

# AT8010 Series (Preliminary)

## Multilayer Chip Antenna

### Features

- ❖ Monolithic SMD with small, low-profile and light-weight type.
- ❖ Wide bandwidth

### Applications

- ❖ 2.4GHz WLAN, Home RF, Bluetooth Modules, etc.



### Specifications

Part Number	Frequency Range (MHz)	Peak Gain (dBi typ.)	Average Gain (dBi typ.)	VSWR	Impedance
AT8010-E2R9HAA_	2400~2500	2.5 (XZ-V)	0.5 (XZ-V)	2 max.	50 Ω

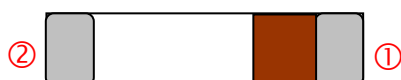
Q'ty/Reel (pcs) : 1,000 pcs  
 Operating Temperature Range : -40 ~ +85 °C  
 Storage Temperature Range : +5 ~ +35 °C, Humidity 45~75%RH  
 Storage Period : 12 months max.  
 Power Capacity : 3W max.

### Part Number

AT   8010   -   E   2R9   HAA   □  
 ①   ②   ③   ④   ⑤   ⑥

① Type	AT : Antenna	② Dimensions ( L × W )	8.0 × 1.0 mm
③ Material Code	E	④ Frequency Range	2R9=2900MHz
⑤ Specification Code	HAA	⑥ Packaging	T: Tape & Reel B: Bulk

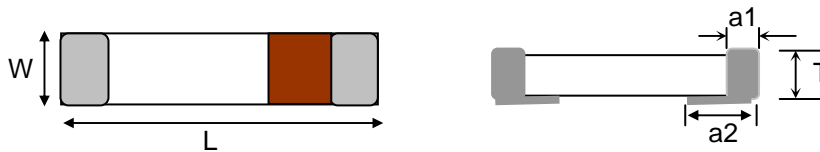
### Terminal Configuration



No.	Terminal Name	No.	Terminal Name
①	Feeding Point	②	NC

## Dimensions and Recommended PC Board Pattern

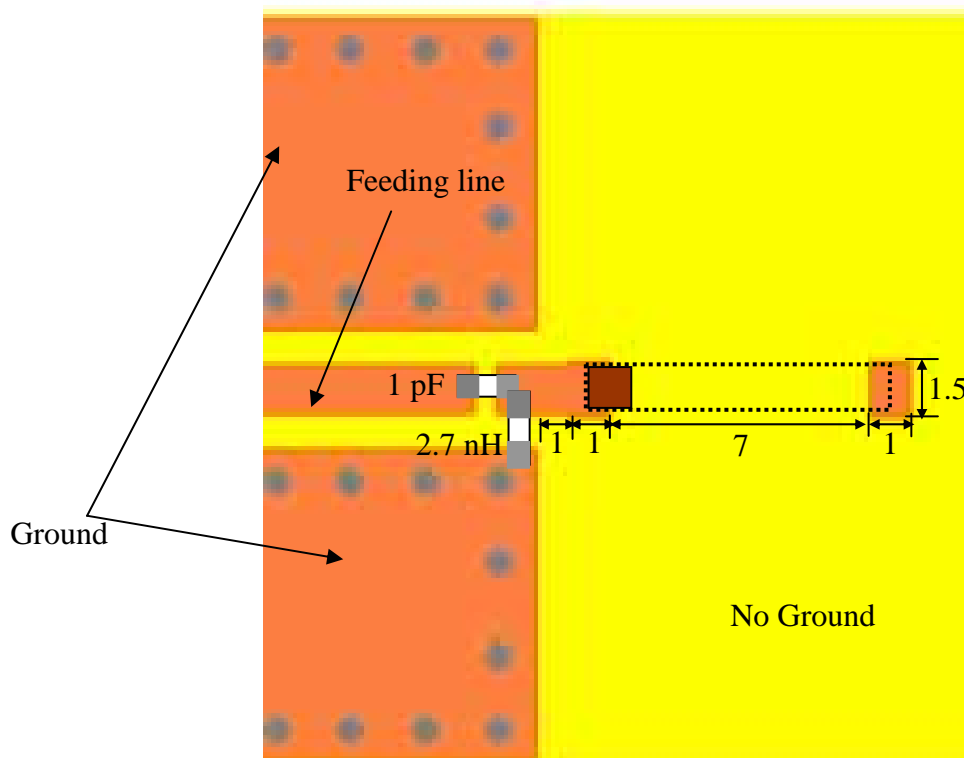
Unit : mm



Mark	L	W	T	a1	a2
Dimensions	8.0±0.2	1.0±0.2	1.0±0.2	0.5±0.2	1.0±0.2

## The Recommended PC Board layout – Type A

❖With Matching Circuits (Unit in mm)



