

**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  $\Omega$
- Fully SMD and Reflow/IR/Wave- soldering compatible



### Applications:

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



All dimensions are in mm / inches

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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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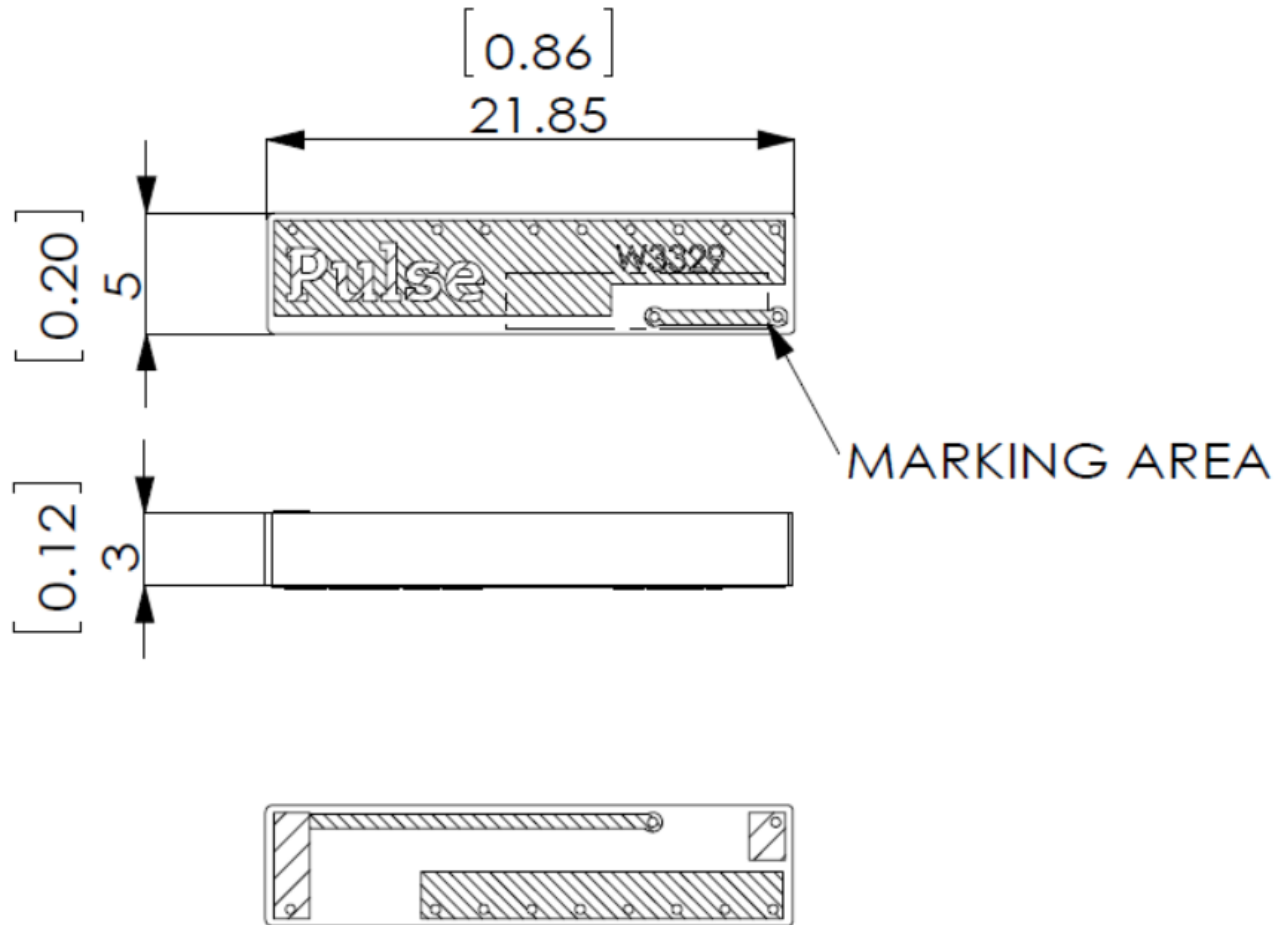
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MECHANICAL DRAWING



