PulseLARSEN Antennas

TECHNICAL DATA SHEET

Description: 5GHz WiFi SMT Antenna

Series: Embedded Antenna

PART NUMBER: W3713



Features:

- Frequency: 4.9-6GHz
- Gain: 4.5dBi
- Size: 10.5 x 3.2 x 2.4 mm
- SMT compatible
- Packing: Tape&Reel
- RoHS compliant
- Mirror image pair for this antenna is W3714

Applications:

- WiFi, ISM 5GHz
- DSRC 5.925GHz
- Tablets, Notebooks
- IoT and M2M devices
- Portable Electronics
- Security, Transportation

All dimensions are in mm / inches

Issue: 1812

RoHS COMPLIANT

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ELECTRICAL SPECIFICATIONS

Frequency	4.9-6GHz
Nominal Impedance	50Ω
VSWR	2:1
Peak Gain	4.5dBi +/- 1 dB
Radiation Pattern	Omni
Polarization:	Linear
Power withstanding	5W

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MECHANICAL SPECIFICATIONS

Material	Phosphor bronze	
Thickness	0.2	mm
Weight	0.1	g
Overall Length	10.5(0.41)	mm(inch)
Fixing system	SMT	

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40/+85	° C

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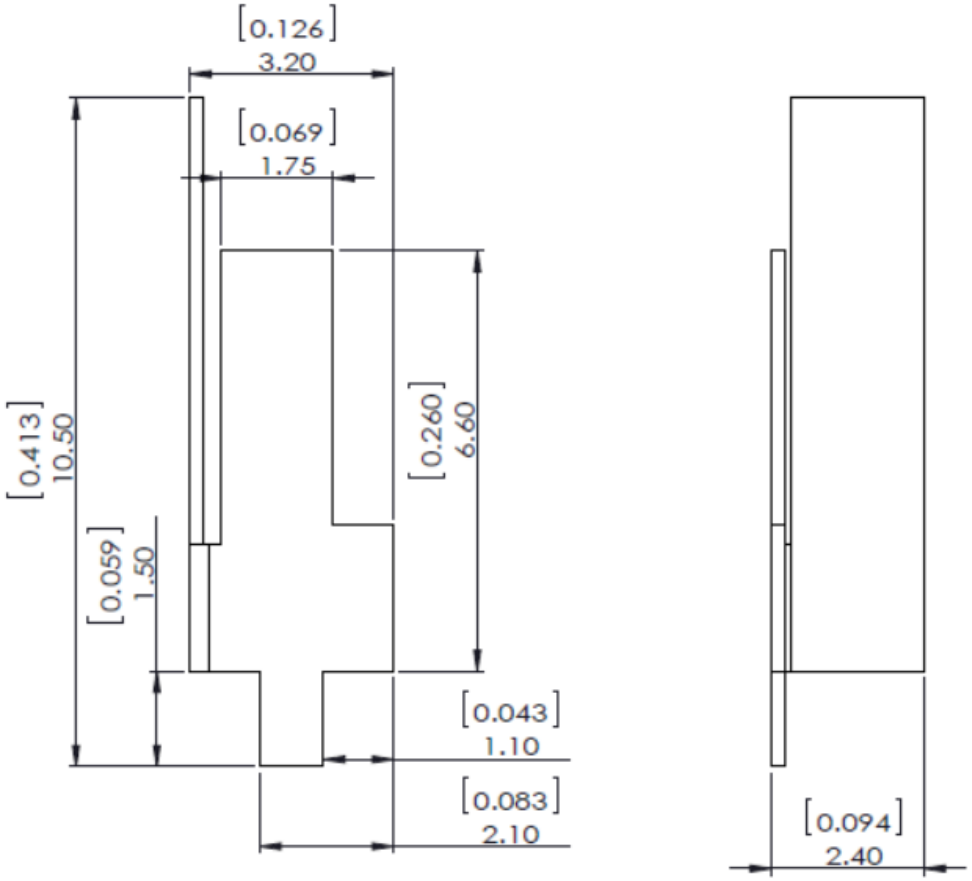
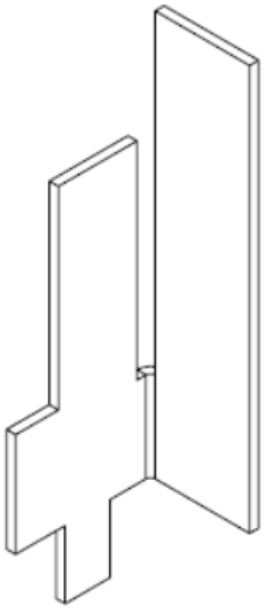
MECHANICAL DRAWING





