

# "High Frequency Ceramic Solutions"

## 490 MHz SMD Chip Antenna

P/N 0490AT62A0040

Detail Specification: 9/12/2013

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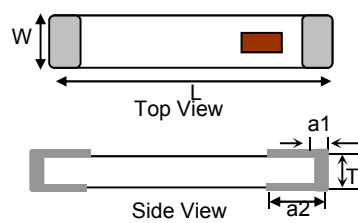
### General Specifications

Part Number	0490AT62A0040
Frequency Range	470 ~ 510 MHz
Peak Gain (YZ-total)	-3.0 dBi typ.
Average Gain (YZ-total)	-6.0 dBi typ.
Return Loss	4.4 dB min.
Impedance	50 $\Omega$
Reel Quantity	500
Operating Temperature	-40 to +85°C
Storage Temperature Range	+5 ~ +35 °C, Humidity 45~75%RH, 18 mos. max
Power Capacity	2W max (CW)



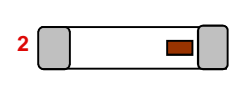
### Mechanical Dimensions

	In	mm
L	0.984 ± 0.008	25.00 ± 0.20
W	0.197 ± 0.008	5.00 ± 0.20
T	0.047 ± 0.004	1.20 ± 0.10
a	0.020 ± 0.008	0.50 ± 0.20
a2	0.039 ± 0.008	1.00 ± 0.20



### Terminal Configuration

No.	Function
1	Feeding Point
2	NC



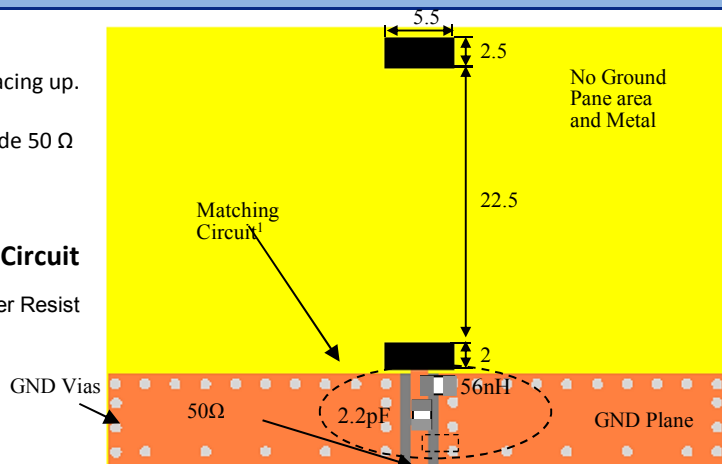
### Mounting Considerations

Mount these devices with brown mark facing up.  
Units: mm  
\* Line width should be designed to provide 50  $\Omega$  impedance matching characteristics.

#### With Matching Circuit

- Solder Resist
- Land

(1) Matching circuit and component values will be different on end-customer's PCB!  
See page 2 and 4 for details and app notes



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[www.johansontechnology.com](http://www.johansontechnology.com)

