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

Issue: 1905

RoHS COMPLIANT

For more information:

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Tel: 49 7032 7806 0

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Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

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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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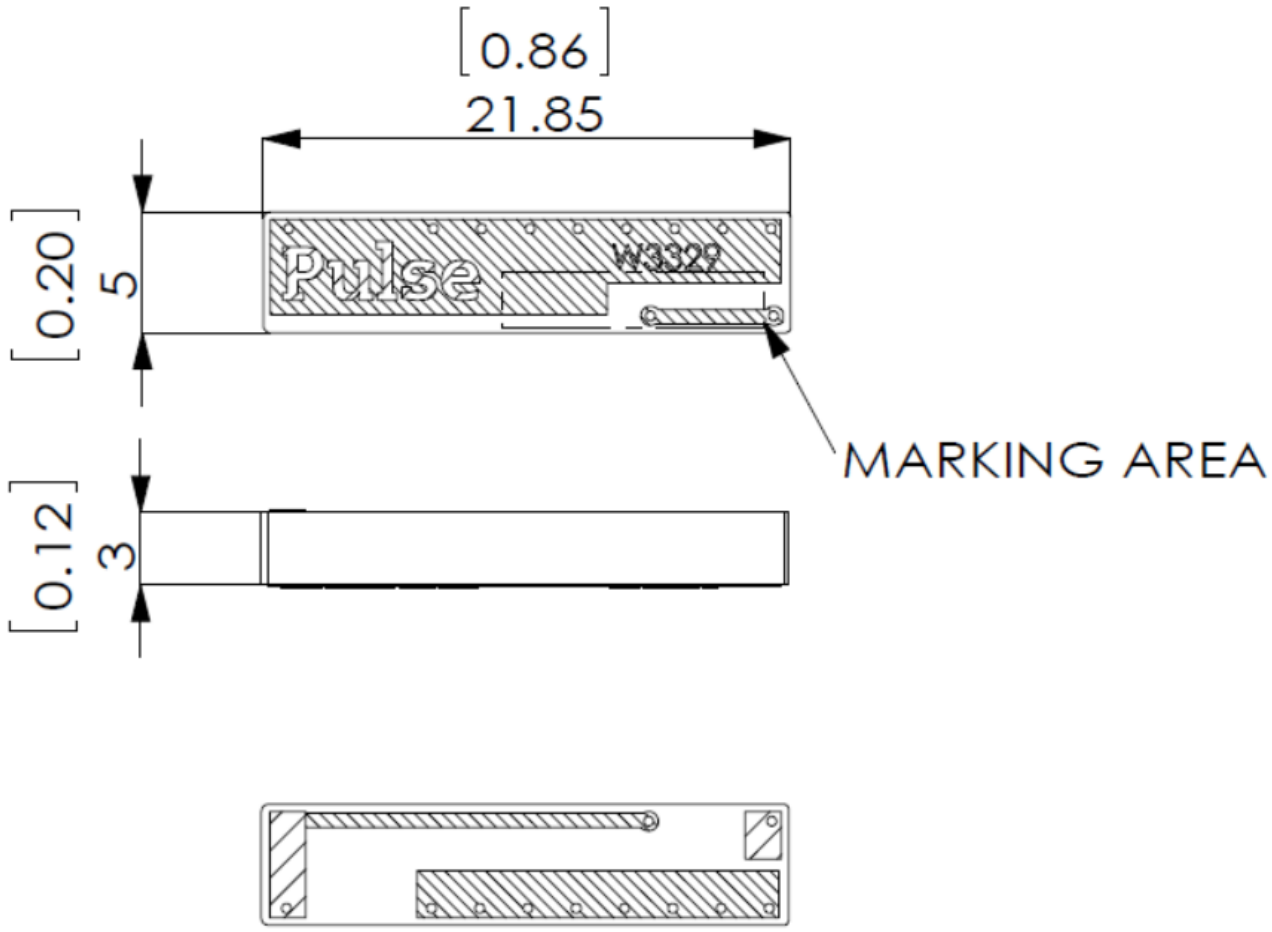
MECHANICAL DRAWING



