



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Description: ISM 868/915MHz,2400-2483.5MHz SMD ANTENNA

Series: Domino

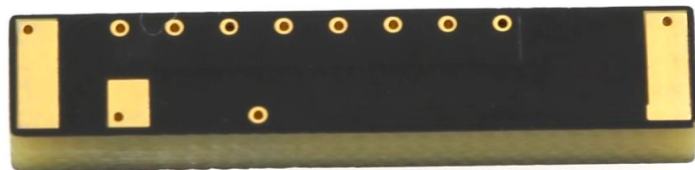
PART NUMBER: W3330

Features:

- Tri-Band ISM antenna
 - Port 1 LB 844-928MHz
 - Port 2 HB 2400-2483,5MHz
- Size 25.1x5x3mm
- Efficiency 60%
- Nominal impedance 50 Ω
- Fully SMD and Reflow/IR/Wave- soldering compatible

Applications:

- ISM Band radios
- Bluetooth, BLE, Zigbee, WiFi
- M2M, IoT



All dimensions are in mm / inches

Issue: 1652

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



Description: ISM 868/915MHz,2400-2483.5MHz SMD ANTENNA**Series: Domino****PART NUMBER: W3330****ELECTRICAL SPECIFICATIONS**

Frequency	844-928/2400-2483.5	MHz
Nominal Impedance	50	Ω
VSWR	3:1	
Return loss	-6 dB	
Isolation P1-P2	>15 dB	
Total Efficiency (844-928MHz)	60 %	
Total Efficiency (2400-2483.5MHz)	60 %	
Peak Gain (844-928MHz)	0.4 dBi	
Peak Gain (2400-2483.5MHz)	2 dBi	
Average Gain (844-928MHz)	-2.2 dBi	
Average Gain (2400-2483.5MHz)	-2.2 dBi	
Maximum power input	5 W	

(* All RF parameters measured on Pulse reference test PCB

**Description: ISM 868/915MHz,2400-
2483.5MHz SMD ANTENNA****Series: Domino****PART NUMBER: W3330****MECHANICAL SPECIFICATIONS**

Color	Black
Size(L X W X T)	25.1 X 5 X 3 mm
Weight	1.5 g
Fixing system	SMD

ENVIRONMENTAL SPECIFICATIONS

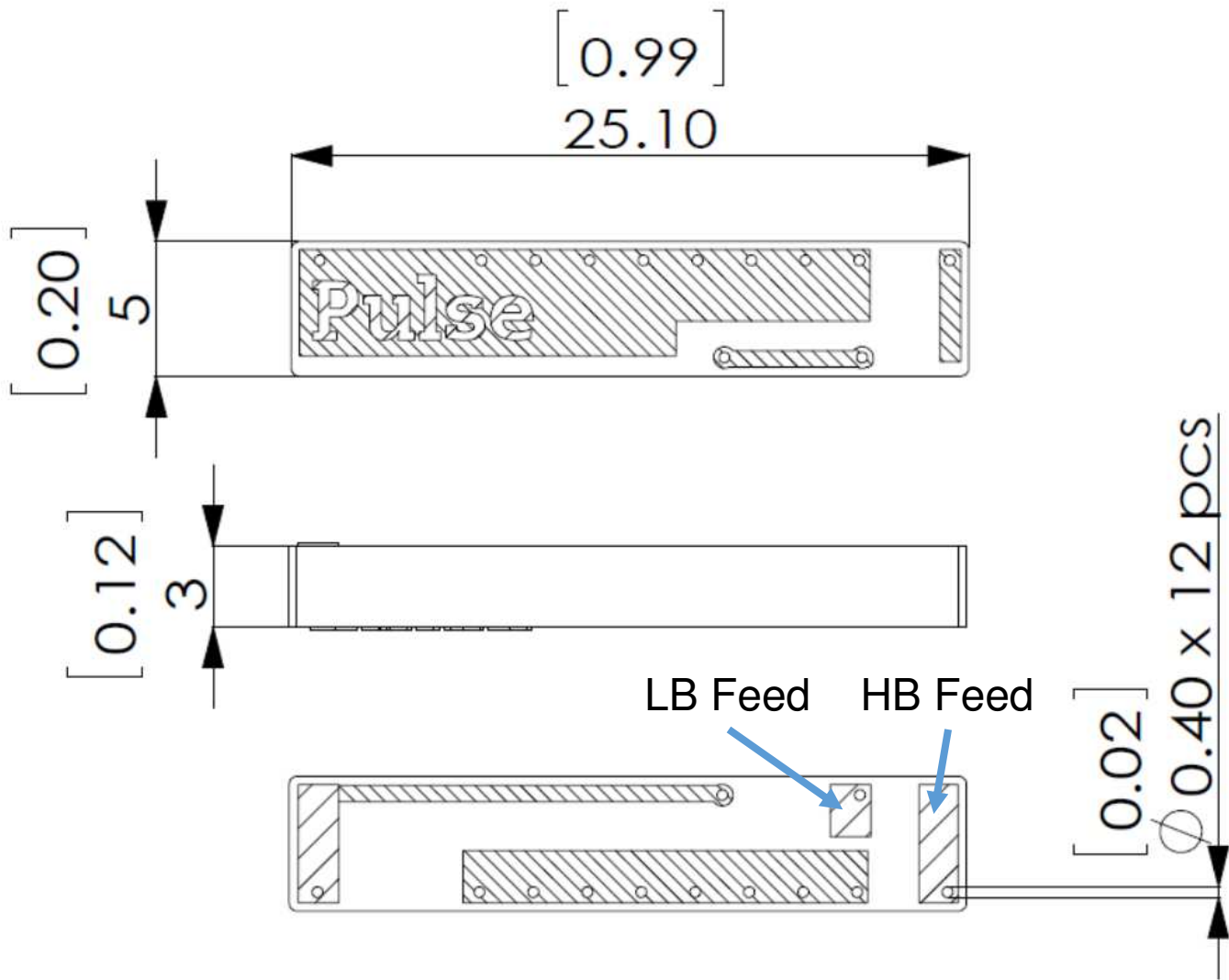
Operating temperature	-40/+85 ° C
Temperature	-40/+85 ° C
Humidity	93% RH @ 30° C 24 hours
Drop test	1 m