DIMENSION UNIT IS [INCH]MM

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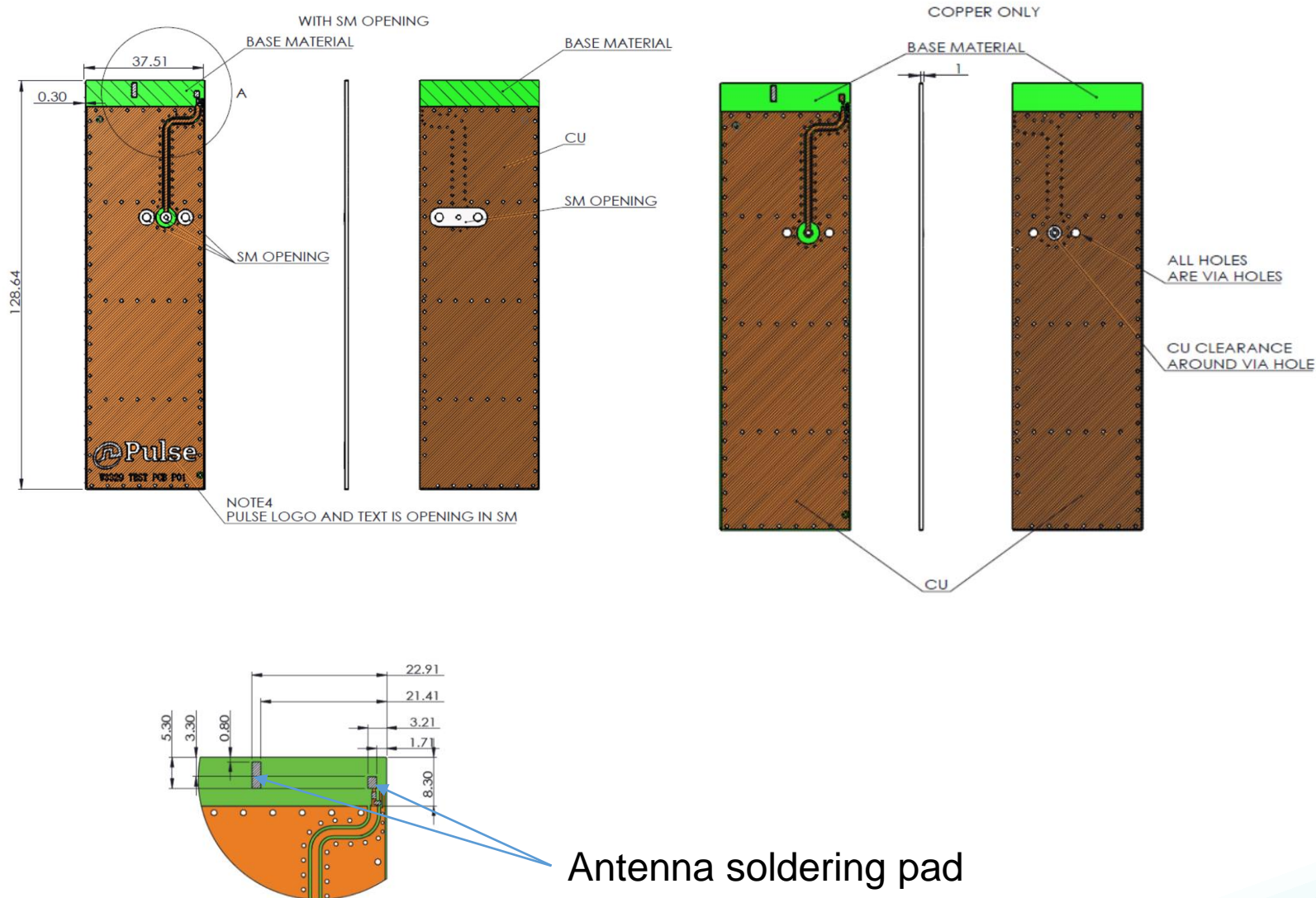
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## TEST SETUP