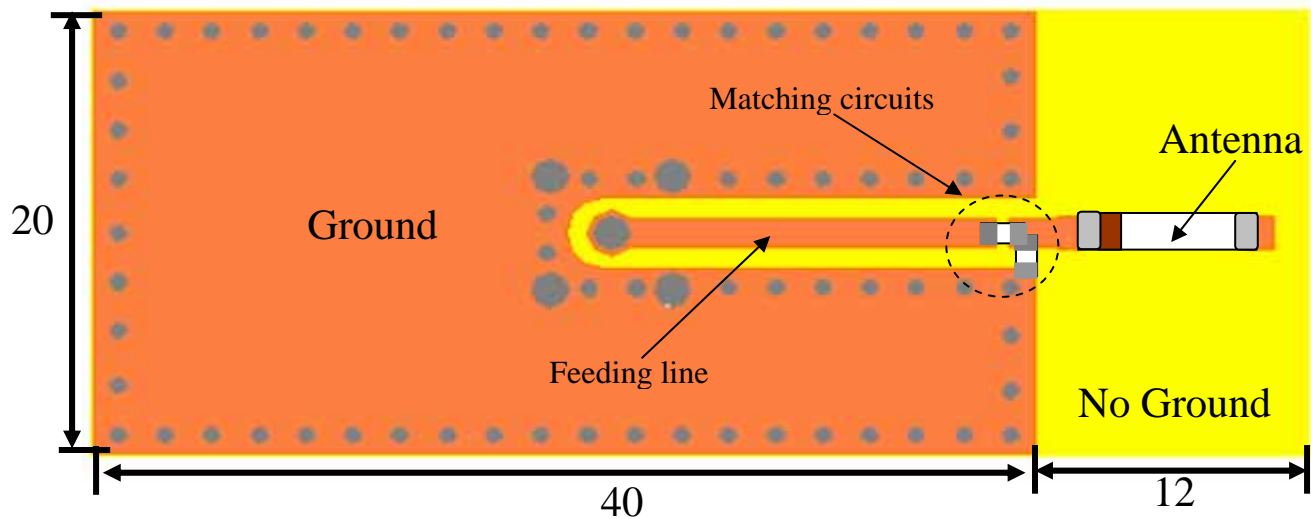
(Matching circuit and component values will be different, depending on PCB layout)

\*Line width should be designed to match 50Ω characteristic impedance, depending on PCB

