



DATASHEET

PCA2450-502010(MW 2412)

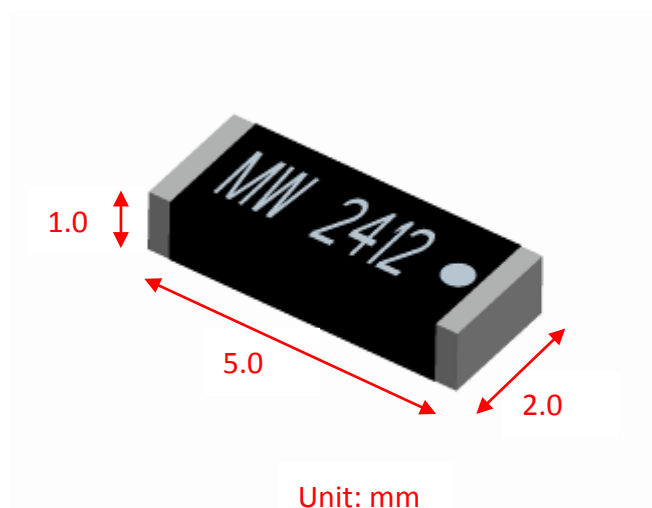
● Application

2.4GHz Wireless Devices

WLAN (IEEE 802.11 b/g)

Bluetooth

Zigbee



※ The direction of white dot forwards to feed point

● Features

Compact Size (5.0*2.0*1.0mm³)

Use matching circuit to get high efficiency

SMT processes compliance

RoHS Compliant

V2.1



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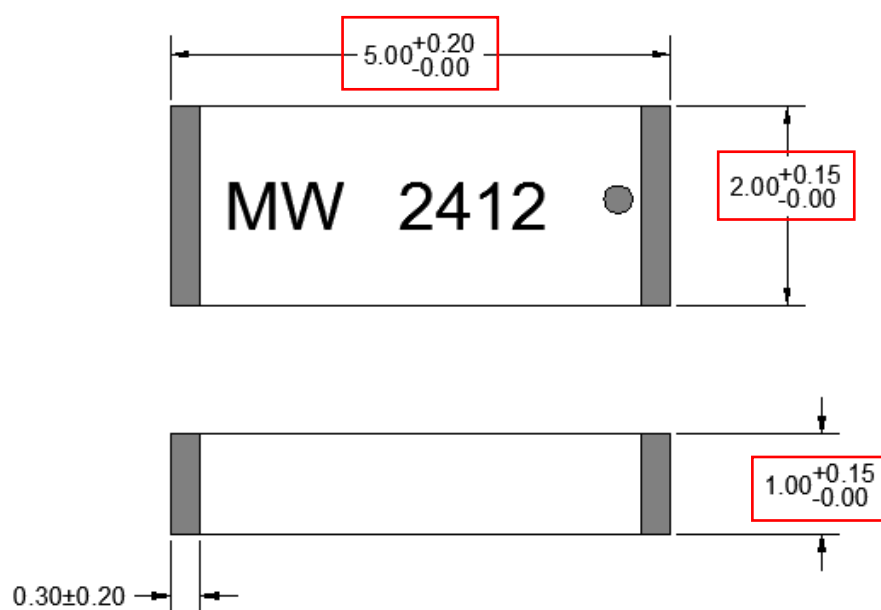
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1. Specifications

No	Item	SPEC.	Unit
1	Dimensions (LxWxH)	5.0*2.0*1.0	mm
2	Operating Frequency Range	2.4~2.5	GHz
3	VSWR	2 max.	
4	Impedance	50	Ω
5	Polarization	Linear	
6	Peak gain	2.82	dBi
7	Efficiency	71	%
8	Operating Temperature	-40~85	$^{\circ}\text{C}$

※ The antenna performance is measured on 40*20mm test Board.