DIMENSION UNIT IS [INCH]MM

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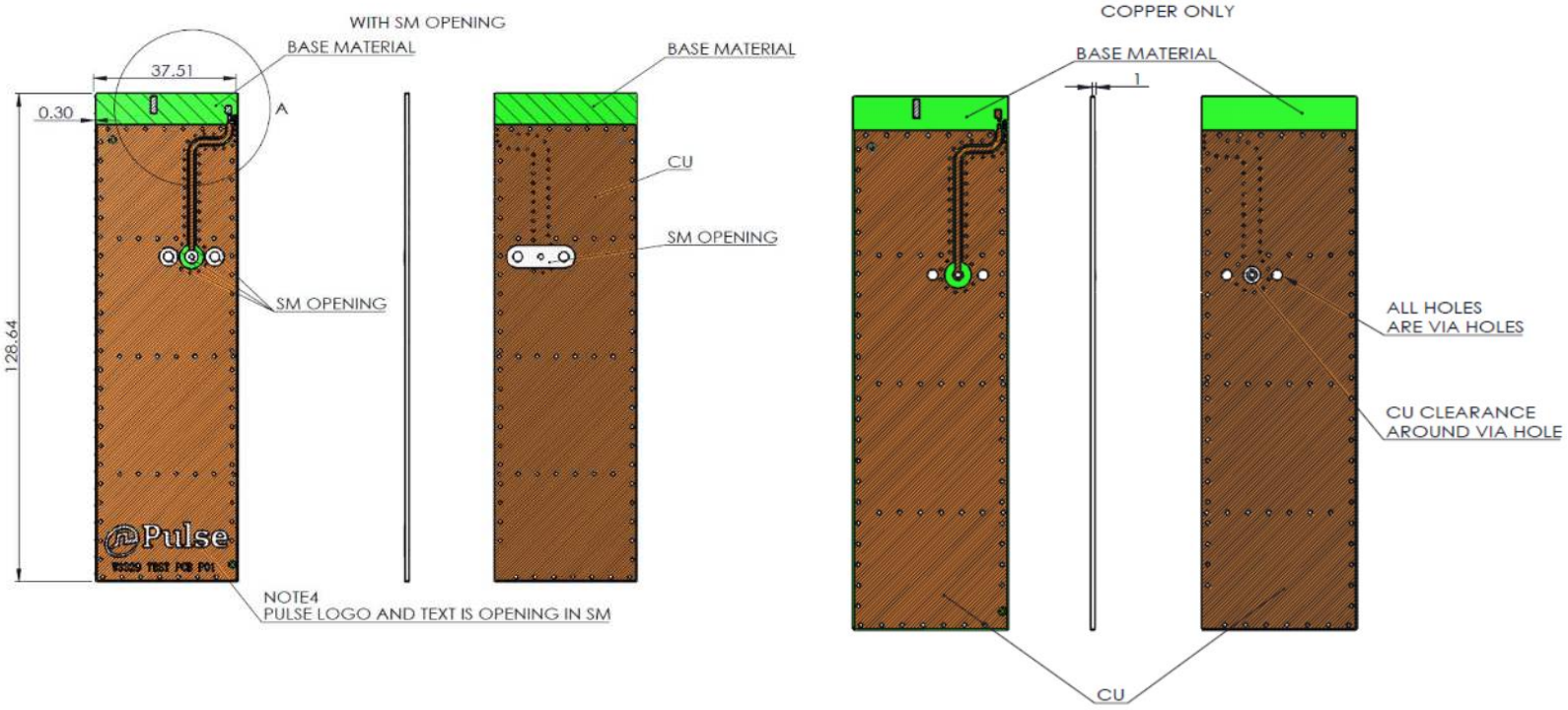
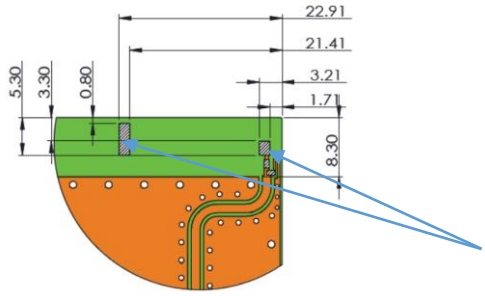
TEST SETUP

Pulse reference test PCB for W3329 antenna





Antenna soldering pad

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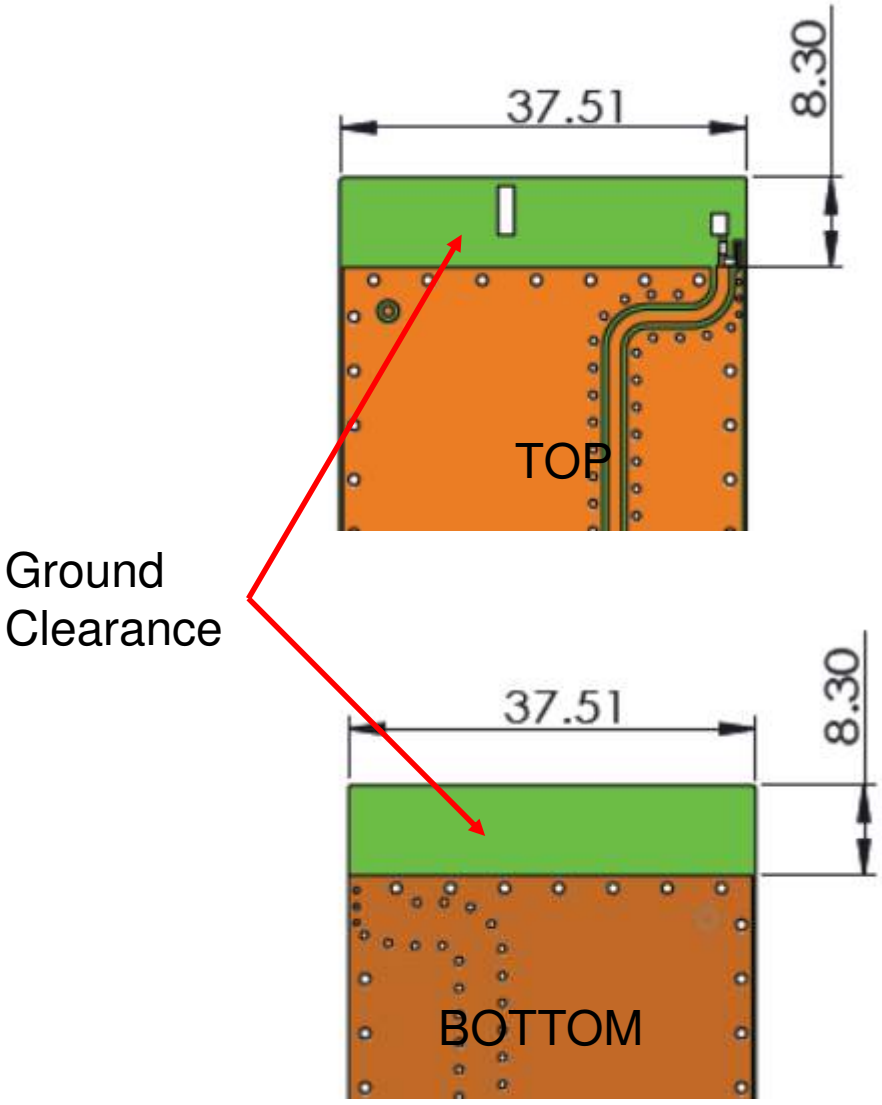
TEST SETUP

