

# "High Frequency Ceramic Solutions"

## 1.57 GHz Antenna

P/N 1575AT47A0040


Detail Specification: 10/27/09

Page 1 of 6

### General Specifications

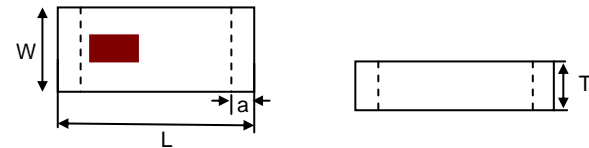
Part Number	1575AT47A0040
Frequency Range	1555 - 1595 Mhz
Peak Gain	-1.0 dBi typ. (XZ-V)
Average Gain	-3.0 dBi typ. (XZ-V)
Return Loss	9.5 dB min.

Input Power	3W max.
Impedance	50 Ω
Operating Temperature	-40 to +85°C
Reel Quantity	1,000

No.	Function	Terminal Configuration
1	INPUT	
2	NC	

### Mechanical Dimensions

	In	mm
L	0.394 ± 0.008	10.00 ± 0.20
W	0.118 ± 0.008	3.00 ± 0.20
T	0.030 ± 0.008	0.77 ± 0.20
a	0.030 ± 0.008	0.75 ± 0.20

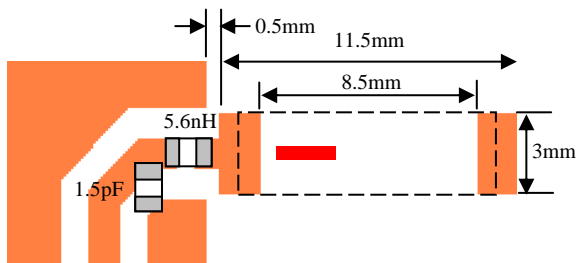


### Mounting Considerations (Close Up)

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

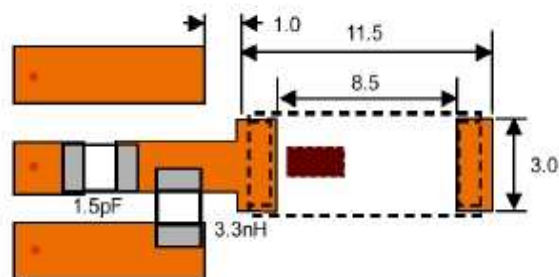
\* Line width should be designed to provide 50Ω impedance matching characteristics.

#### With Matching Circuit (Horizontal Mounting Situation)



JTI P/N for Matching Circuit:  
Cap (1.5pF): 500R07S1R5BV4T  
Inductor (5.6nH): L-07C5N6SV4T

#### With Matching Circuit (Vertical Mounting Situation)



JTI P/N for Matching Circuit:  
Cap (1.5pF): 500R07S1R5BV4T  
Inductor (3.3nH): L-07C3N3SV6T

(Matching components, if used, will vary in value depending on PCB layout)