Description: ISM 868/915MHz,2400-2483.5MHz SMD ANTENNA

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MECHANICAL DRAWING



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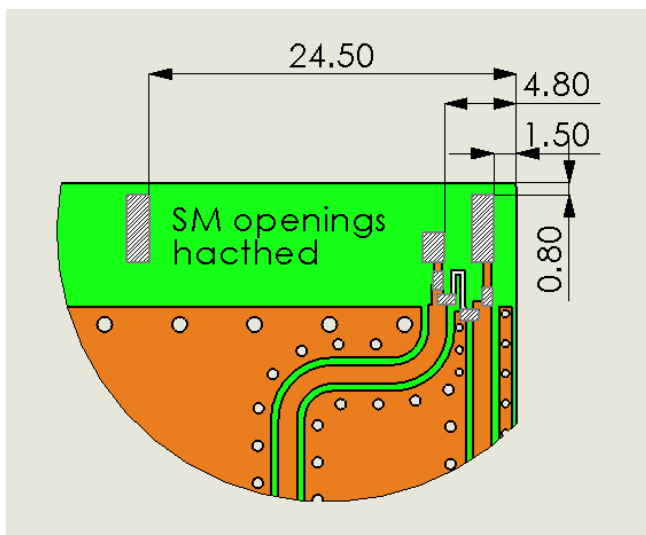
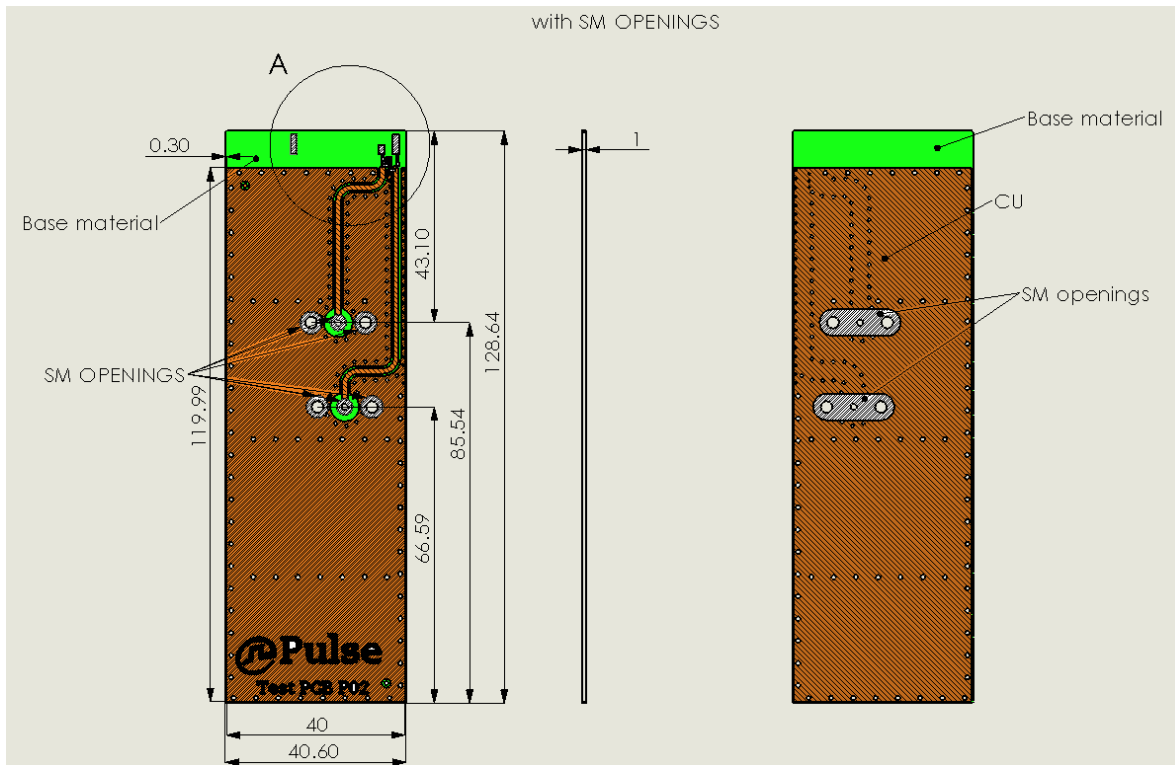
Description: ISM 868/915MHz,2400-2483.5MHz SMD ANTENNA

