PulseLARSEN Antennas

TECHNICAL DATA SHEET

Description: 868MHz PCB SMT Antenna

Series: Domino

PART NUMBER: W3329

Features:

- 868MHz ISM antenna
- Size 21.85 x 5 x 3 mm
- Efficiency 60%
- Nominal impedance 50 Ω
- Fully SMD and Reflow/IR/Wave- soldering compatible

Applications:

- 868MHz radios
- M2M
- IoT
- SigFox
- LoRa

All dimensions are in mm / inches

Preliminary

RoHS COMPLIANT

Issue: 1718P

For more information:

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Description: 868MHz PCB SMT Antenna

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ELECTRICAL SPECIFICATIONS

Frequency	868 MHz
Nominal Impedance	50Ω
Return loss	-10 dB
Total Efficiency	60 %
Peak Gain	0.17 dBi
Maximum power input	5 W

(*) All RF parameters measured on Pulse reference test PCB

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MECHANICAL SPECIFICATIONS

Color	Black	
Size(L X W X T)	21.85 x 5 x 3	mm
Weight	1.3	g
Fixing system	SMD	
MSL level	3	

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40/+85	° C
Temperature	-40/+85	° C
Humidity	93% RH @ 30° C	24 hours
Drop test	1	m

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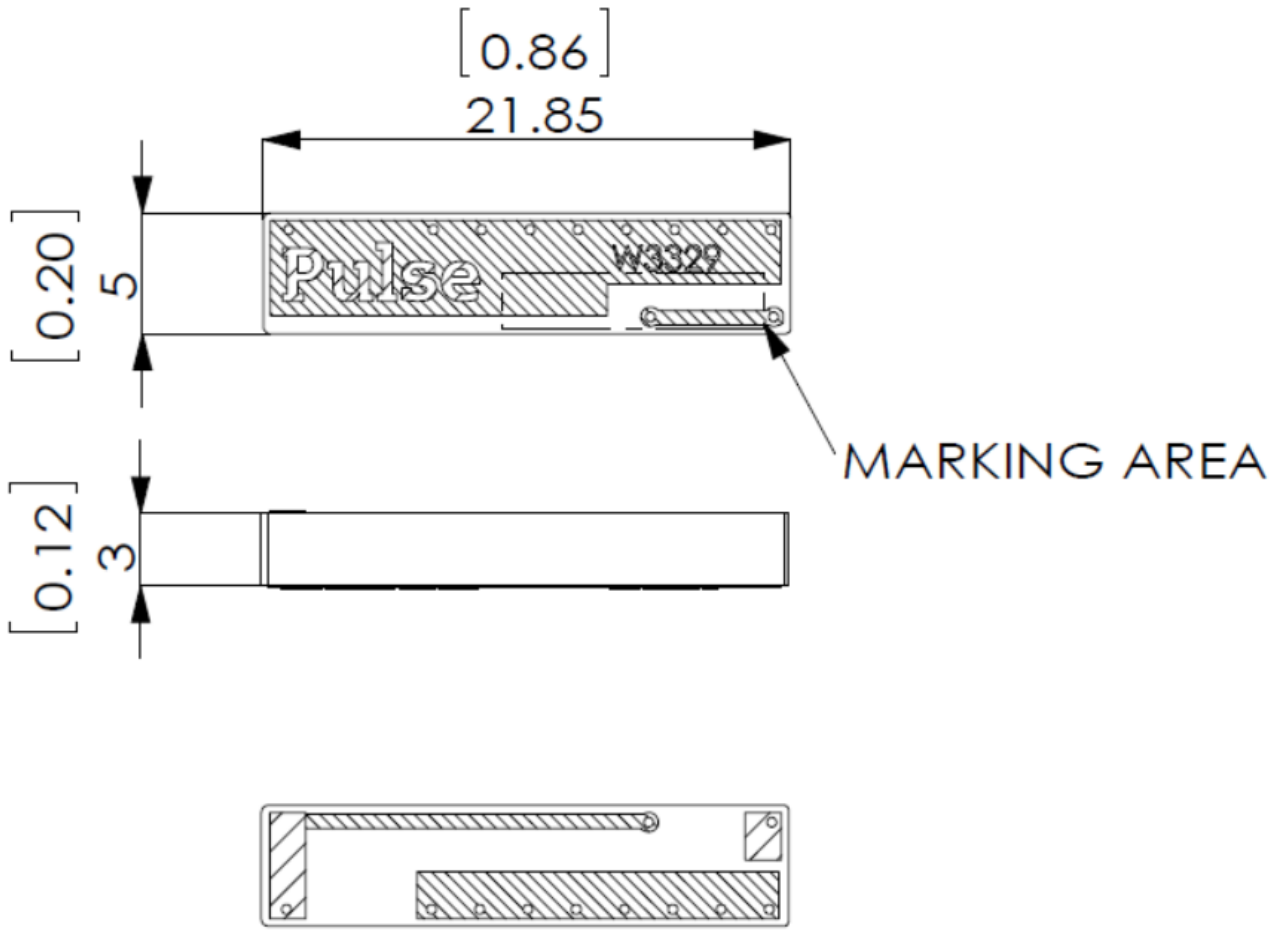
MECHANICAL DRAWING