### Pulse reference test PCB for W3329 antenna



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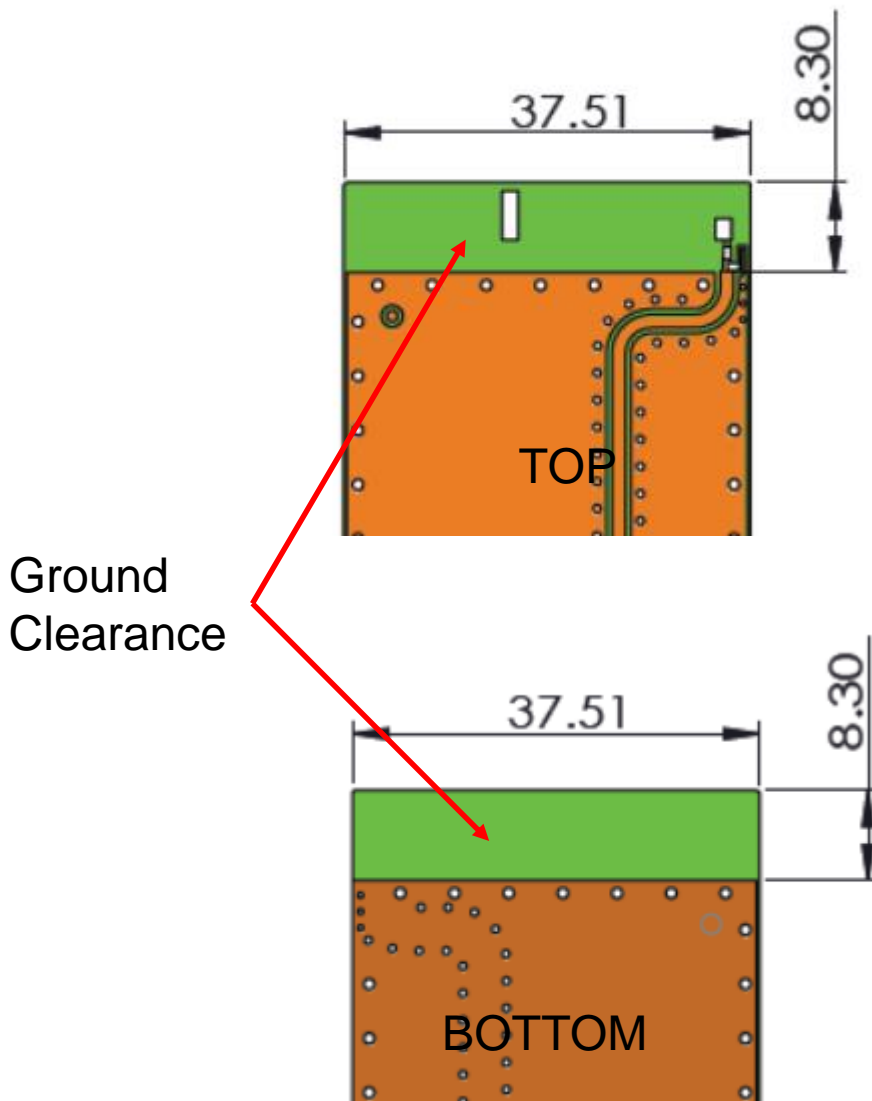
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### TEST SETUP

