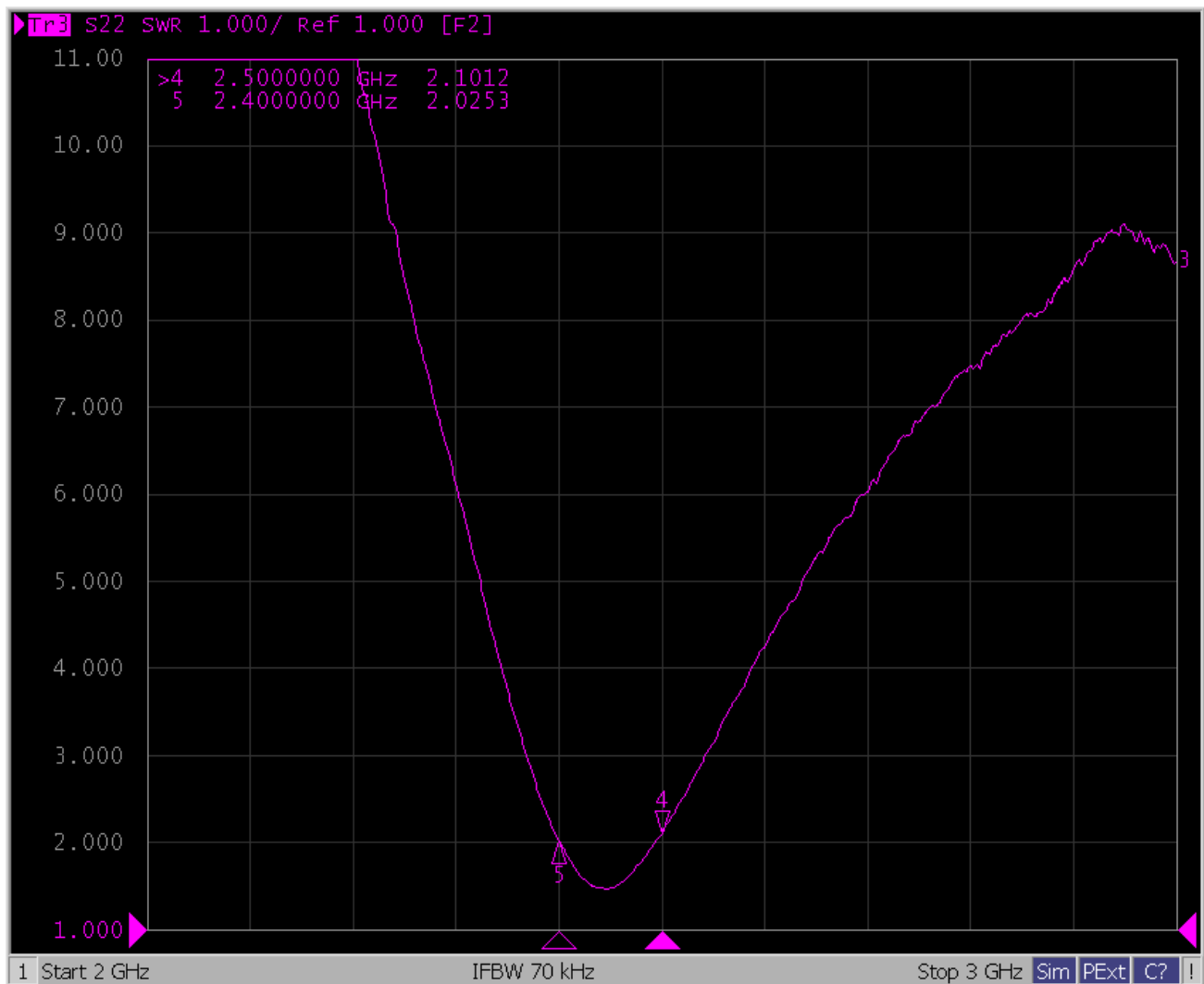
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CHARTS