DIMENSION UNIT IS [INCH]MM

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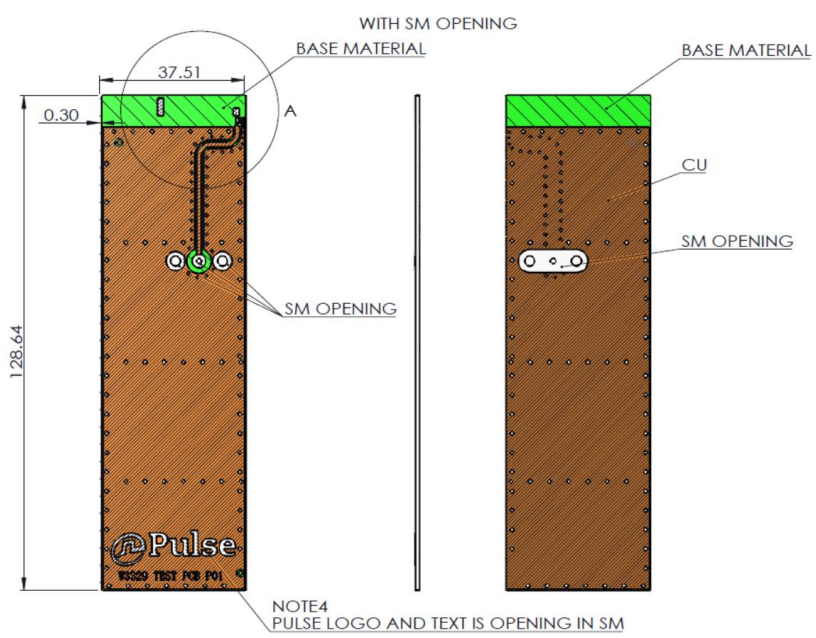
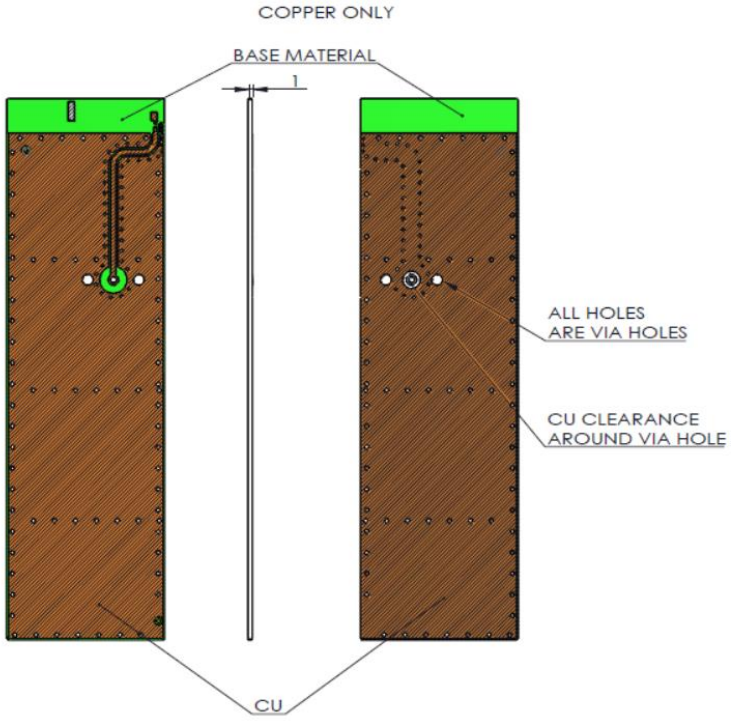
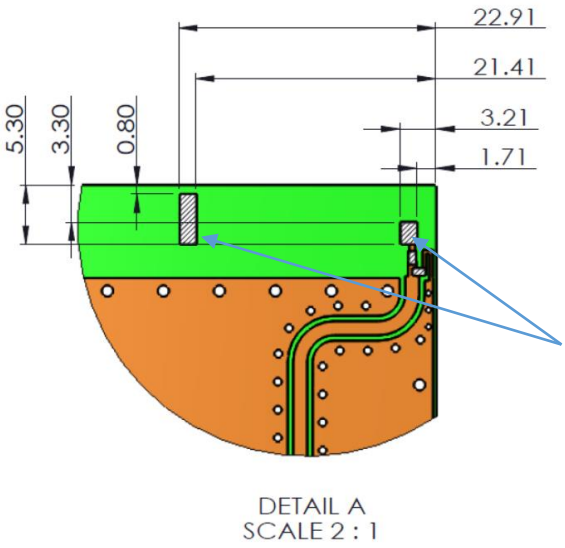
TEST SETUP

