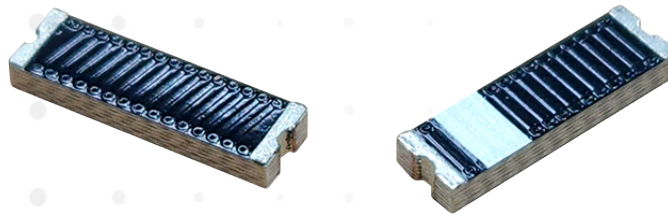




# SPECIFICATION

**ISM band — 315 / 433 / 868 / 915 MHz**  
**Chip Antenna**



**Model No. : CPCLW-3901**



## 1. General Description

### 1.1 Electrical Properties

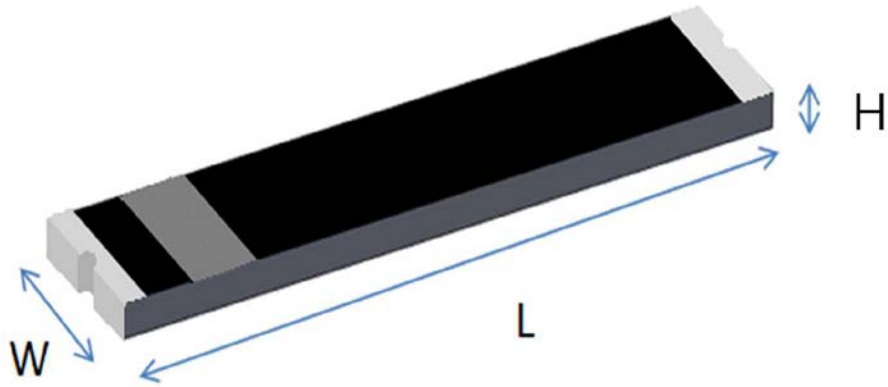
Parameter	Description			
Frequency Band	315/433/868/915 MHz			
Nominal Impedance	50 Ω			
Polarization	Linear			
V.S.W.R	<2:1			
	315 MHz	433 MHz	868 MHz	915 MHz
Efficiency	40.7 %	45.6 %	50.7 %	54.7 %
Peak Gain	1.1 dBi	1.2 dBi	1.3 dBi	1.3 dBi
※With 40 x 75 mm Evaluation Board & 40 x 15 mm Clearance Area				

### 1.2 Mechanical Properties

Parameter	Description
Dimensions	10.5*3*1.2 mm
Operating Temperature	-40°C~110°C
Storage Temperature (With Packing Sealed)	0°C~40°C

## 2. Appearance

Dimensions (Unit : mm)



