



**THE DATASHEET OF
0490AT62A0040E**



"High Frequency Ceramic Solutions"

490 MHz SMD Chip Antenna

P/N 0490AT62A0040

Detail Specification: 9/12/2013

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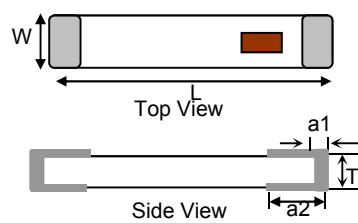
General Specifications

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 Ω
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)



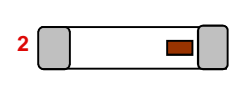
Mechanical Dimensions

	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



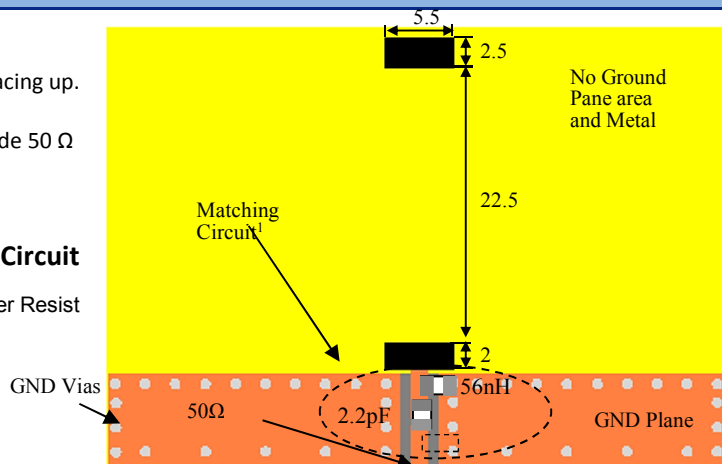
Mounting Considerations

Mount these devices with brown mark facing up.
Units: mm
* Line width should be designed to provide 50 Ω 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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490 MHz SMD Chip Antenna

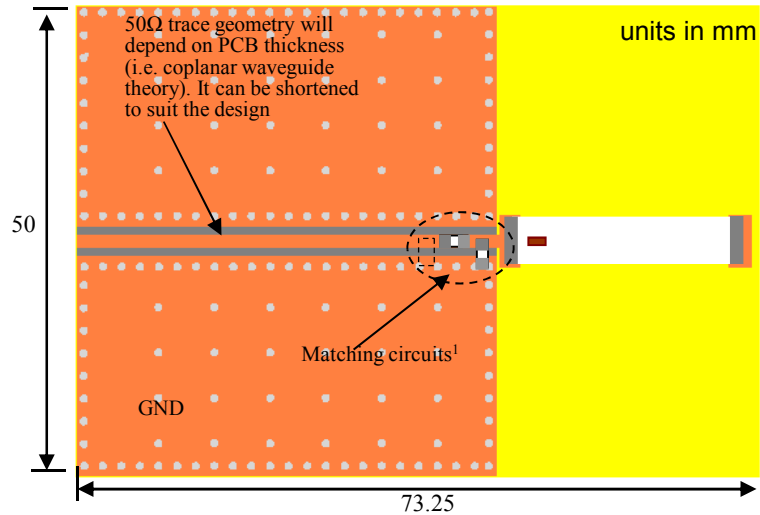
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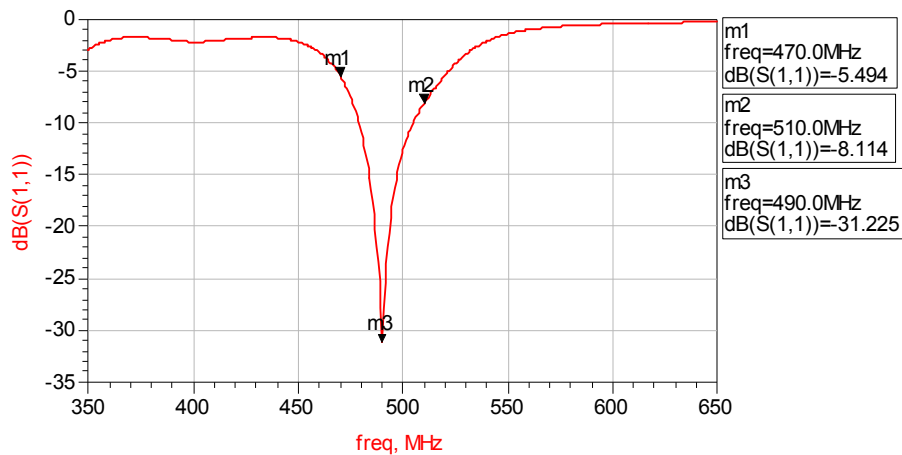
Mounting Considerations