Pulse reference test PCB for W3329 antenna







Antenna soldering pad

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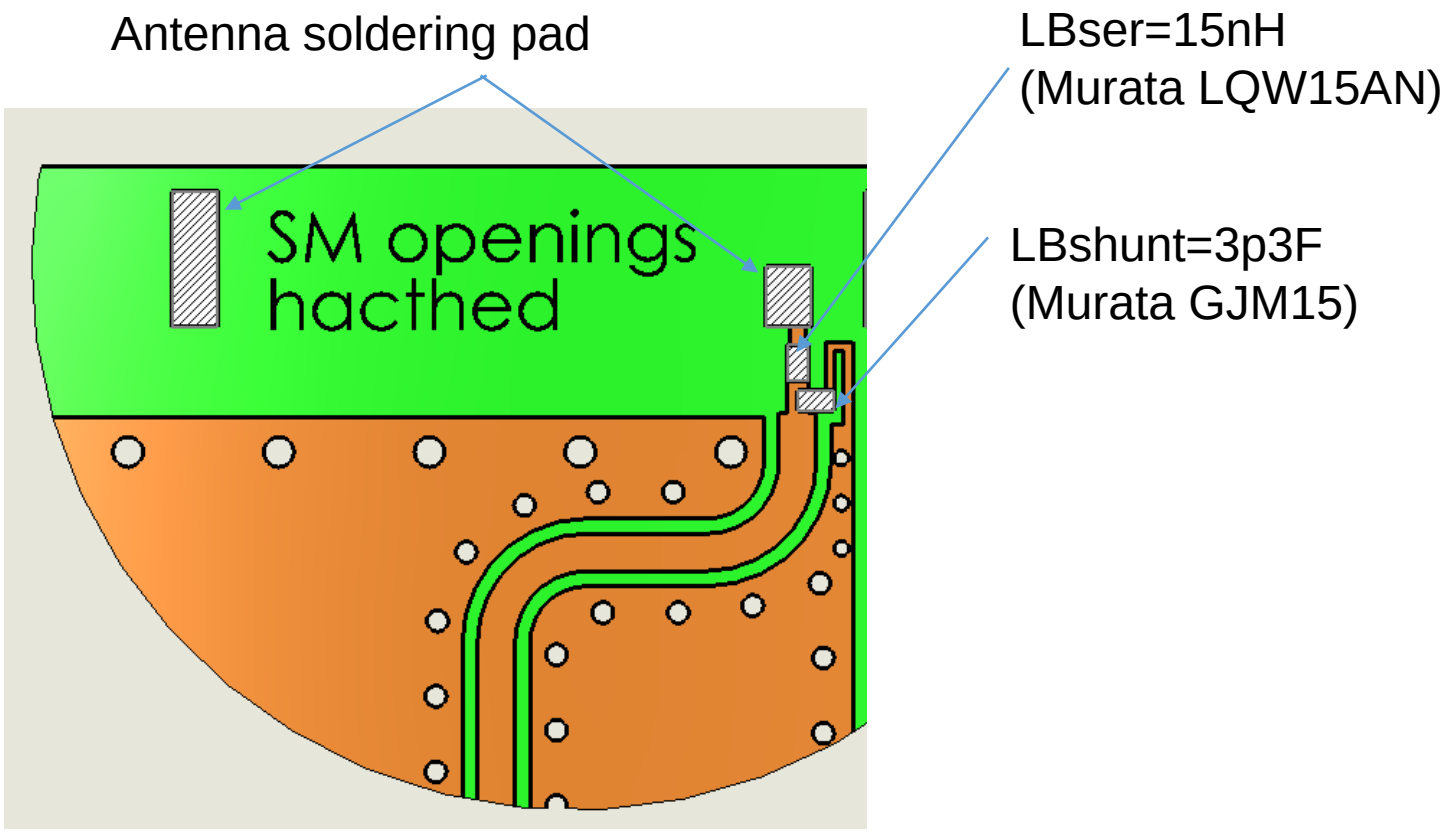
TEST SETUP



Recommended test board PCB layout for electrical characteristic measurement. Substrate material FR4, thickness 1mm