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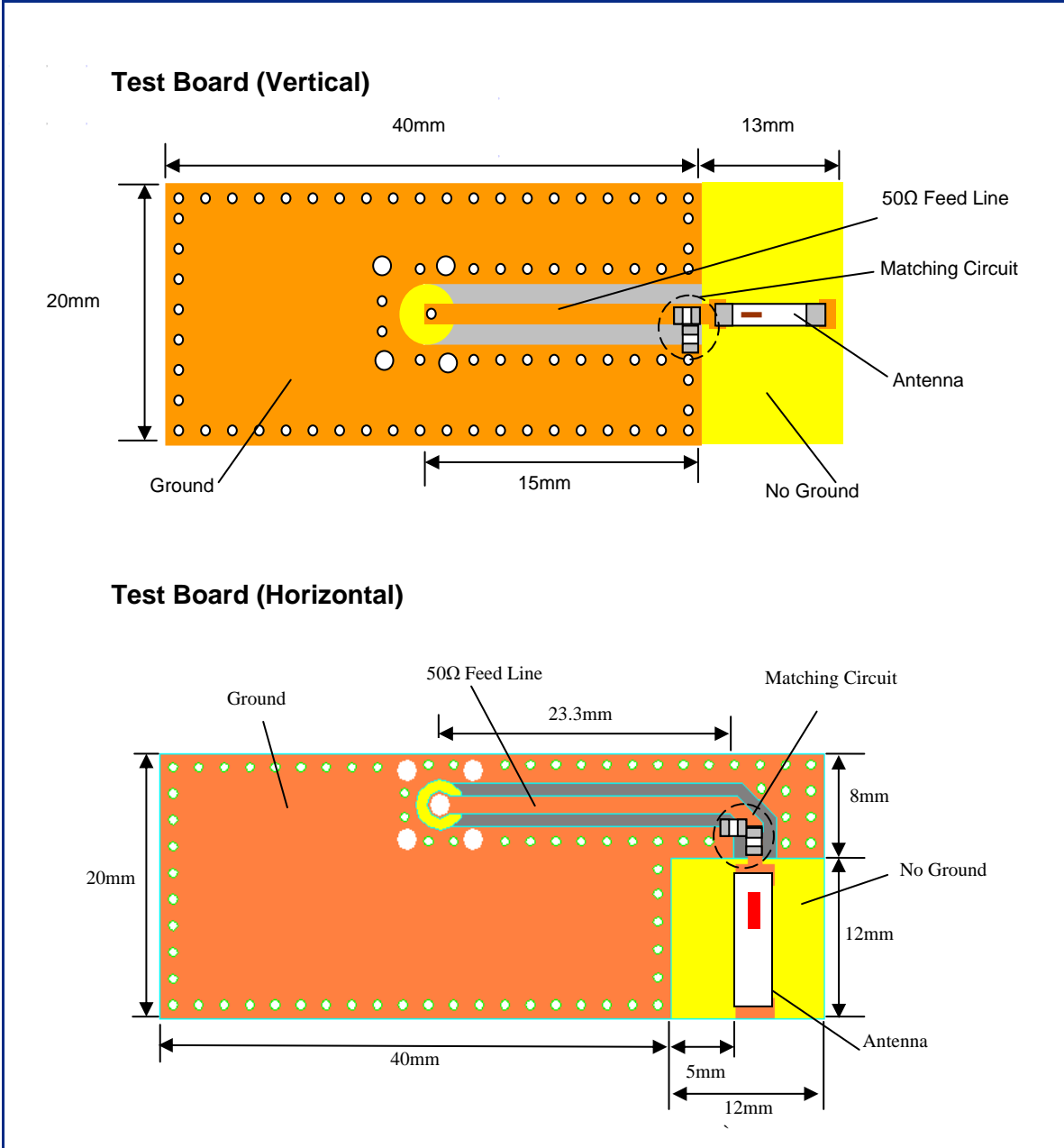
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Page 2 of 6

## Mounting Considerations



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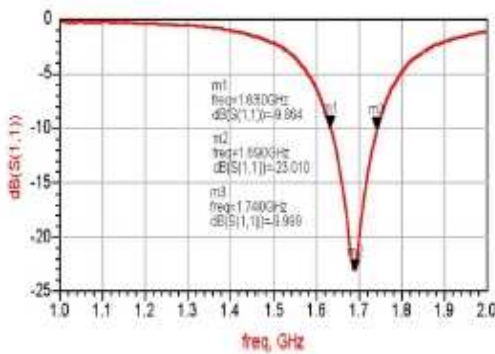
Detail Specification: 10/27/09

