

Series: Domino

TECHNICAL DATA SHEET

Description: 868MHz PCB SMT Antenna

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

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

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Maximum power input

TECHNICAL DATA SHEET

5 W

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ELECTRICAL SPECIFICATIONS

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

(*) 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



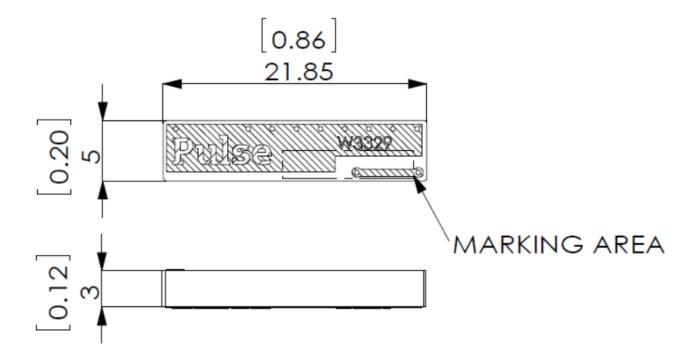


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MECHANICAL DRAWING





DIMENSION UNIT IS [INCH]MM



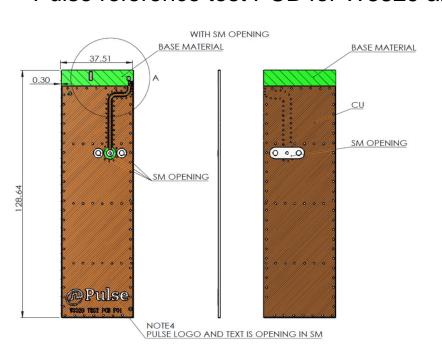
Description: 868MHz PCB SMT Antenna

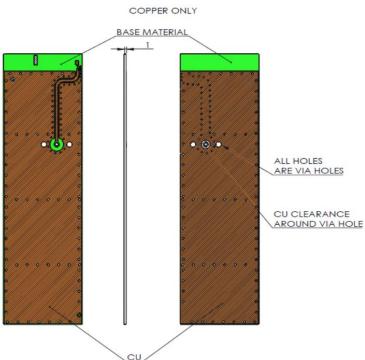
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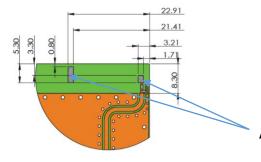
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TEST SETUP

Pulse reference test PCB for W3329 antenna







Antenna soldering pad



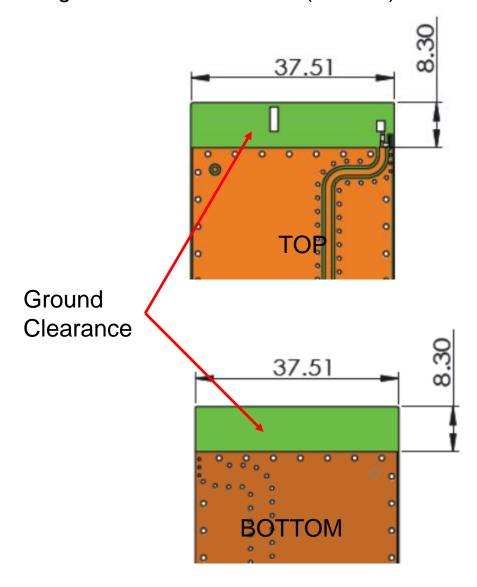
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TEST SETUP

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







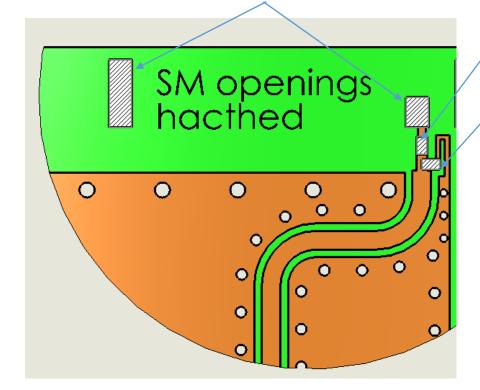
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TEST SETUP

Antenna soldering pad



LBser=15nH (Murata LQW15AN)

LBshunt=3p3F (Murata GJM15)

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.

П		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

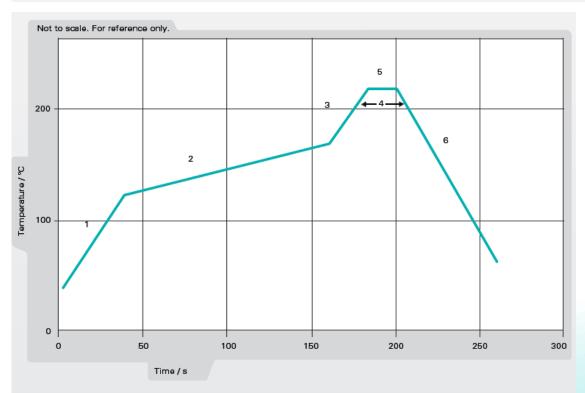


Figure 1. Minimum temperature profile recommendation for reflow soldering process



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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

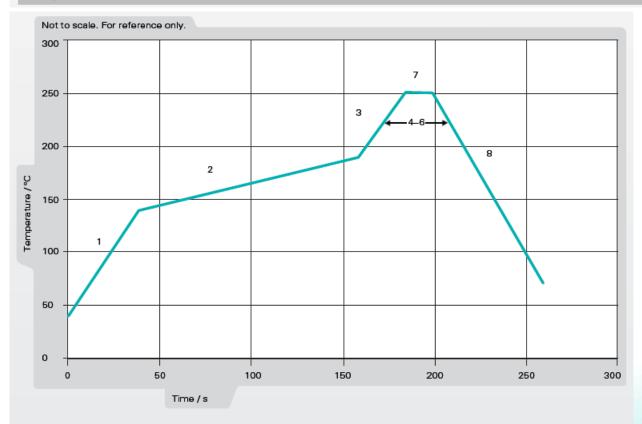


Figure 2. Maximum temperature profile recommendation for reflow soldering process