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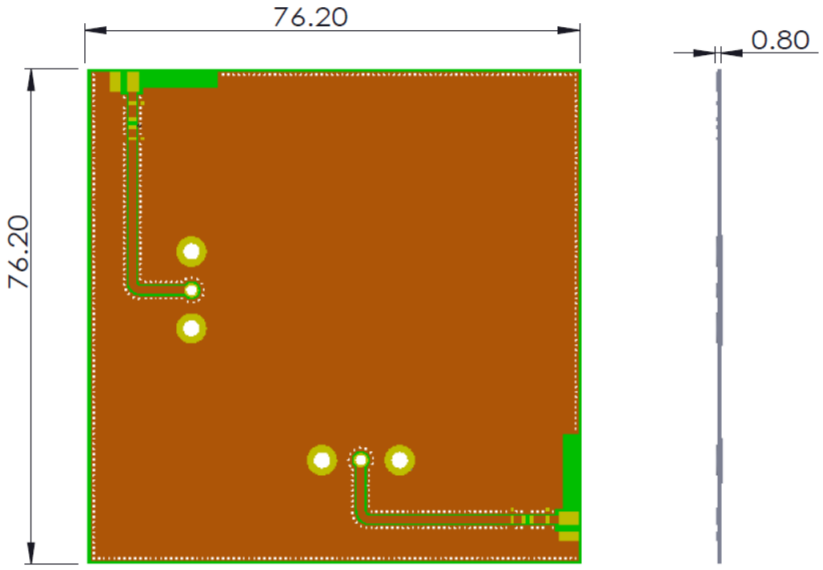
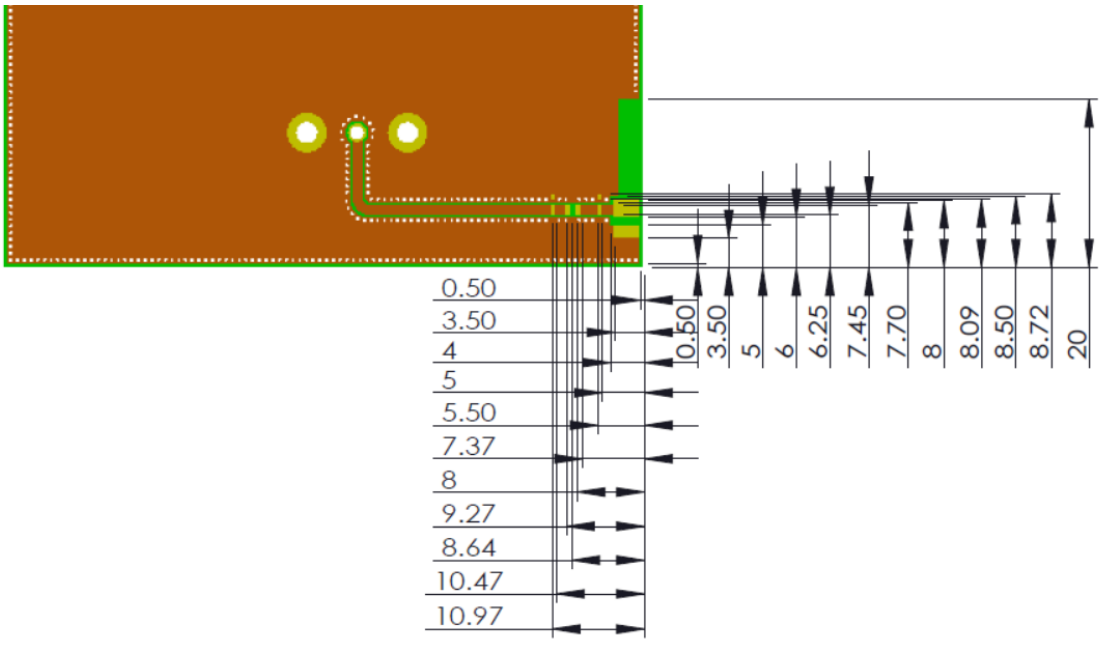
OTHER SPECIFICATIONS

PCB LAYOUT:

1，PCB material, FR4, size, 76.2X76.2X0.8mm



2， Clearance area (Top)



