

# "High Frequency Ceramic Solutions"

## 5.5 GHz Chip Antenna

P/N 5500AT18A0725

Detail Specification: 01/27/09

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### General Specifications

|                 |                      |
|-----------------|----------------------|
| Part Number     | 5500AT18A0725        |
| Frequency Range | 5150 - 5875 Mhz      |
| Peak Gain       | 2.0 dBi typ. (XZ-V)  |
| Average Gain    | -2.5 dBi typ. (XZ-V) |
| Return Loss     | 9.5 dB min.          |

|                       |                                            |
|-----------------------|--------------------------------------------|
| Input Power           | 2W max.                                    |
| Impedance             | 50 $\Omega$                                |
| Reel Quantity         | 3,000                                      |
| Operating Temperature | -40 to +85°C                               |
| Storage Temperature   | +5 ~ +35°C, Humidity 45~75%RH, 12 mos. Max |

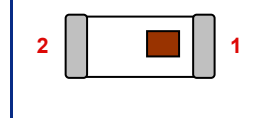
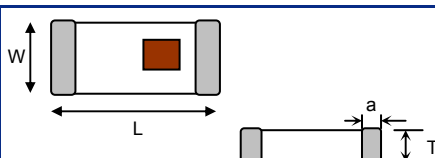
|               |                   |            |                        |                           |
|---------------|-------------------|------------|------------------------|---------------------------|
| P/N<br>Suffix | Packaging Style   | Bulk       | Suffix = S             | Eg. 5500AT18A0725S        |
|               |                   | T & R      | Suffix = E             | Eg. 5500AT18A0725E        |
|               | Termination Style | 100% Tin   | Suffix = None          | Eg. 5500AT18A0725(E or S) |
|               |                   | Tin / Lead | Please consult Factory |                           |

### Terminal Configuration

| No. | Function      |
|-----|---------------|
| 1   | Feeding Point |
| 2   | NC            |

### Mechanical Dimensions

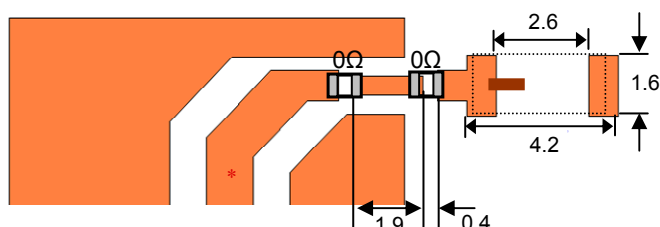
|   | In                       | mm                  |
|---|--------------------------|---------------------|
| L | 0.126 $\pm$ 0.008        | 3.20 $\pm$ 0.20     |
| W | 0.063 $\pm$ 0.008        | 1.60 $\pm$ 0.20     |
| T | 0.051 $\pm$ 0.004/-0.008 | 1.30 $\pm$ 0.1/-0.2 |
| a | 0.020 $\pm$ 0.012        | 0.50 $\pm$ 0.30     |