Series: Domino

PART NUMBER: W3330

OTHER SPECIFICATIONS

Pulse reference test PCB for W3330 antenna



All dimensions are in mm

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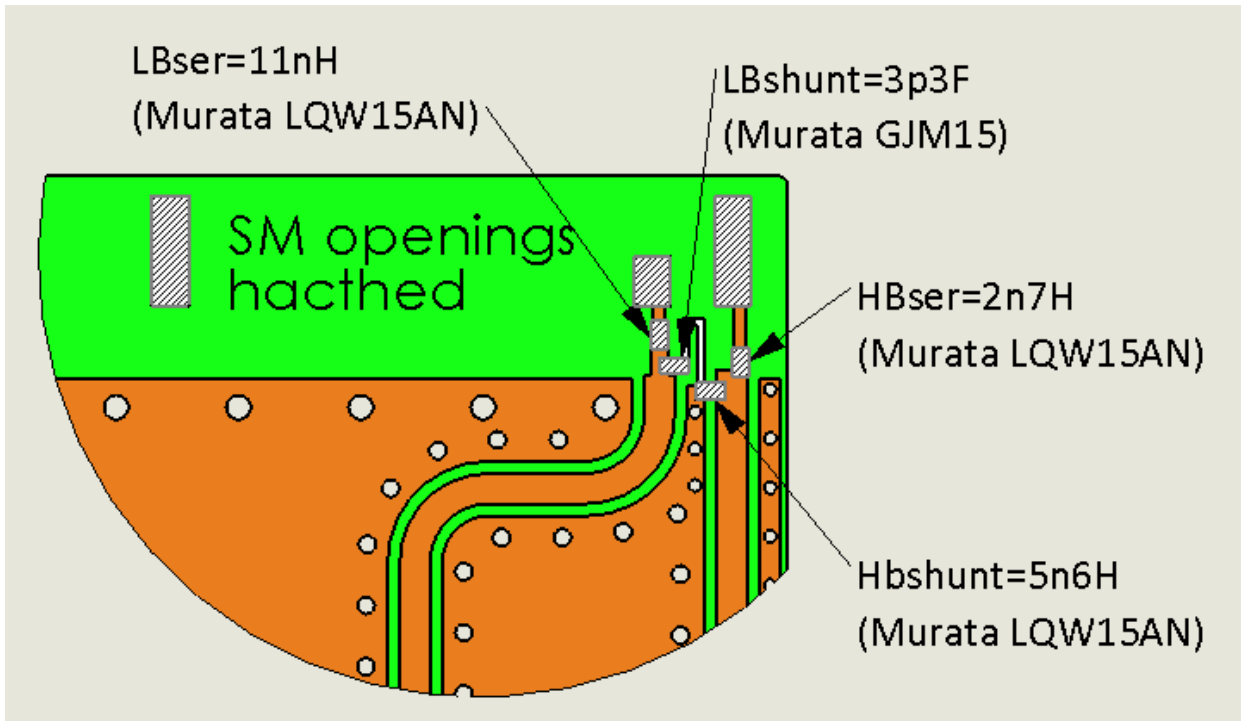
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Description: ISM 868/915MHz,2400-2483.5MHz SMD ANTENNA

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OTHER SPECIFICATIONS



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

All dimensions are in mm

Description: ISM 868/915MHz,2400-2483.5MHz SMD ANTENNA

Series: Domino

PART NUMBER: W3330

OTHER SPECIFICATIONS

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

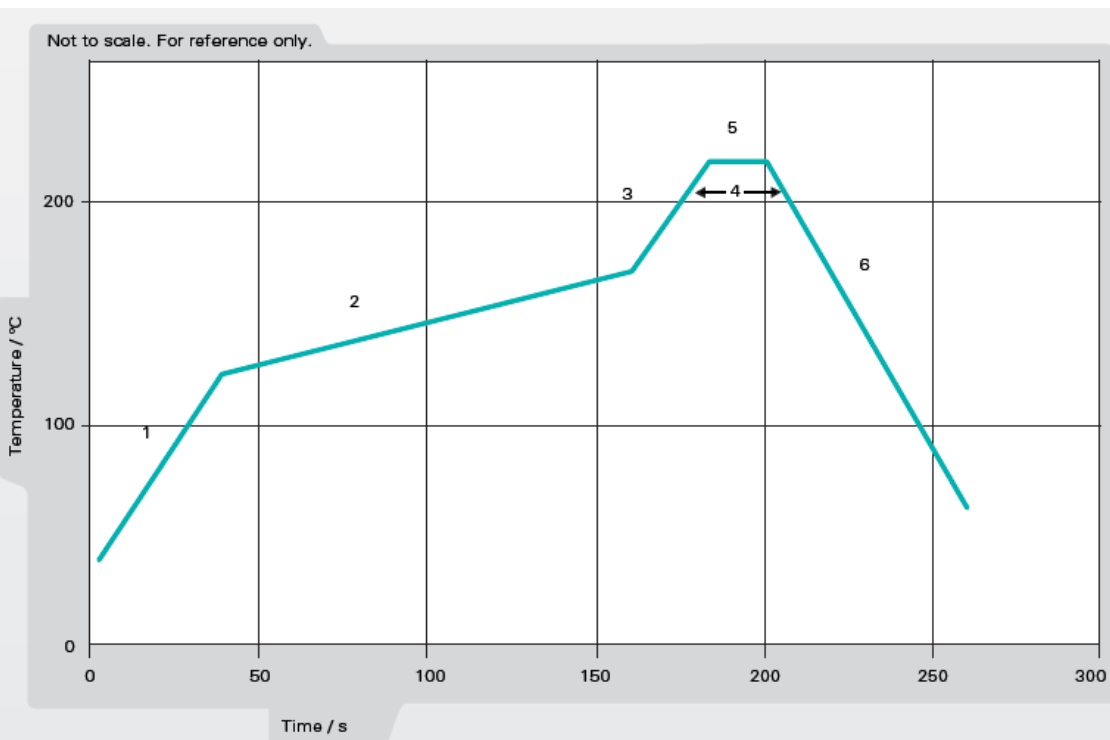


Figure 1. Minimum temperature profile recommendation for reflow soldering process