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Ver. 1.2

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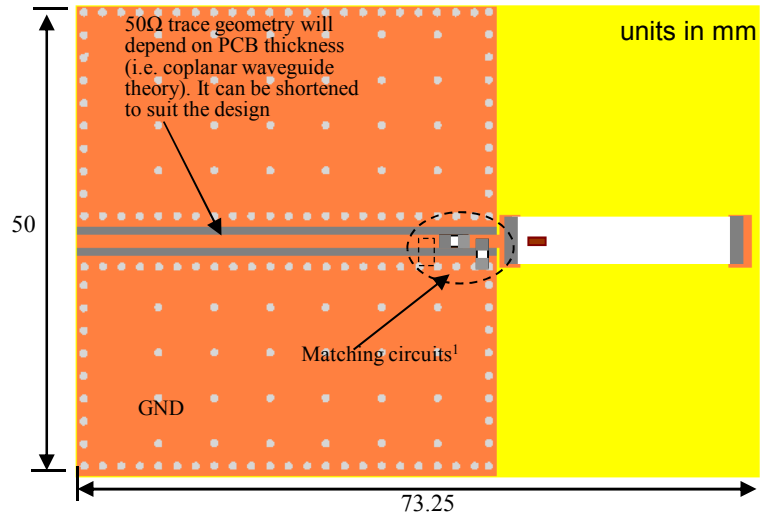
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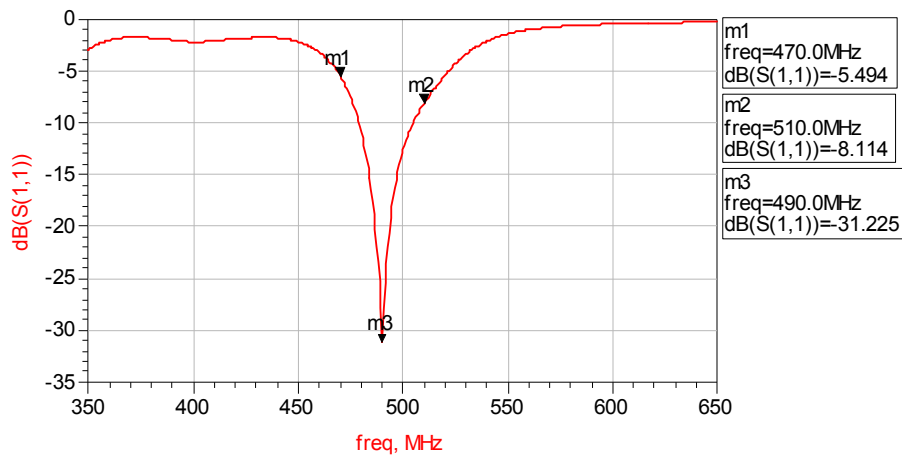
## Mounting Considerations

**Test Board orderable  
item p/n:**  
0490AT62A0040-EB1SMA



(1)Note: It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values here are used when antenna is mounted on Johanson's evaluation board. The matching values on clinet's PCB will be different, go to: [johansontechnology.com/tuning](http://johansontechnology.com/tuning) and see how to obtain the new values. If you need further help, contact our RF Applications Eng Team at: [www.johansontechnology.com/en/ask-a-technical-question.html](http://www.johansontechnology.com/en/ask-a-technical-question.html)