VSWR



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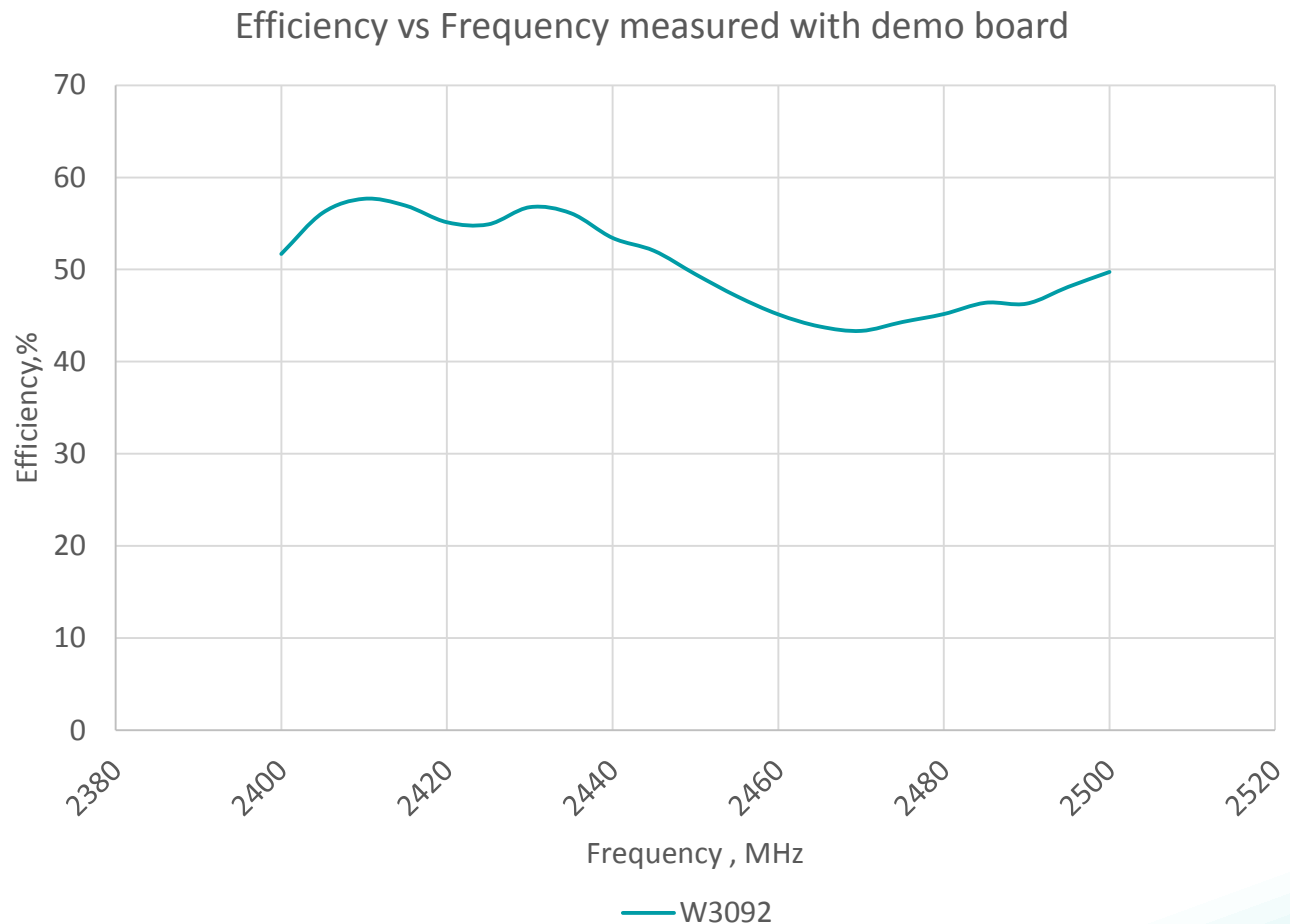
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CHARTS

