

# "High Frequency Ceramic Solutions"

## 2450 MHz Antenna

P/N 2450AT42B100

Ground Clearance Requirements Minimized

Detail Specification: 11/20/2008

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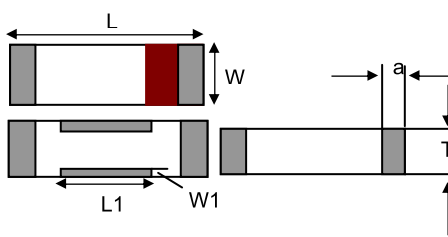
### General Specifications

|                 |                      |
|-----------------|----------------------|
| Part Number     | 2450AT42B100         |
| Frequency Range | 2400 - 2500 Mhz      |
| Peak Gain       | 0 dBi typ. (XZ-V)    |
| Average Gain    | -1.5 dBi typ. (XZ-V) |
| Return Loss     | 9.5 dB min.          |

|                       |              |
|-----------------------|--------------|
| Input Power           | 3W max.      |
| Impedance             | 50 $\Omega$  |
| Operating Temperature | -40 to +85°C |
| Reel Quantity         | 2,000        |

### Mechanical Dimensions

|    | In                       | mm                  |
|----|--------------------------|---------------------|
| L  | 0.197 $\pm$ 0.008        | 5.00 $\pm$ 0.20     |
| W  | 0.079 $\pm$ 0.008        | 2.00 $\pm$ 0.20     |
| L1 | 0.102 $\pm$ 0.008        | 2.60 $\pm$ 0.20     |
| W1 | 0.020 $\pm$ 0.008        | 0.50 $\pm$ 0.20     |
| T  | 0.079 $\pm$ 0.004/-0.008 | 2.00 $\pm$ 0.1/-0.2 |
| a  | 0.020 $\pm$ 0.012        | 0.50 $\pm$ 0.30     |



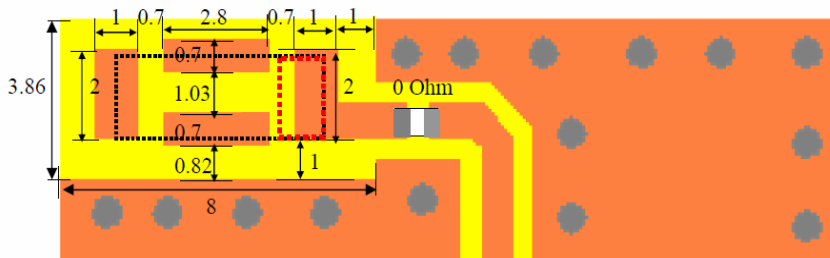
| No. | Function           |
|-----|--------------------|
| 1   | Feed Point         |
| 2   | Anchoring Pin-NC   |
| 3   | * Anchoring Pin-NC |
| 4   | * Anchoring Pin-NC |

### Mounting Considerations

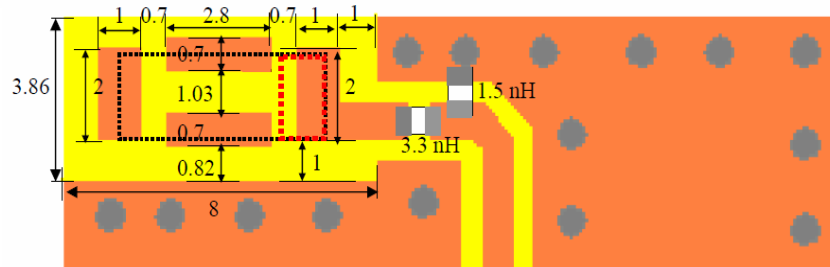
Mount these devices with brown mark facing up. Units: mm

Line width should be designed to provide 50 $\Omega$  impedance matching characteristics.

\* Note: Pins 3 & 4, although "No Connect", must be soldered to its PCB pads for proper electrical operation



a) Without Matching Circuit



b) With Matching Circuit

JTI P/N for Matching Circuit:  
Inductor (1.5nH): L-07C1N5SV6T  
Inductor (3.3nH): L-07C3N3SV6T

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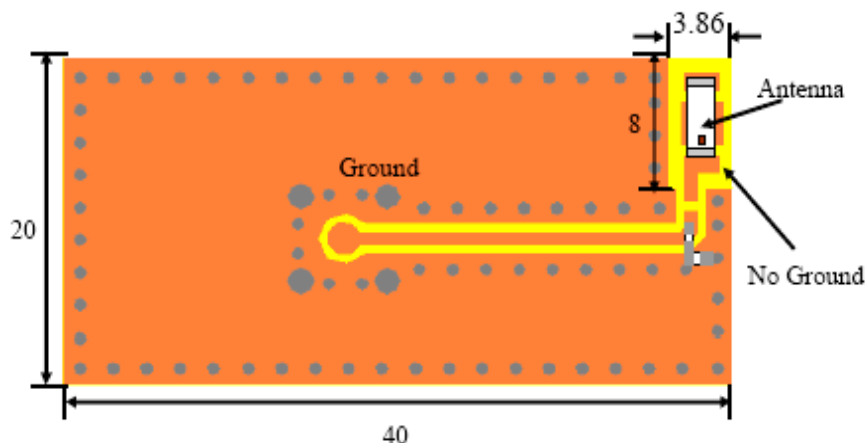
Detail Specification: 11/20/08