All dimensions are in mm

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TEST SETUP

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

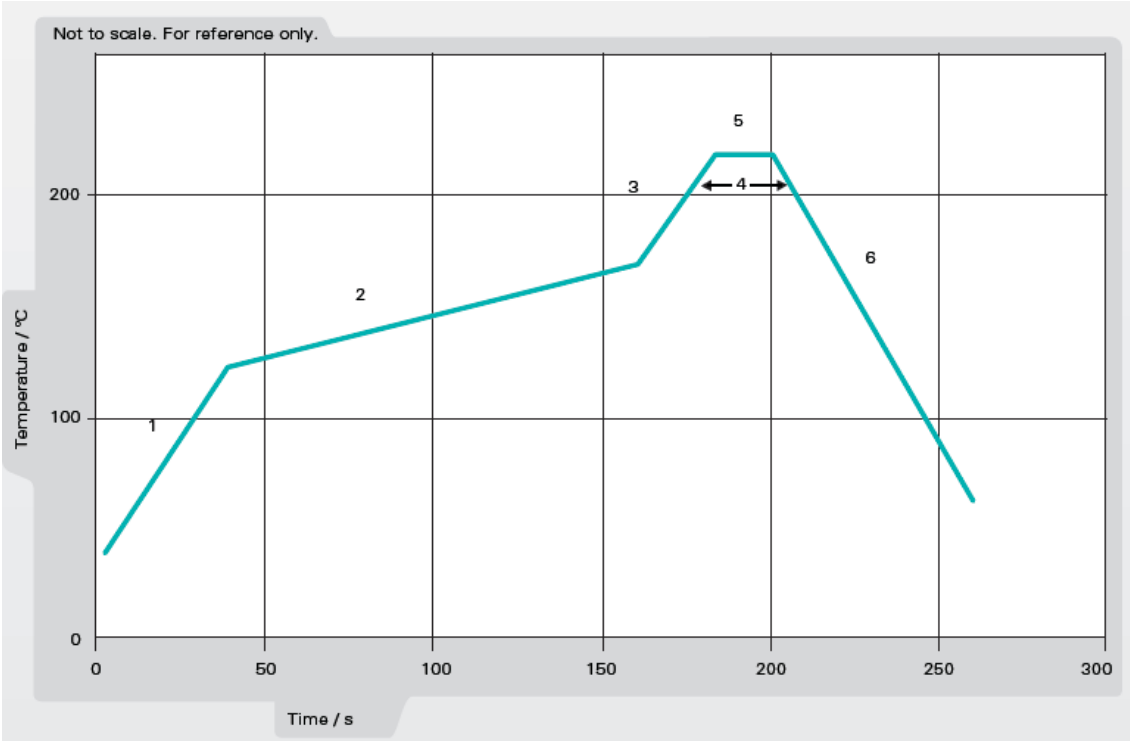

Figure 1. Minimum temperature profile recommendation for reflow soldering process