PWB ground clearance area (Top):37.5x8.3mm
PWB ground clearance area (Bottom):37.5x8.3mm



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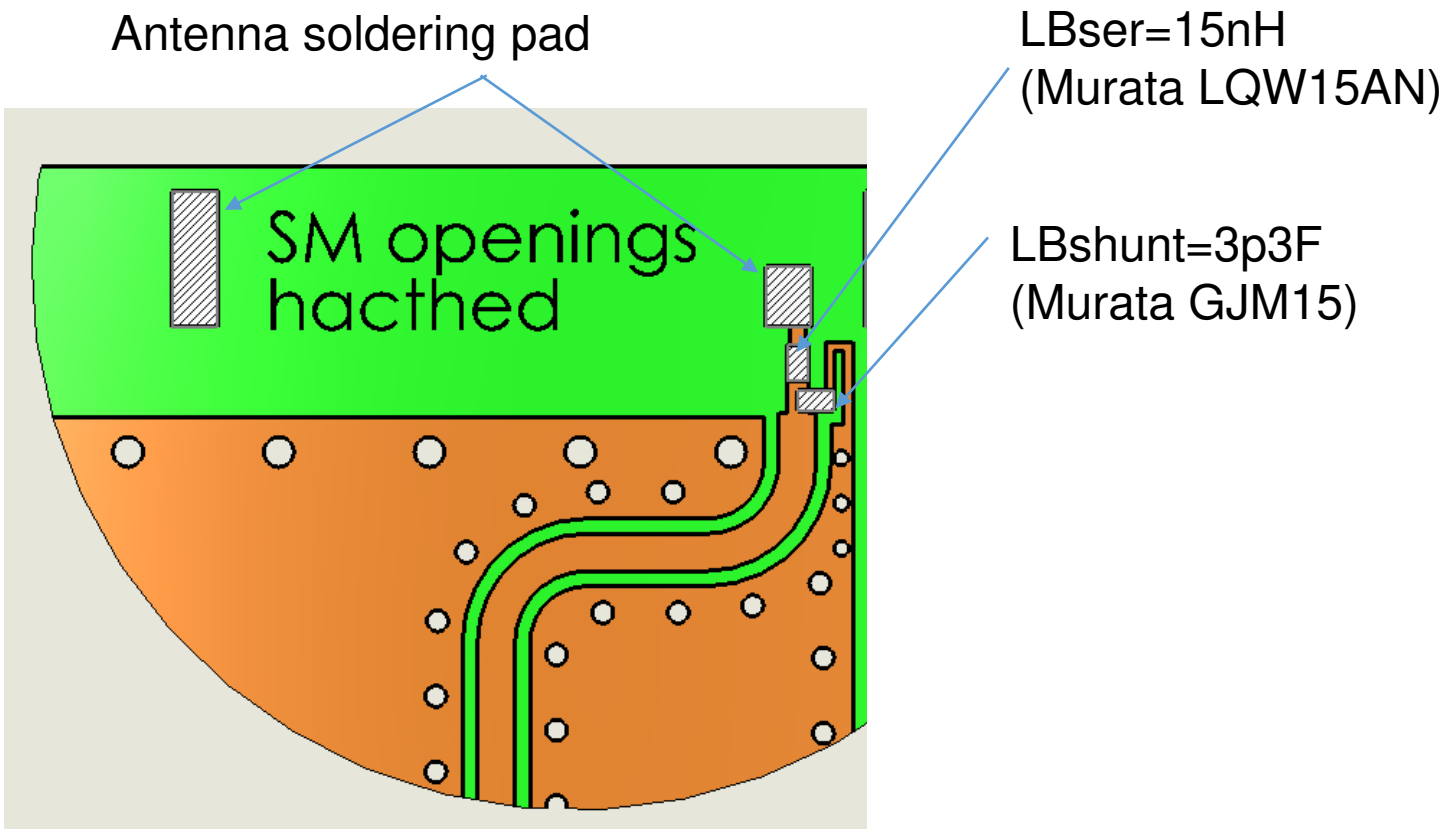
TEST SETUP