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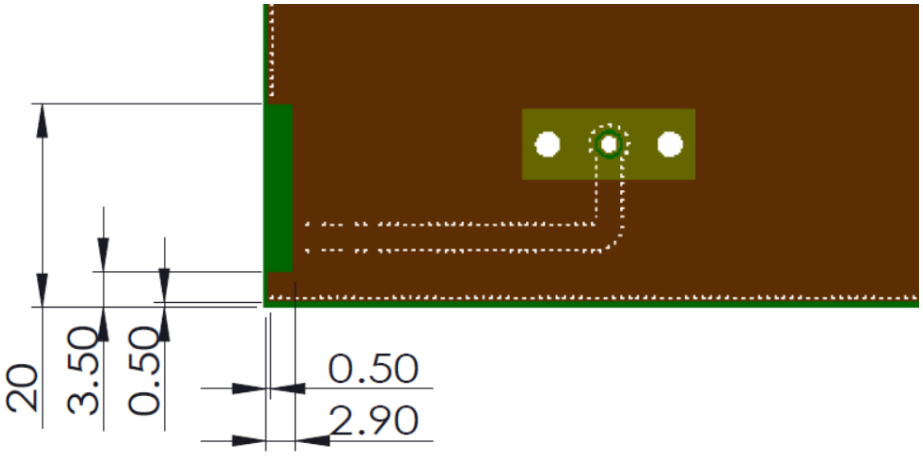
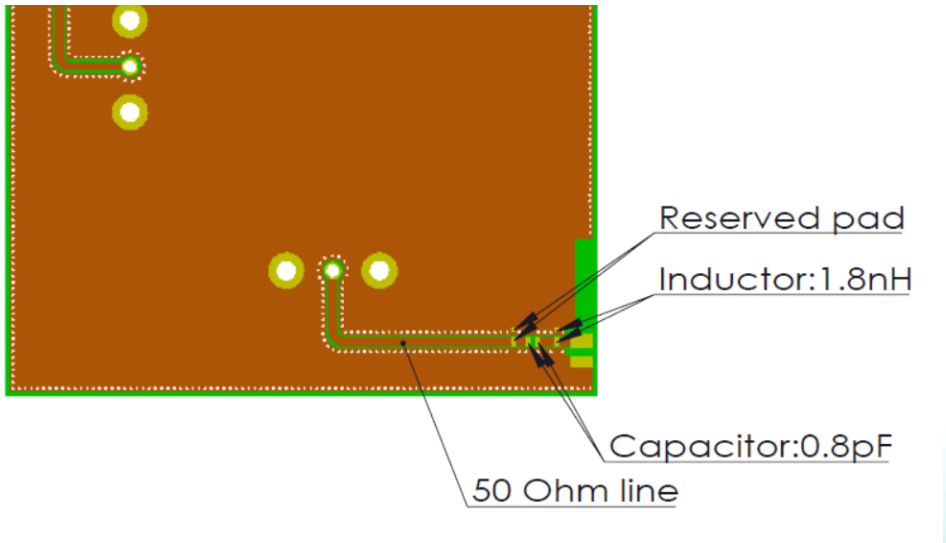
OTHER SPECIFICATIONS

3, Clearance area (Bottom)



4, PCB Features



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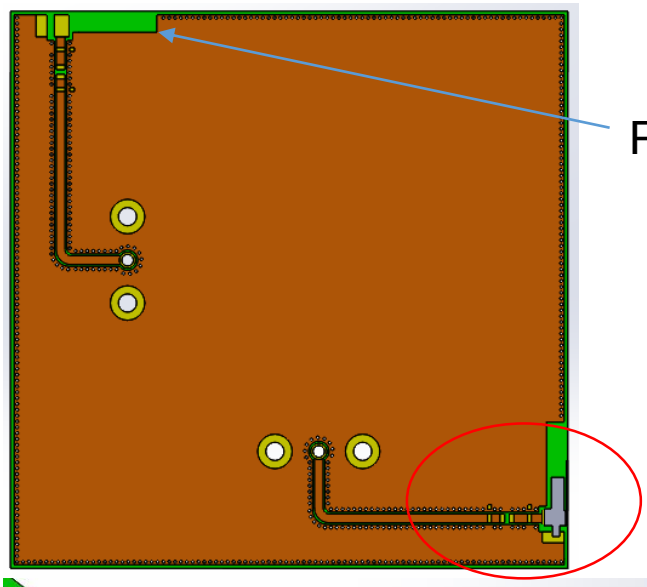
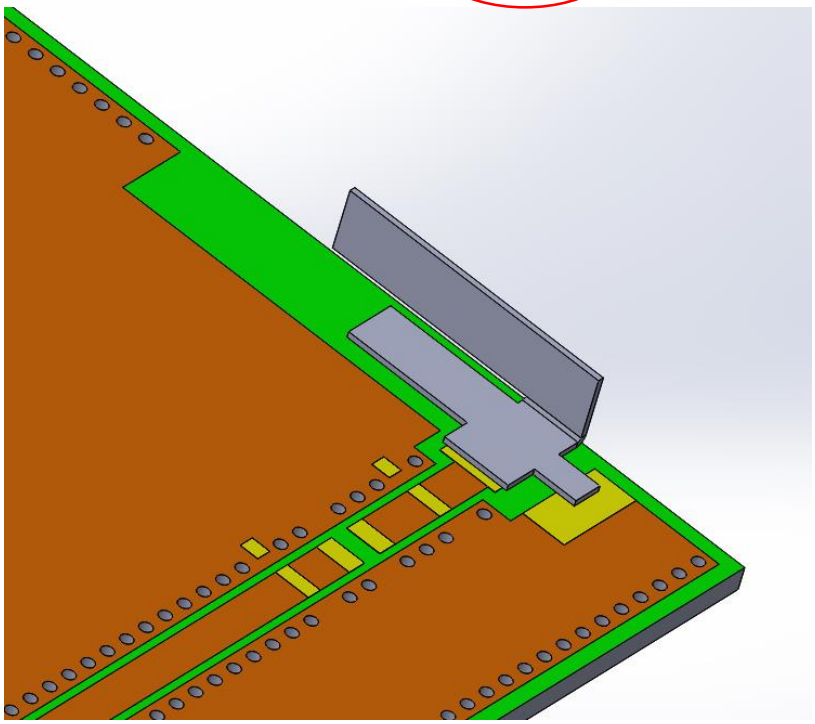
OTHER SPECIFICATIONS