L	W	H
10.5	3	1.2

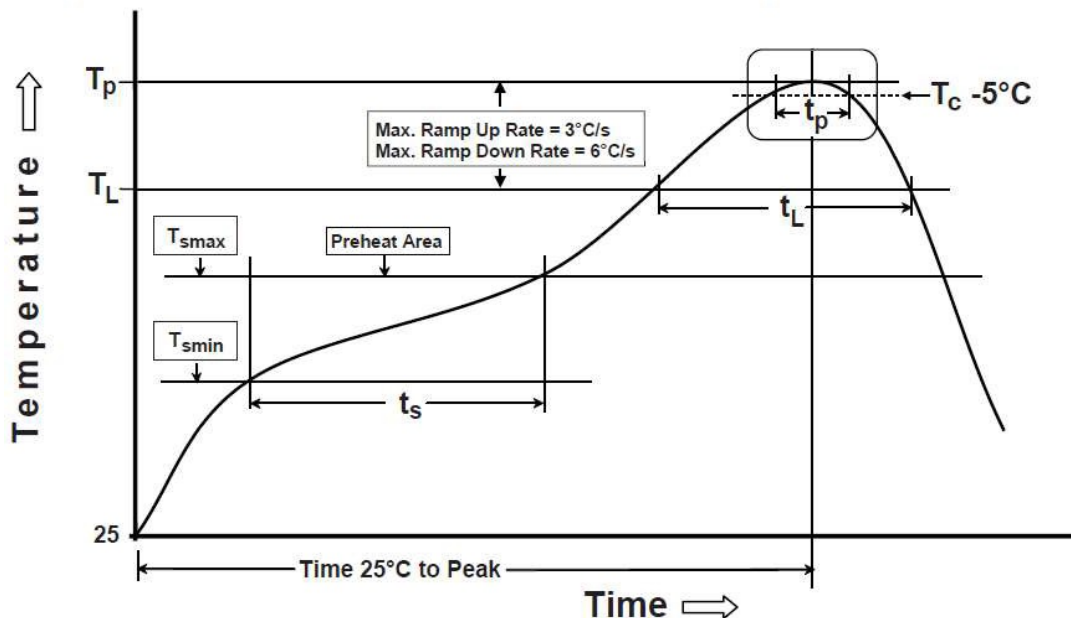
### 3. Soldering Conditions

The product can be assembled following Pb-free assembly. According to the Standard **IPC/JEDEC J-STD-020C**, the temperature profile suggested is as follow :

Phase	Profile features	Pb-Free Assembly (SnAgCu)
PREHEAT	-Temperature Min( $T_{smin}$ ) -Temperature Max( $T_{smax}$ ) -Time( $t_s$ ) form ( $T_{smin}$ to $T_{smax}$ )	150°C 200°C 60~120 seconds
RAMP-UP	Avg. Ramp-up Rate ( $T_{smax}$ to TP)	3°C/second max.
REFLOW	-Temperature( $T_L$ ) -Total Time above $T_L$ ( $t_L$ )	217°C 30~100 seconds
PEAK	-Temperature( $T_P$ ) -Time( $t_p$ )	260°C 10 seconds
RAMP-DOWN	Rate	6°C/second max.
Time from 25°C to Peak Temperature		8 minutes max.
Composition of solder paste		Sn 96.5/ Ag 3/Cu 0.5
Solder Paste Model		SHENMAO PF606-P26

Note : All the temperature measure point is on top surface of the component, if temperature over recommend, it will make component surface peeling or damage.

The graphic shows temperature profile for component assembly process in reflow ovens





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### Soldering With Iron:

Temperature  $270 \pm 10$  °C.

Apply preheating at  $120$ °C for 2-3 minutes.

Finish soldering for each terminal within 3 seconds, if soldering iron over temperature  $270 \pm 10$  °C or 3 seconds, it will make component surface peeling or damage.

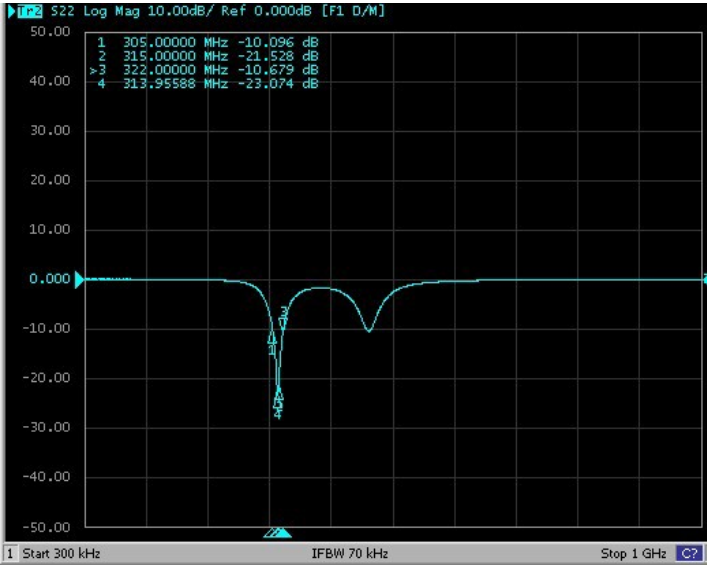
Soldering iron can not leakage of electricity.