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

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



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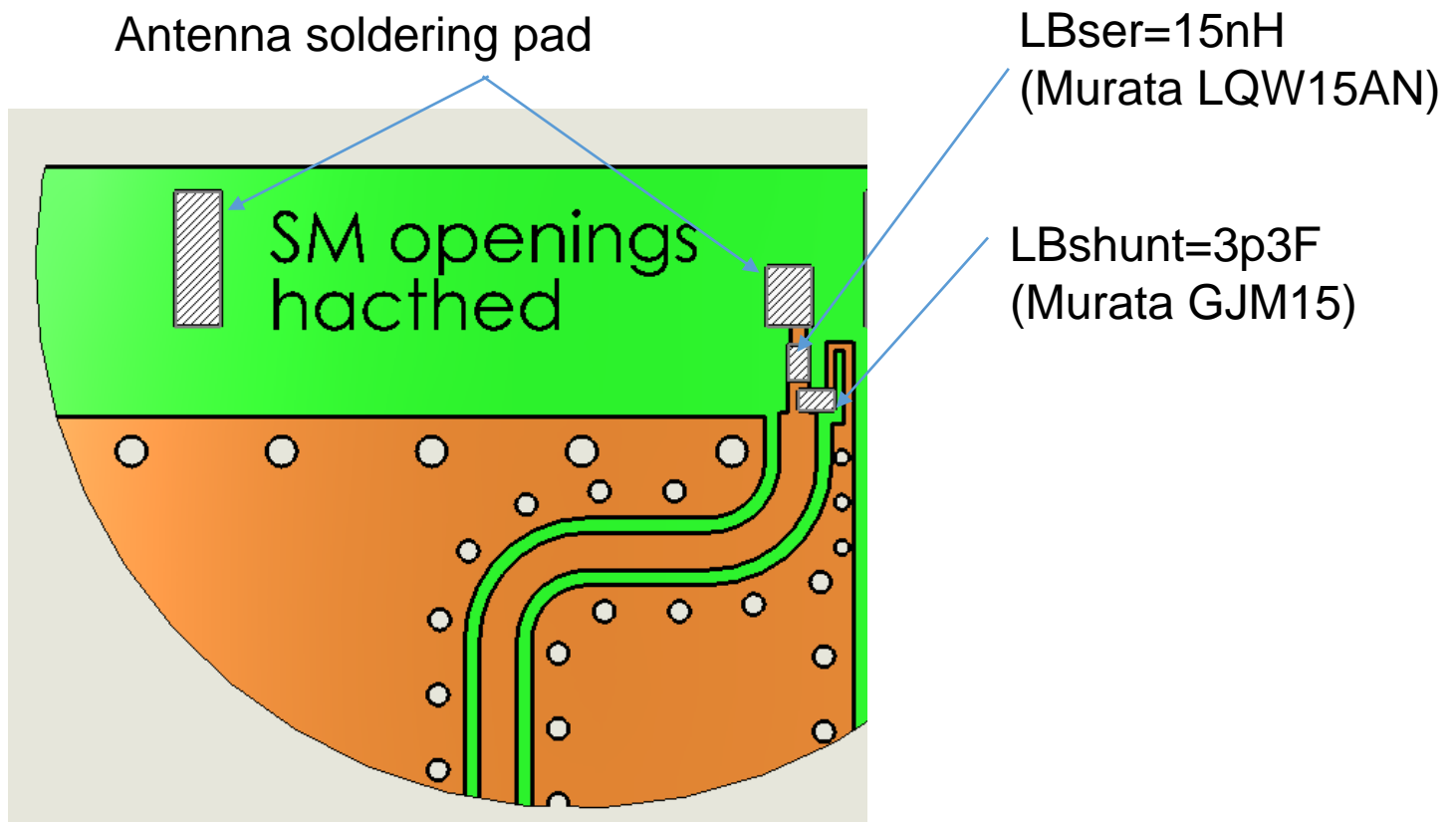
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## TEST SETUP