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OTHER SPECIFICATIONS

	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

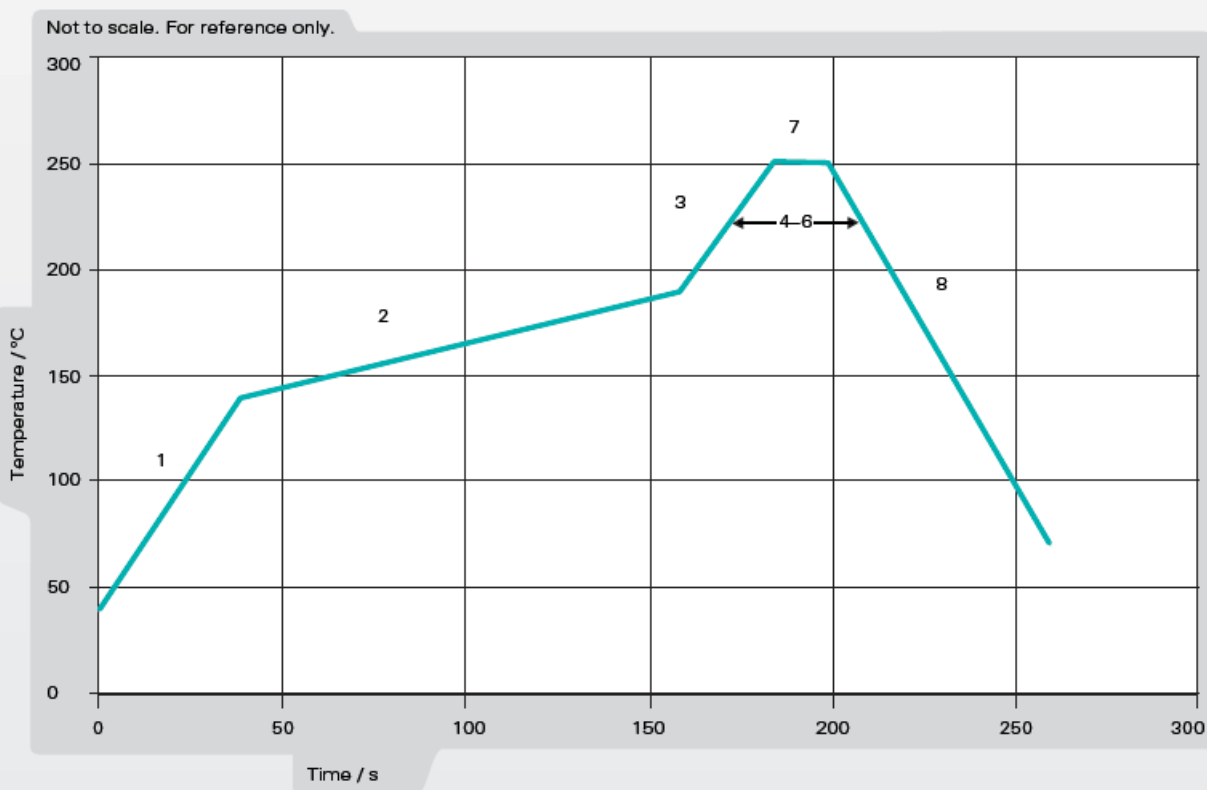


Figure 2. Maximum temperature profile recommendation for reflow soldering process

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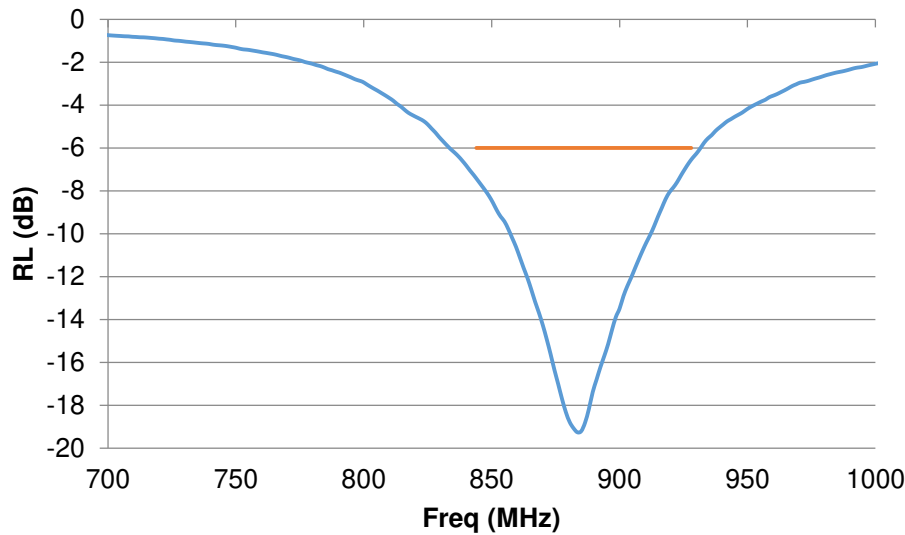
Series: Domino