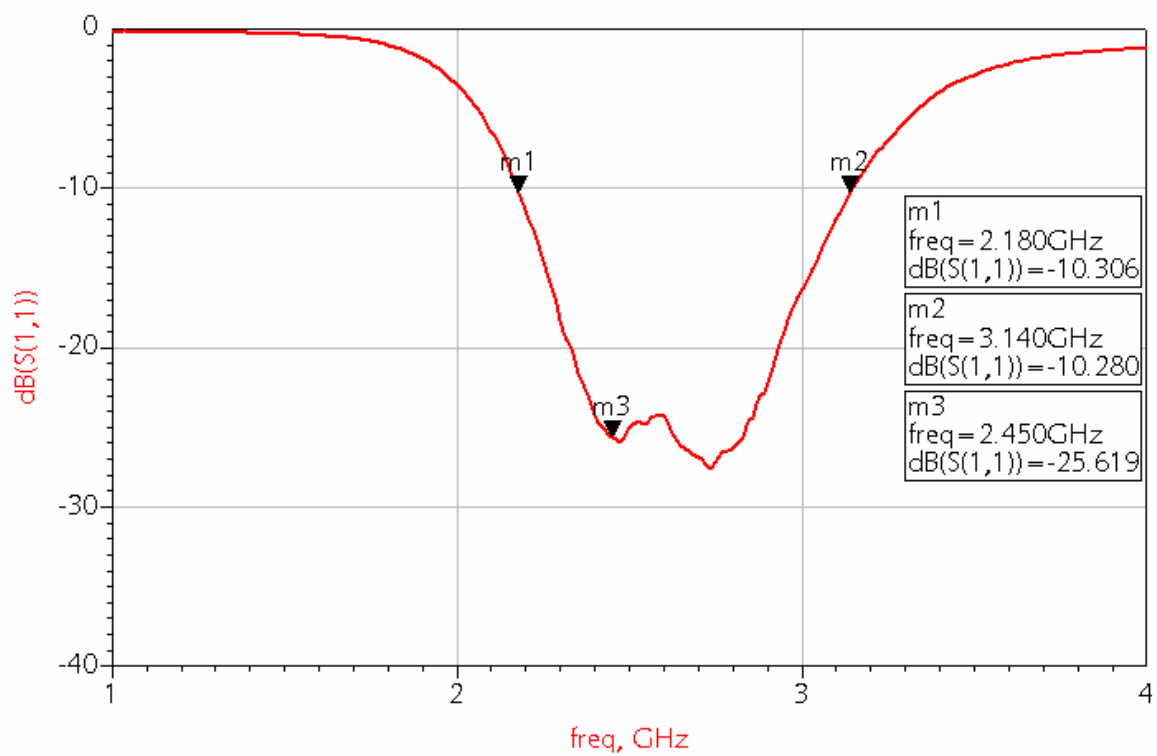
material and thickness.

### Typical Electrical Characteristics (T=25°C)

❖ Test Board – Type A (Unit in mm)

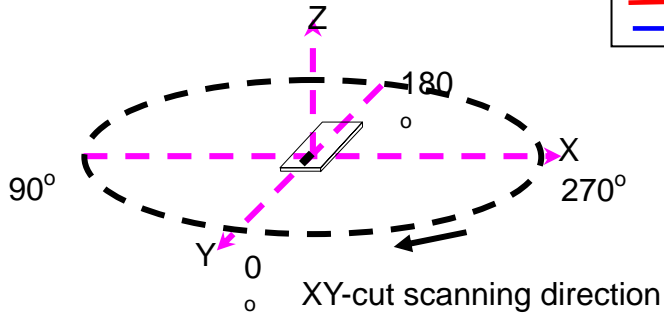


❖ Return Loss / With Matching Circuits

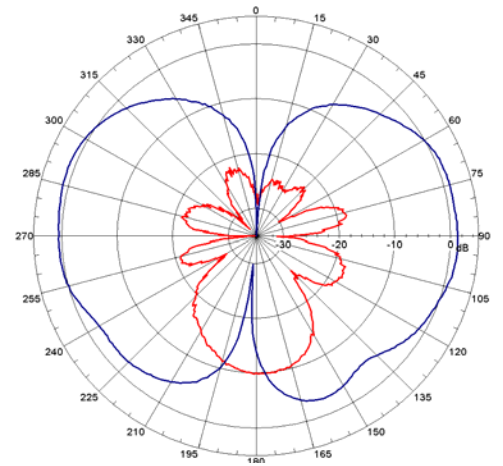


❖ Radiation Patterns

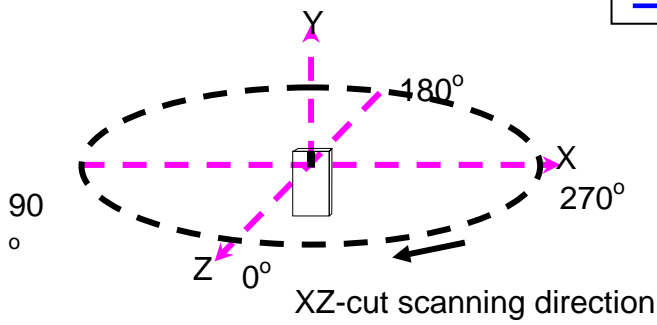
XY-V/XY-H



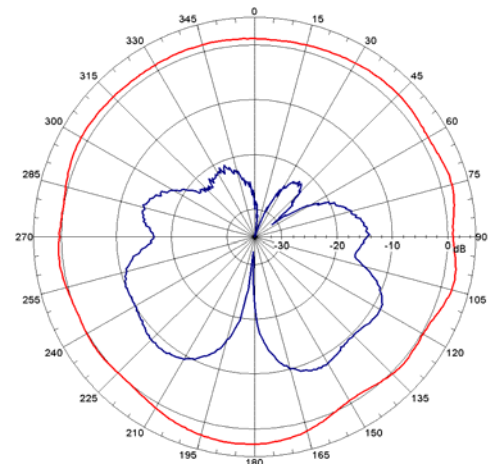
XY cut @2.45GHz  
— Vertical  
— Horizontal



