

"High Frequency Ceramic Solutions"

1.57 GHz Antenna

P/N 1575AT47A0040

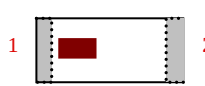
Detail Specification: 10/27/09

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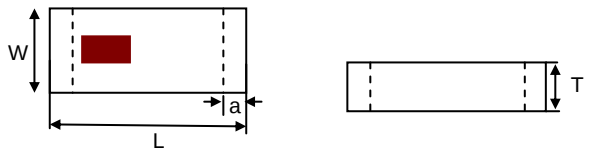
General Specifications

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

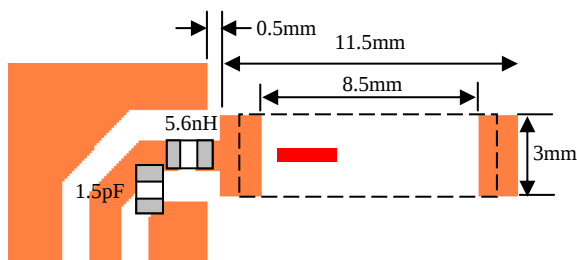
	In	mm	
L	0.394 $\pm$ 0.008	10.00 $\pm$ 0.20	
W	0.118 $\pm$ 0.008	3.00 $\pm$ 0.20	
T	0.030 $\pm$ 0.008	0.77 $\pm$ 0.20	
a	0.030 $\pm$ 0.008	0.75 $\pm$ 0.20	

Mounting Considerations (Close Up)

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

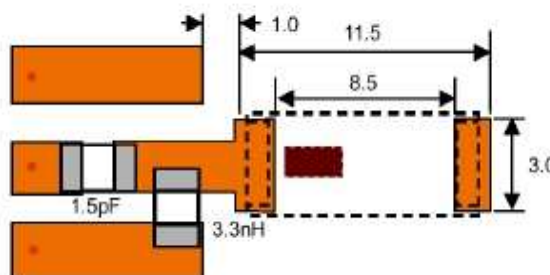
* Line width should be designed to provide 50 Ω impedance matching characteristics.

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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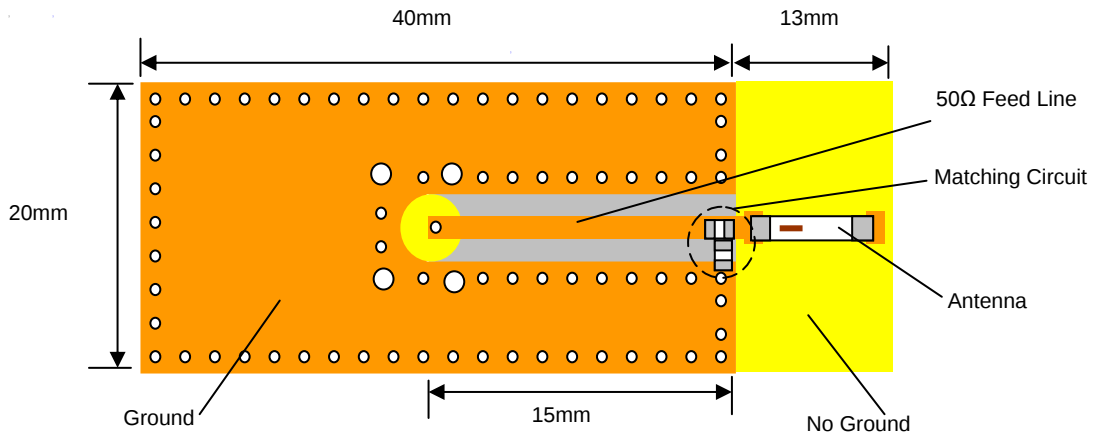
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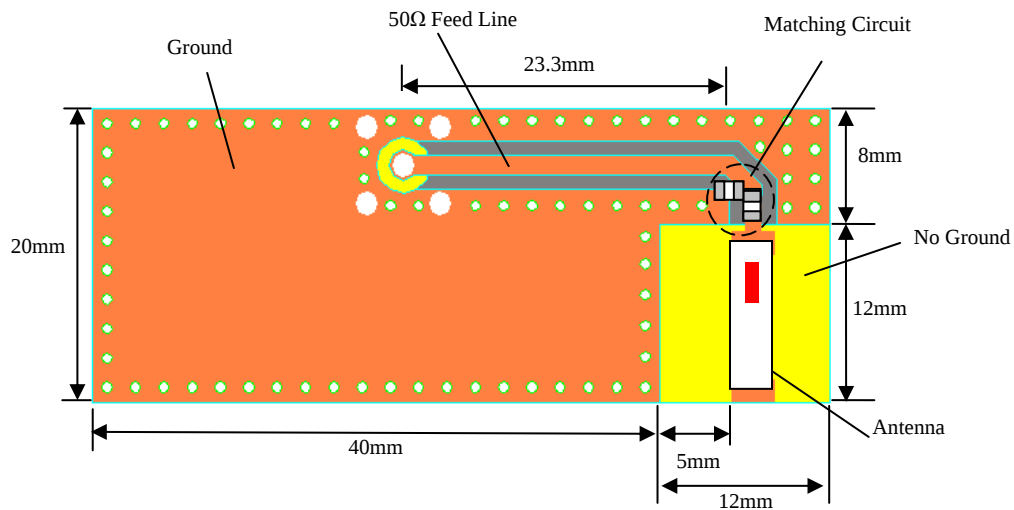
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Mounting Considerations