Efficiency



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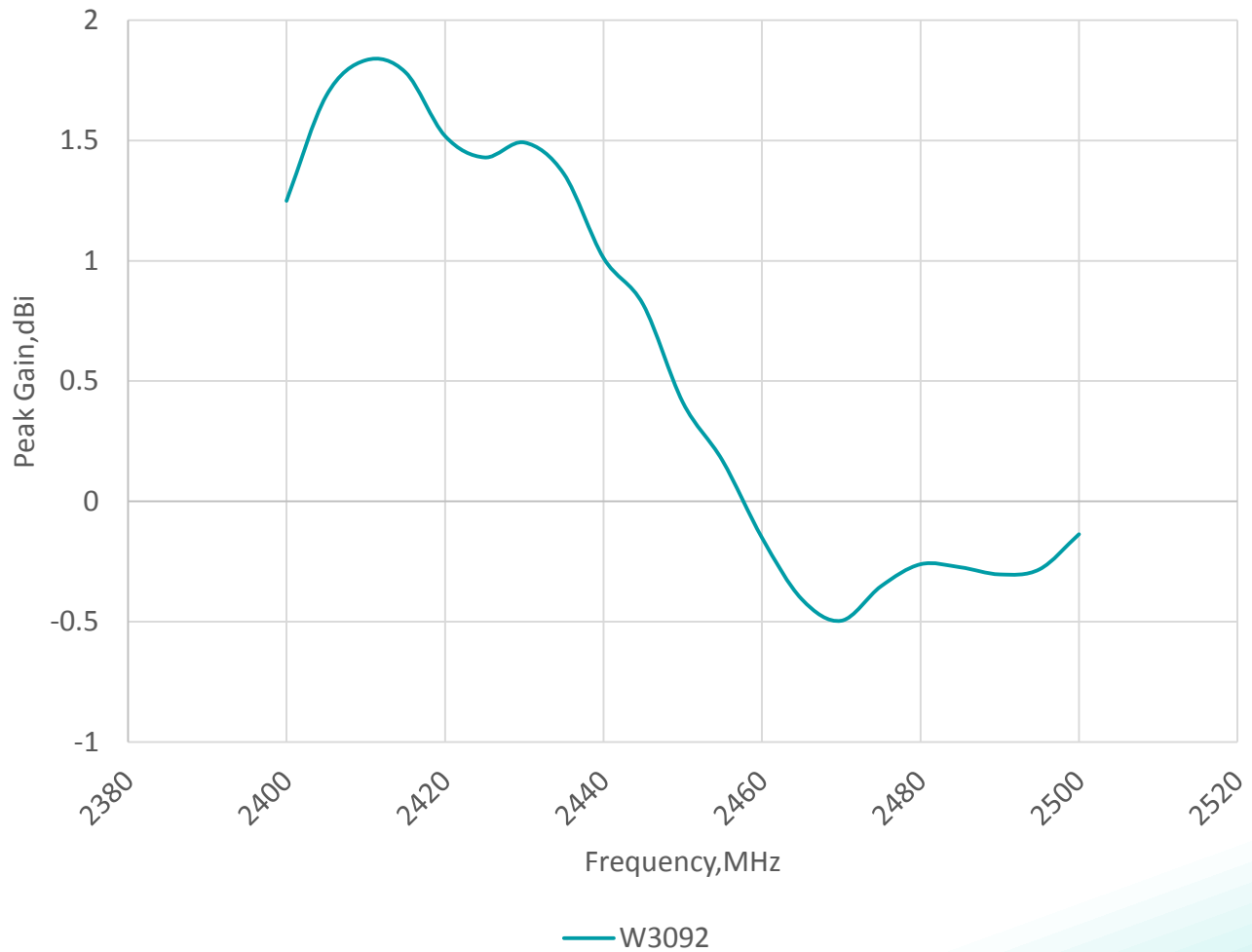
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CHARTS