Page 3 of 6

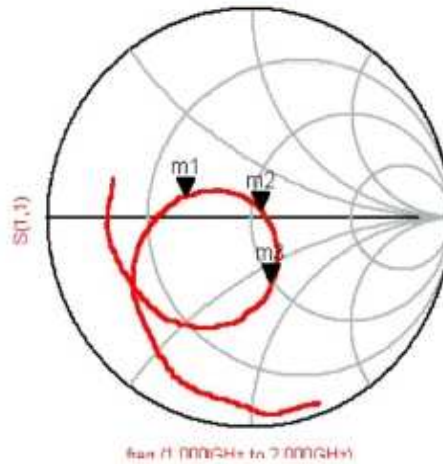
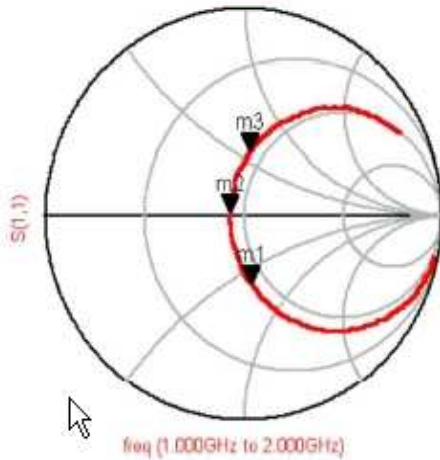
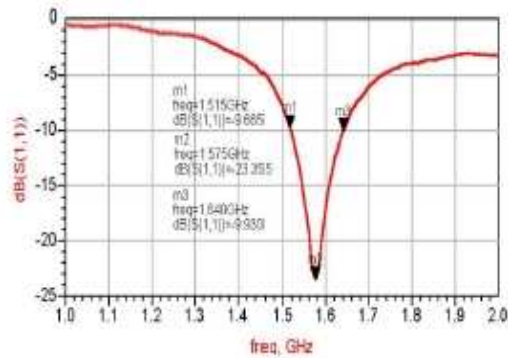
## Typical Electrical Characteristics (T=25°C)

### Return Loss

**Vertical Test Board  
(without matching components)**



**Vertical Test Board  
(with matching components)**



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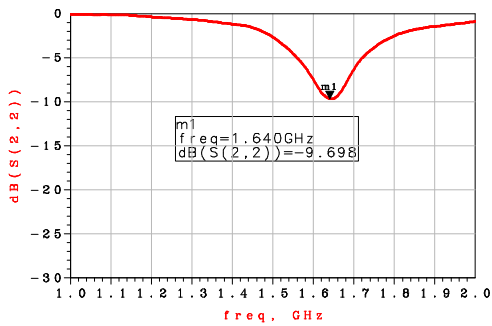
Detail Specification: 10/27/09

Page 4 of 6

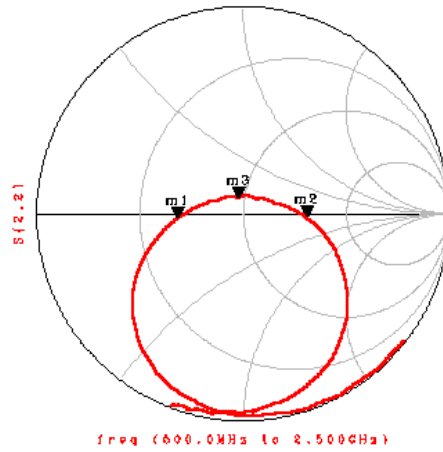
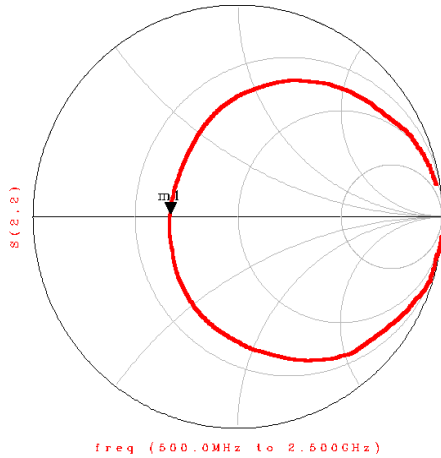
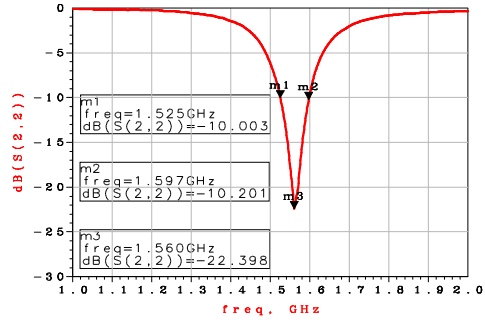
## Typical Electrical Characteristics (T=25°C)