Test Board (Vertical)



Test Board (Horizontal)



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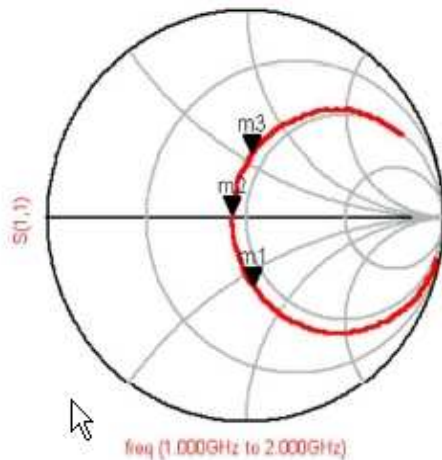
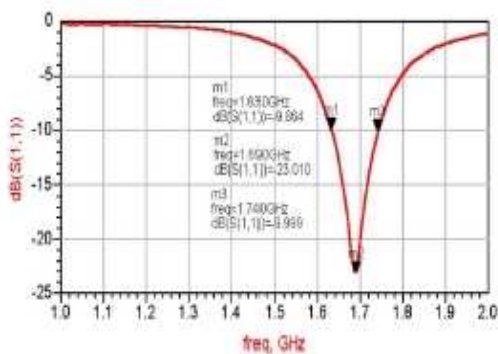
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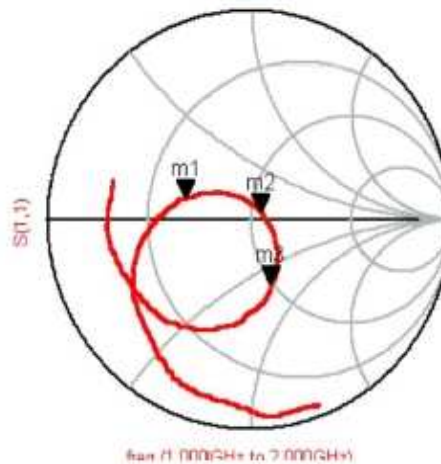
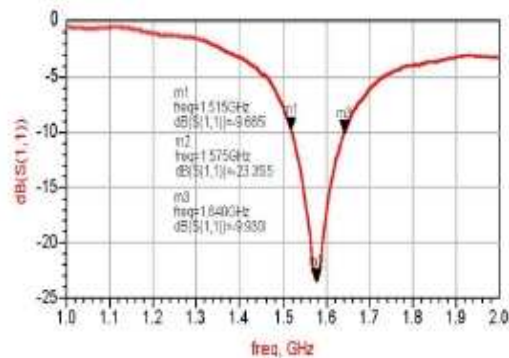
Typical Electrical Characteristics (T=25°C)

Return Loss

Vertical Test Board
(without matching components)



Vertical Test Board
(with matching components)



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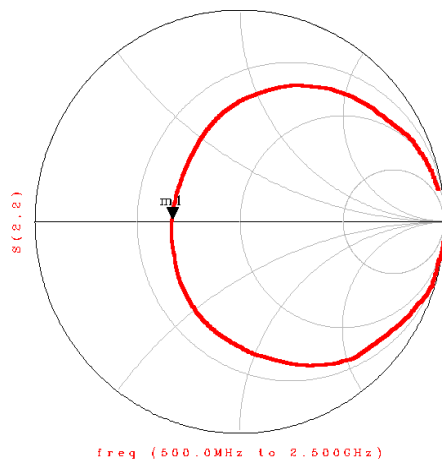
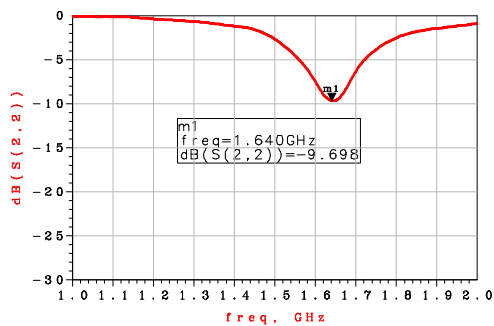
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Typical Electrical Characteristics (T=25°C)