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

All dimensions are in mm

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

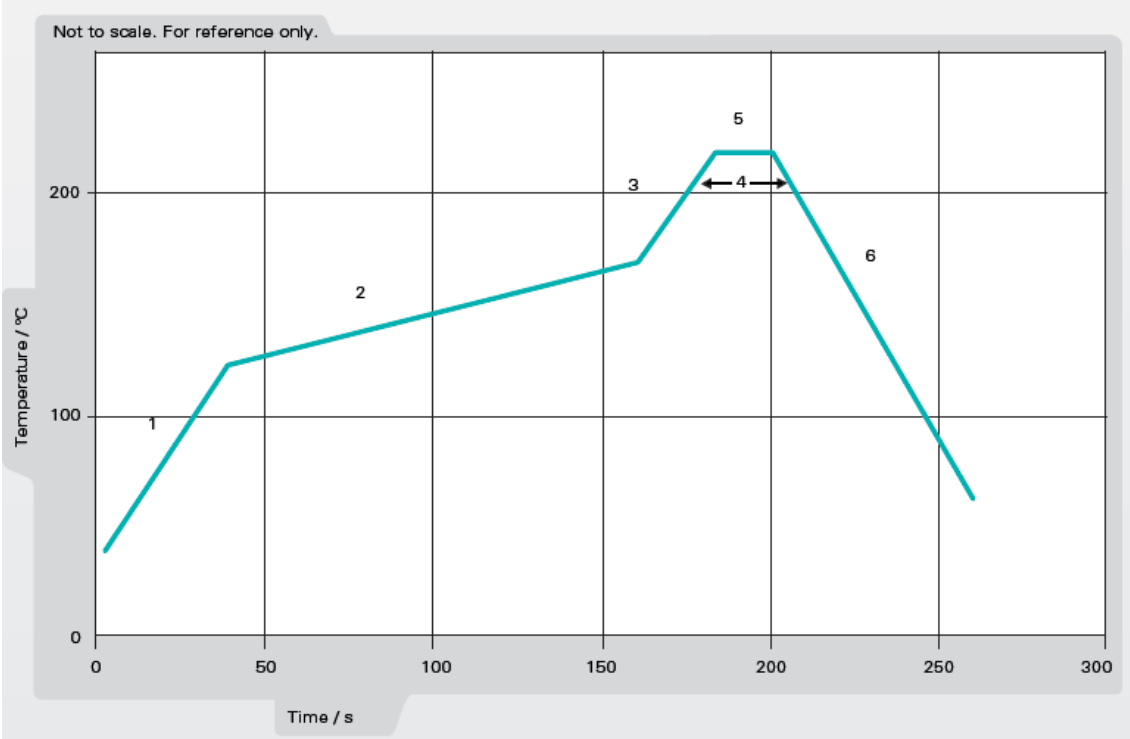


Figure 1. Minimum temperature profile recommendation for reflow soldering process