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

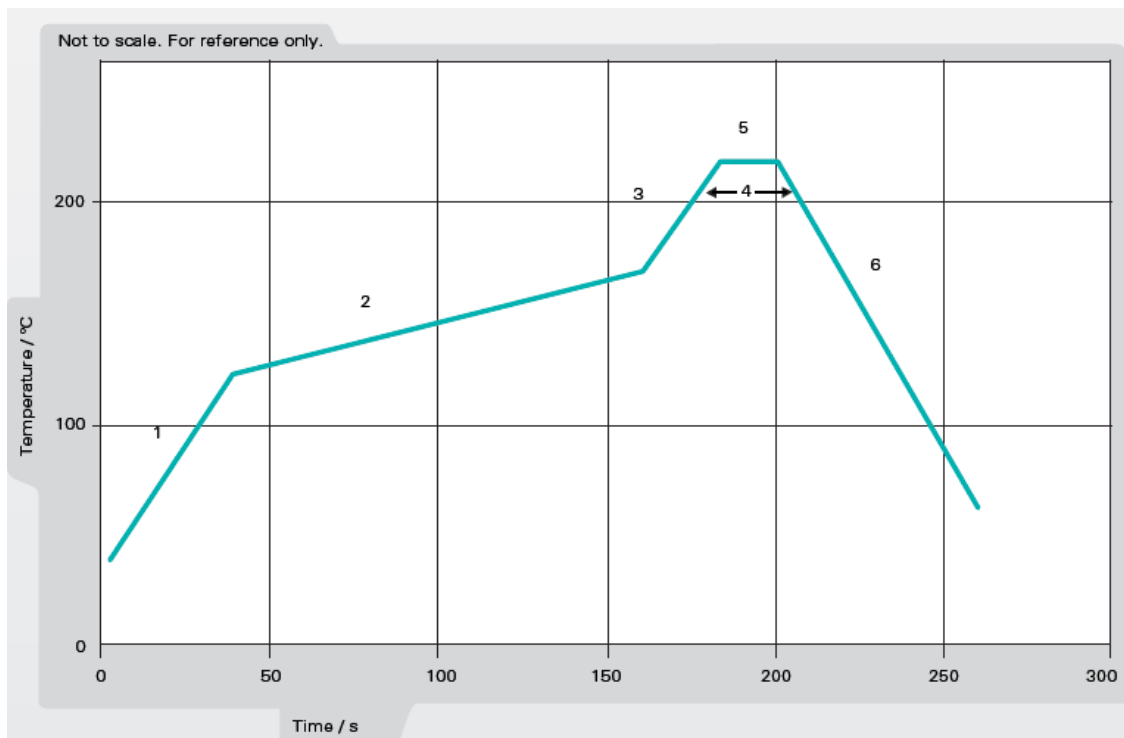


Figure 1. Minimum temperature profile recommendation for reflow soldering process

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	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

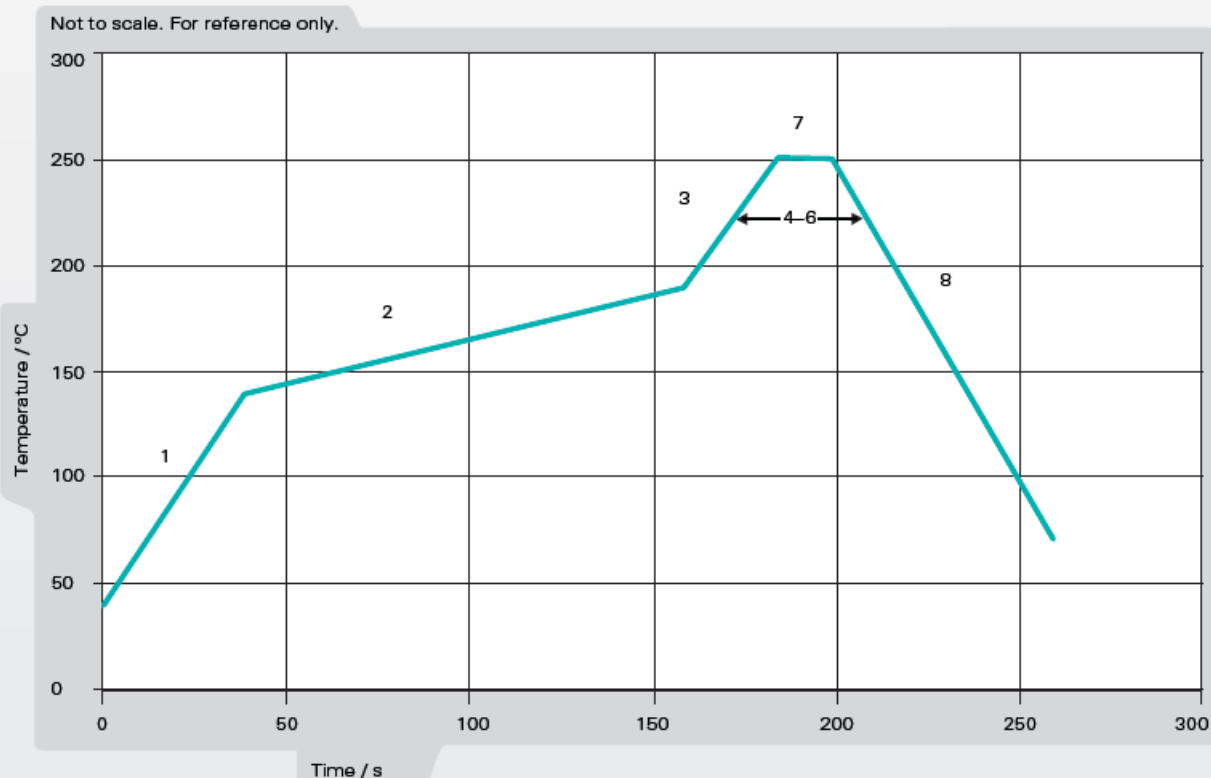


Figure 2. Maximum temperature profile recommendation for reflow soldering process