Return Loss

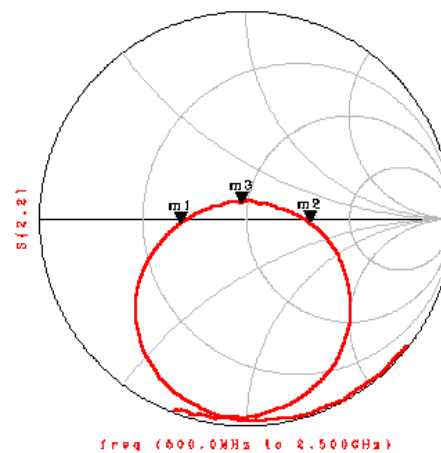
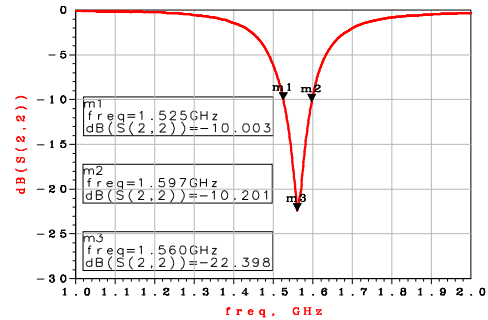
Horizontal Test Board

(without matching components)



Horizontal Test Board

(with matching components)



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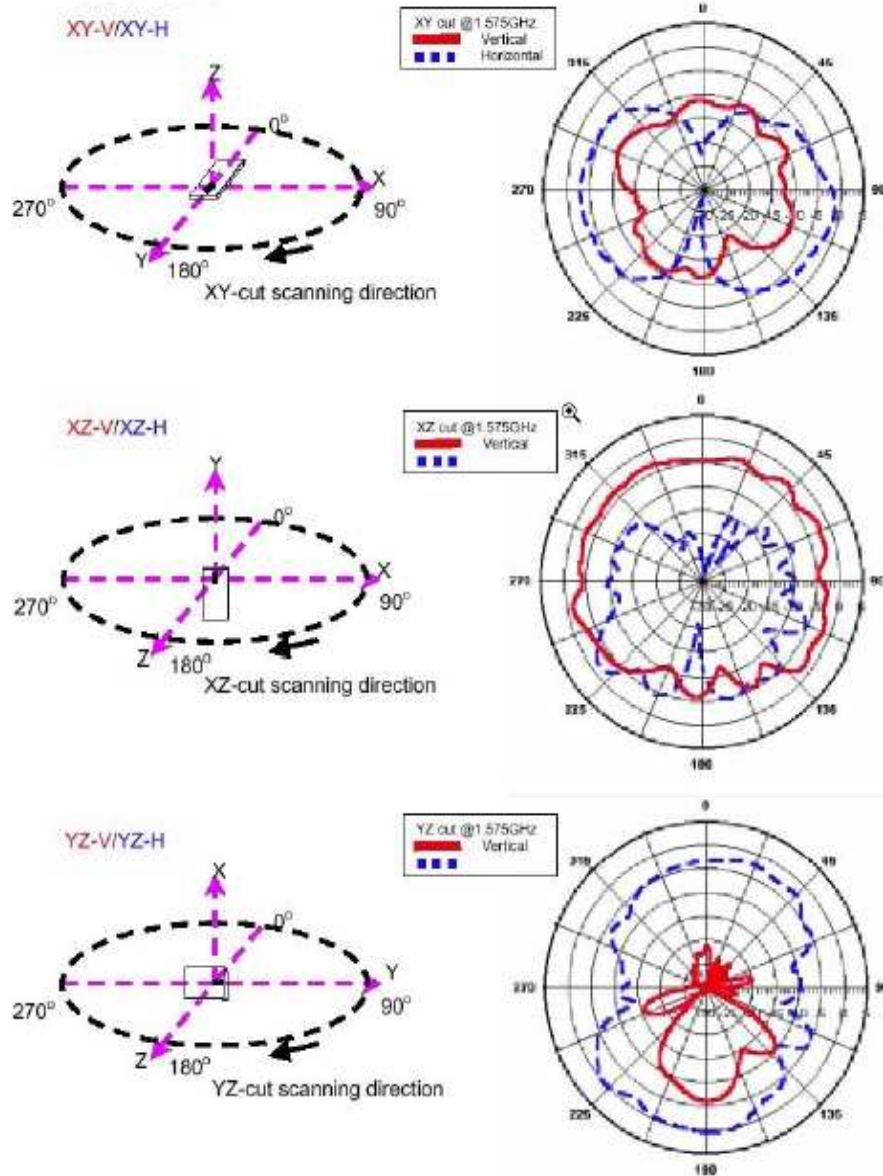
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Typical Radiation Patterns (Vertical Test Board)