P/N 2450AT42B100

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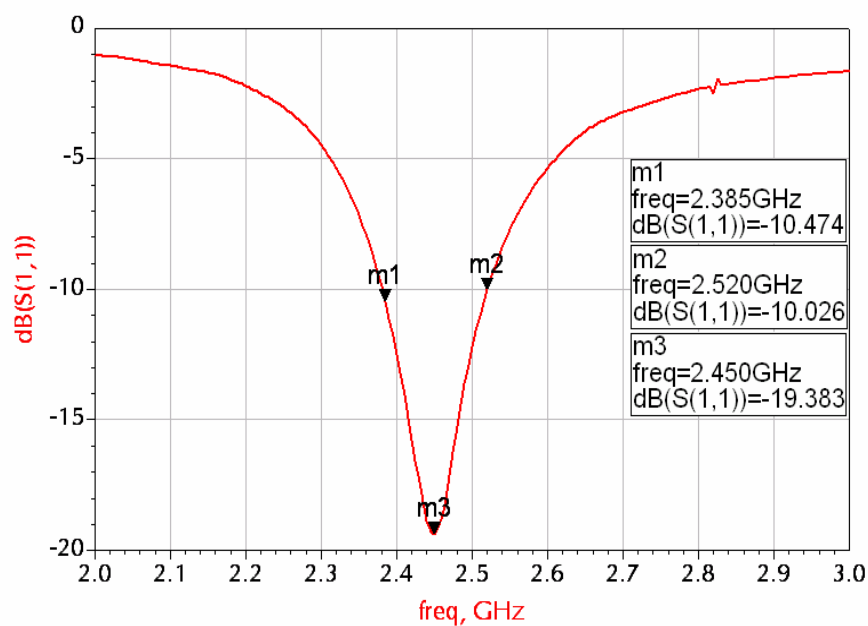
### Typical Electrical Characteristics (T=25°C)

Test Board:



### Return Loss

a) With Matching Circuit



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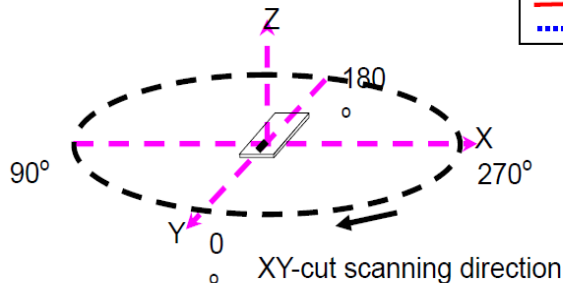
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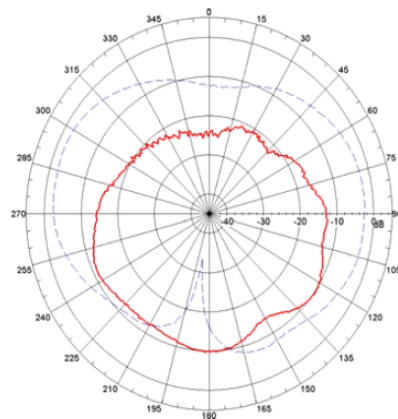
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### Typical Radiation Patterns

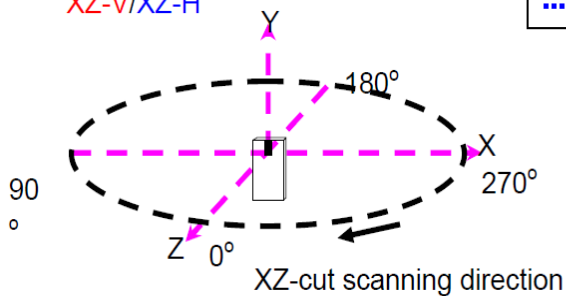
XY-V/XY-H



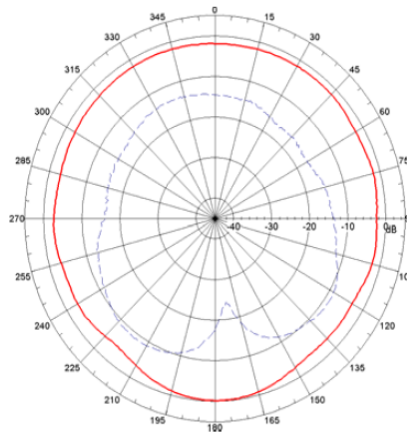
XY cut @2.45GHz  
— Vertical  
- - - Horizontal



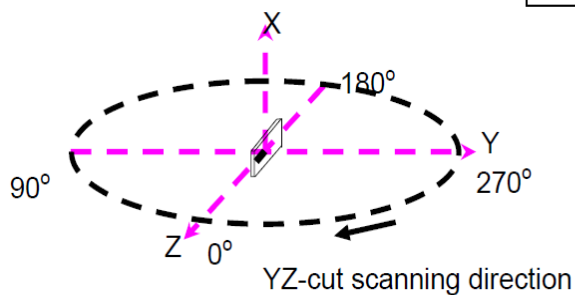
XZ-V/XZ-H



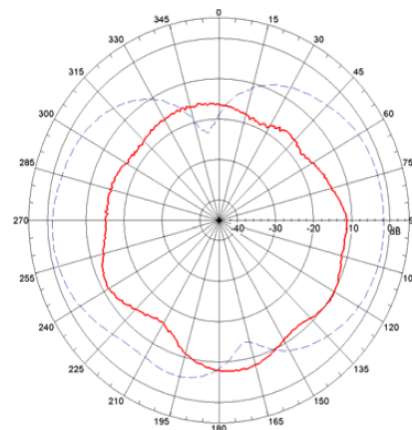
XZ cut @2.45GHz  
— Vertical  
- - - Horizontal



YZ-V/YZ-H



YZ cut @2.45GHz  
— Vertical  
- - - Horizontal



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