

# AT3216 Series

## Multilayer Chip Antenna

### Features

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

### Applications

- ❖ Bluetooth/Wireless LAN/Home RF
- ❖ ISM band 2.4GHz applications



### Specifications

Part Number	Frequency Range (MHz)	Peak Gain (XZ-V)	Average Gain (XZ-V)	VSWR	Impedance
<b>AT3216</b> <b>-B2R7HAA_</b>	2400 ~ 2500	0.5 dBi typ.	-0.5 dBi typ.	2 max.	50 Ω

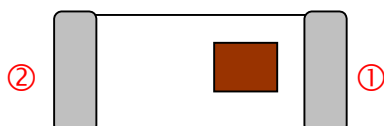
Q'ty/Reel (pcs) : 3,000pcs  
 Operating Temperature Range : -40 ~ +85 °C  
 Storage Temperature Range : -40 ~ +85 °C  
 Power Capacity : 3W max.

### Part Number

**AT**   **3216**   -   **B**   **2R7**   **HAA**   **□**   **□**  
 ①   ②   ③   ④   ⑤   ⑥   ⑦

① Type	AT : Antenna	② Dimensions ( L x W )	3.2x 1.6 mm
③ Material Code	B	④ Frequency Range	2R7=2700MHz
⑤ Specification Code	HAA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	=lead-containing /LF=lead-free		

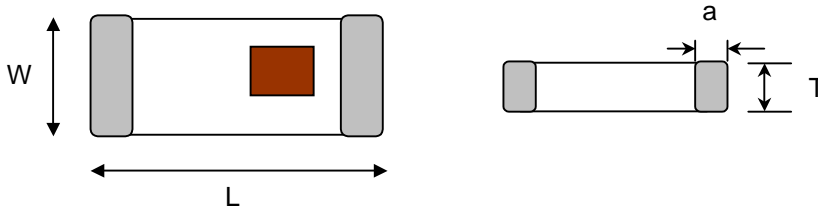
### Terminal Configuration



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

### Dimensions and Recommended PC Board Pattern

Unit : mm

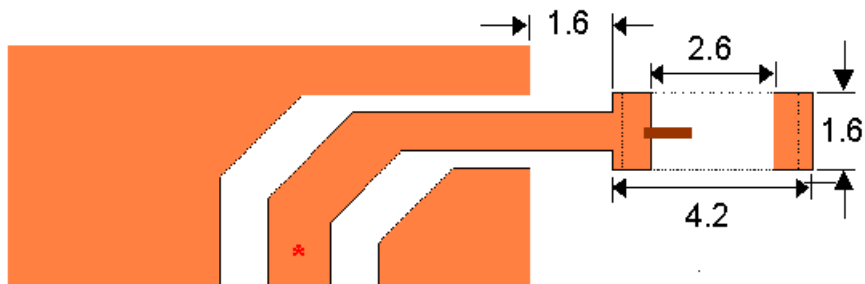


Mark	L	W	T	a
Dimensions	3.2± 0.2	1.6± 0.2	1.3+ 0.1/-0.2	0.5± 0.3

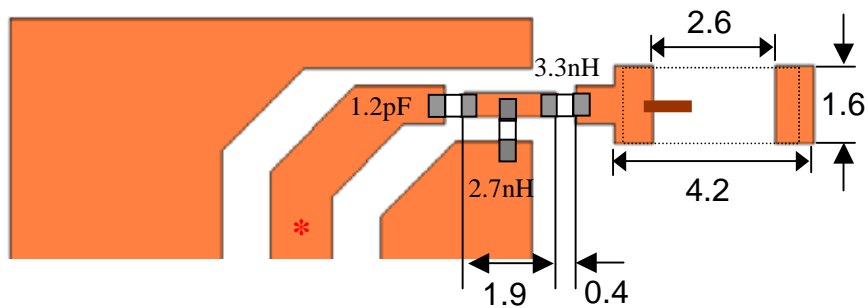
### Gain and Efficiency

Frequency	Gain (dBi)	Efficiency (%)
2400MHz	-1.45	19
2410MHz	-1.17	19
2420MHz	-2.11	15
2430MHz	-1.07	17
2440MHz	0.5	21
2450MHz	-1.29	16
2460MHz	-1.74	15
2470MHz	-1.82	15
2480MHz	-1.03	18
2500MHz	-1.13	16