3, Antenna on test PCB





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OTHER SPECIFICATIONS

Recommendation for reflow soldering process

Printing stencil thickness 0,15 - 0,25 mm is recommended for the solder paste. The maximum soldering temperature should not exceed 260°C. The temperature profile recommendations for reflow soldering process is presented in the Figures 1 and 2. The reflow profile presented in figure 1 describes minimum reflow temperatures. The reflow profile presented in figure 2 describes maximum reflow temperatures. located at the center of the coverage area.

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 30 sec
5	Peak temperature in reflow	230 °C for 10 seconds
6	Temperature gradient in cooling	Max -5 °C/s

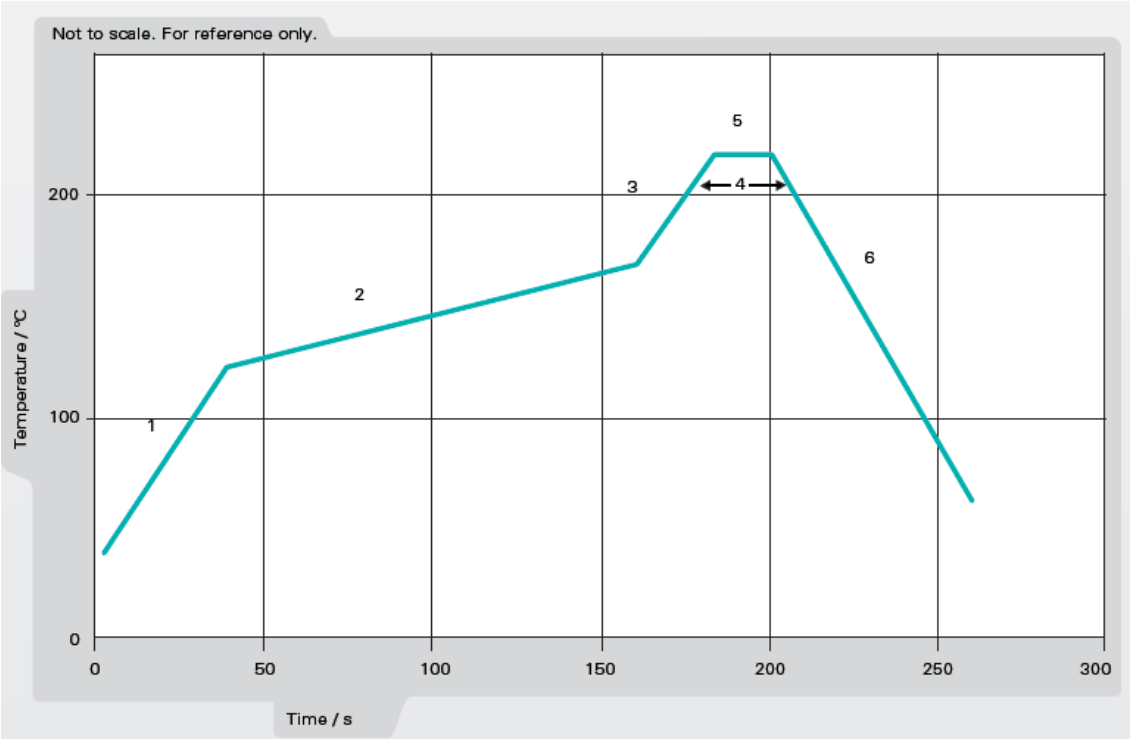

Figure 1. Minimum temperature profile recommendation for reflow soldering process

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OTHER SPECIFICATIONS

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 60 sec
5	Time above 230 °C	Max 50 sec
6	Time above 250 °C	Max 10 sec
7	Peak temperature in reflow	260 °C for 5 seconds
8	Temperature gradient in cooling	Max -5 °C/s