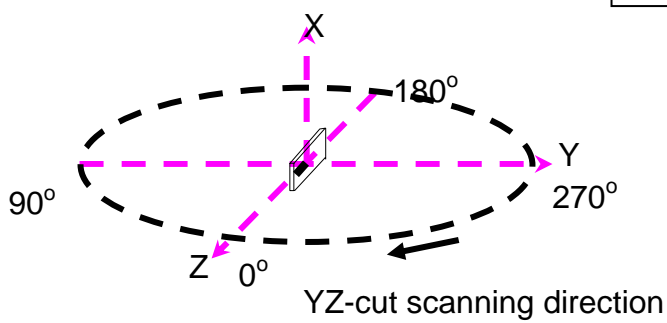
XZ-V/XZ-H



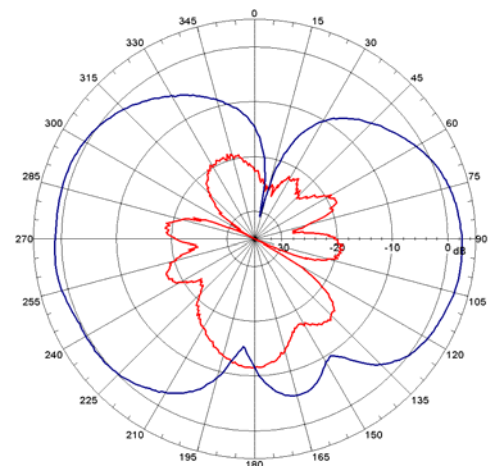
XZ cut @2.45GHz  
— Vertical  
— Horizontal