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## CHARTS

### Return Loss



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## CHARTS

### Efficiency(%)



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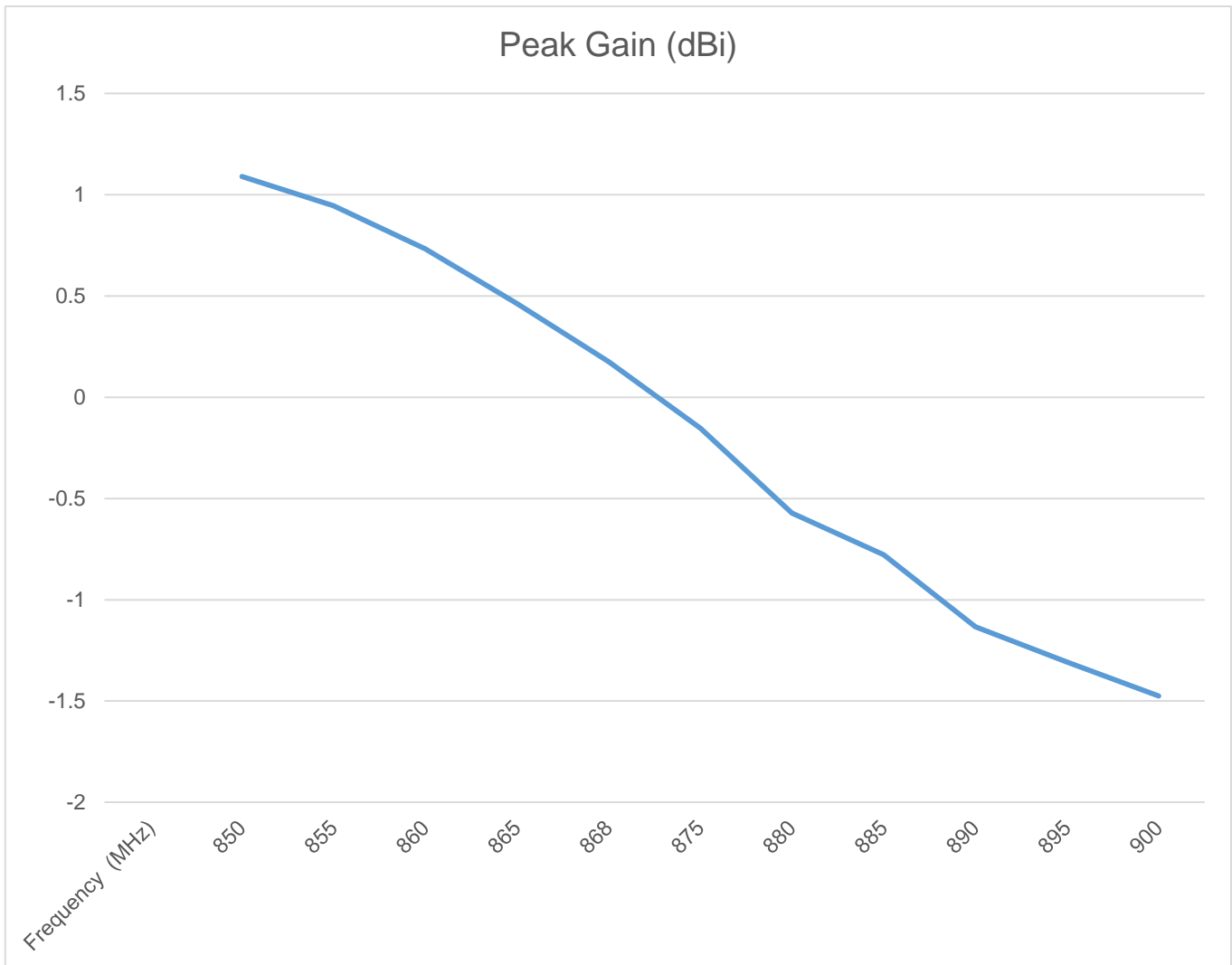
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## CHARTS