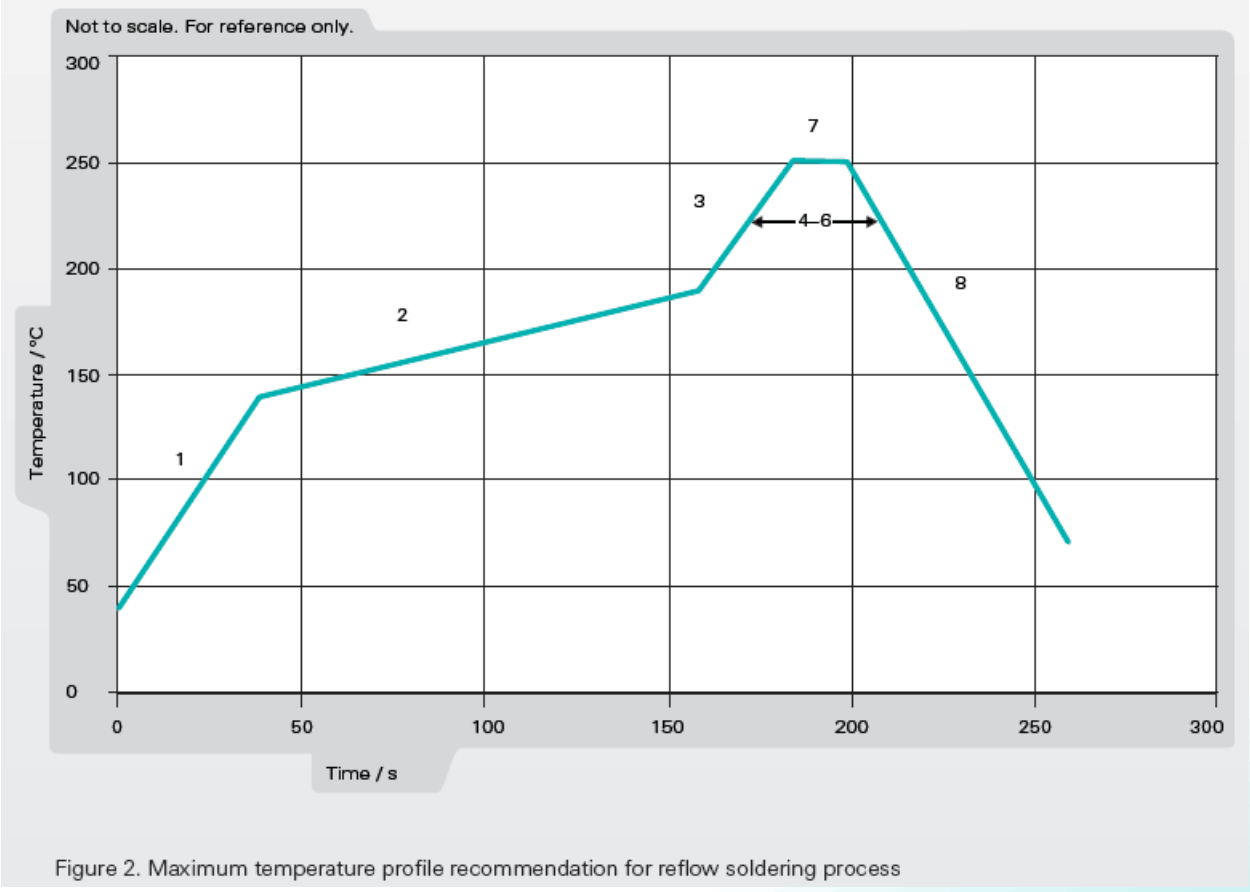

Figure 2. Maximum temperature profile recommendation for reflow soldering process