YZ-V/YZ-H

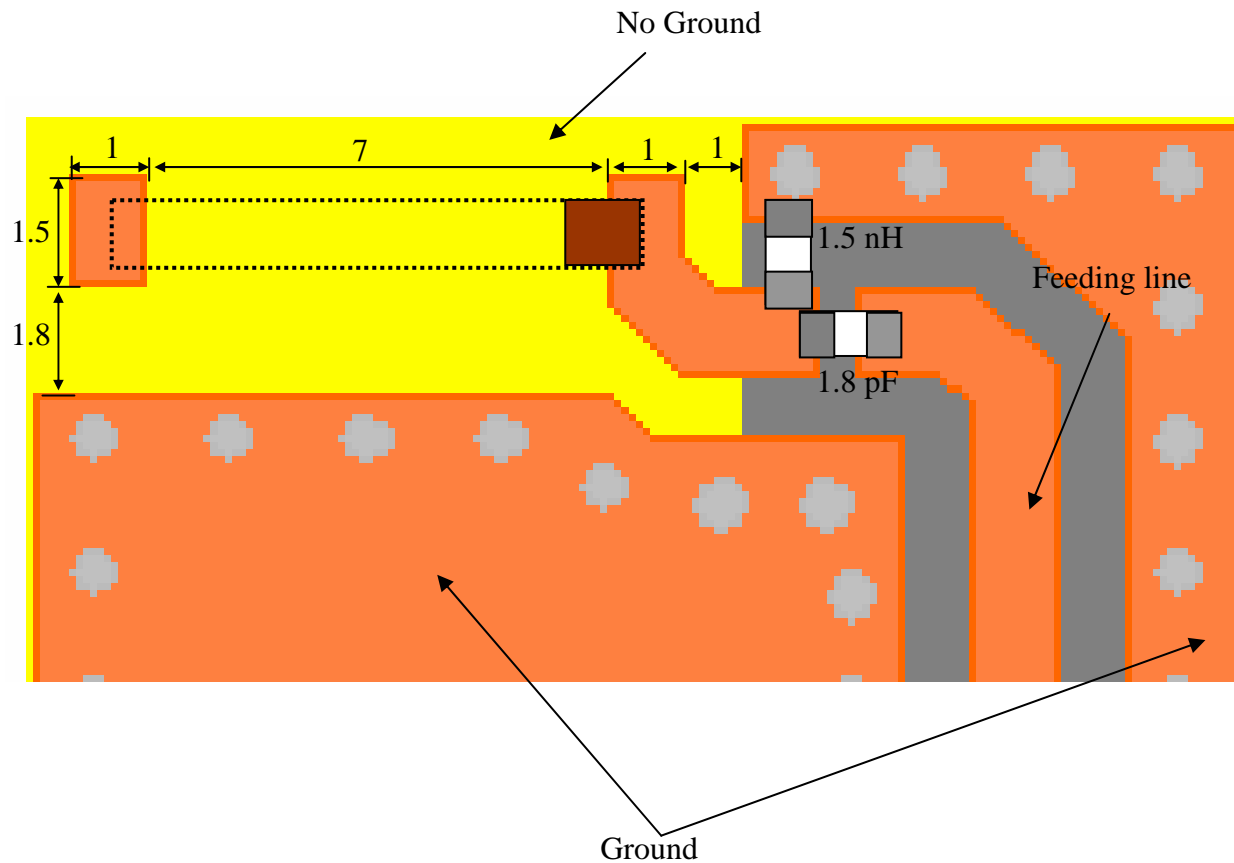


YZ cut @2.45GHz  
— Vertical  
— Horizontal



## The Recommended PC Board layout – Type B

❖ With Matching Circuits (Unit in mm)

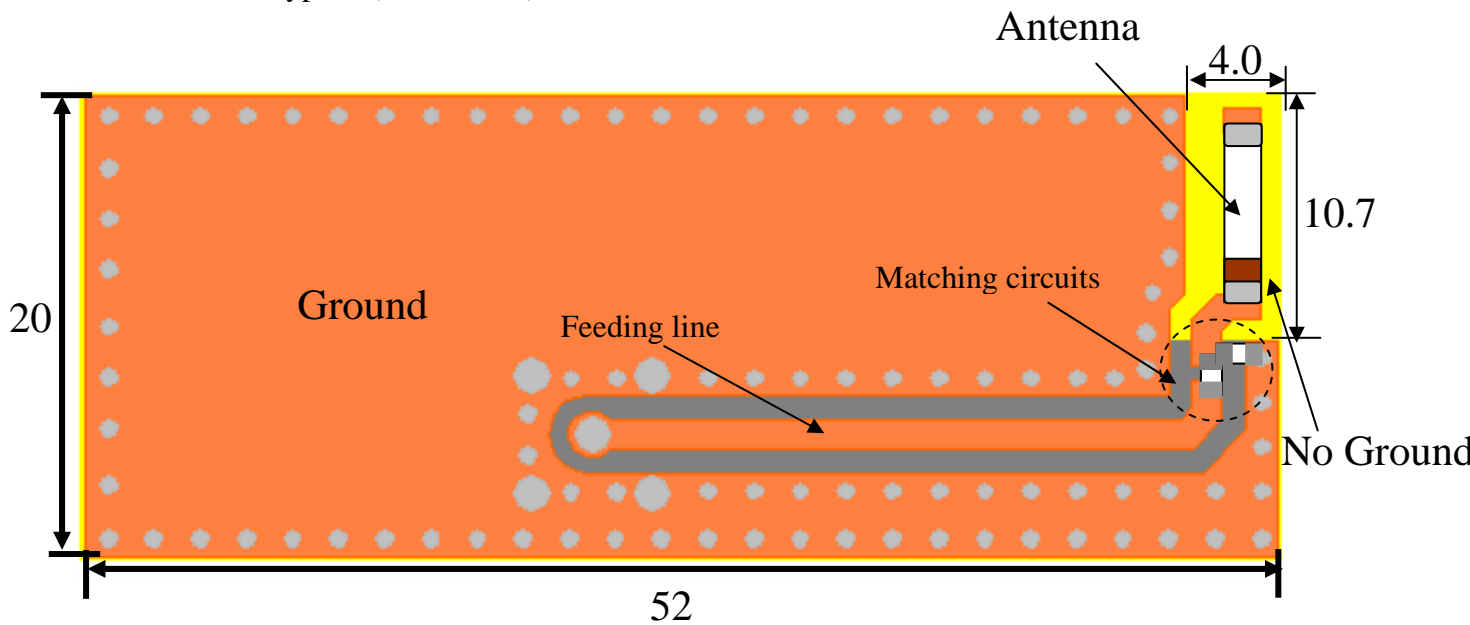


(Matching circuit and component values will be different, depending on PCB layout)

