

# 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><br><b>-B2R7HAA</b> | 2400 ~ 2500           | 0.5 dBi typ.     | -0.5 dBi typ.       | 2 max. | 50 Ω      |

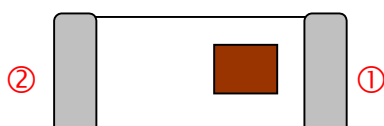
Q'ty/Reel (pcs) : 3,000pcs  
 Operating Temperature Range : -40 ~ +85 °C  
 Storage Temperature Range : -40 ~ +85 °C  
 Power Capacity : 3W max.

### Part Number

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

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

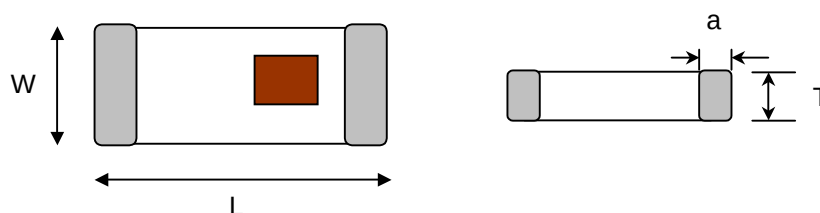
### Terminal Configuration



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

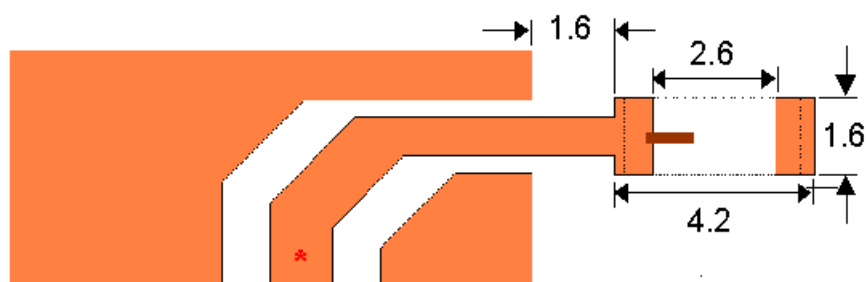
## Dimensions and Recommended PC Board Pattern

Unit : mm

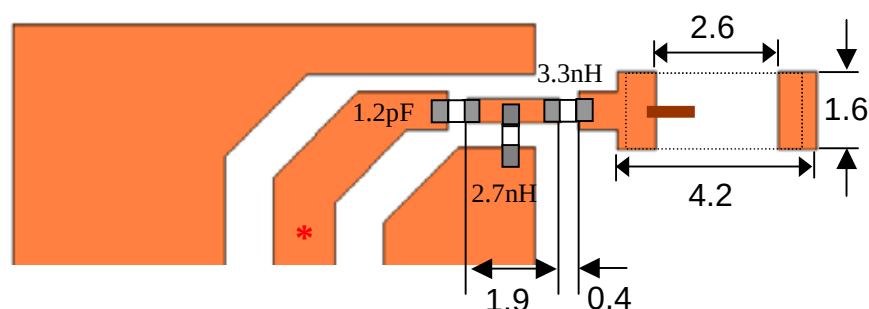


| Mark       | L             | W             | T                   | a             |
|------------|---------------|---------------|---------------------|---------------|
| Dimensions | $3.2 \pm 0.2$ | $1.6 \pm 0.2$ | $1.3 + 0.1 / - 0.2$ | $0.5 \pm 0.3$ |