Description: 868MHz PCB SMT Antenna

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TEST SETUP

	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

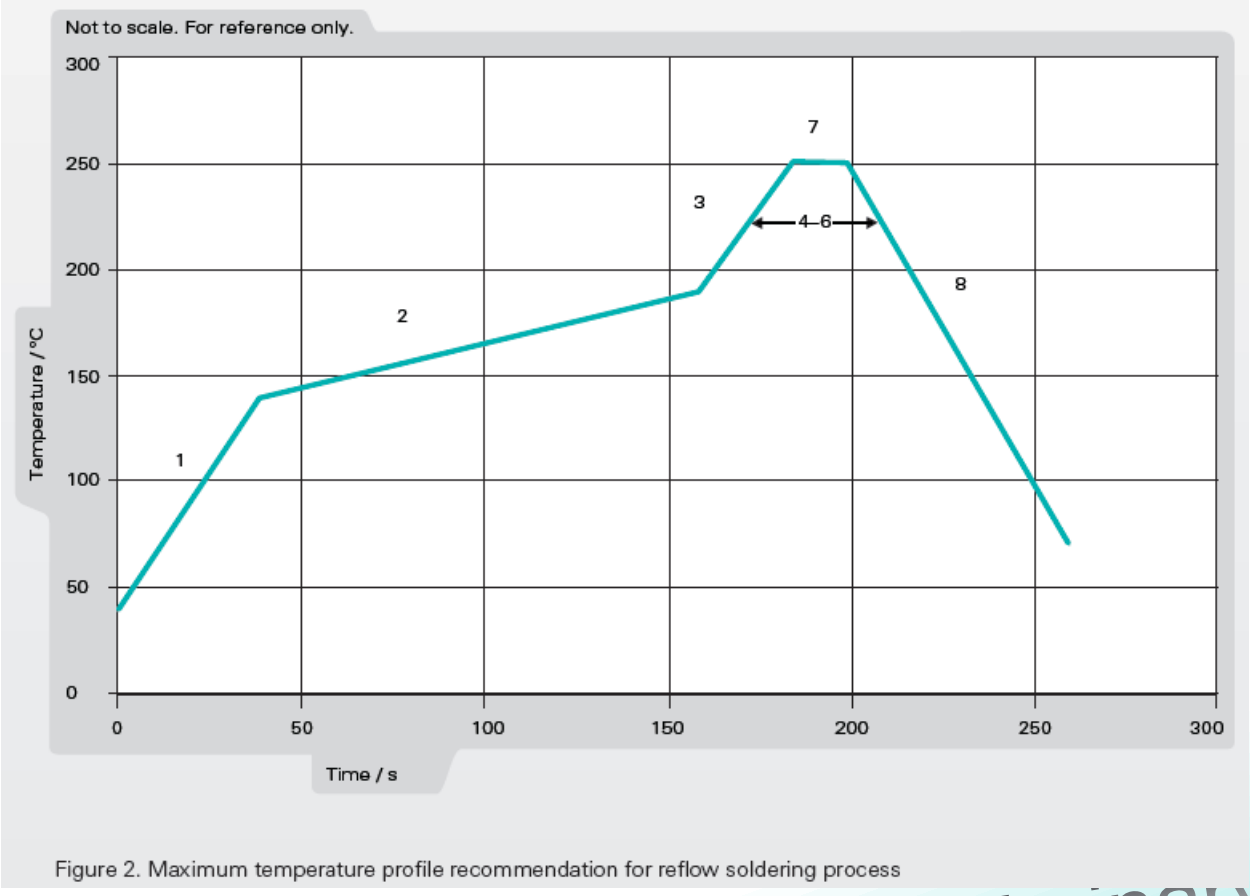

Figure 2. Maximum temperature profile