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

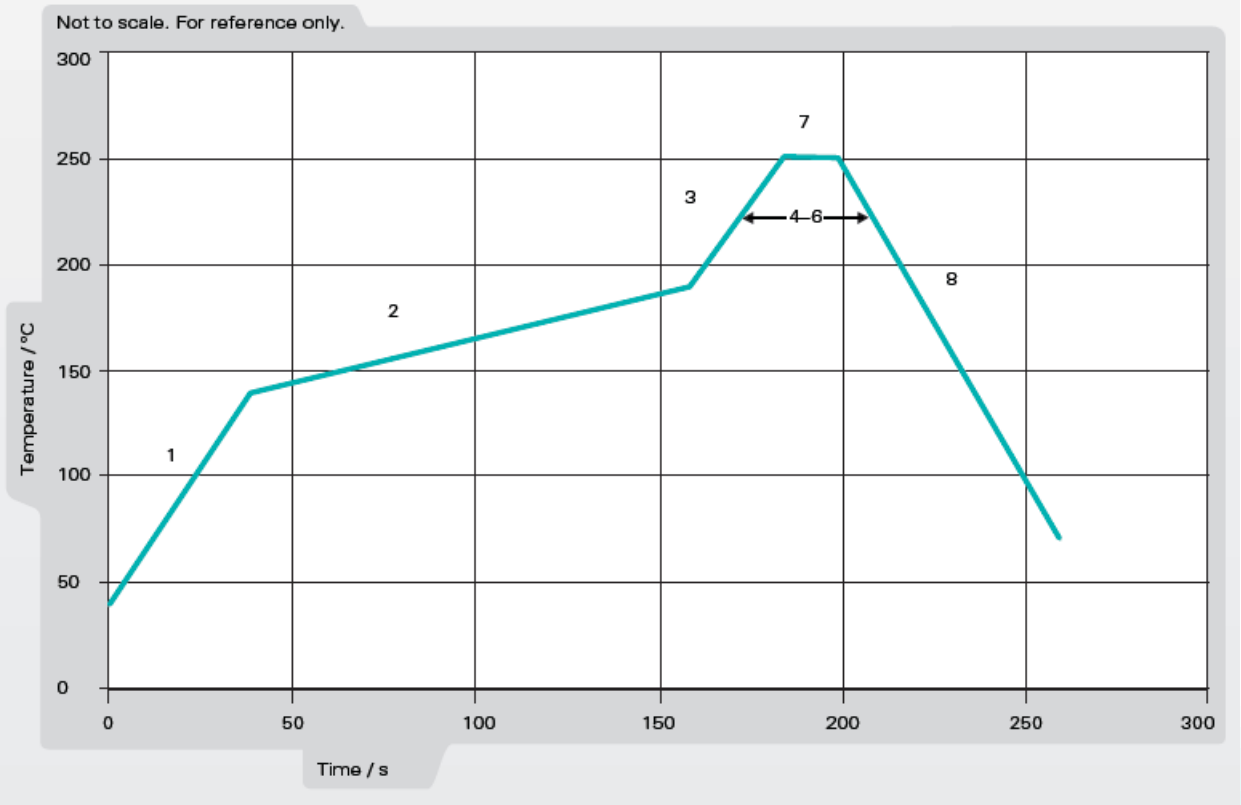

Figure 2. Maximum temperature profile recommendation for reflow soldering process

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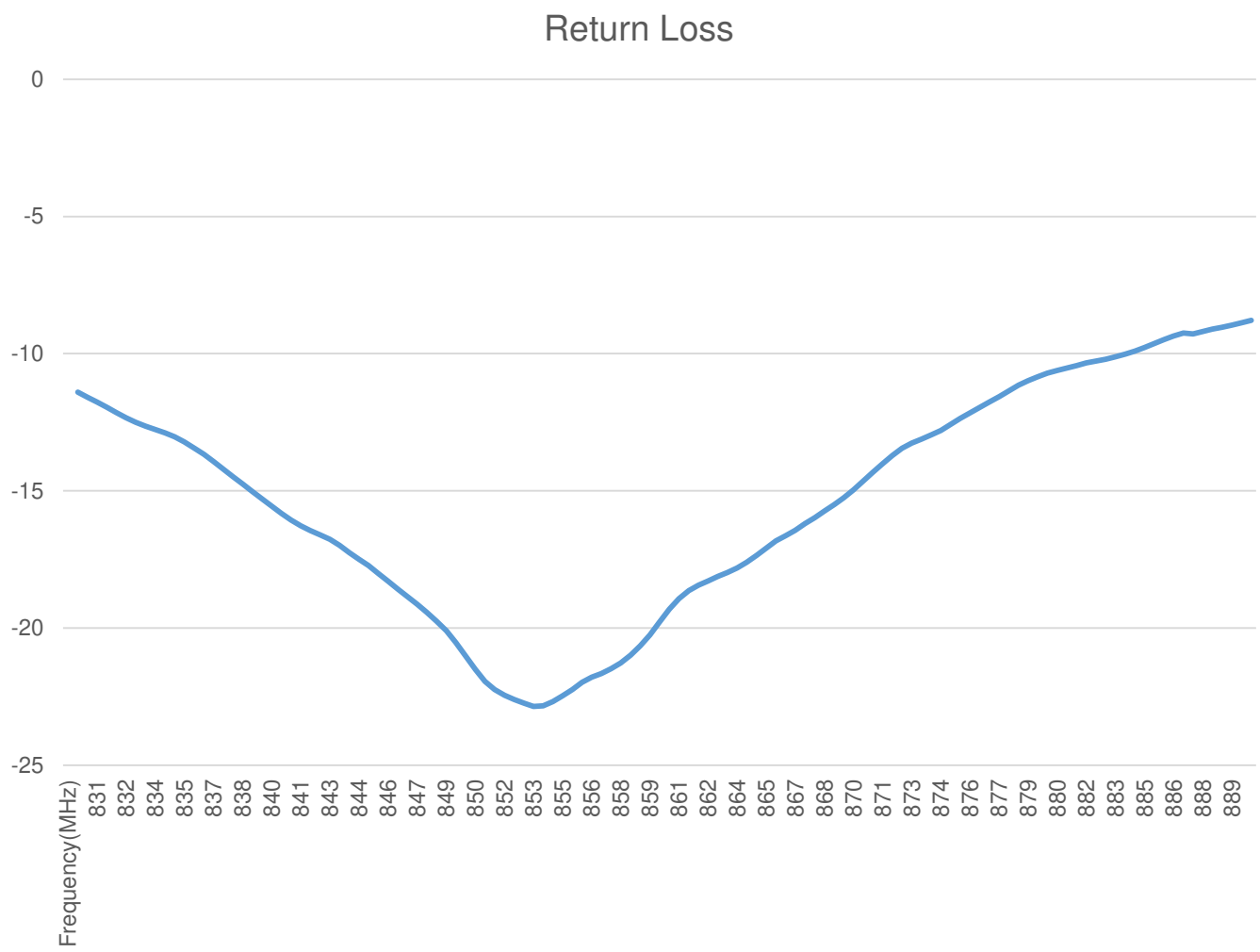
CHARTS