## Typ Return Loss (with matching)



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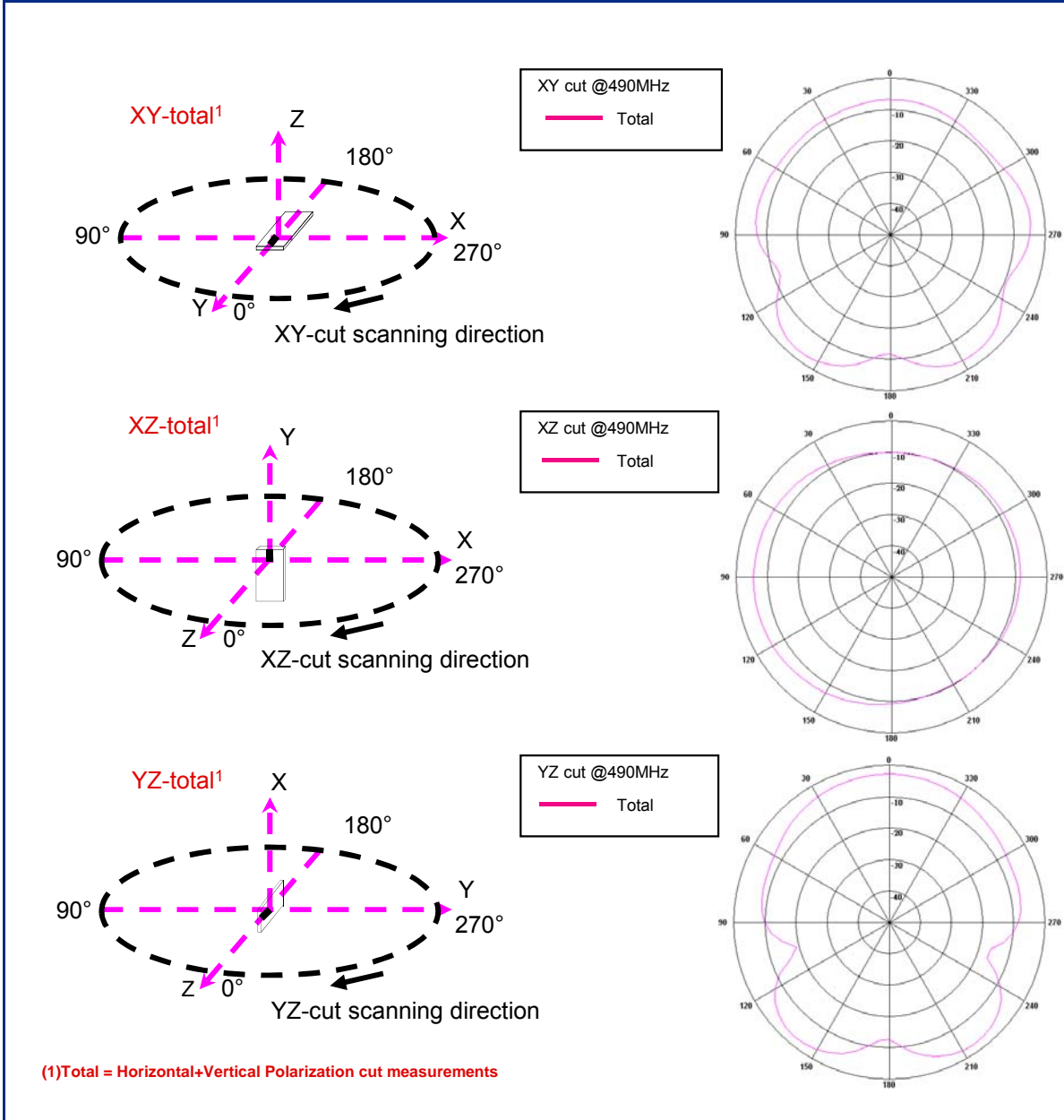
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## Typical Radiation Patterns (@25C)



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## Further Technical and Environmental Information

### Part Number Explanation

<b>P/N Suffix</b>	<b>Packaging Style</b>	Bulk (loose pieces)	Suffix = S	Eg. 0490AT62A0040S
		T & R	Suffix = E	Eg. 0490AT62A0040E
		T & R (Reverse)	Suffix = R	Eg. 0490AT62A0040R (MOQ Applies)
	<b>Termination style</b>	100% Tin (RoHS)	Suffix = S/E/R	Eg. 0490AT62A0040(S, E, R)
		Tin / Lead	Please consult Factory	
	<b>Evaluation Board(s)</b> (1-port SMA antenna test boards)	0490AT62A0040-EB1SMA (Page 2)		

### Antenna layout review, tuning, and characterization services

[www.johansontechnology.com/ipcantennaservices](http://www.johansontechnology.com/ipcantennaservices)

### Soldering Information

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

### Packaging information

[www.johansontechnology.com/ipcpackaging.html](http://www.johansontechnology.com/ipcpackaging.html)

### RoHS Compliance

[www.johansontechnology.com/technical-notes/rohs-compliance.html](http://www.johansontechnology.com/technical-notes/rohs-compliance.html)

### MSL Info

[www.johansontechnology.com/technical-notes/msl-rating.html](http://www.johansontechnology.com/technical-notes/msl-rating.html)

### Recommended Storage Condition and Max Shelf Life

[www.johansontechnology.com/ipcstorage-shelflife](http://www.johansontechnology.com/ipcstorage-shelflife)

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