(a) Without Matching Circuits



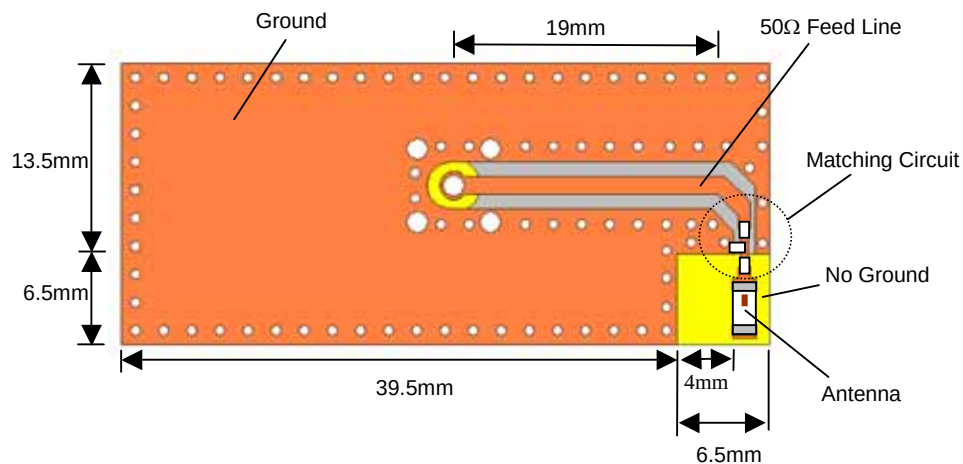
(b) With Matching Circuits



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

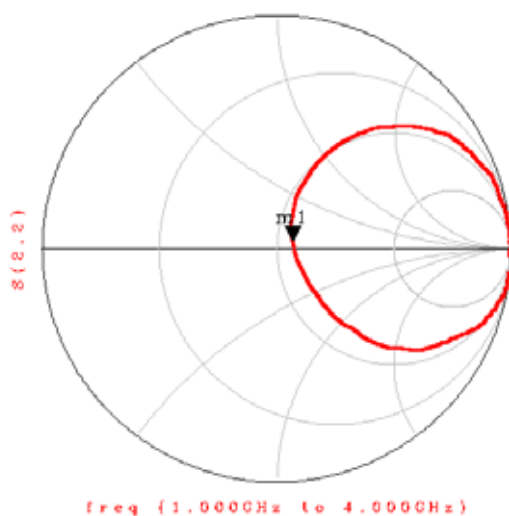
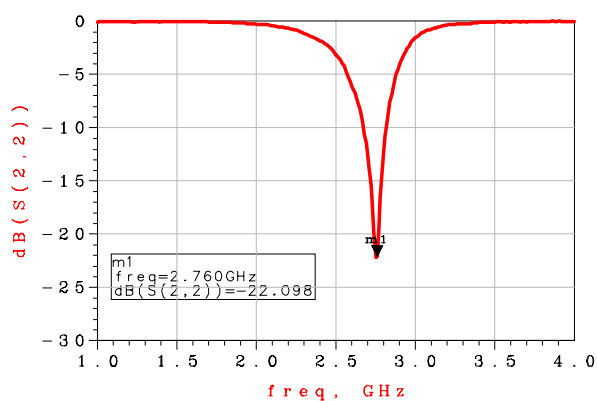
## Typical Electrical Characteristics (T=25°C)

### ❖ Test Board

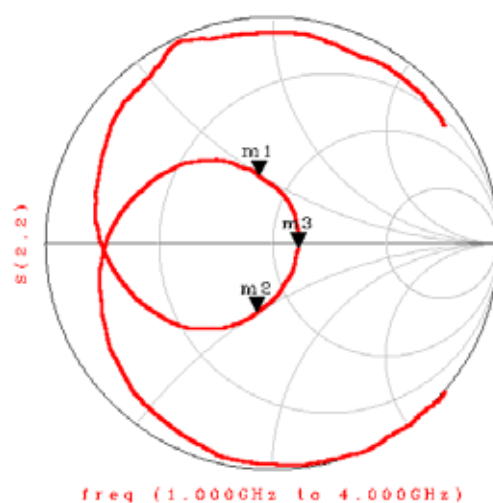
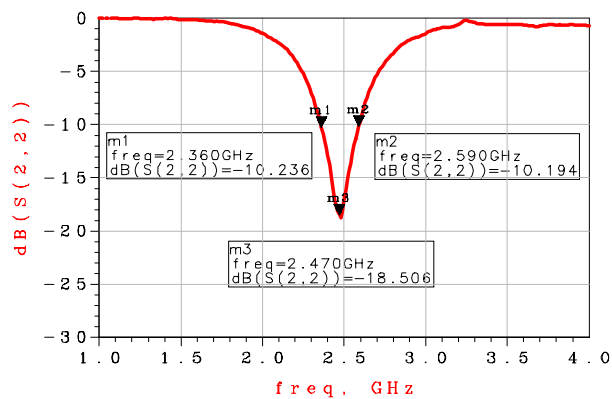