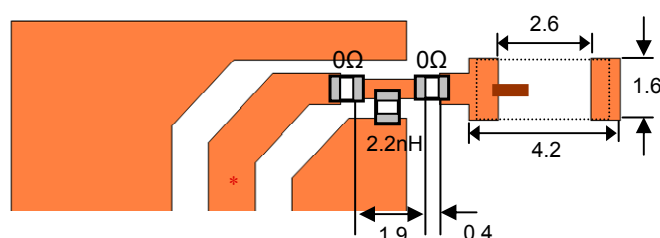
### Mounting Considerations

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

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



a) Without Matching Circuits



b) With Matching Circuits

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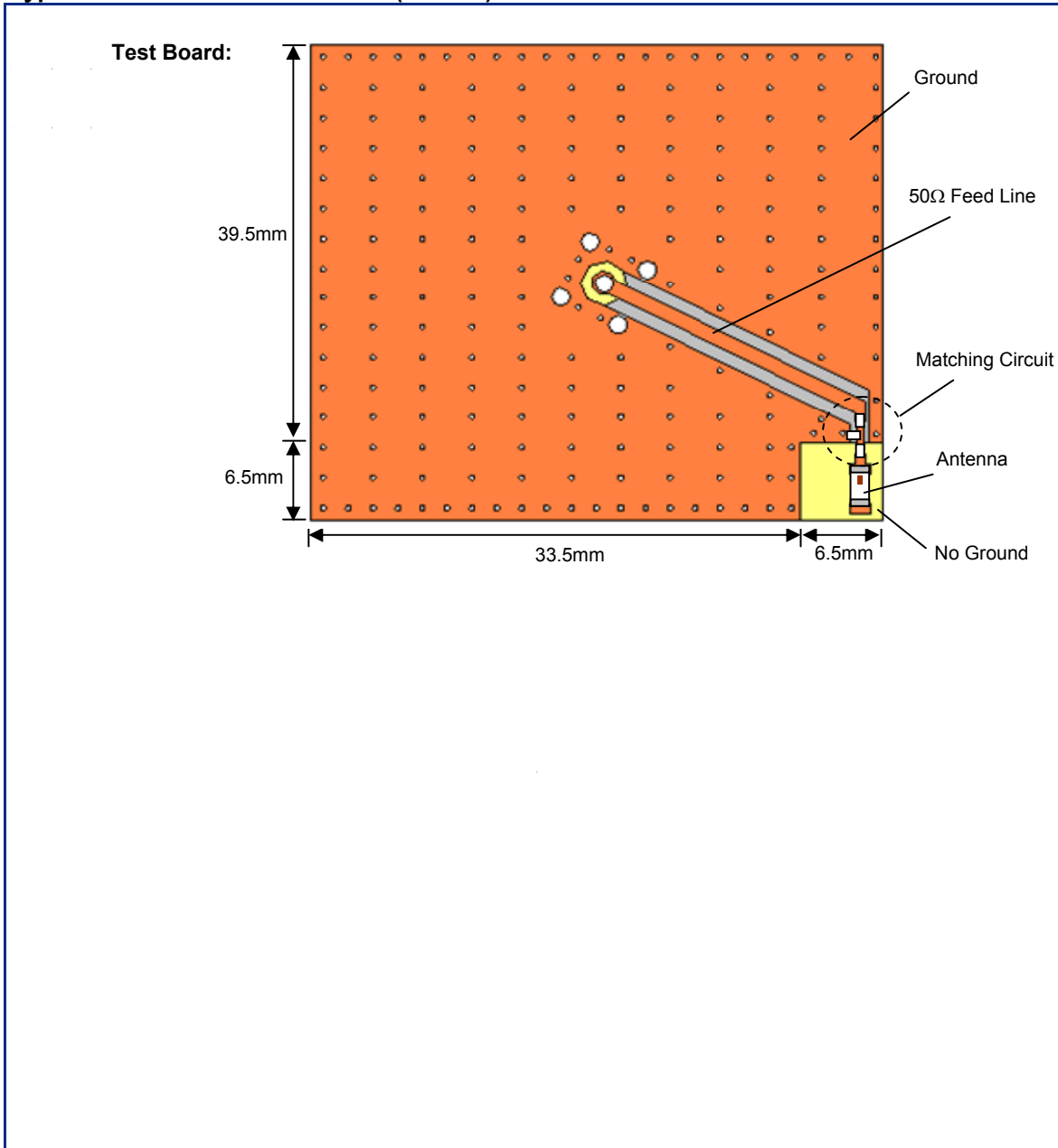
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### Typical Electrical Characteristics (T=25°C)



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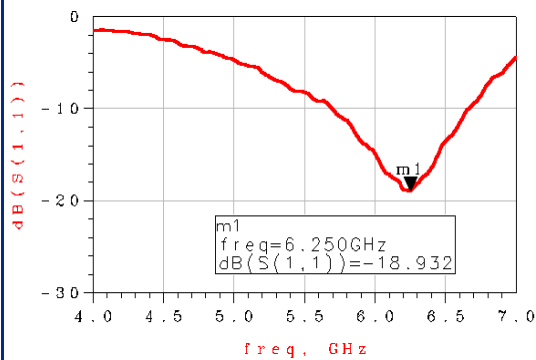
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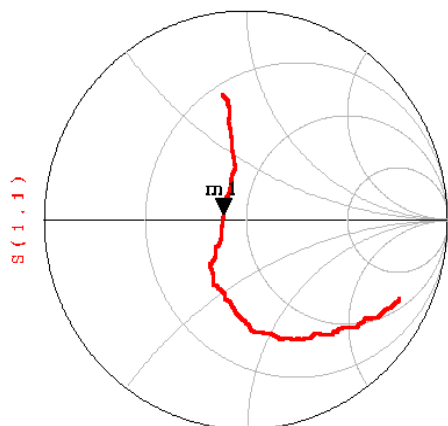
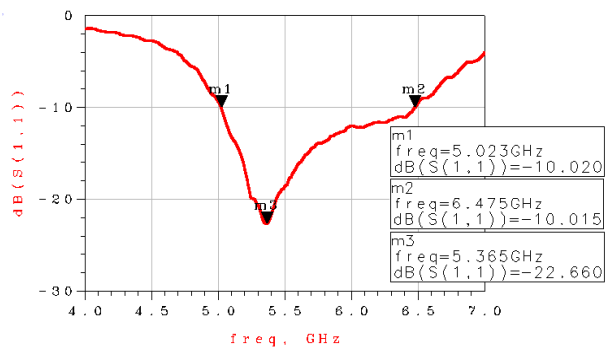
### Typical Electrical Characteristics (T=25°C)