Peak Gain

Peak Gain vs Frequency measured with demo board



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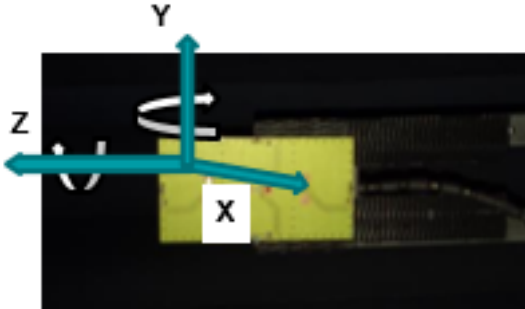
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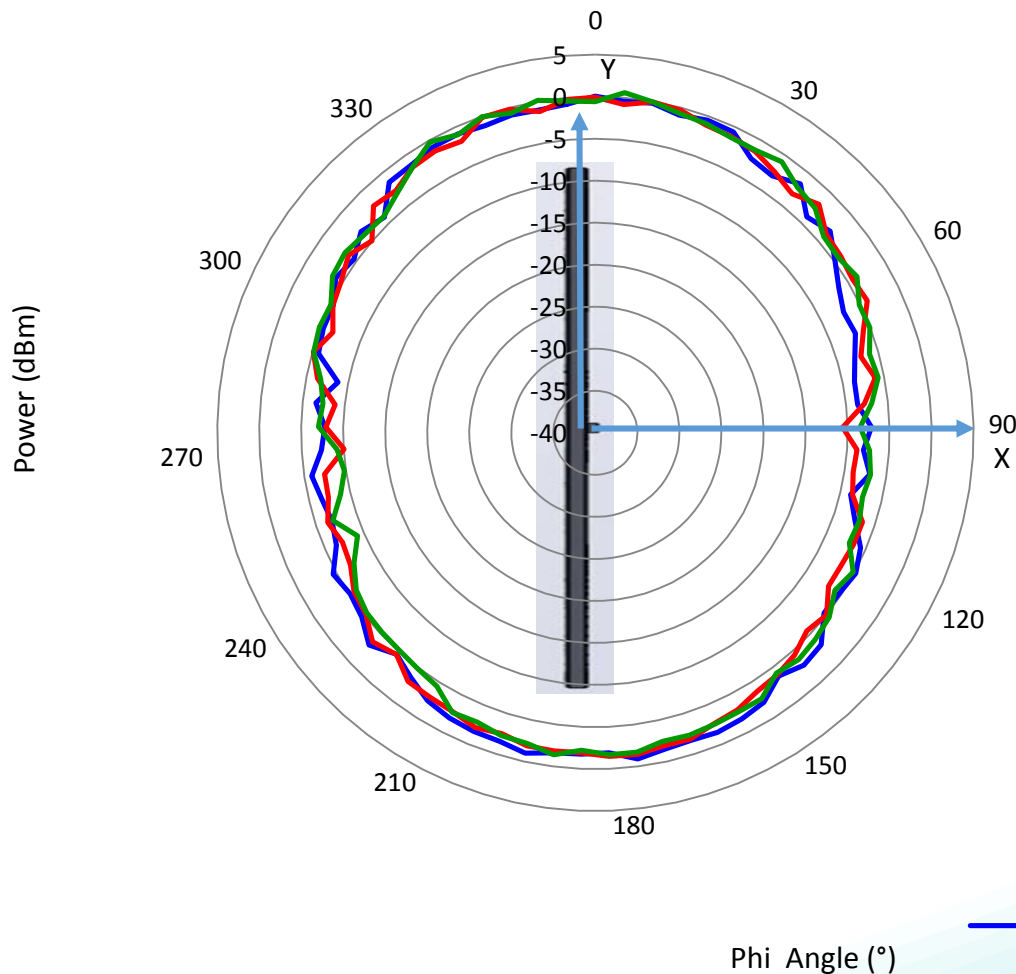
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CHARTS



