SMD Antenna 2.4GHz LDS Monopole Antenna











Features & Applications:

- Bluetooth devices
- Headsets
- Motebooks and netbooks
- Smart Phones
- Tablet PCs
- 2.4GHz WiFi devices
- Wireless LAN (WLAN)
- @ IEEE 802.11b/g/n devices
- Tape&Reel packed
- @ Reflow soldering compatible

	ELECTRICAL SPECIFICATIONS @ 25°C						
	General Specifications 1)						
Antenna Type	Nominal Impedance	Polarization	Frequency	Return loss	Efficiency	VSWR	Gain
Monopole	50Ω	Linear	2400~2483.5 MHz	< -5	> 45%	< 3	2.0 to 3.2 dBi

MECHANICAL SPECIFICATIONS						
SWA434D						
Dimension (Length x Width x Height)	Material	Color	Antenna Type	Mounting Style	MSL	Weight
3mm x 3mm x 4mm	LCP	Black	LDS	SMT	1	0.04g

ENVIRONMENTAL SPECIFICATIONS				
SWA434D				
Storage Temperature	Operating Temperature	RoHS Compliant		
-40/+85° C	-40/+85° C	Yes		

Notes:

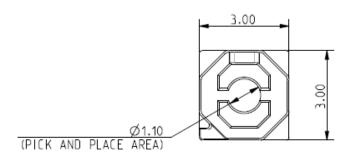
1) Tested on 40x100mm evaluation board, matching circuit 4.3nH shunt inductor

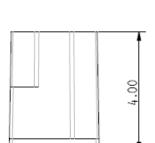
SWA434D

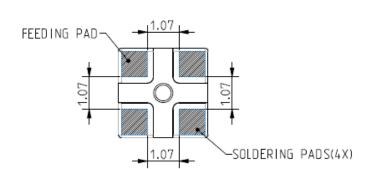


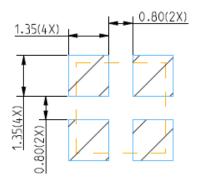
Mechanical Drawing

SWA434D

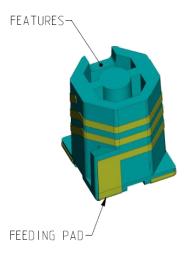








RECOMMENDED PCB LAYOUT



3D VIEW

Dimensions: mm

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Recommendation for Reflow Soldering Process

SWA434D

Printing stencil thickness 0.15 to 0.25 mm is recommended for solder paste. The maximum soldering temperature should not exceed 250°C.

The temperature profile recommendations for reflow solder process are presented in Figure 1 and 2. The reflow profile presented in Figure 2 describes maximum reflow temperatures.

Figure 1 - Minimum temperature profile recommendation for reflow soldering process

	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

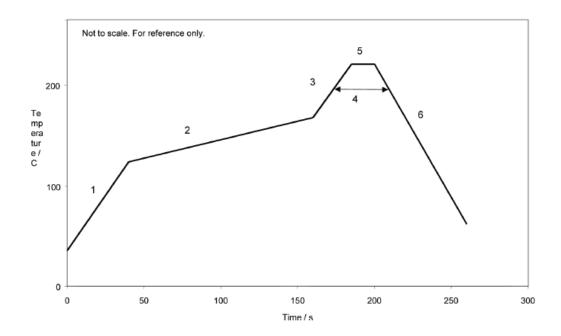
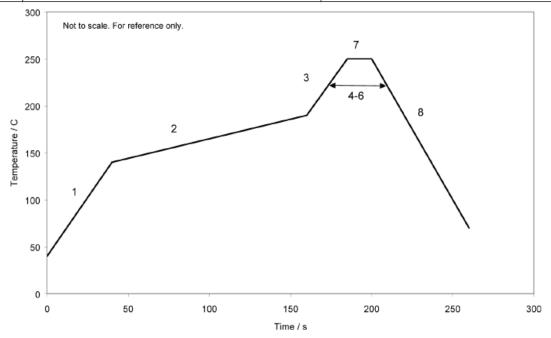




Figure 2 - Maximum temperature profile recommendation for reflow soldering process

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	≤2°C/s
2	Soak time	1-2 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
7	Peak temperature in reflow	250°C
8	Temperature gradient in cooling	Max-5°C/s