2. Appearance



Unit:mm

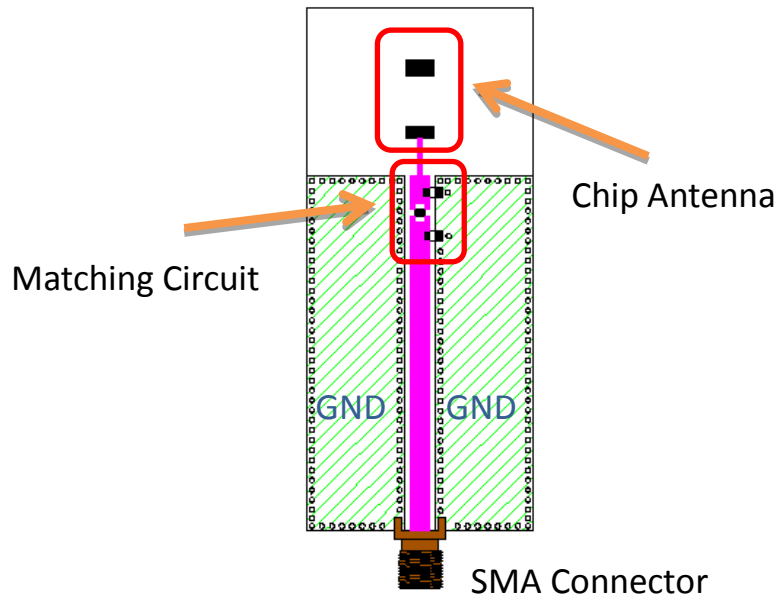
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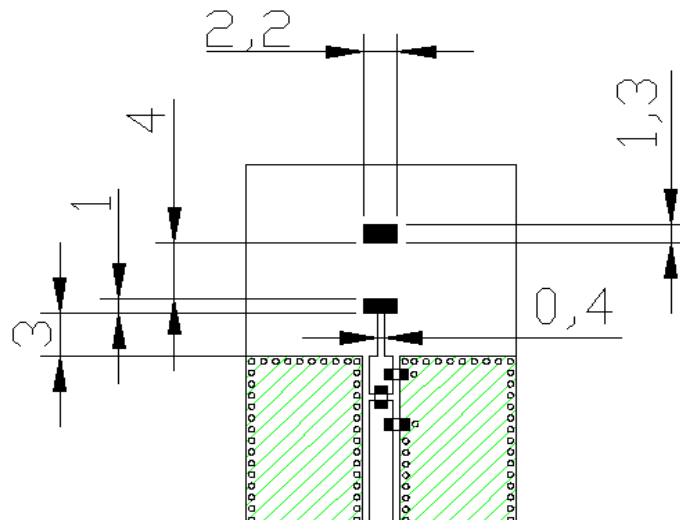
3. PCB Design for Measurement

3.1 Test Board Dimension



- ※ Test Board size is 40*20mm
- ※ Ground plane size is 30*20mm

3.2 PCB Design Guide



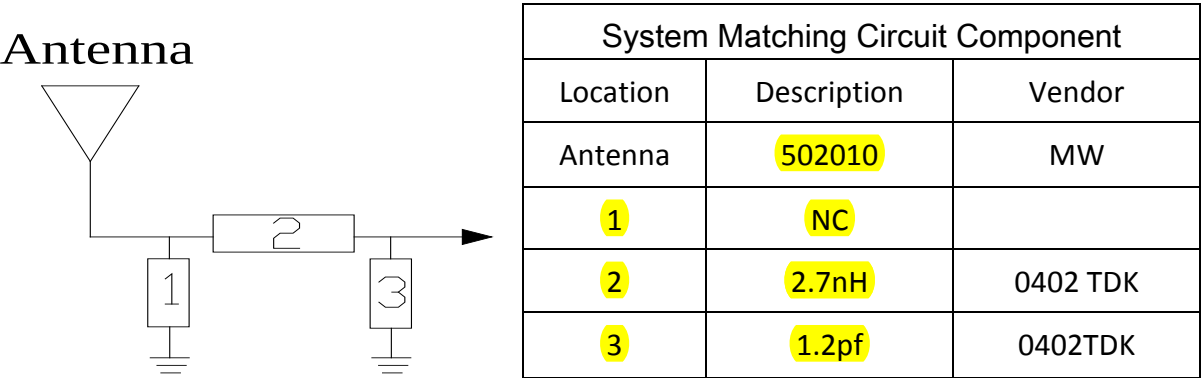
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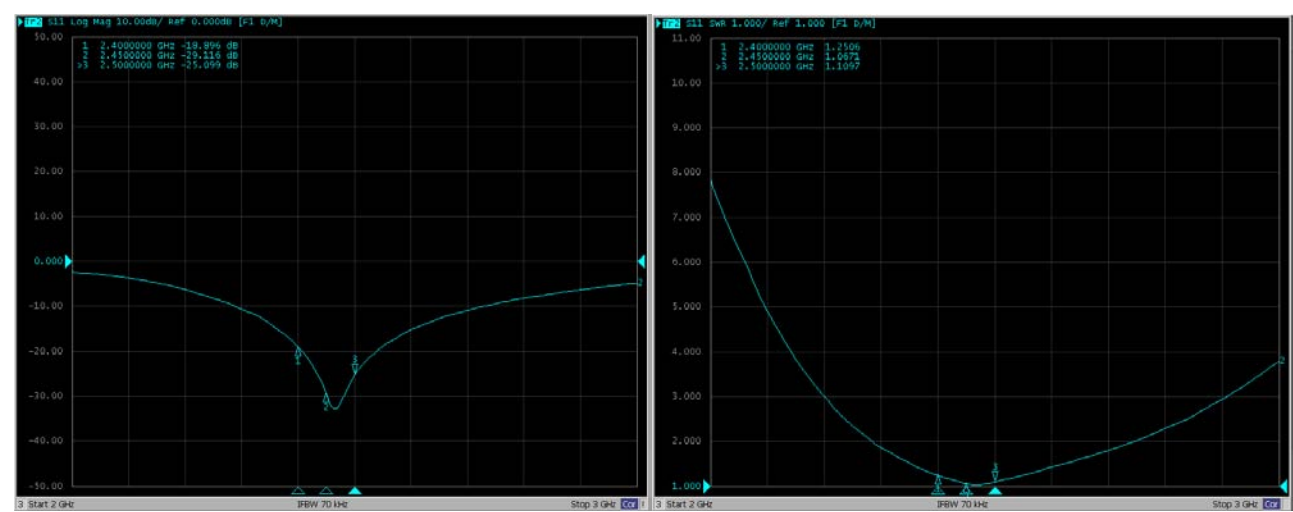
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4. Measurement Result