recommendation for reflow soldering process

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CHARTS

Return Loss

Preliminary

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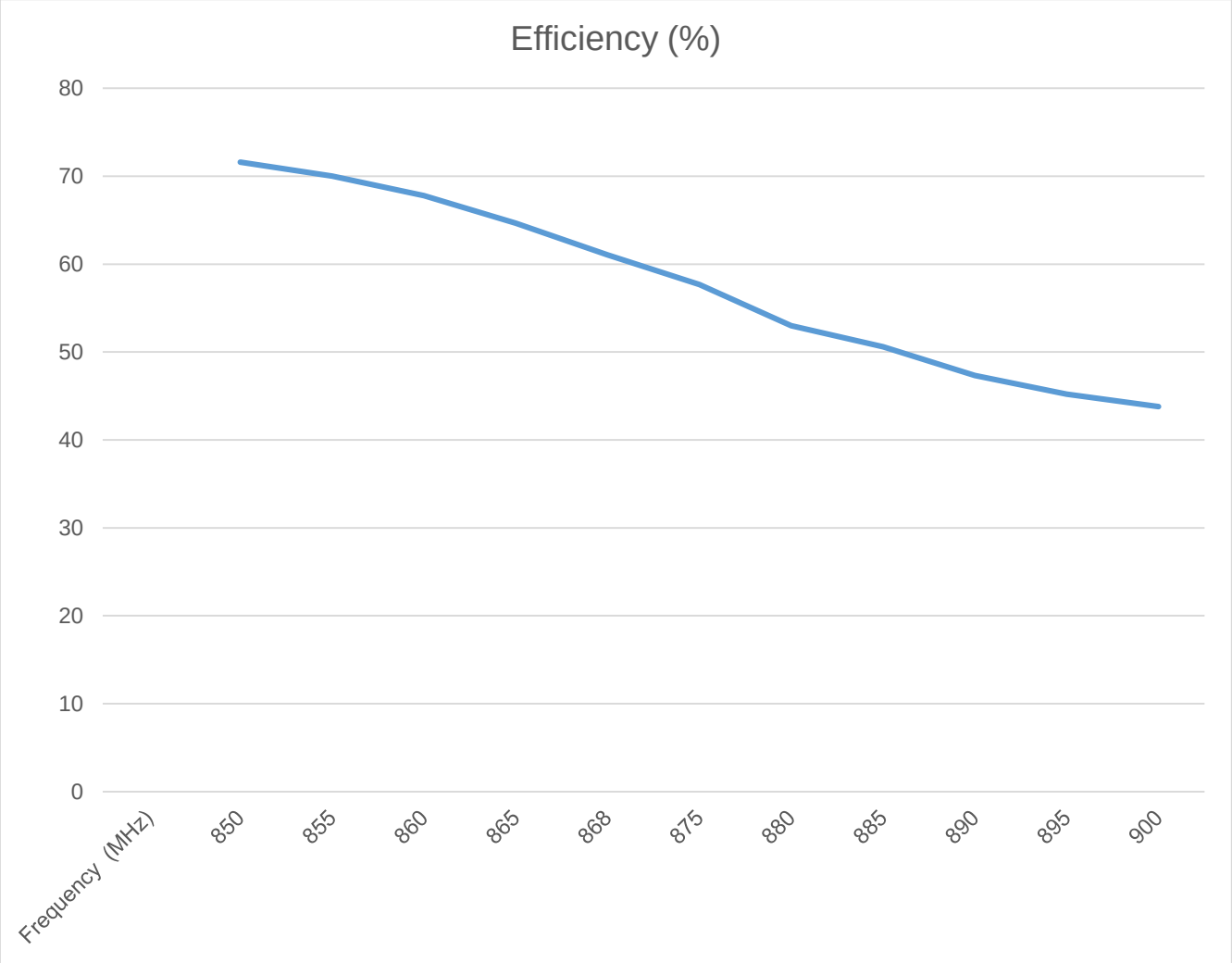
CHARTS