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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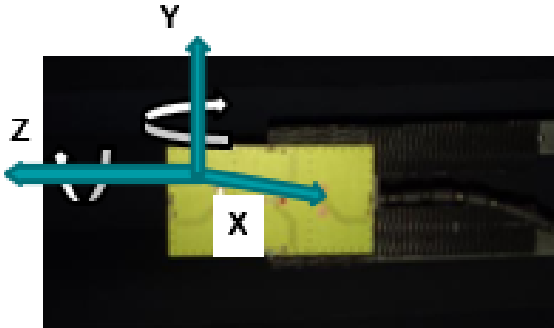
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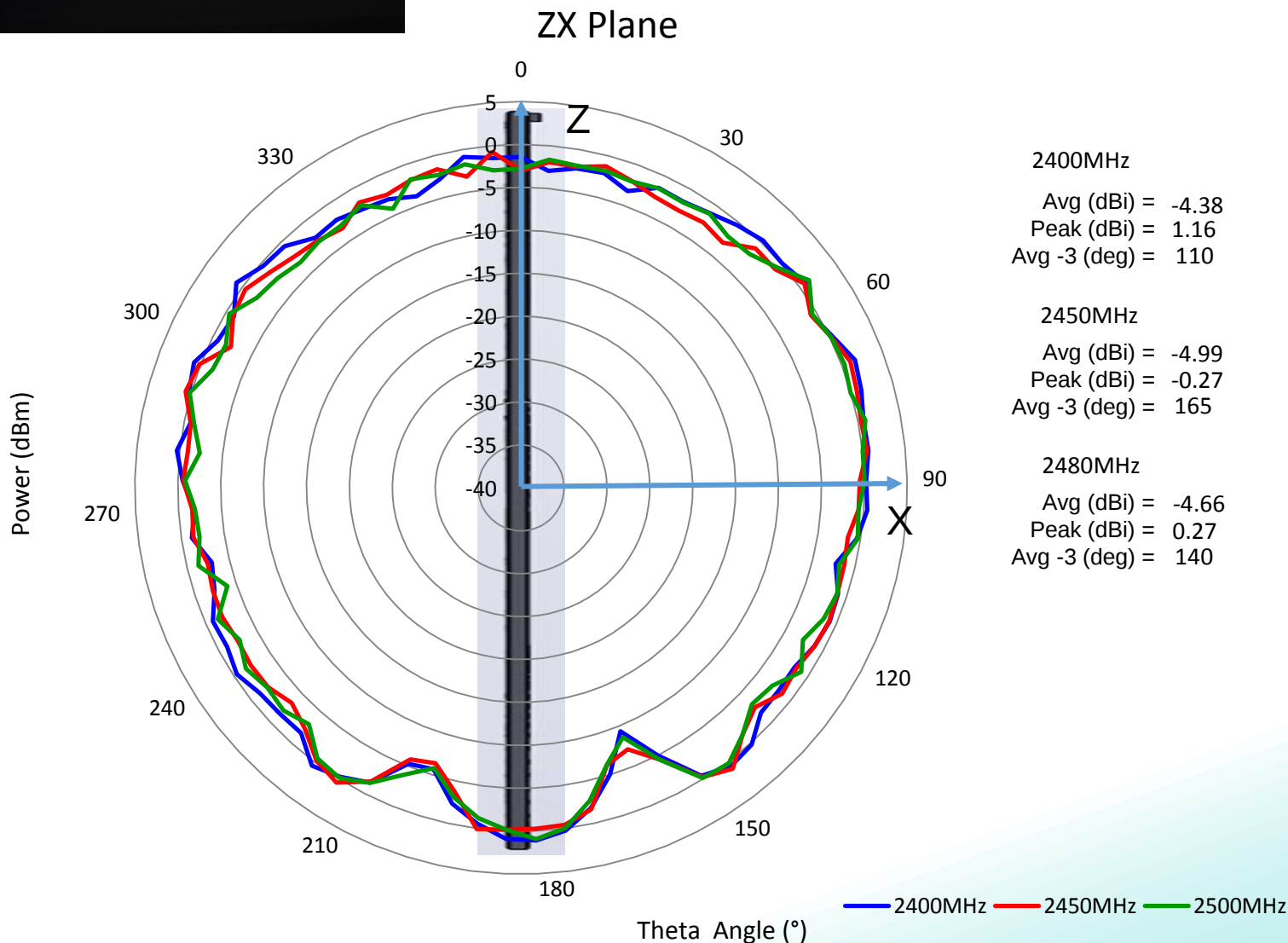
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CHARTS