### Return Loss

**Horizontal Test Board  
(without matching components)**



**Horizontal Test Board  
(with matching components)**



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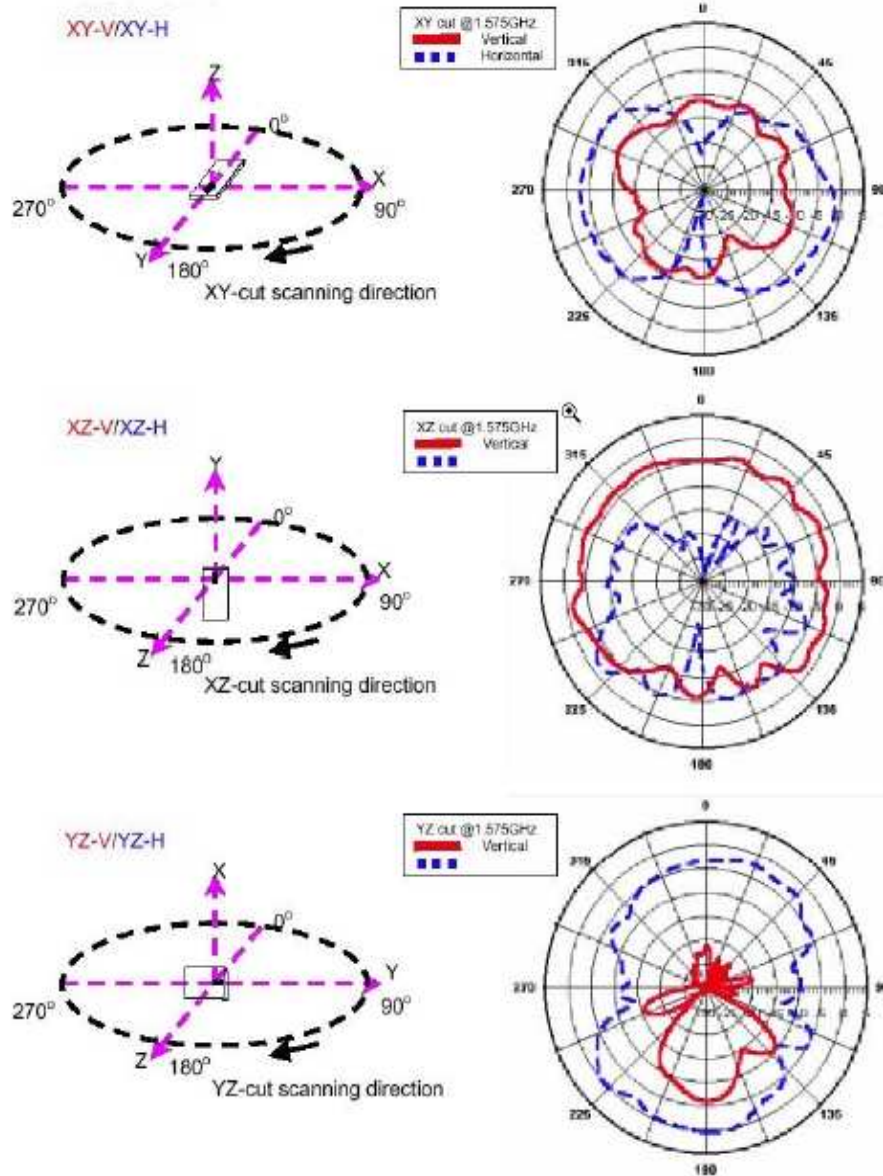
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P/N 1575AT47A0040