PART NUMBER: W3330

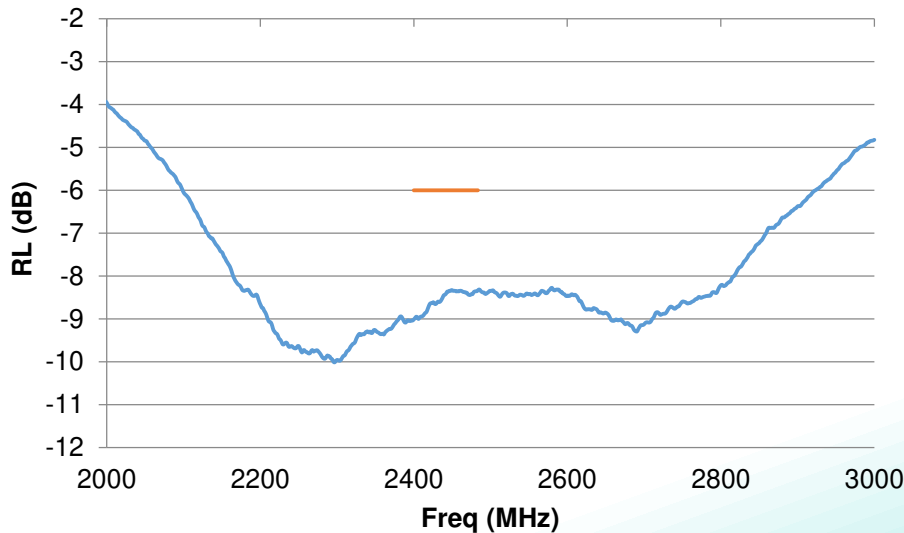
CHARTS

Free space measurements on Pulse reference test PCB

Low Band Return Loss in free space, dB



High Band Return Loss in free space, dB



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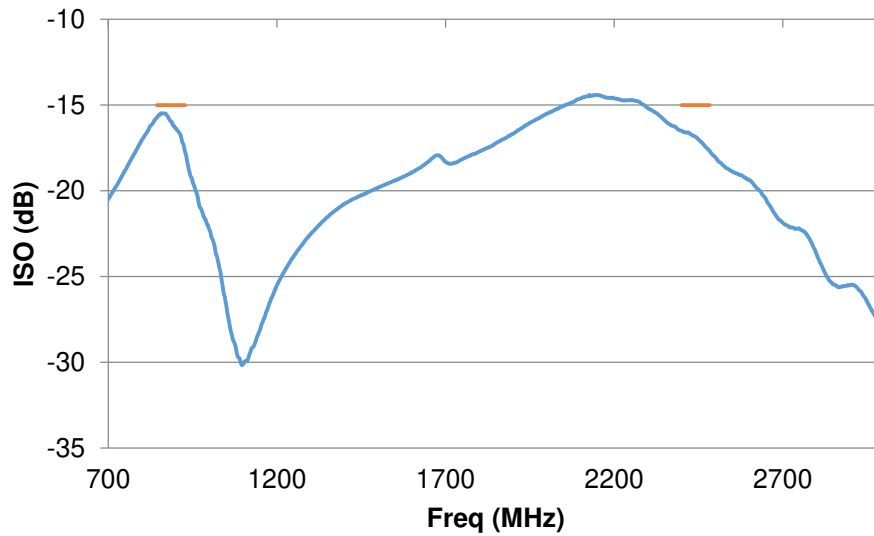
Description: ISM 868/915MHz,2400-2483.5MHz SMD ANTENNA

Series: Domino

PART NUMBER: W3330

CHARTS

Isolation between low band port and high band port



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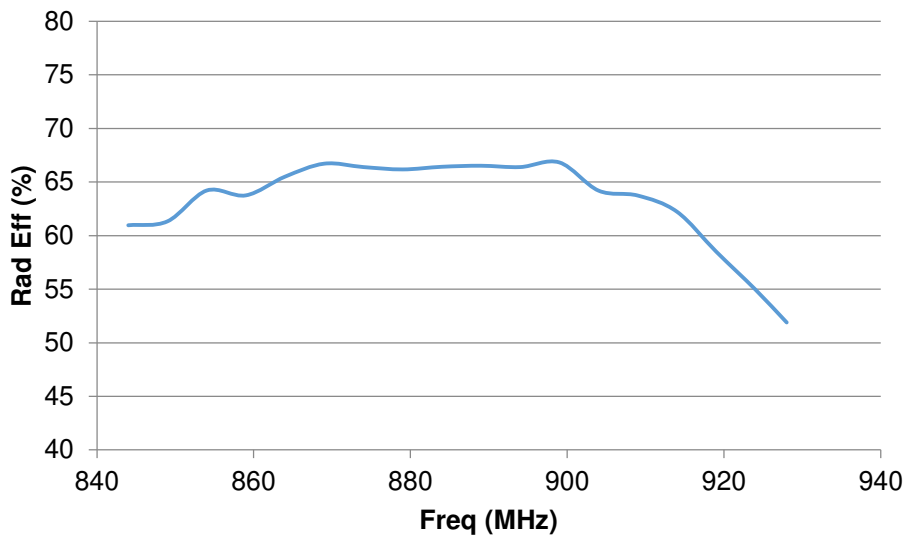
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Series: Domino

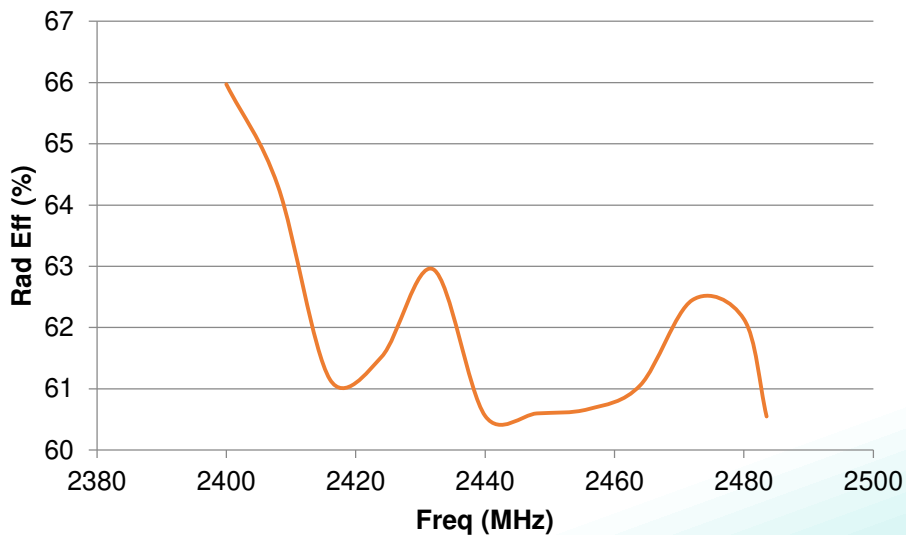
PART NUMBER: W3330

CHARTS

Radiation Efficiency in free space - Low band (%)