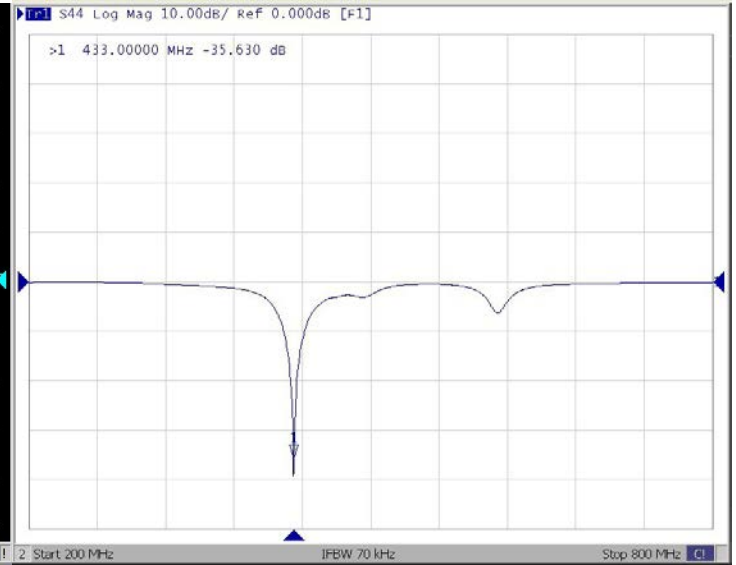
## 4. Performance

### 4.1 Return Loss

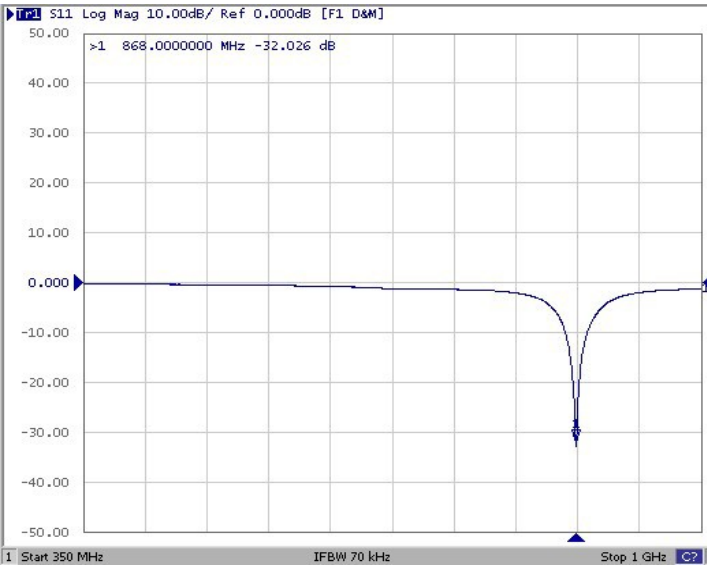
315 MHz



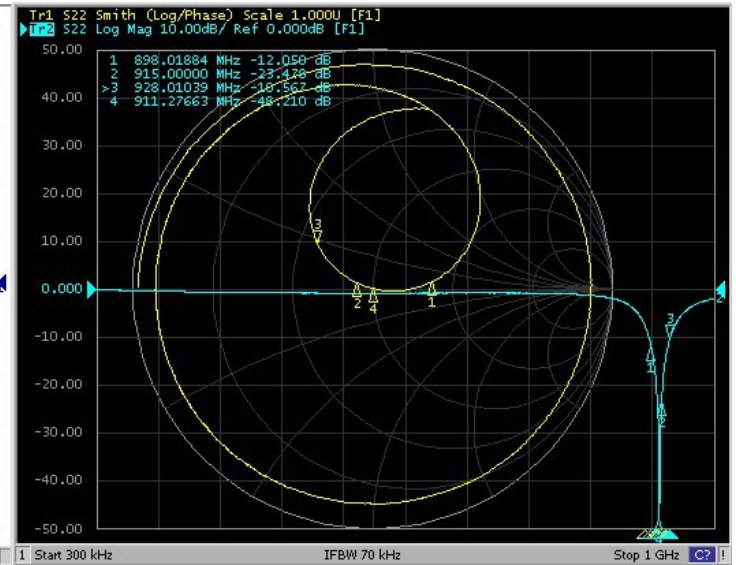
433 MHz



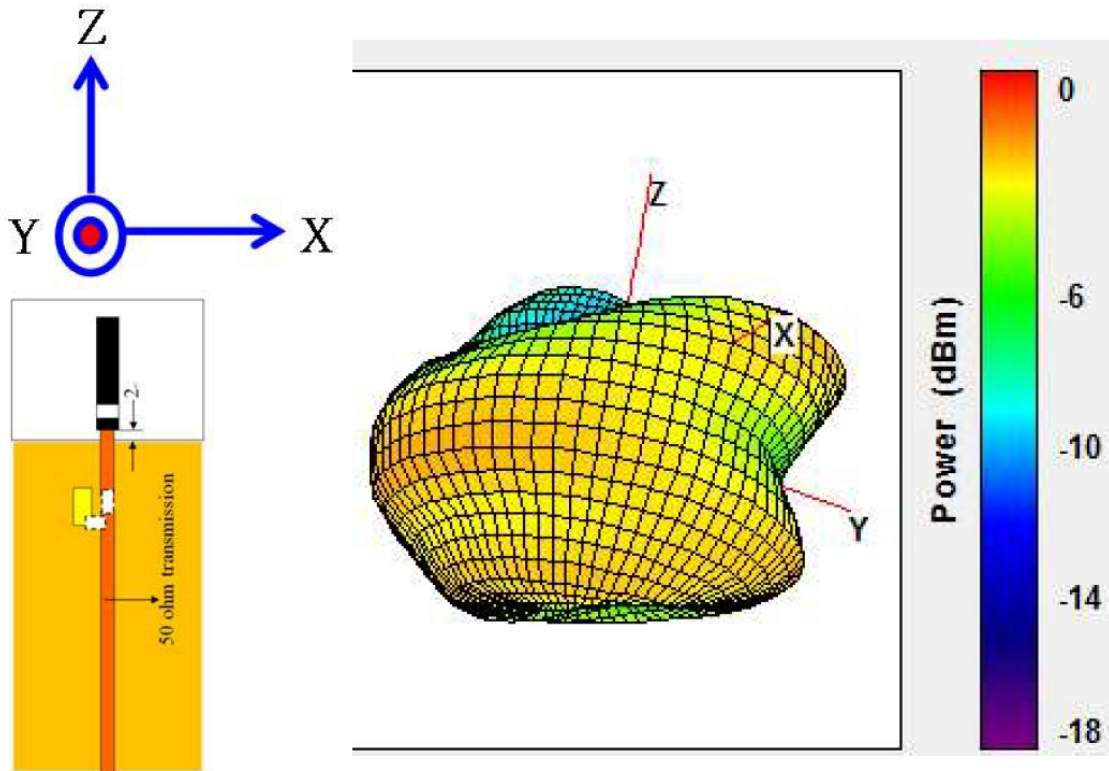
868 MHz



915 MHz