Return Loss



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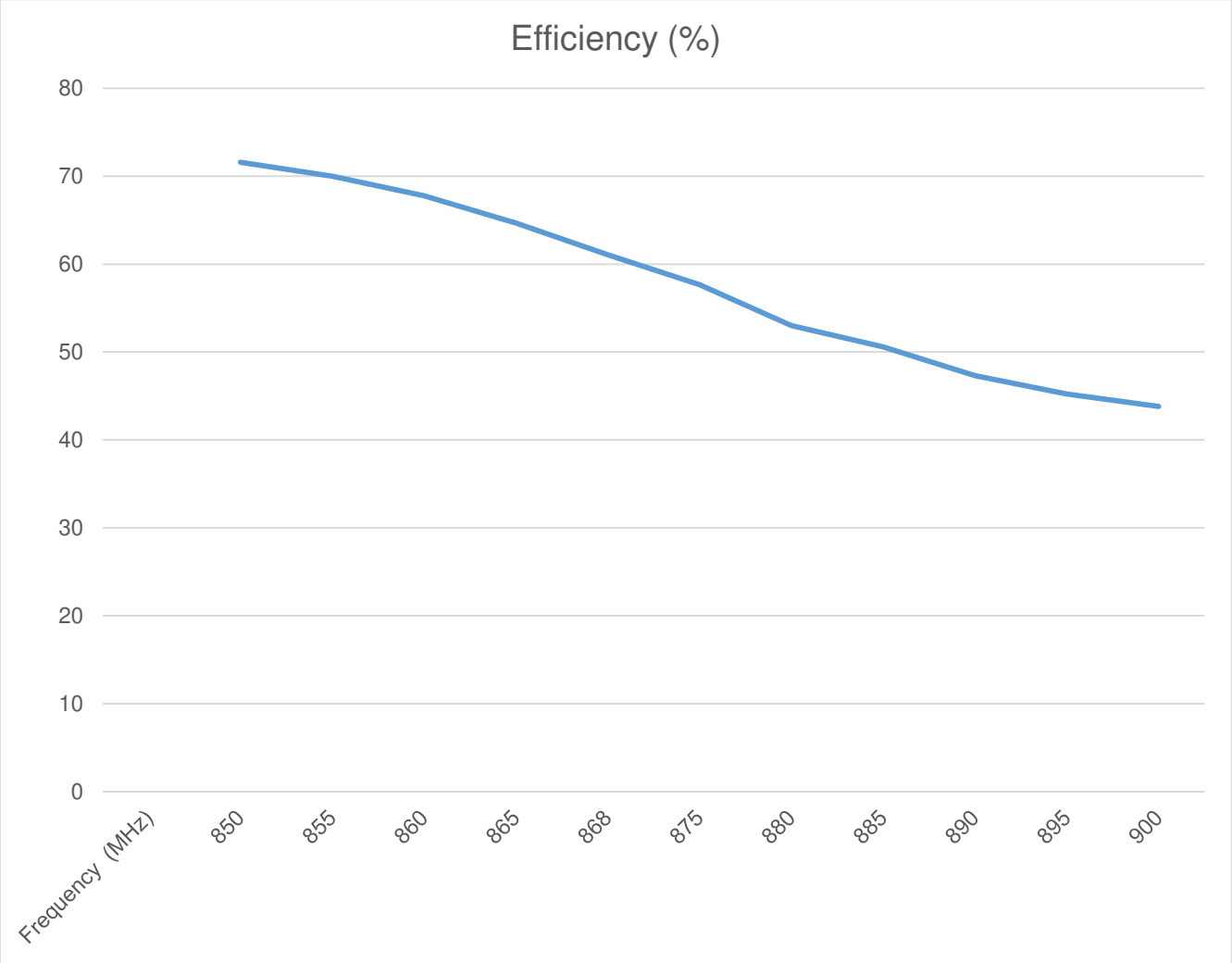
CHARTS

Efficiency(%)