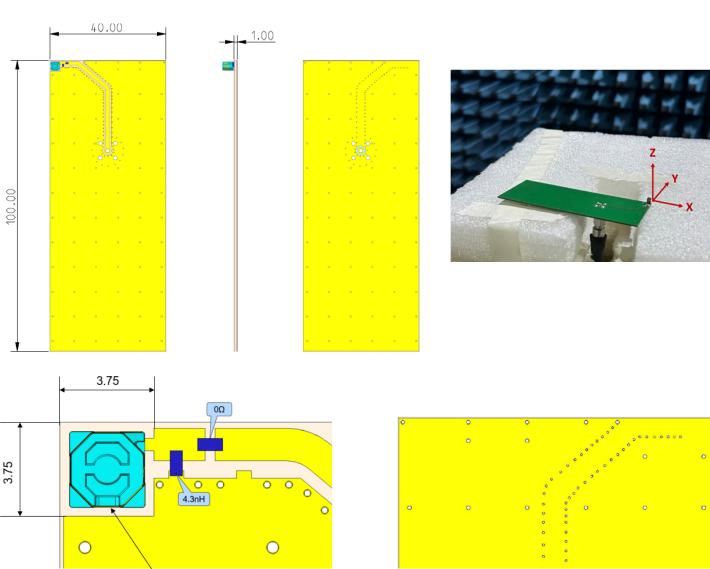




Test Setup

SWA434D

Pulse reference test PCB for SWA434D antenna



Dimensions: mm

3.75mm*3.75mm keep out area on PCB top side

PulseElectronics.com Issue: (09/25)

No keep out area on PCB bottom side



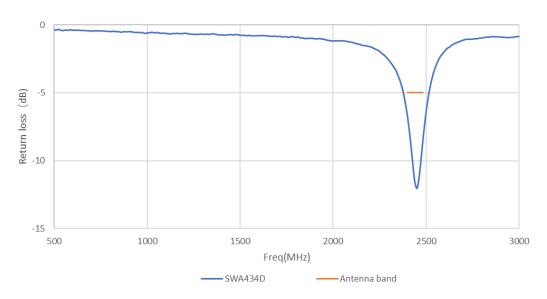


Charts- Antenna Return Loss & VSWR

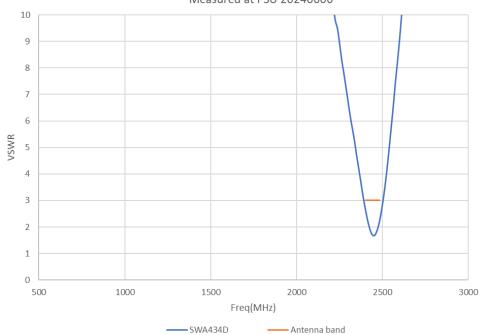
SWA434D

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VSWR VS Frequency Measured at PSU 20240606

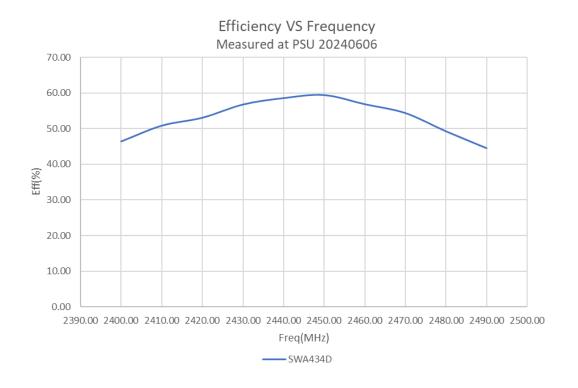


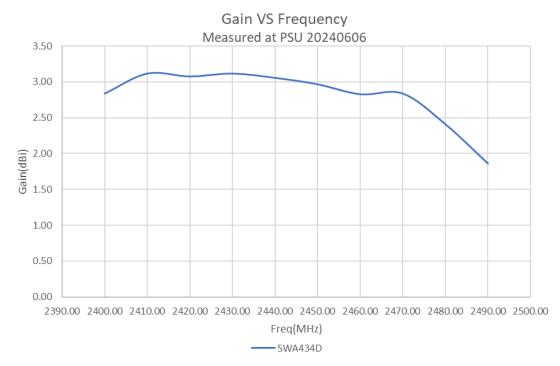


Charts- Efficiency & Peak Gain

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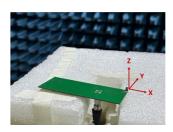