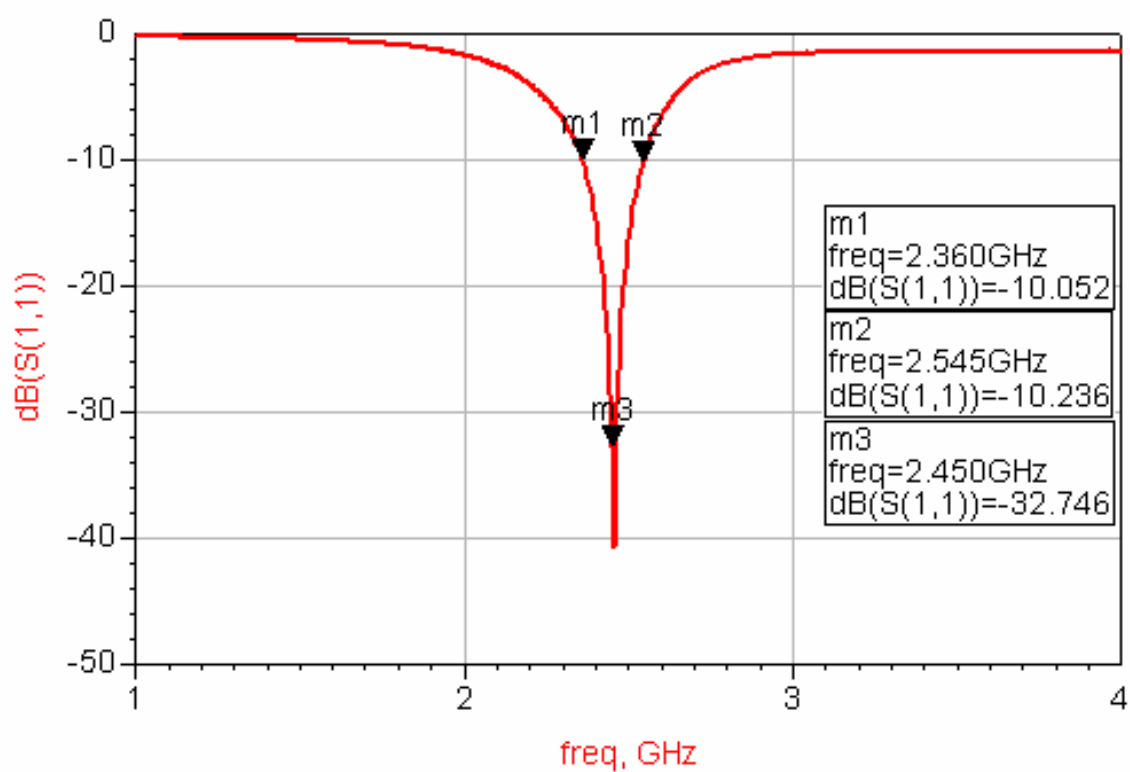
\*Line width should be designed to match  $50\Omega$  characteristic impedance, depending on PCB material and thickness.

## Typical Electrical Characteristics (T=25°C)

❖ Test Board – Type B (Unit in mm)