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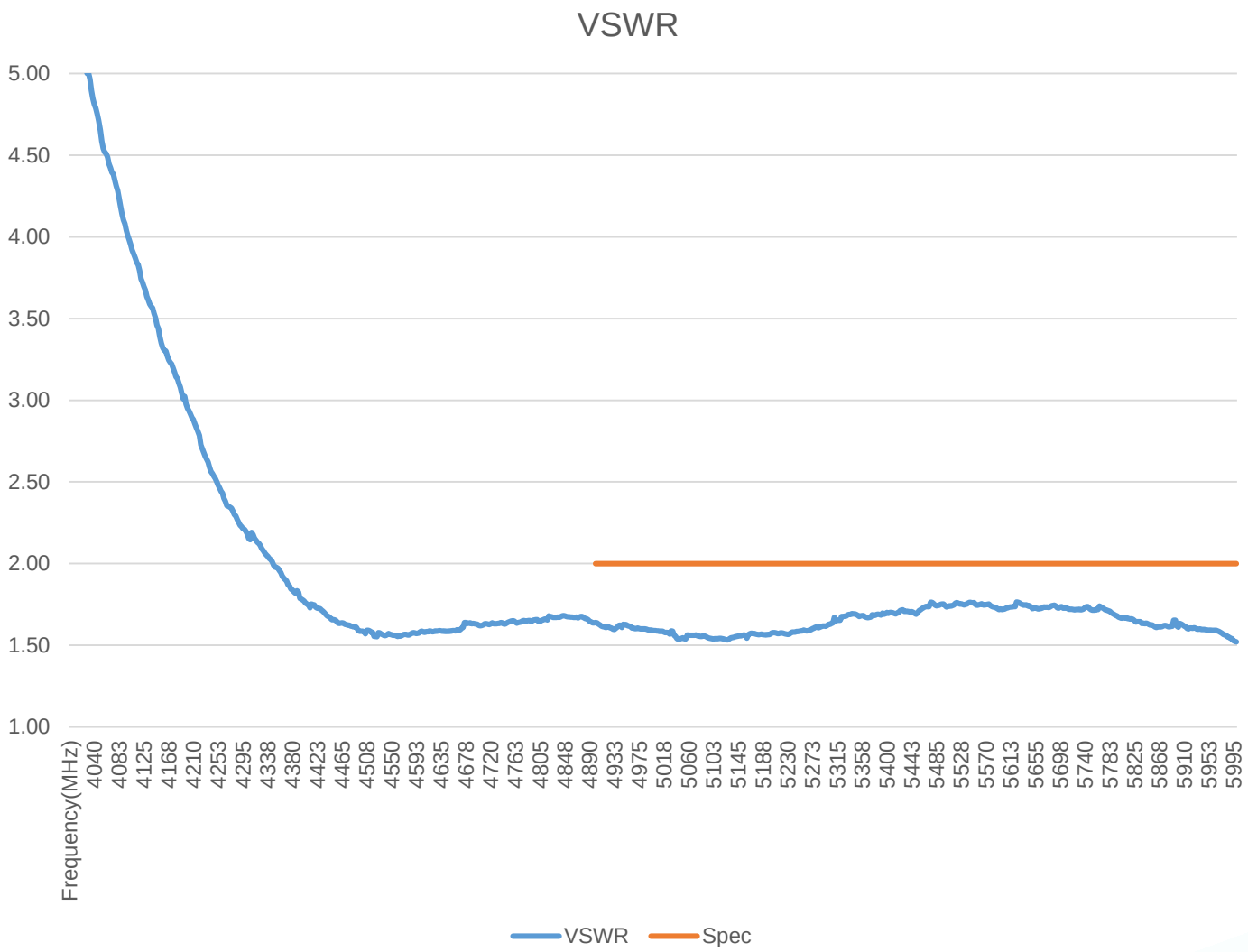
CHARTS

VSWR



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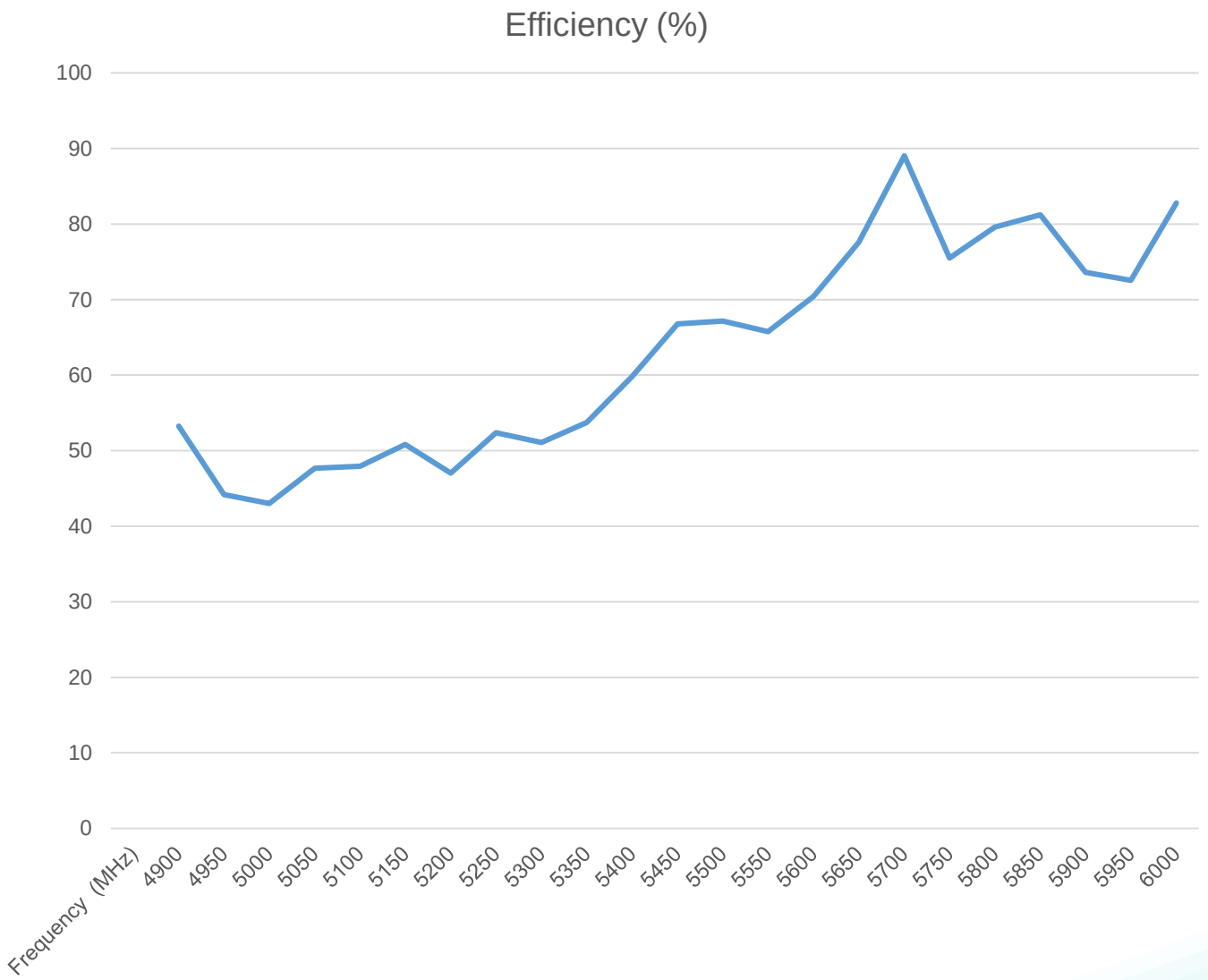
CHARTS