(a) Without Matching Circuits



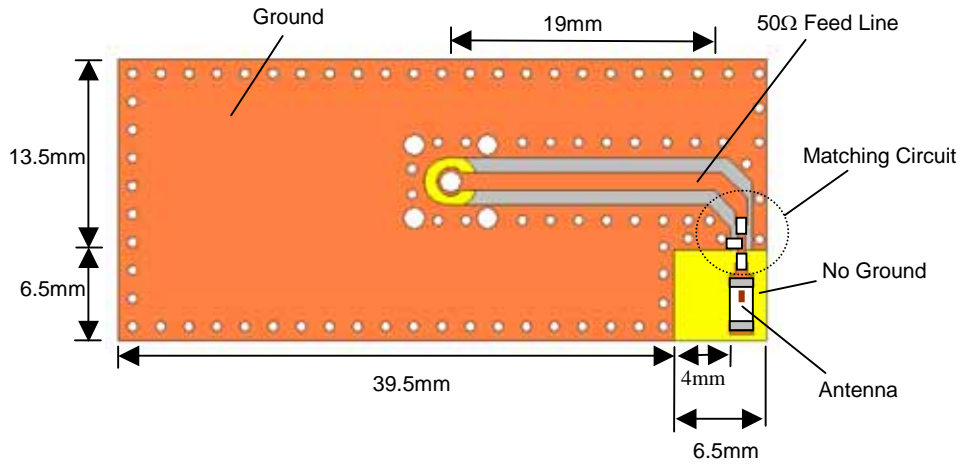
(b) With Matching Circuits



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

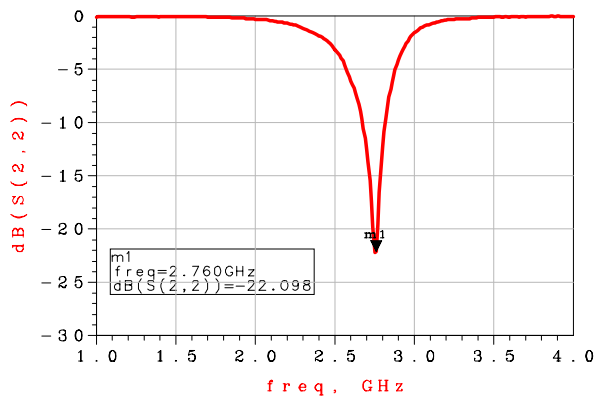
**Typical Electrical Characteristics (T=25°C)**

❖ Test Board

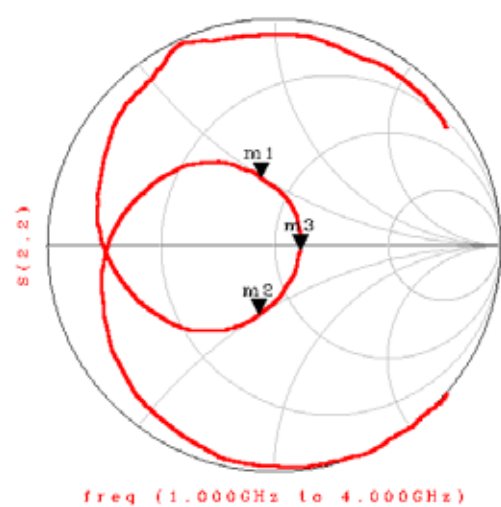
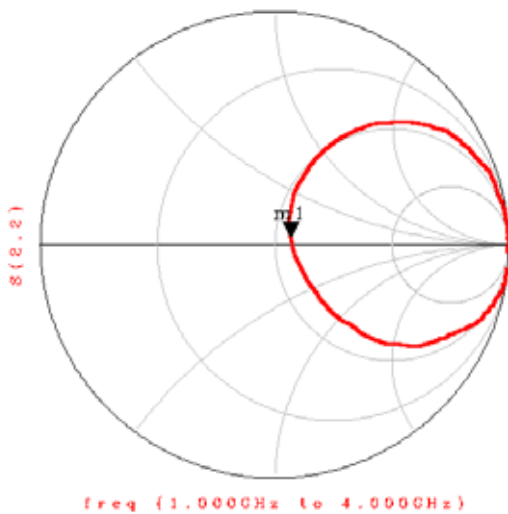
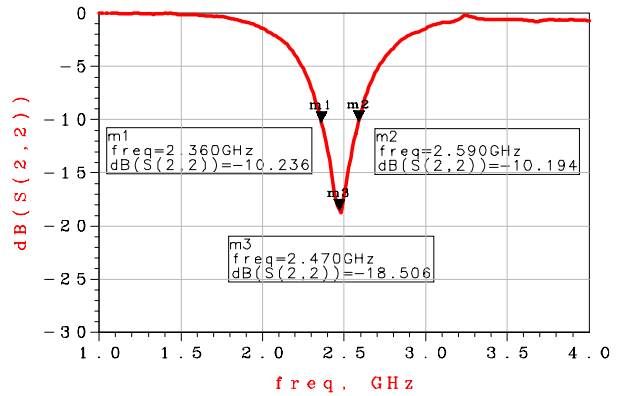