### Peak Gain(dBi)



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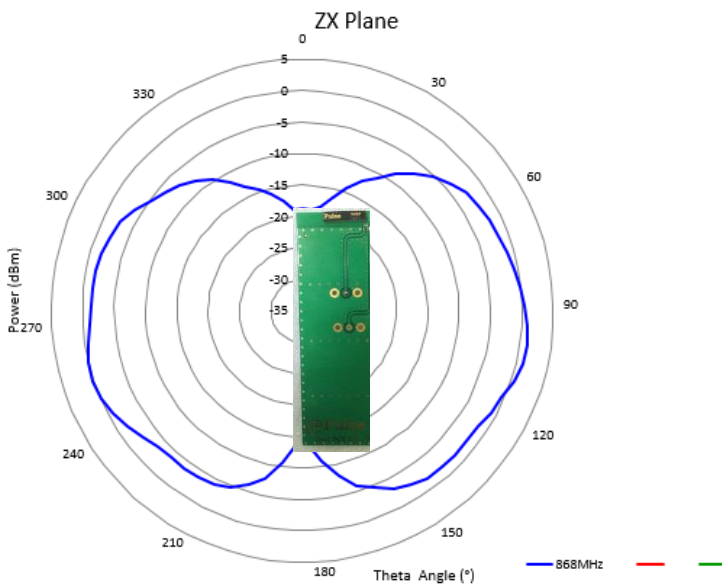
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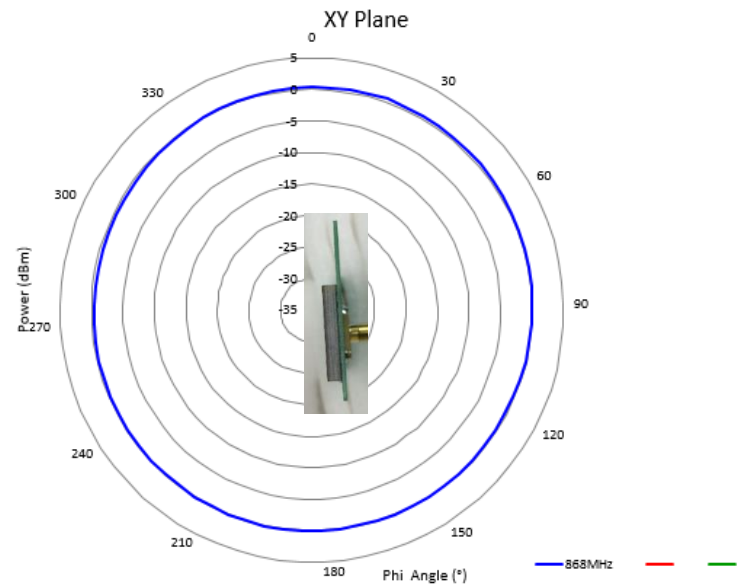
## CHARTS