4.1 Matching circuit



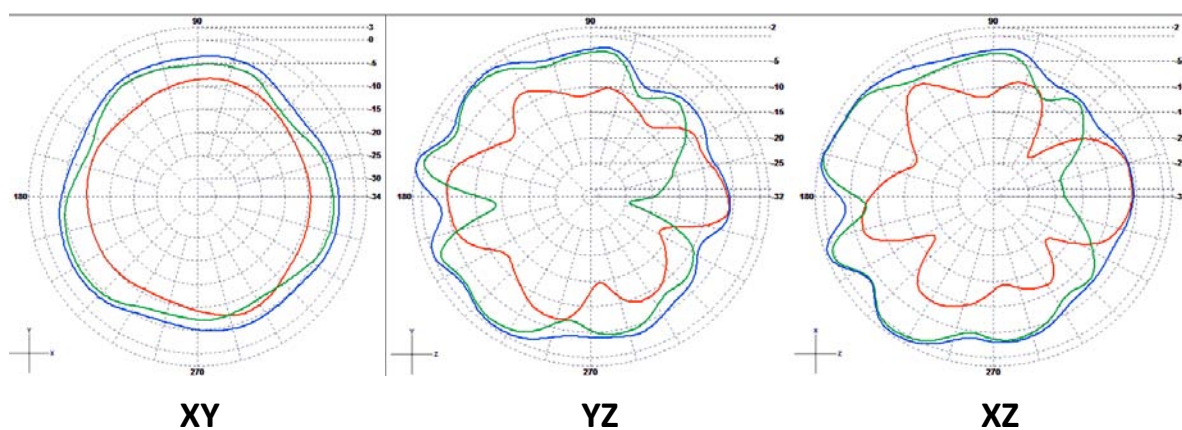
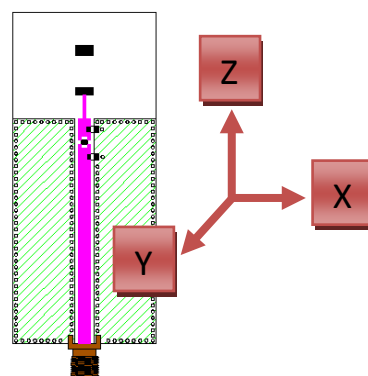
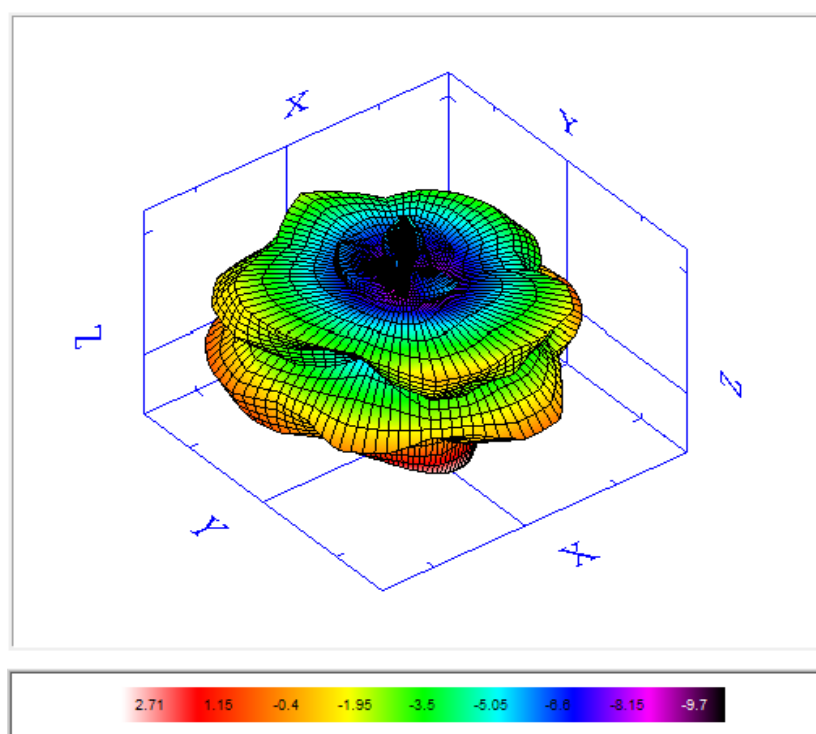
4.2 Return Loss (S11 / VSWR)