❖ Return Loss

(a) Without Matching Circuits

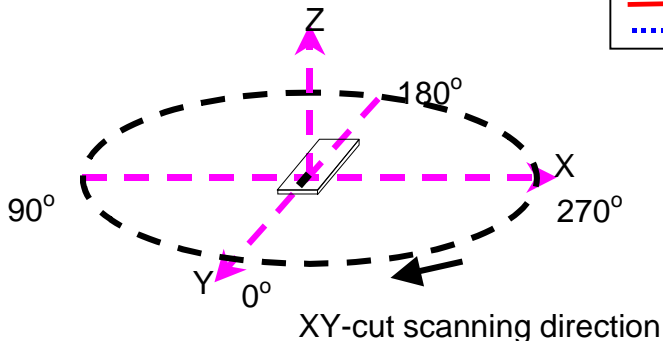


(b) With Matching Circuits

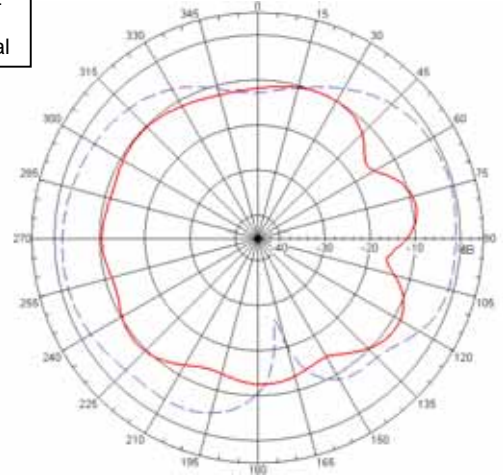


Radiation Patterns

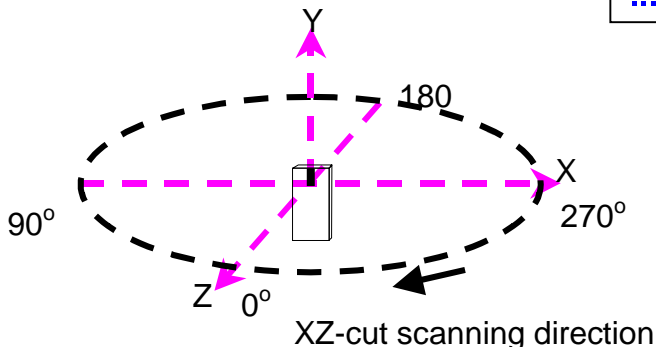
XY-V/XY-H



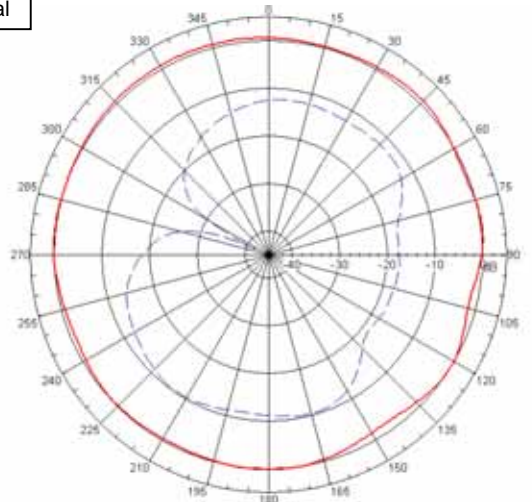
XY cut @2.45GHz  
— Vertical  
⋯ Horizontal



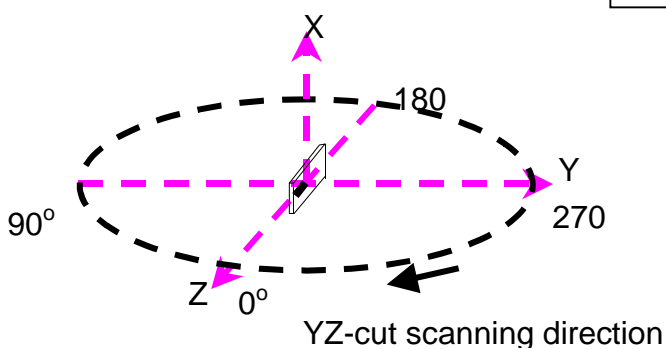
XZ-V/XZ-H



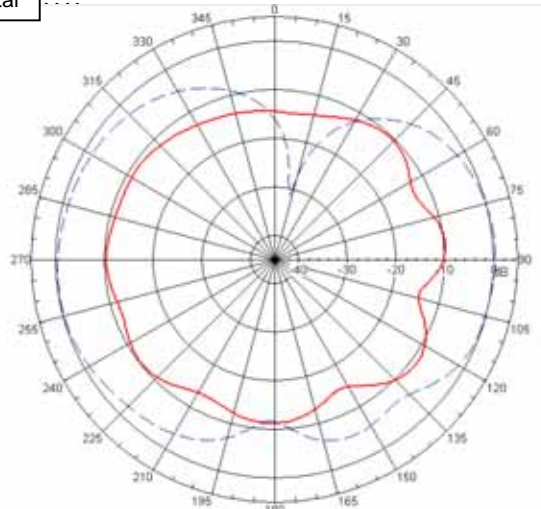
XZ cut @2.45GHz  
— Vertical  
⋯ Horizontal



YZ-V/YZ-H



YZ cut @2.45GHz  
— Vertical  
⋯ Horizontal



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