Detail Specification: 10/27/09

Page 5 of 6

## Typical Radiation Patterns (Vertical Test Board)



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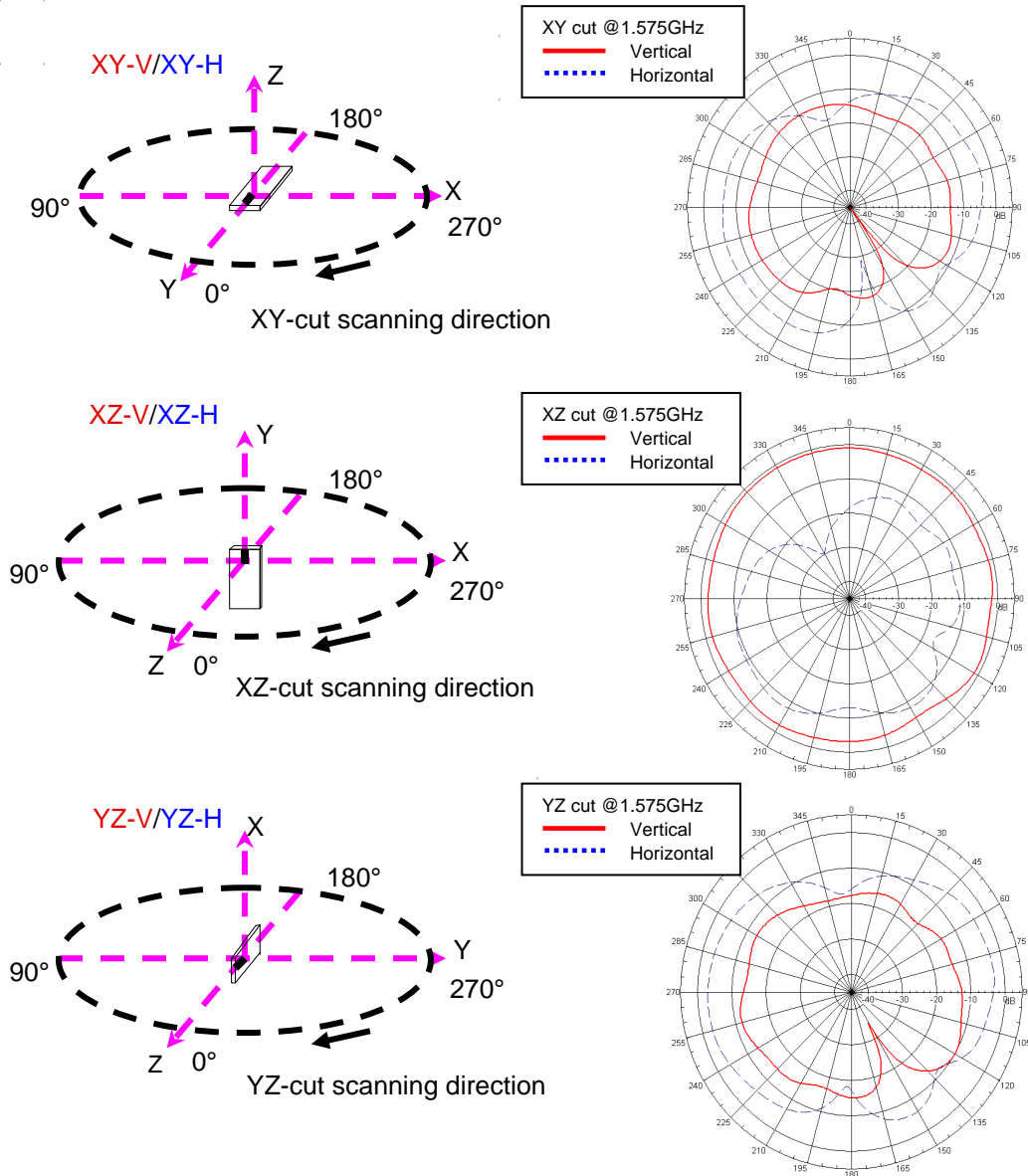
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Page 6 of 6

## Typical Radiation Patterns (Horizontal Test Board)



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