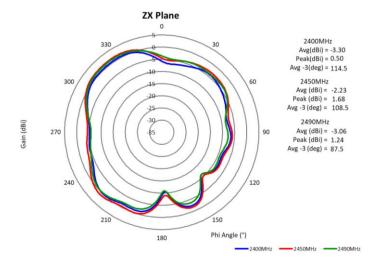


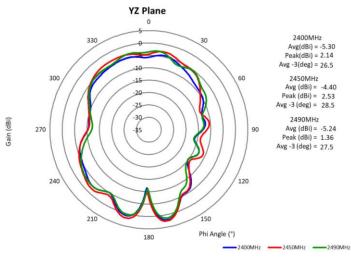
Charts - Antenna Radiation Gain Pattern

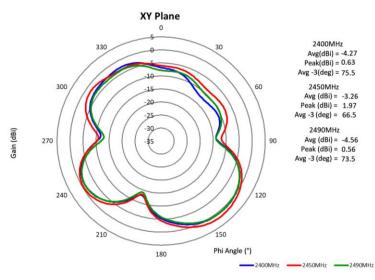
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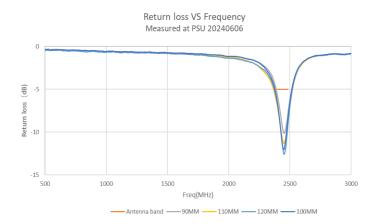
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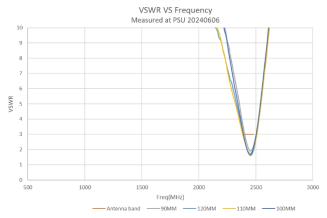


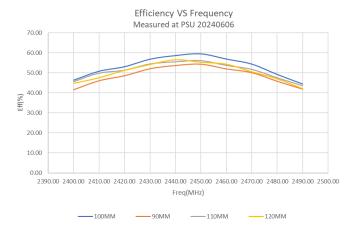
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PCB Length Effect

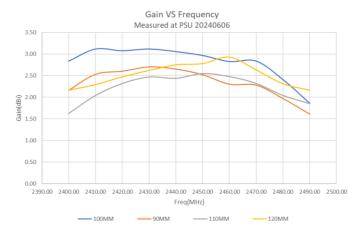
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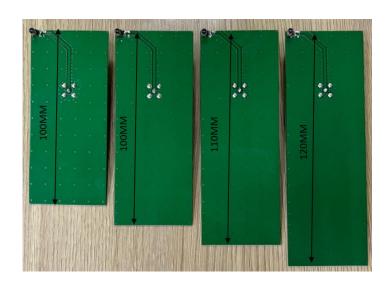






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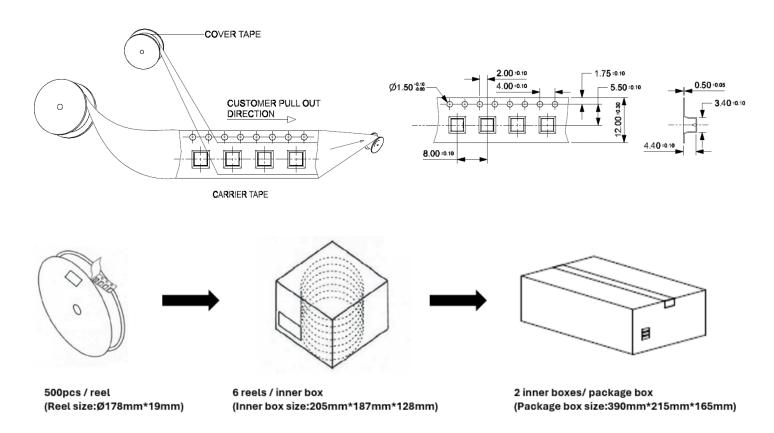
SWA434D



Packaging

SWA434D

- 1. Reel & tape packing
- 2. $500pcs/reel \rightarrow 6 reels/inner box \rightarrow 2 inner boxes/package box$
- 3. Total 6000pcs for one package, package box size: 390mm*215mm*165mm



For More Information:

Americas - antennas.us@pulseelectronics.com | Europe - antennas.eu@pulseelectronics.com | Asia - antennas.as@pulseelectronics.com | Questions? +1-800-ANTENNA Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright , 2020. Pulse Electronics, Inc. All rights reserved. Company address: Pulse Electronics, a YAGEO Company, 15255 Innovation Drive, Suite #100, San Diego, CA 92128.

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