Efficiency(%)



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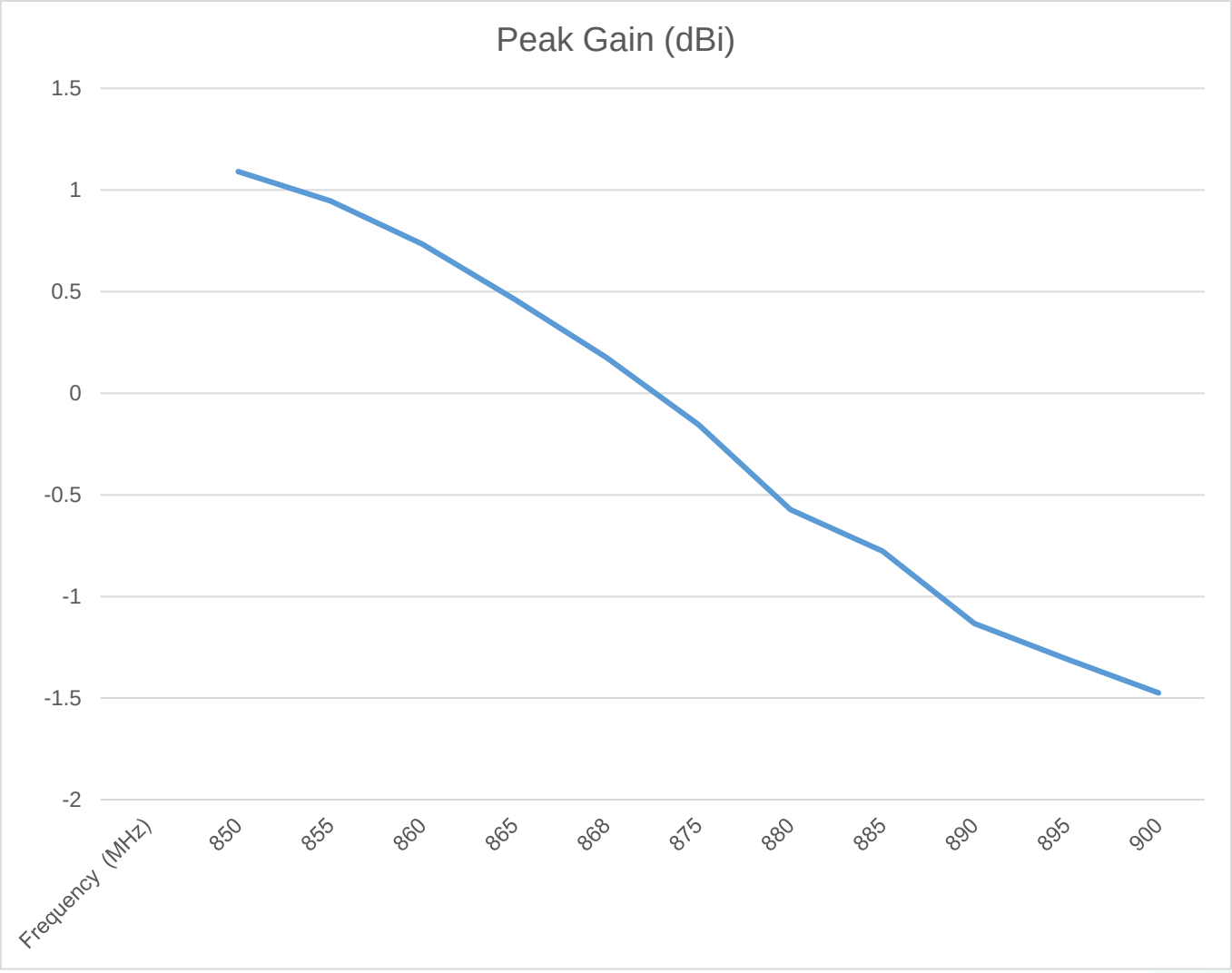
CHARTS