### Free Space Radiation Pattern

#### Elevation Plane



#### Horizontal Plane



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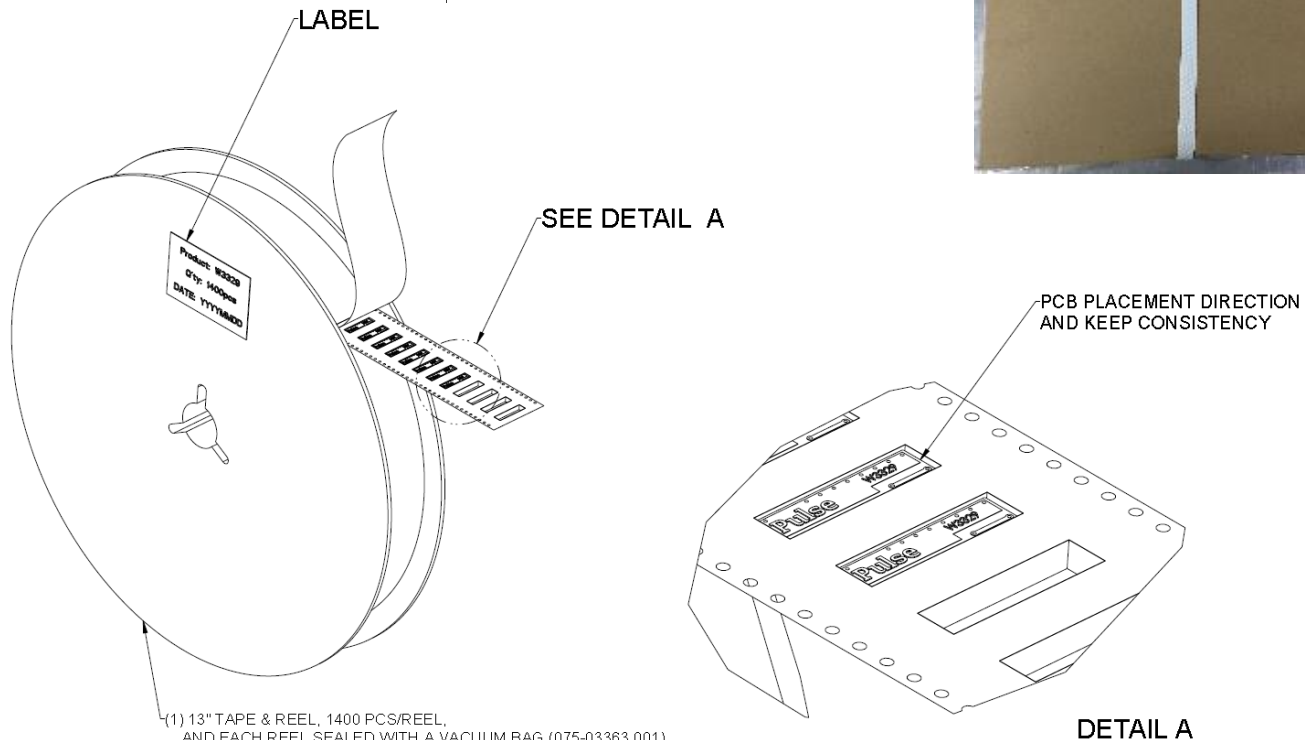
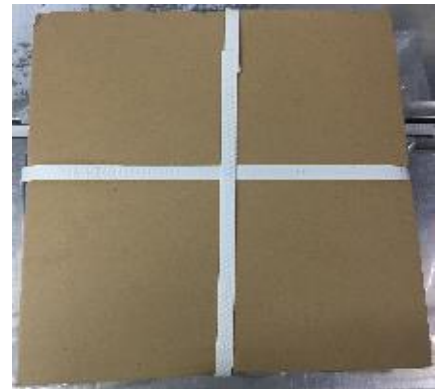
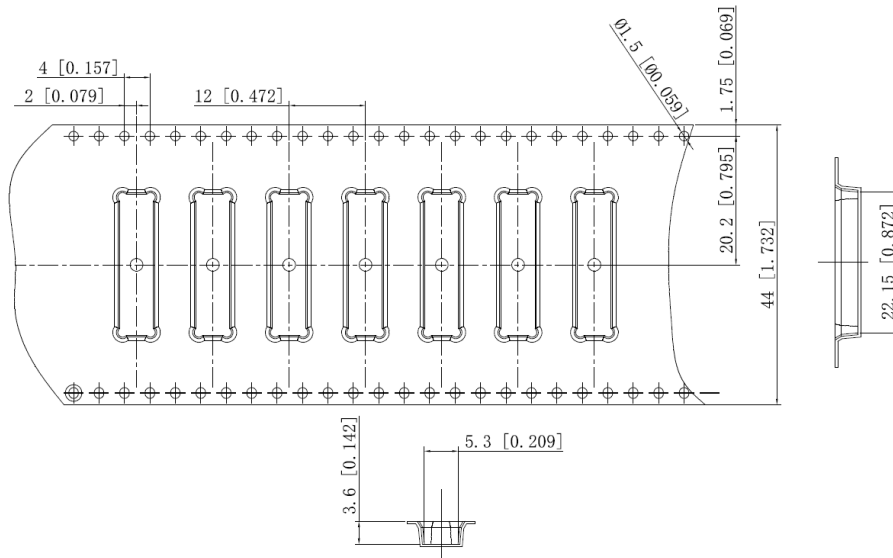
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## PACKAGING (TAPE & REEL)

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



(1) 13" TAPE & REEL, 1400 PCS/REEL,  
AND EACH REEL SEALED WITH A VACUUM BAG (075-03363.001)  
(2) 2 PCS TAPE & REEL OF PRODUCTS(TOTAL 2800PCS PRODUCTS)  
PACKED IN ONE CARTON.

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