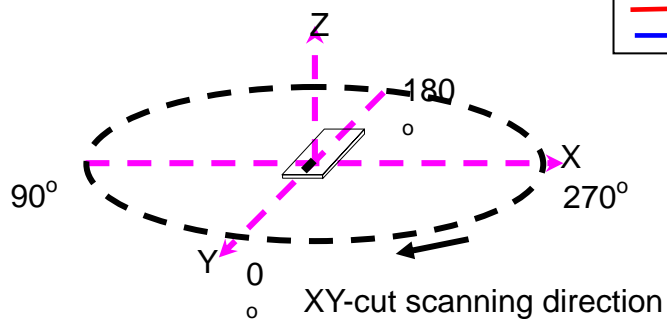


❖ Return Loss / With Matching Circuits

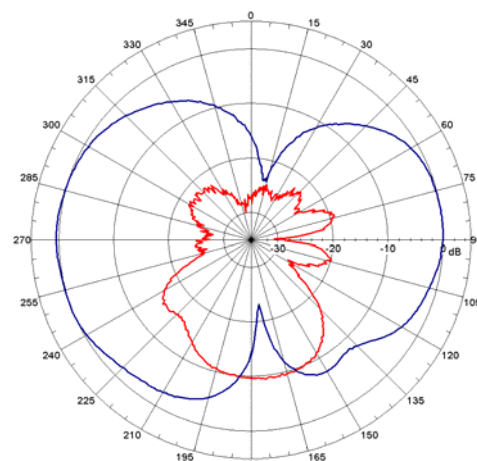


❖ Radiation Patterns

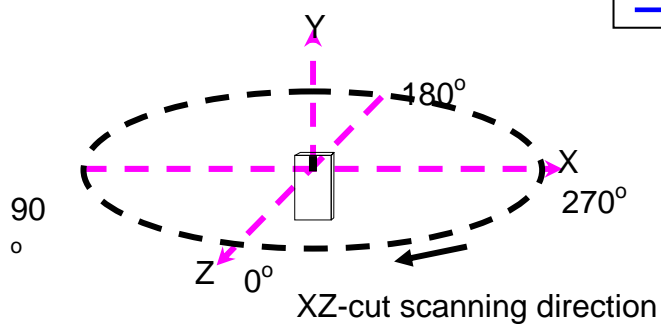
XY-V/XY-H



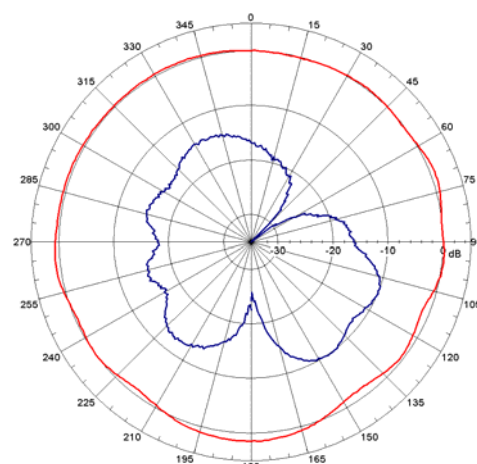
XY cut @2.45GHz  
— Vertical  
— Horizontal



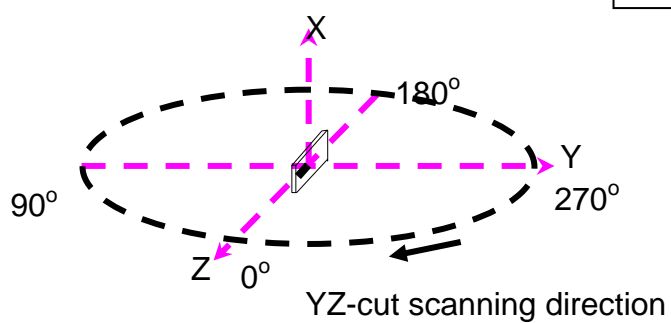
XZ-V/XZ-H



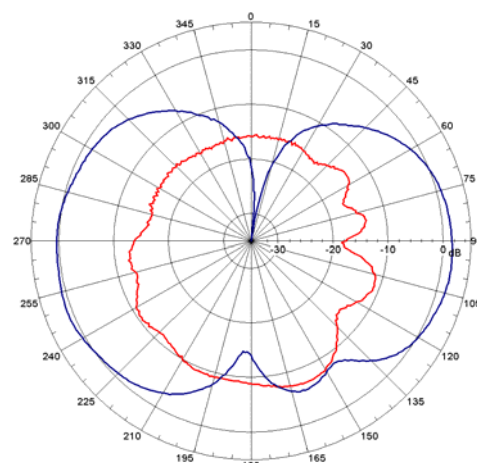
XZ cut @2.45GHz  
— Vertical  
— Horizontal



YZ-V/YZ-H



YZ cut @2.45GHz  
— Vertical  
— Horizontal



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