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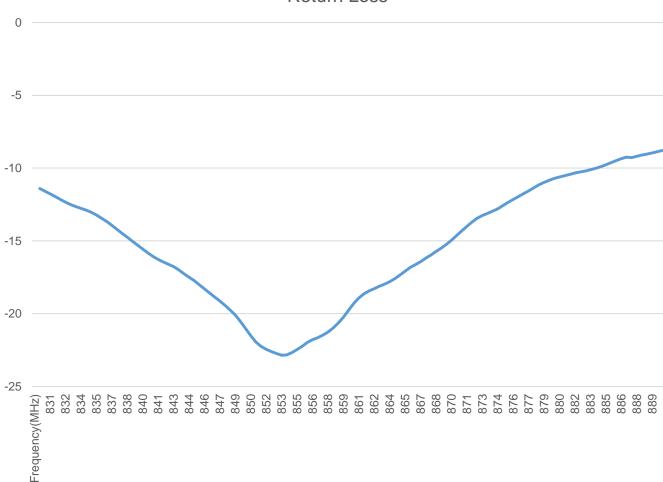
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CHARTS

Return Loss

Return Loss





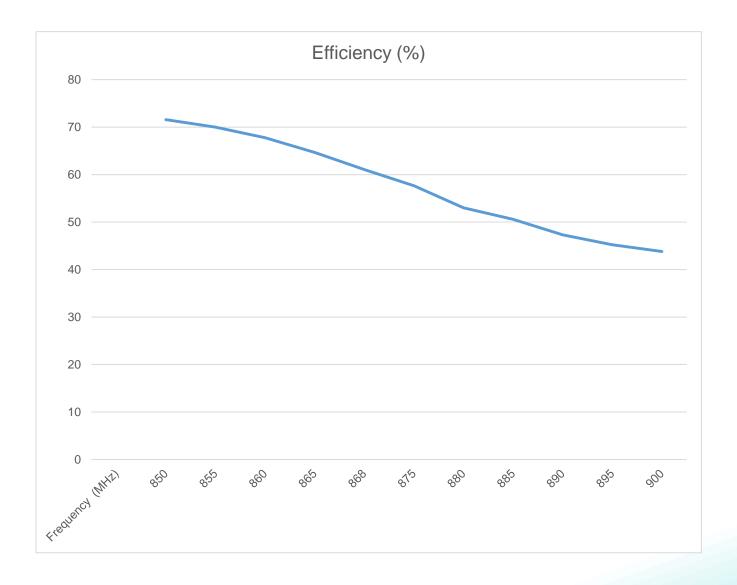
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CHARTS

Efficiency(%)





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CHARTS

Peak Gain(dBi)





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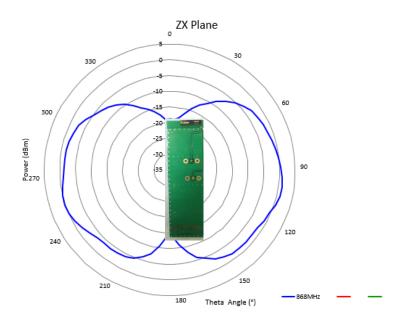
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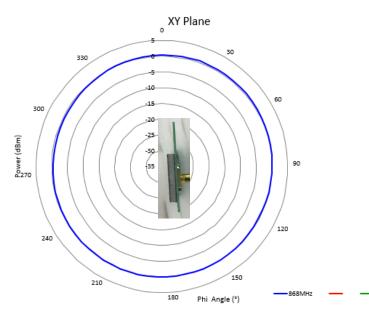
CHARTS

Free Space Radiation Pattern

Elevation Plane

Horizontal Plane







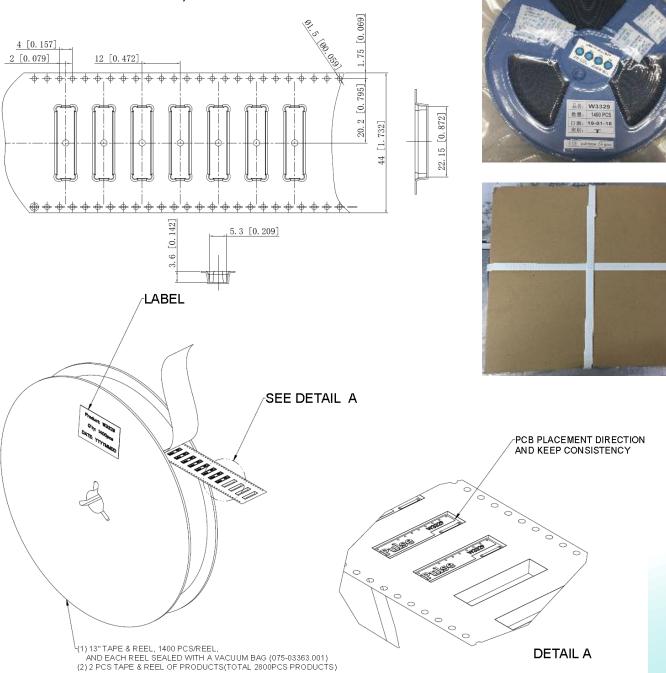
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PACKAGING (TAPE & REEL)

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



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OOO «ЛайфЭлектроникс" "LifeElectronics" LLC

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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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