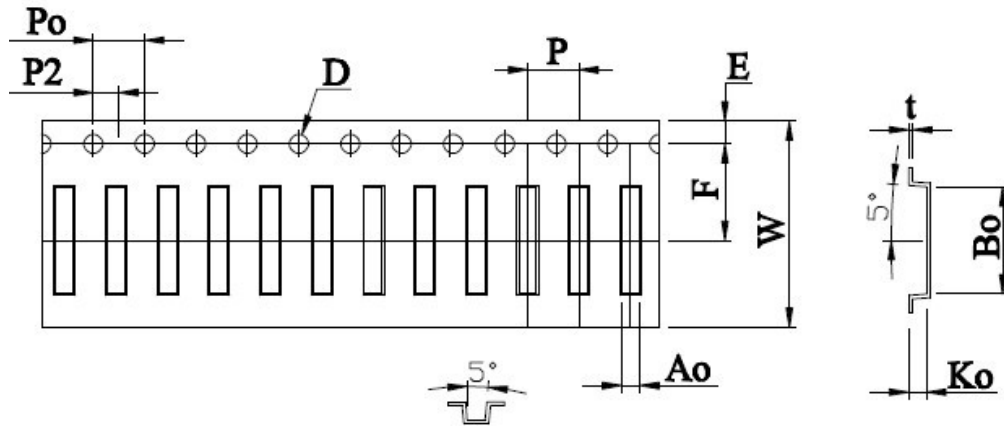


## 4.2 3D Radiation Pattern



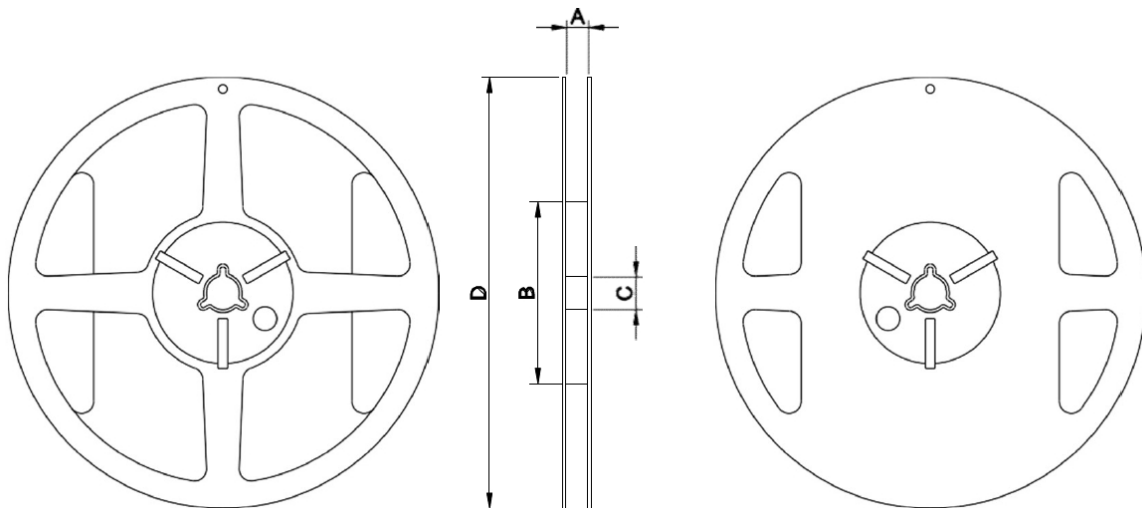
## 5. Packing

- Tape :



W	Ao	Bo	Ko	P	F	E	D	D1	Po	P2	t
24.0 $\pm 0.30$	3.61 $\pm 0.10$	11.78 $\pm 0.10$	2.49 $\pm 0.10$	8.00 $\pm 0.10$	11.5 $\pm 0.10$	1.75 $\pm 0.10$	1.50 $\pm 0.10$	1.50 $\pm 0.15$	4.00 $\pm 0.10$	2.00 $\pm 0.10$	0.305 $\pm 0.02$

- Reel : 1,000 pcs



7''( $\varnothing 180$  mm) x 24 mm

Tape Width(mm)	A(mm)	B(mm)	C(mm)	D(mm)
24	25 $\pm 0.5$	60 $\pm 1.0$	13.5 $\pm 0.5$	178 $\pm 1.0$