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 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

Typ Return Loss (with matching)



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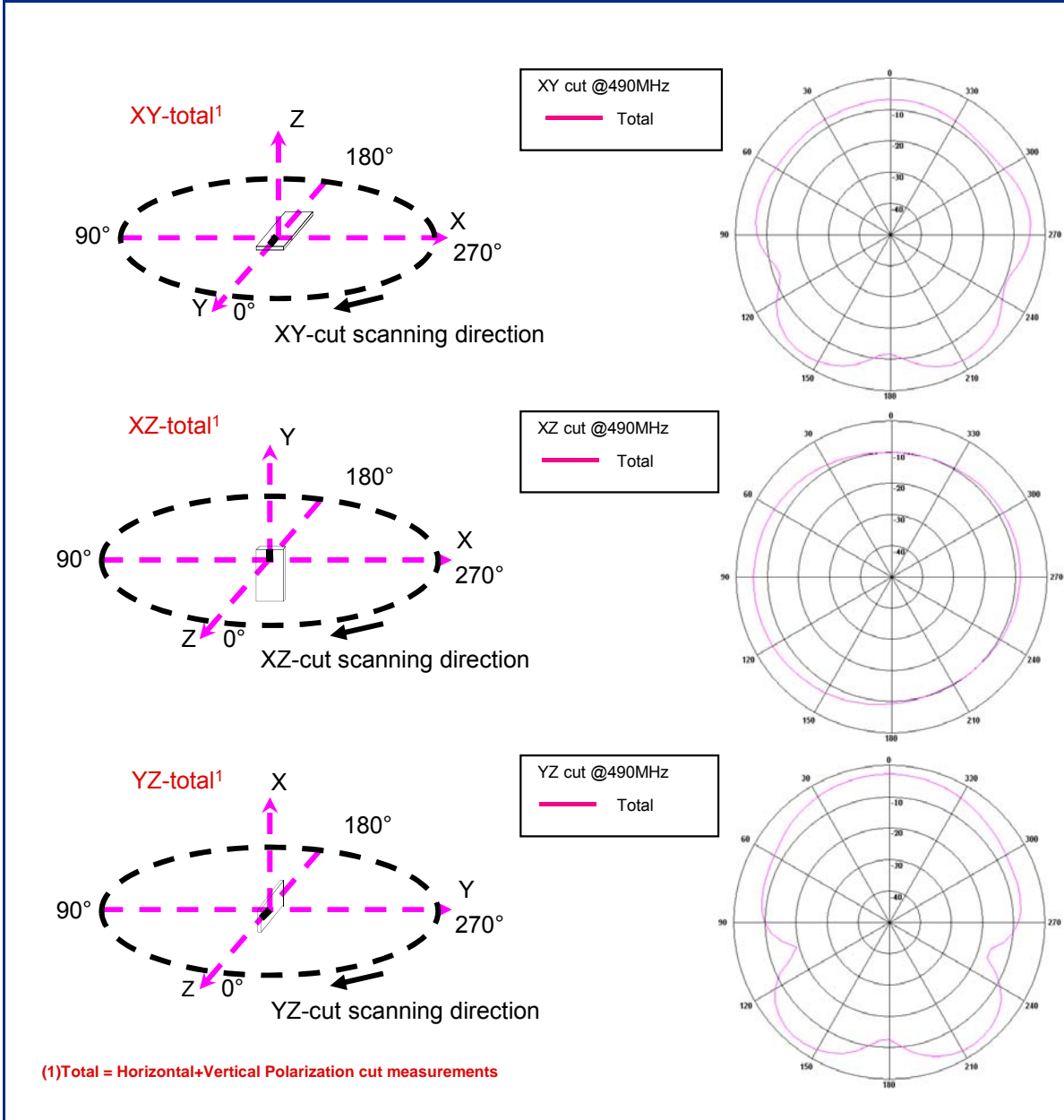
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Typical Radiation Patterns (@25C)



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Further Technical and Environmental Information

Part Number Explanation

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

Antenna layout review, tuning, and characterization services

www.johansontechnology.com/ipcantennaservices

Soldering Information

www.johansontechnology.com/ipcsoldering-profile

Packaging information

www.johansontechnology.com/ipcpackaging.html

RoHS Compliance

www.johansontechnology.com/technical-notes/rohs-compliance.html

MSL Info

www.johansontechnology.com/technical-notes/msl-rating.html

Recommended Storage Condition and Max Shelf Life

www.johansontechnology.com/ipcstorage-shelflife

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