Radiation Efficiency in free space - High band (%)



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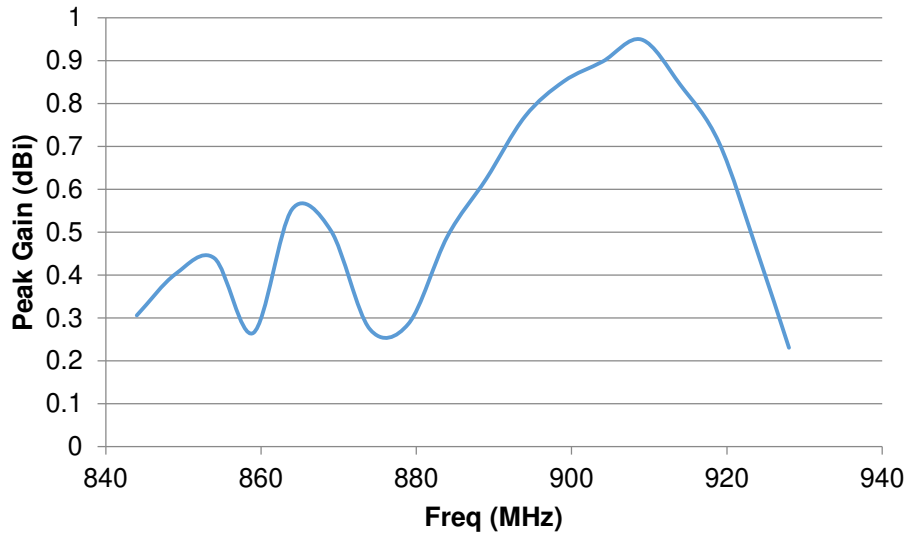
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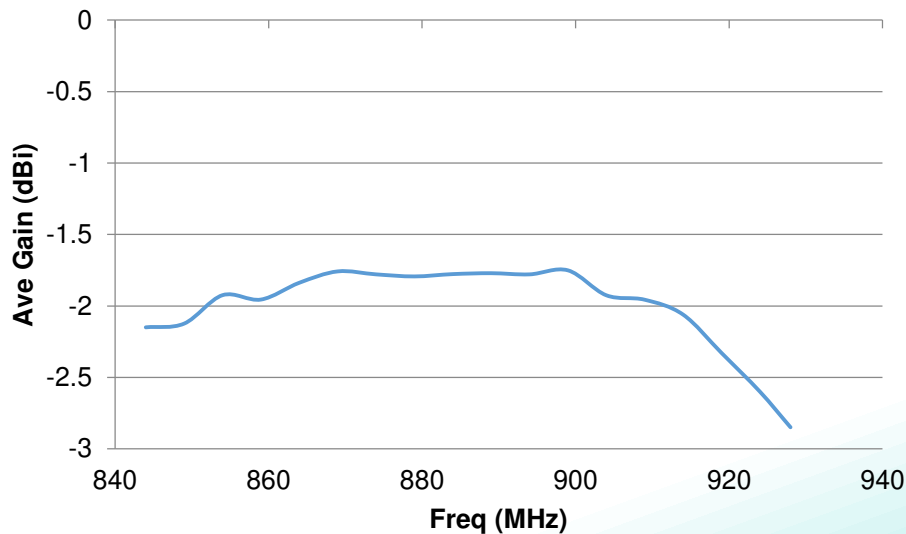
PART NUMBER: W3330

CHARTS

Peak gain - Low band (dBi)



Average gain - Low band (dBi)



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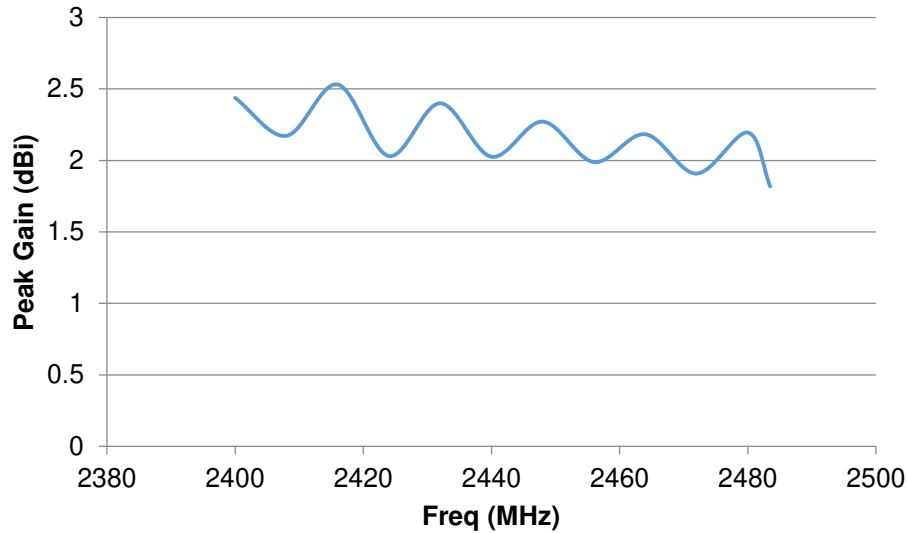
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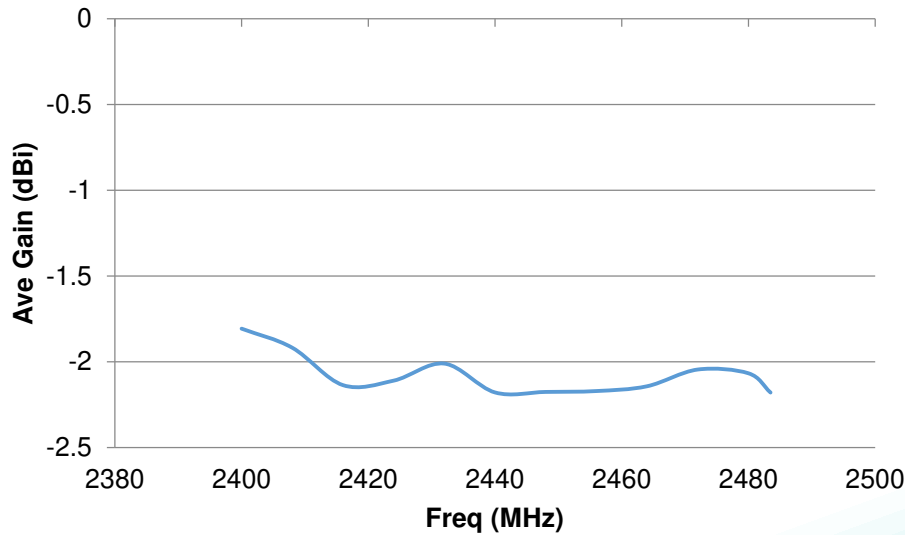
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CHARTS