Peak Gain(dBi)



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RoHS COMPLIANT

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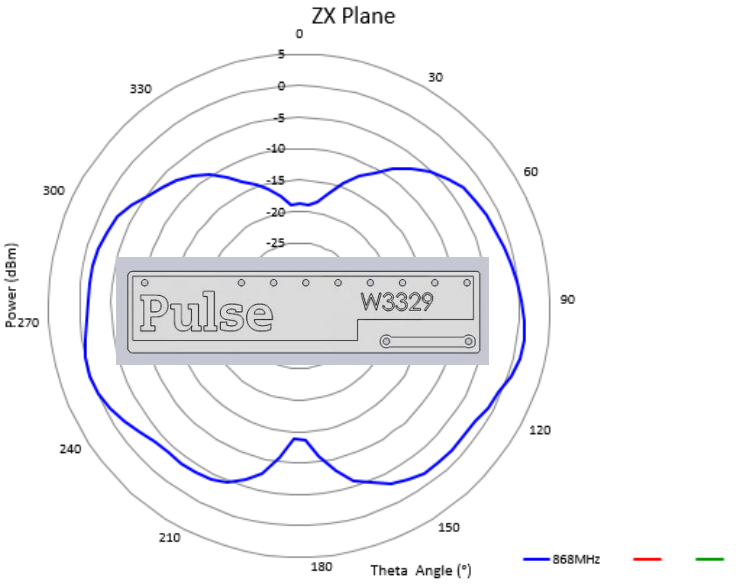
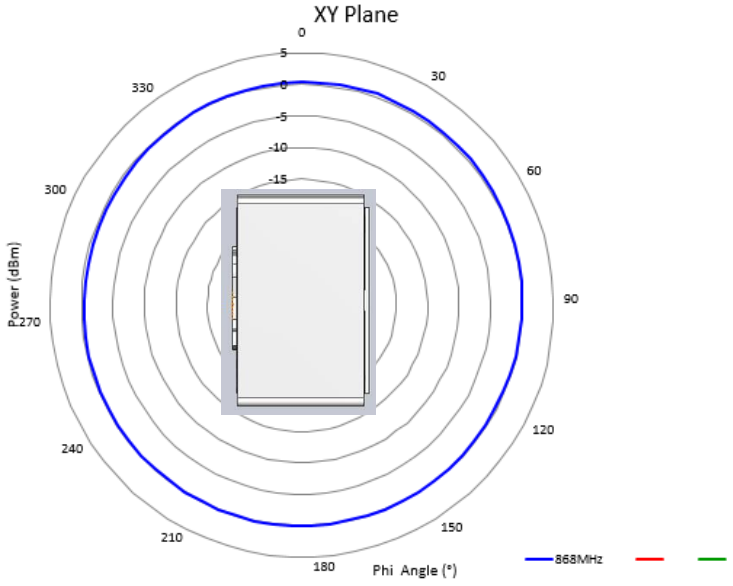
CHARTS

Free Space Radiation Pattern

Elevation Plane



Horizontal Plane



Preliminary

RoHS COMPLIANT

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PACKAGING

Reel packing, 1400PCS/reel
2 Reels/Carton box
Total 2800PCS/Carton box

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