Efficiency(%)



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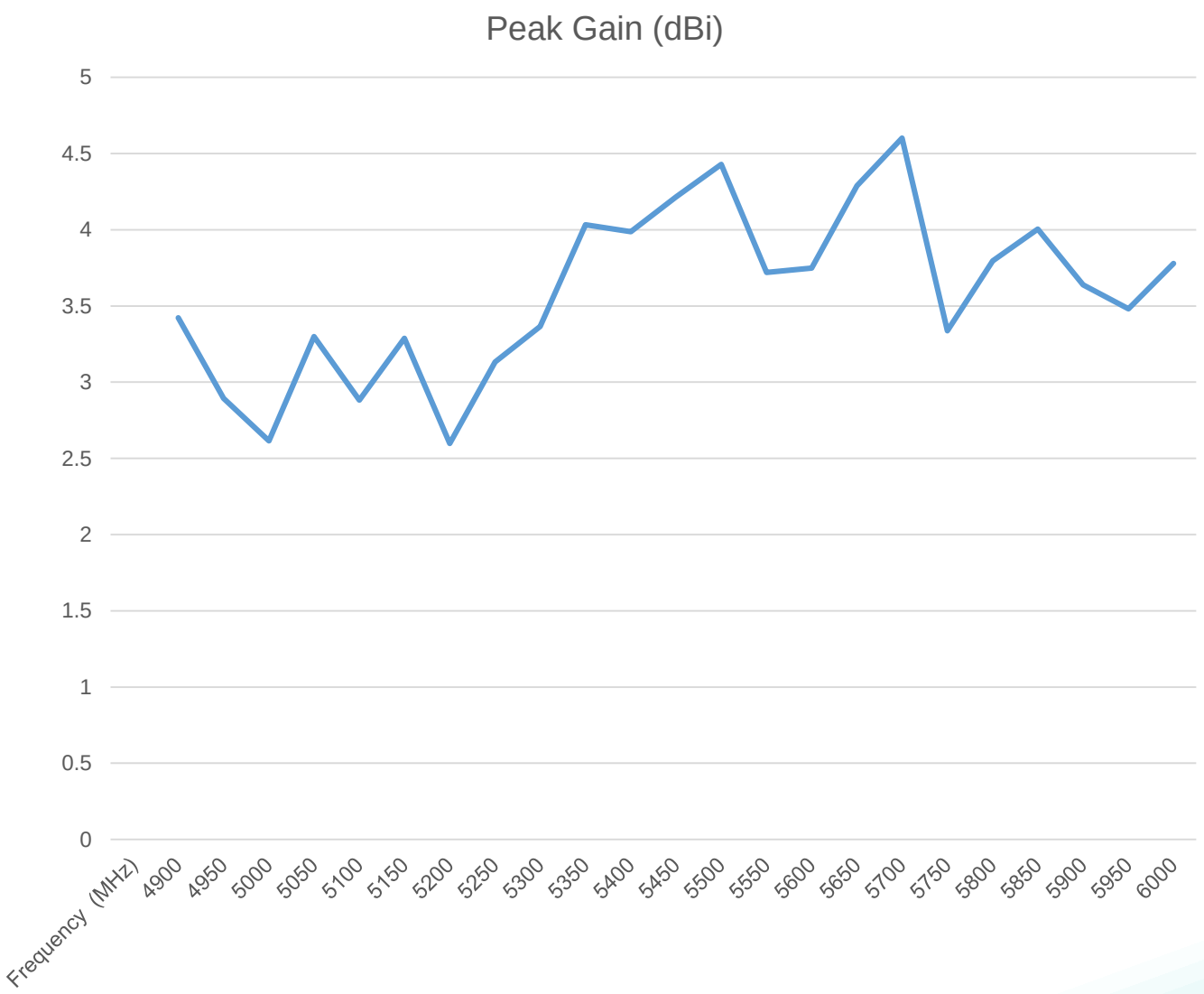
CHARTS