Radiation pattern



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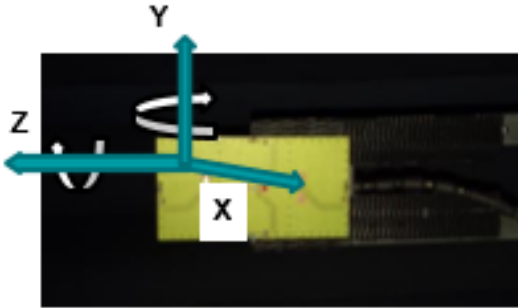
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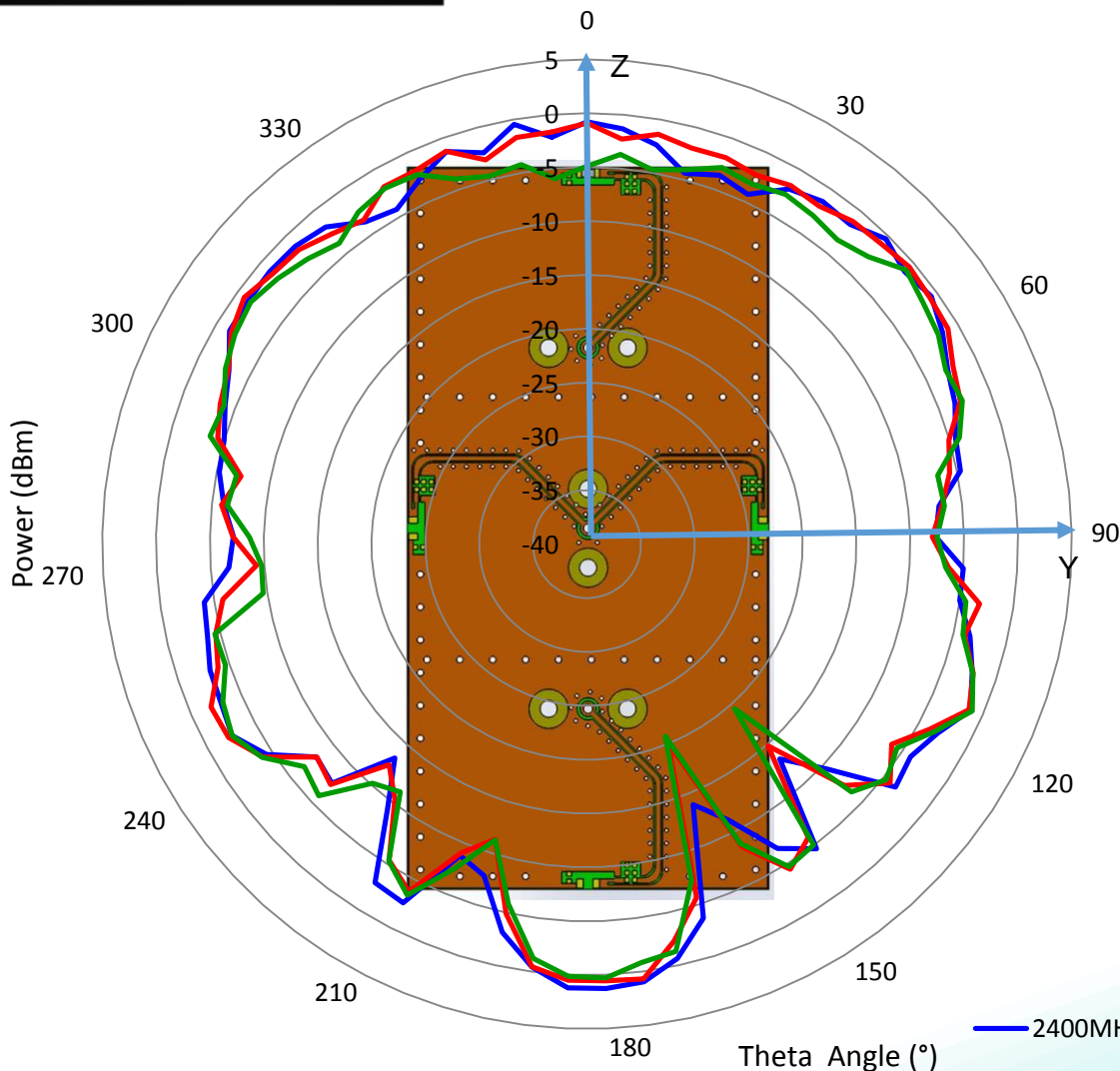
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CHARTS