#### Return Loss

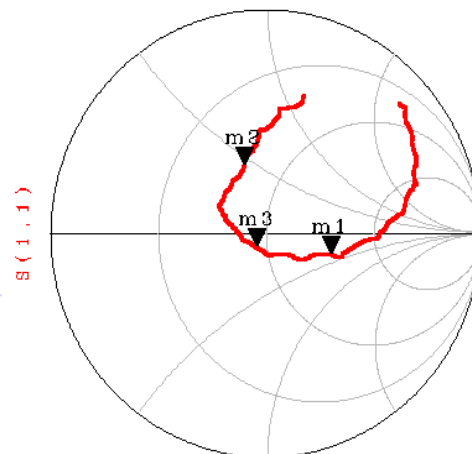
a) Without Matching Circuit



b) With Matching Circuit



freq (4.000GHz to 7.000GHz)



freq (4.000GHz to 7.000GHz)

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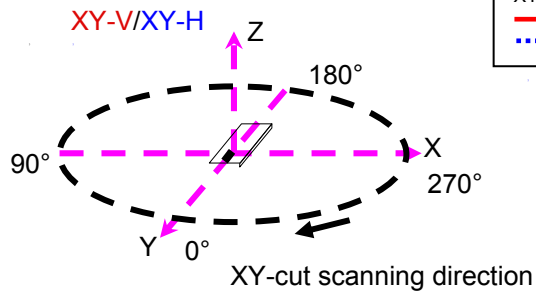
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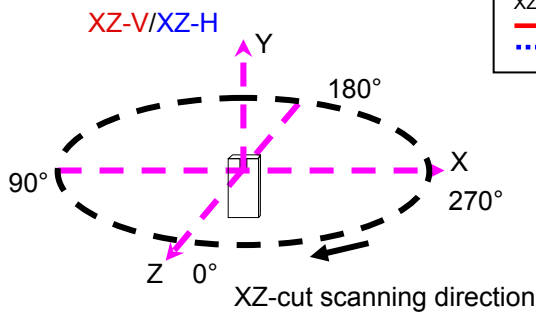
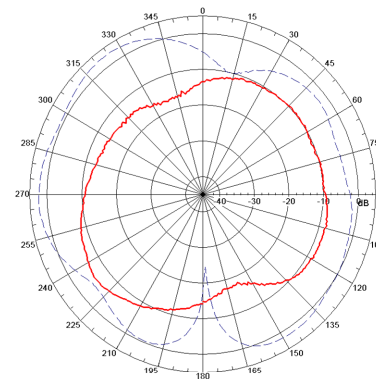
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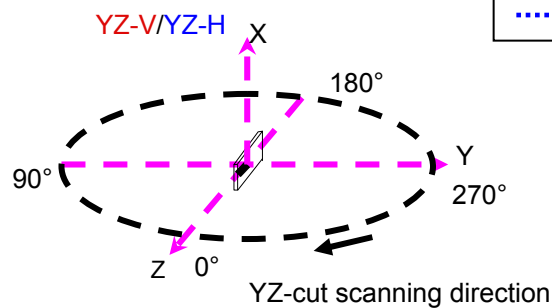
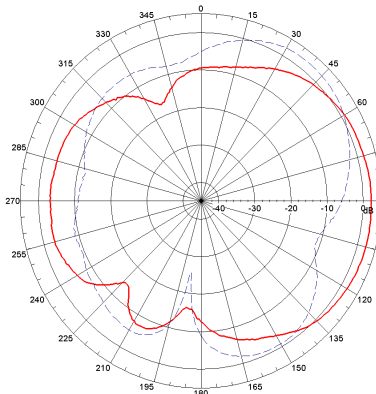
### Typical Radiation Patterns



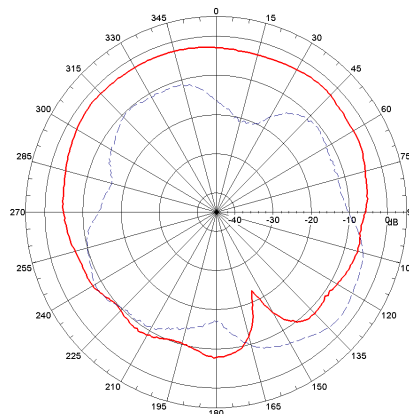
XY cut @5.5GHz  
— Vertical  
... Horizontal



XZ cut @5.5GHz  
— Vertical  
... Horizontal



YZ cut @5.5GHz  
— Vertical  
... Horizontal



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