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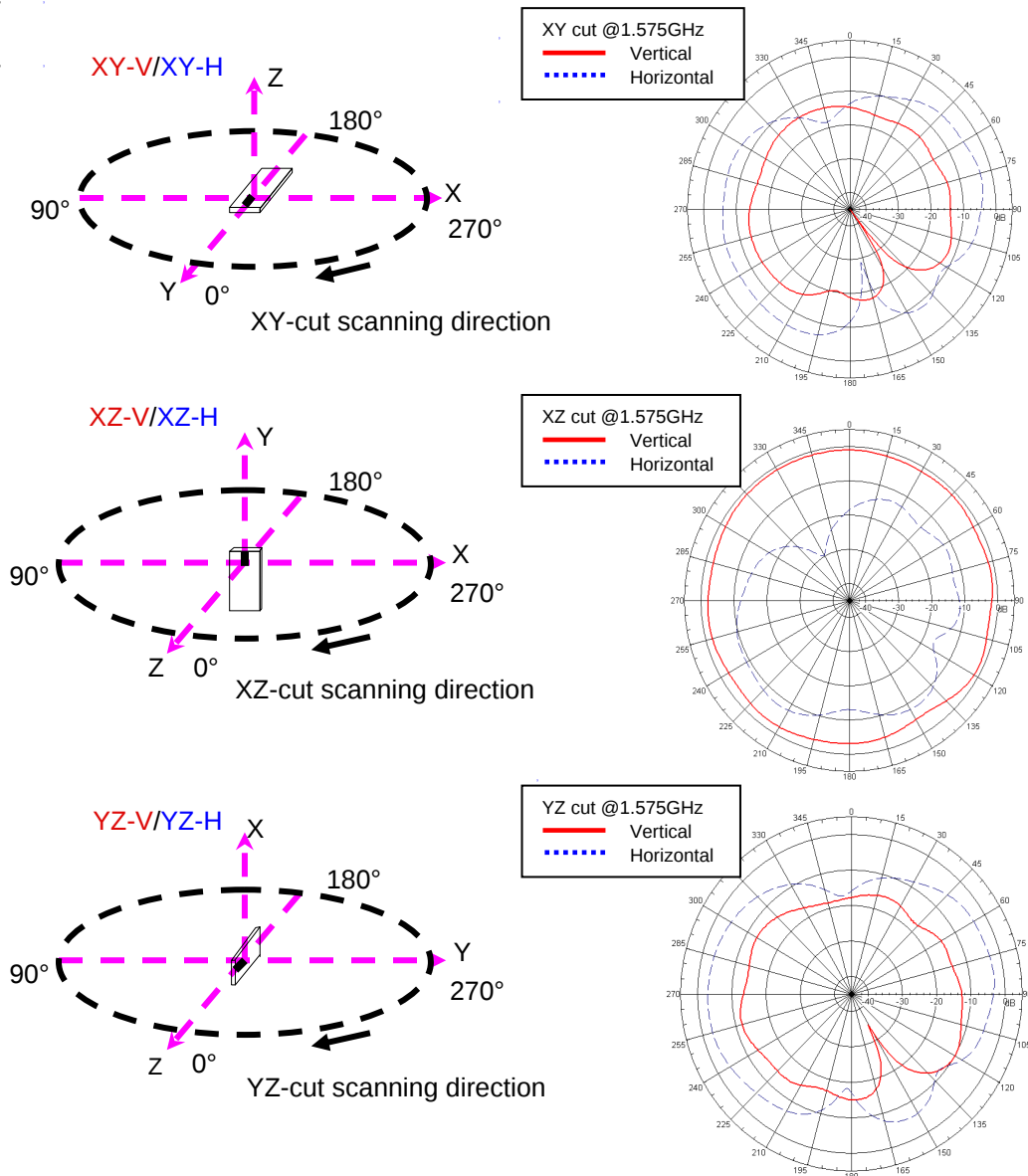
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Typical Radiation Patterns (Horizontal Test Board)



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