	2.4GHz	2.45GHz	2.5GHz
S11(dB)	-19	-29	-25
VSWR	1.3	1.1	1.1



4.3 Radiation Pattern(@2450MHz)



	X-Y plane	Y-Z plane	X-Z plane
Avg. gain(dBi)	-4.04	-2.61	-2.10
Peak gain(dBi)	-2.96	2.82	2.60

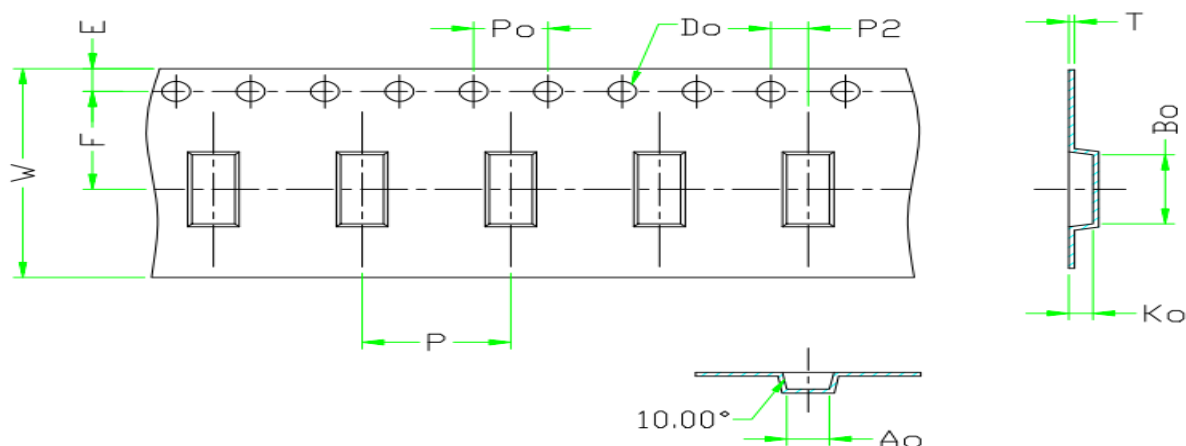
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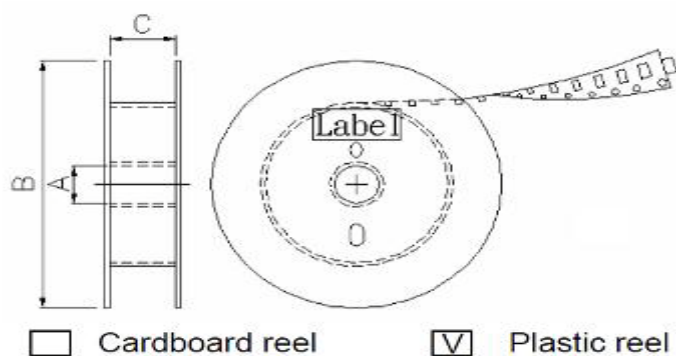
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5. Package

5.1 Dimension (Unit: mm)



5.2 Reel & Packing Specification



Item	Specifications	Tolerances
W	16.00	±0.30
E	1.75	± 0.10
F	7.50	± 0.10
P	8.00	+0.10
P ₀	4.00	± 0.10
P ₂	2.00	± 0.10
D ₀	1.50	± 0.10
T	0.30	± 0.05
A ₀	2.30	± 0.10
B ₀	5.30	± 0.10
K ₀	1.30	± 0.10

Reel Dimensions		
A	100	mm
B	330	mm
C	12	mm
Reel	5000	pcs

Product code: 1101 - Polycarbonate natural transparent.
 1201 - Polycarbonate conductive black.
 Surface resistivity 10E4 to E6 ohm/sq.

Packing		
Length / Roll	48.6	meters
Each Carton	19	rolls
	95000	pcs

Carton Dimension (mm)	
V	350(L)*350(W)*350(H)

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