Peak gain - High band (dBi)



Average gain - High band (dBi)



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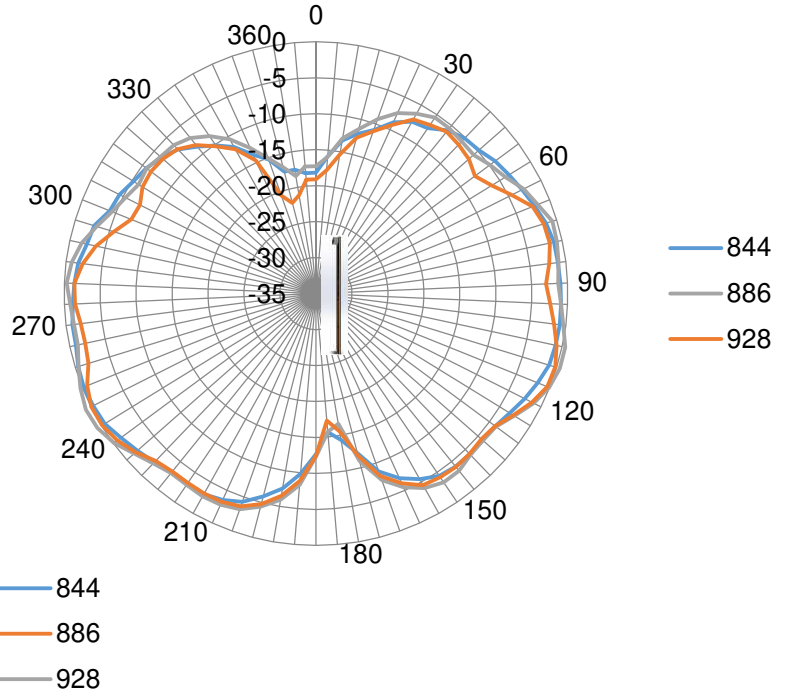
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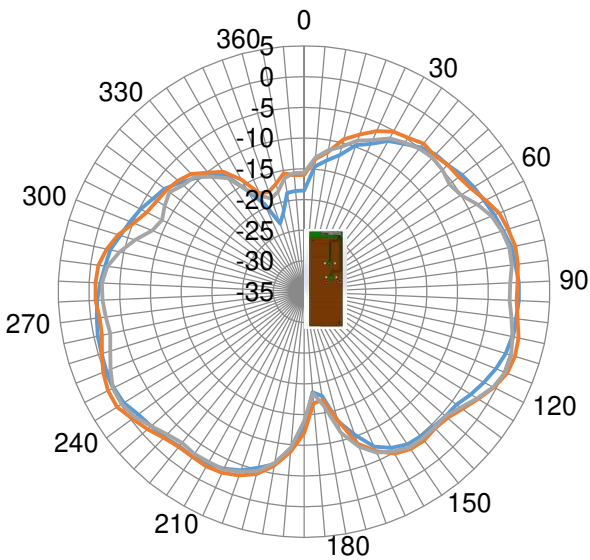
Series: Domino