### ❖ Return Loss

#### (a) Without Matching Circuits

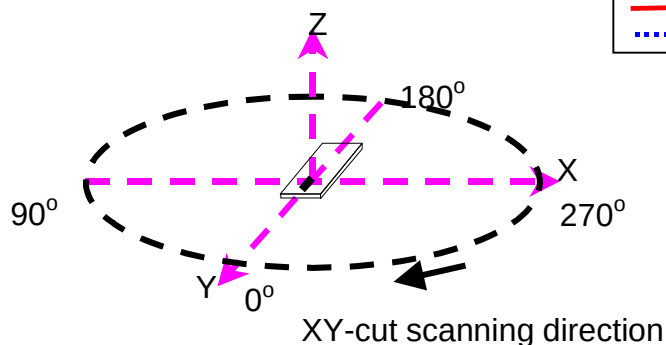


#### (b) With Matching Circuits

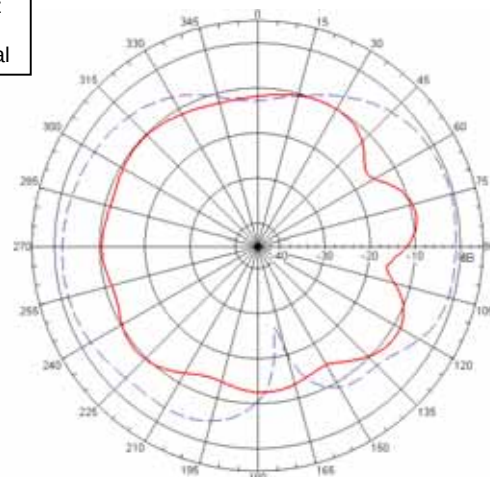


## Radiation Patterns

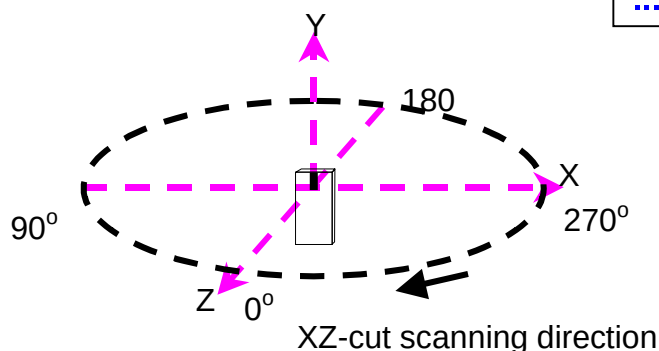
XY-V/XY-H



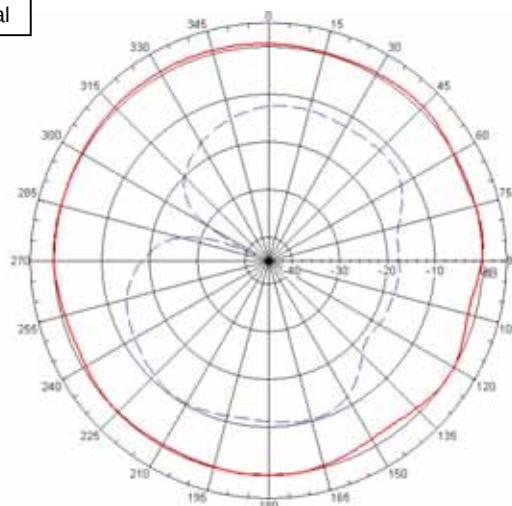
XY cut @2.45GHz  
— Vertical  
..... Horizontal



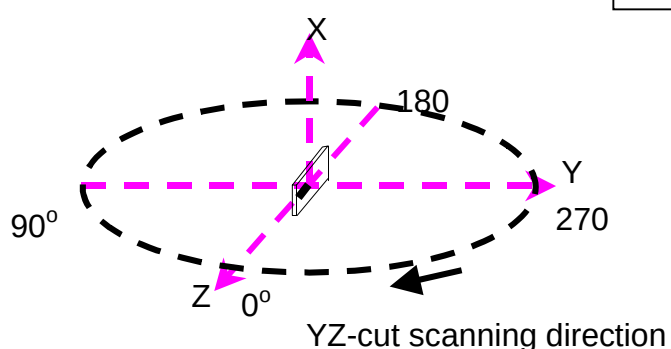
XZ-V/XZ-H



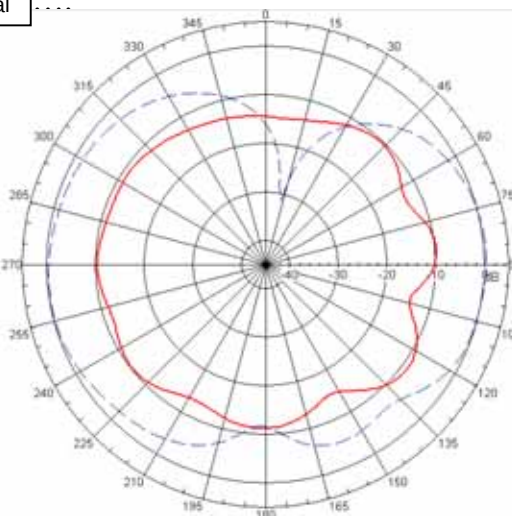
XZ cut @2.45GHz  
— Vertical  
..... Horizontal



YZ-V/YZ-H



YZ cut @2.45GHz  
— Vertical  
..... Horizontal



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