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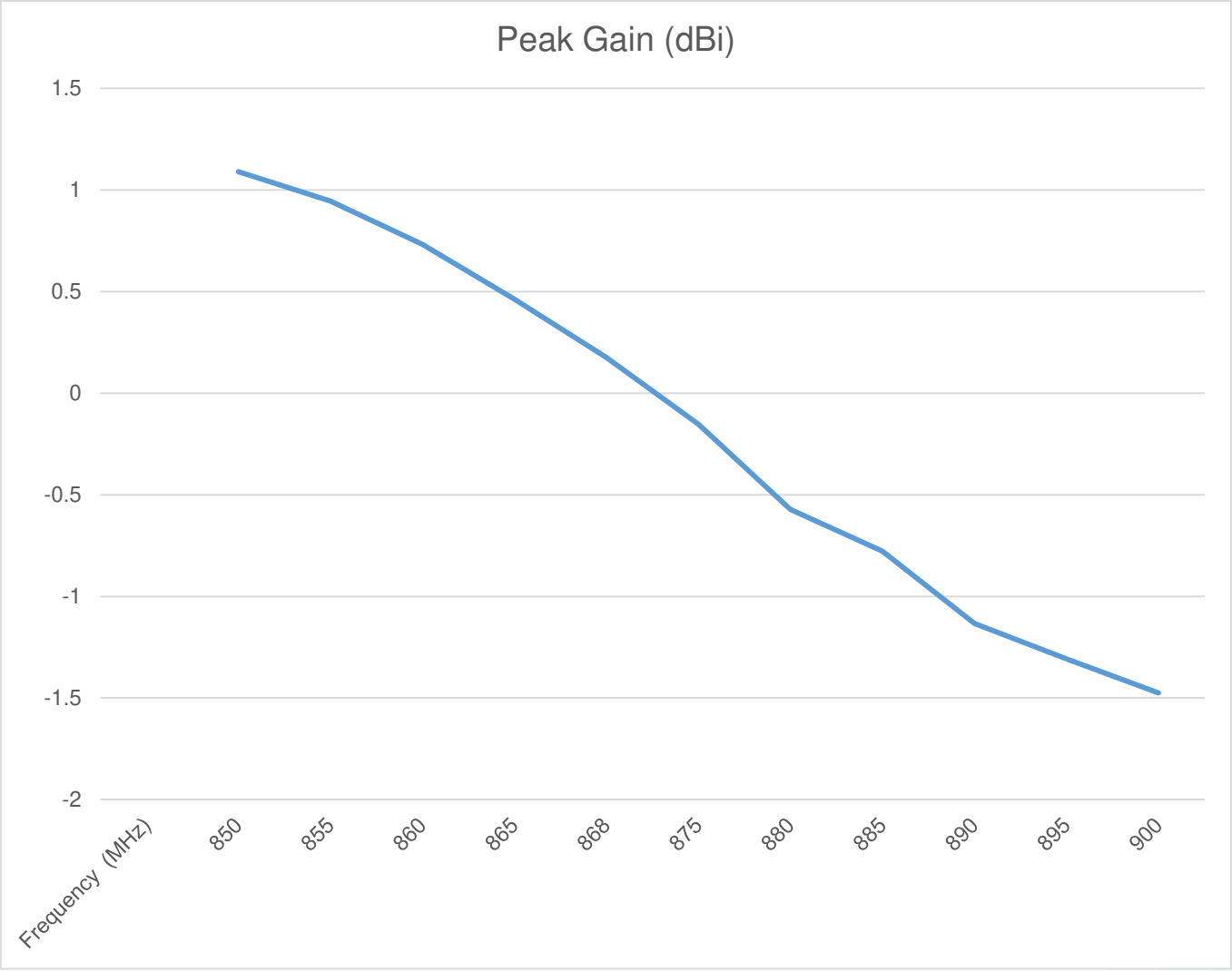
CHARTS

Peak Gain(dBi)



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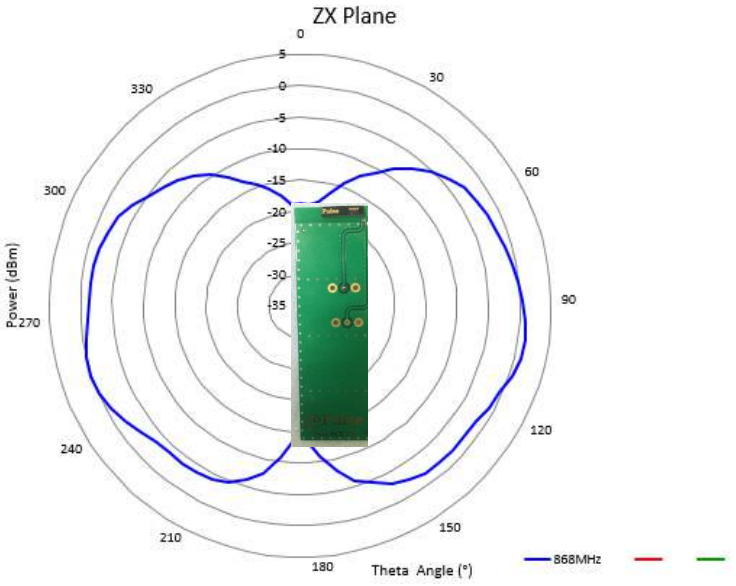
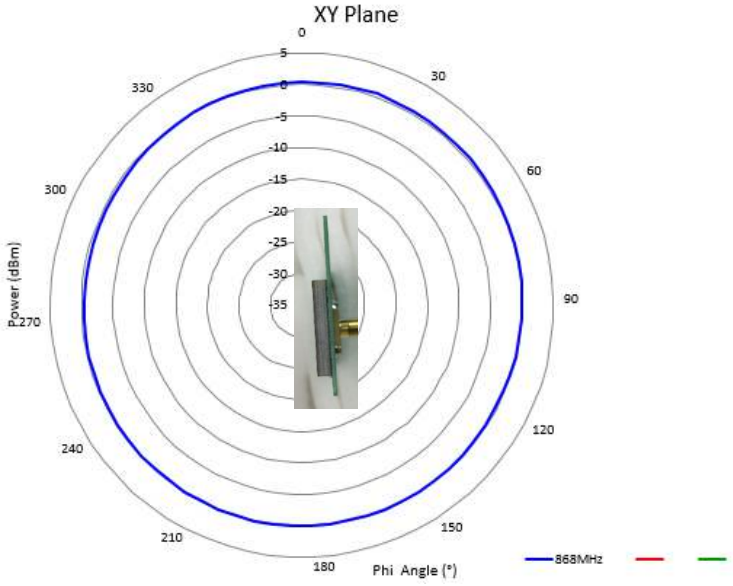
CHARTS