CHARTS 844-928MHz

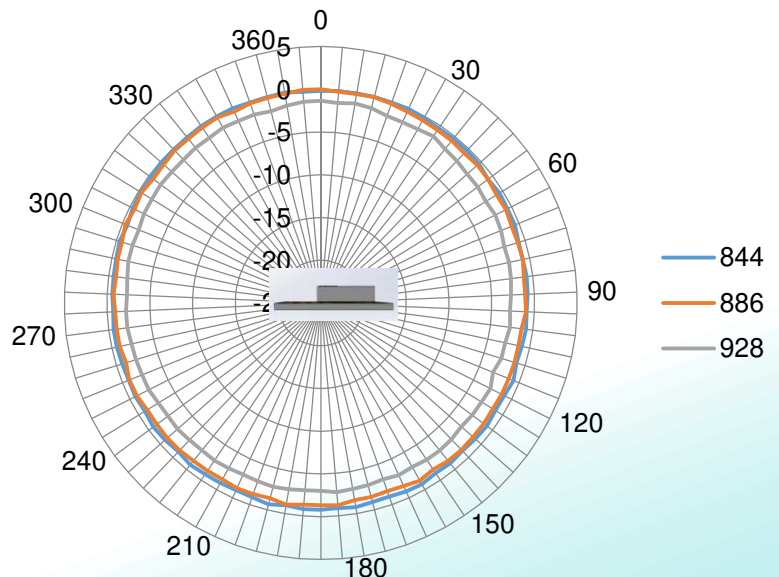
Vertical plot, side view



Vertical plot, front view



Horizontal plot



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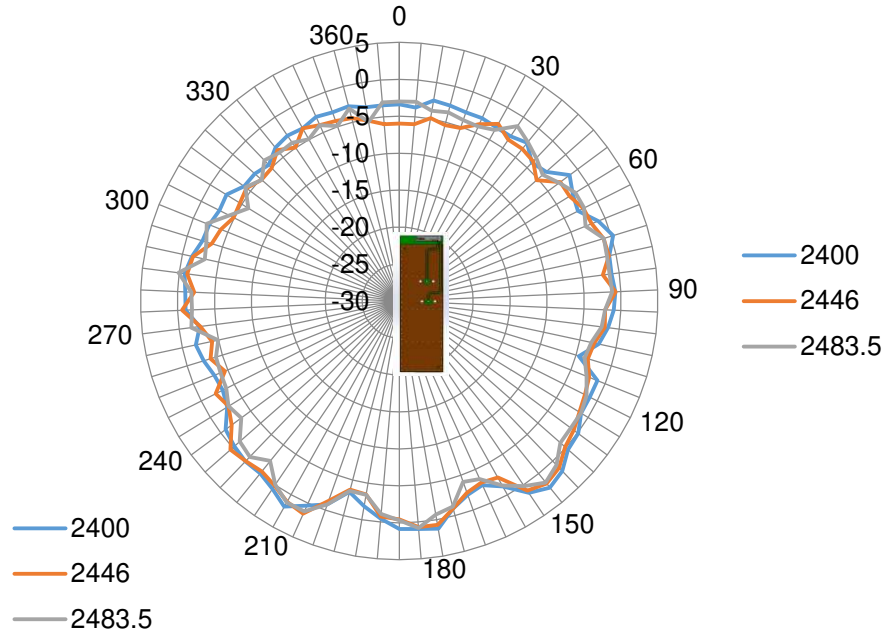
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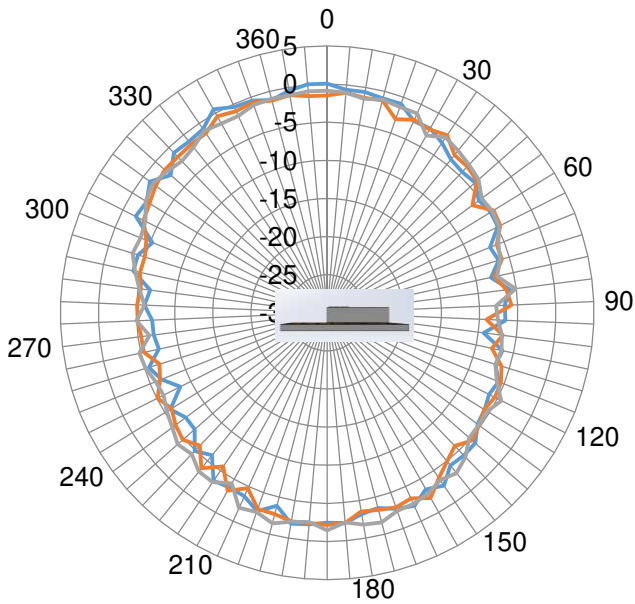
PART NUMBER: W3330

CHARTS 2400-2483.5MHz

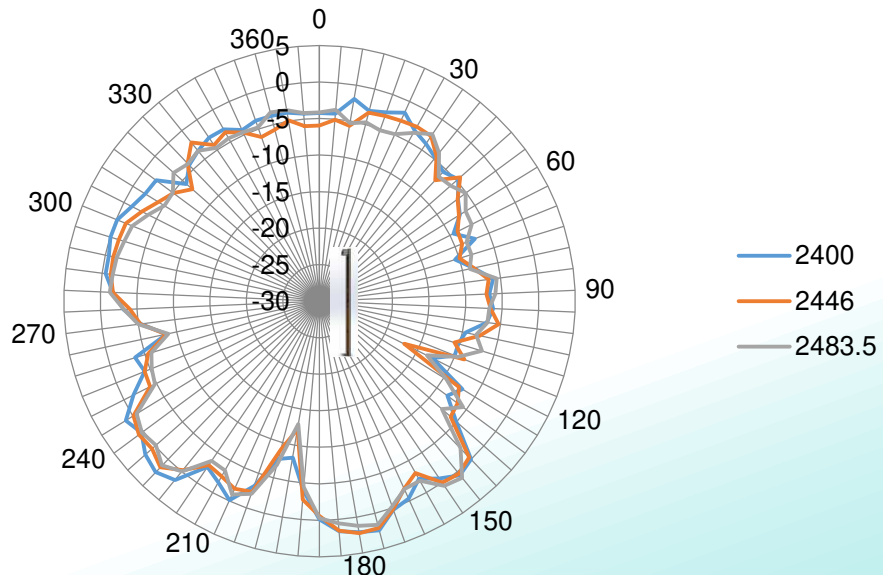
Vertical plot, front view



Horizontal plot



Vertical plot, side view



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PACKAGING

Reel packing
140PCS/Reel
10 Reels/Carton box
Total 1400PCS/Carton box



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