Radiation pattern

YZ Plane



2400MHz
Avg (dBi) = -5.51
Peak (dBi) = 1.17
Avg -3 (deg) = 55

2450MHz
Avg (dBi) = -5.79
Peak (dBi) = 1.17
Avg -3 (deg) = 40

2480MHz
Avg (dBi) = -5.37
Peak (dBi) = 0.76
Avg -3 (deg) = 60

— 2400MHz — 2450MHz — 2500MHz

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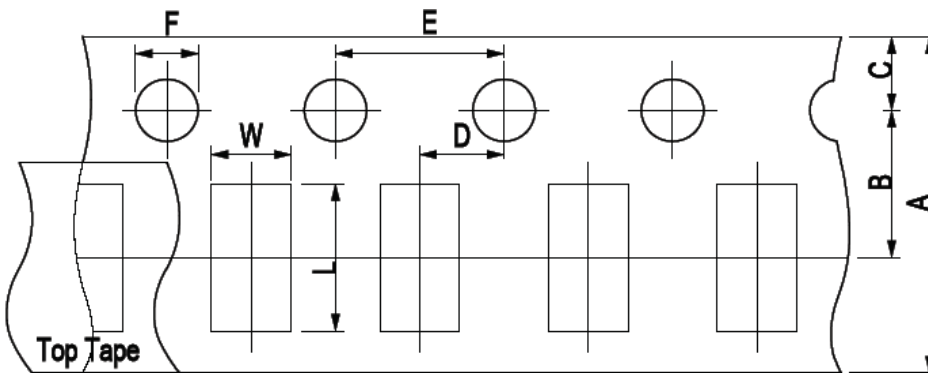
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PACKAGING

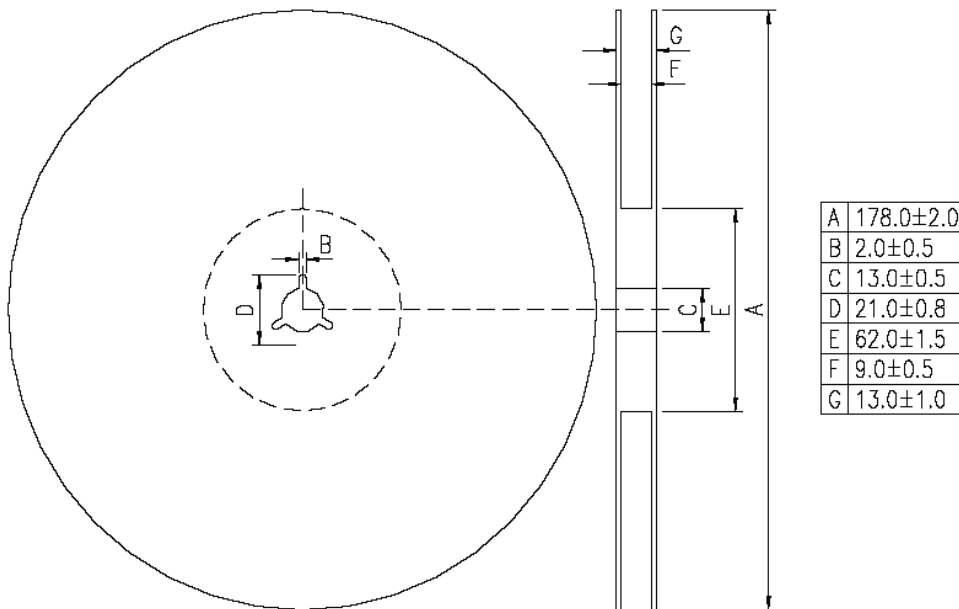
Taping Package and Label Marking: (unit: mm)

- (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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