Free Space Radiation Pattern

Elevation Plane



Horizontal Plane



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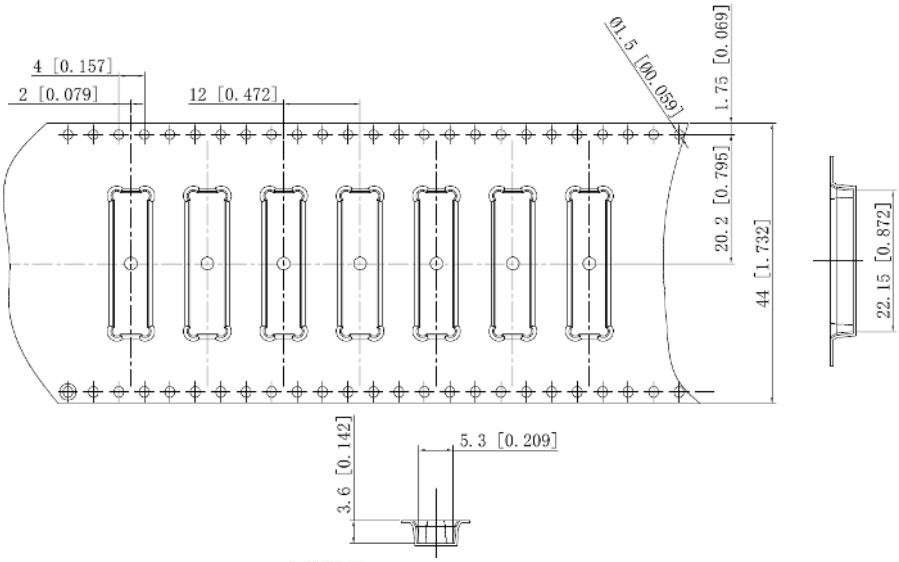
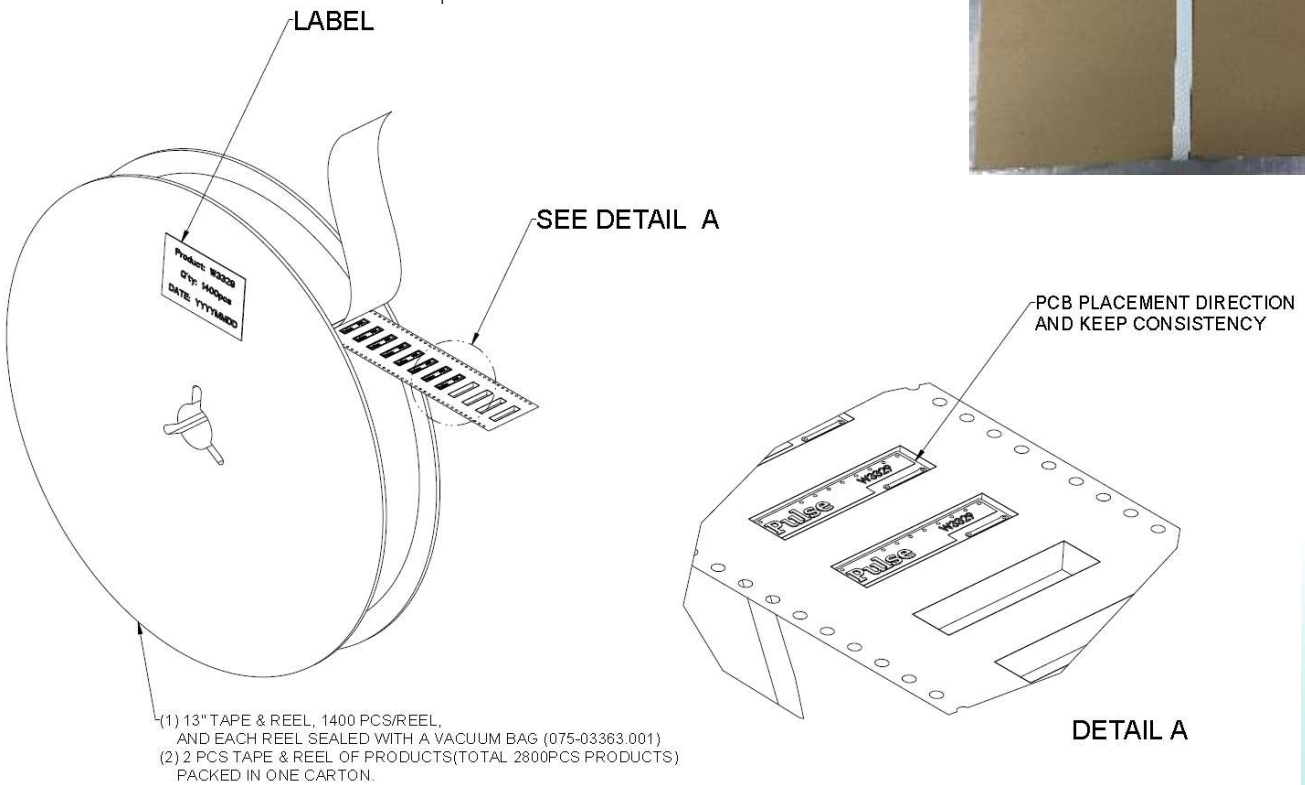
PACKAGING (TAPE & REEL)

Reel packing, 1400 PCS/Reel
2 Reels/Carton box, total 2800 PCS/Carton box





In the effort to improve our products, we reserve the right to make changes judged to be necessary.

RoHS COMPLIANT