Peak Gain (dBi)



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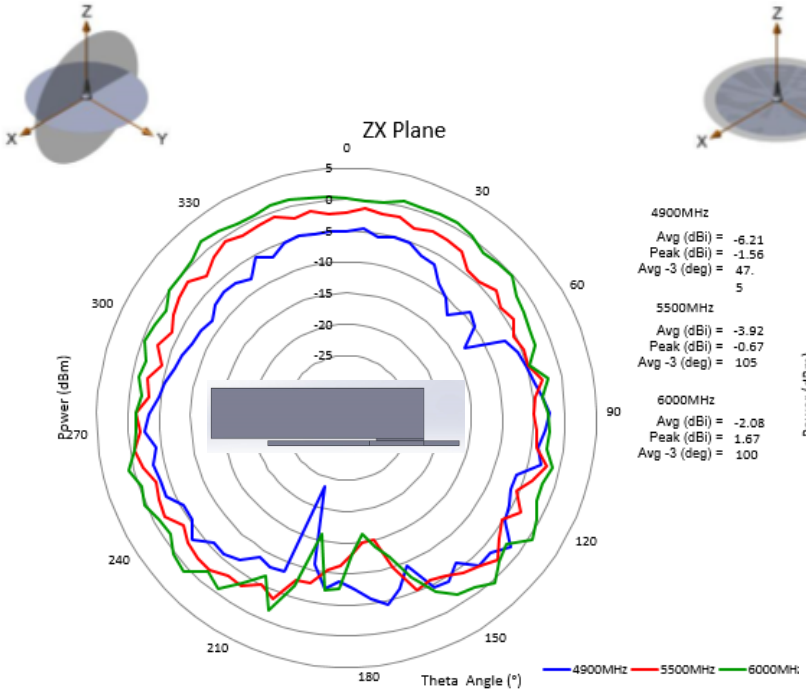
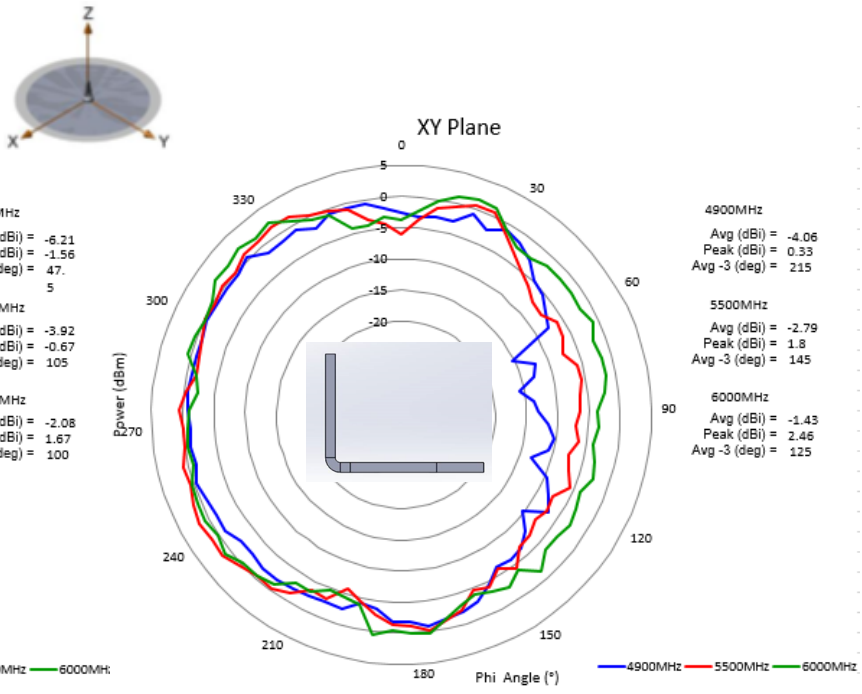
CHARTS

Free Space Radiation Pattern

Elevation Plane



Horizontal Plane



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PACKAGING

Tape and Reel packing:
3000PCS/Tape and Reel
6000PCS/ Carton box

Tape Width : 24mm
Tape Material : Polystyrene





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