

"High Frequency Ceramic Solutions"

L2 Band 1.227GHz GPS Internal Chip Antenna

P/N 1227AT45A0042

Detail Specification: 2/5/2014

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General Specifications	
Part Number	1227AT45A0042
Frequency Range (MHz)	1227.6 ± 21MHz
Operating Frequency (MHz)	1206 - 1249 (+10MHz guard band)
Peak Gain	1.0 dBi typ. (XZ-V)
Average Gain	-2.0 dBi typ. (XZ-V)
Return Loss	9.5 dB min.
Impedance	50 Ω
Power Capacity	3W max. (CW)
Recommended Storage Conditions	+5 ~ +35 °C, Humidity 45~75%RH

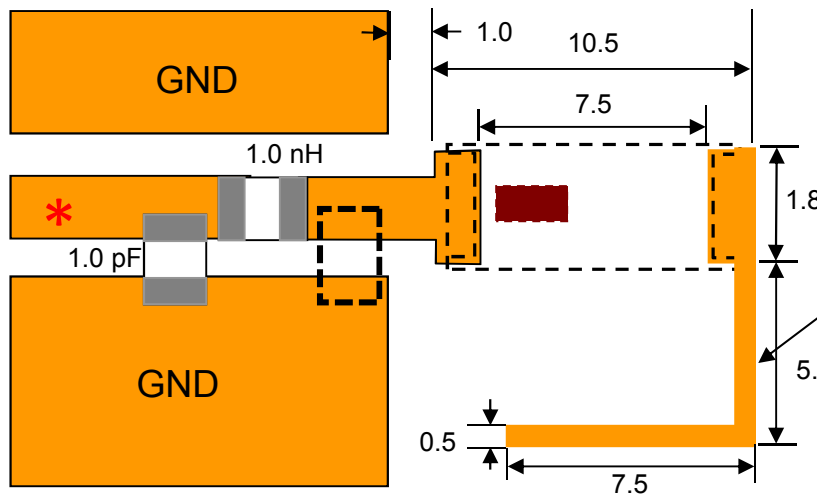


Operating Temperature	-40 to +85°C
Shelf Life	18 Months
Reel Quantity	1,000

Mechanical Dimensions		
	In	mm
L	0.374 ± 0.008	9.50 ± 0.20
W	0.079 ± 0.008	2.00 ± 0.20
T	0.047 +.004/-0.008	1.20 +0.1/-0.2
a	0.020 ± 0.012	0.50 ± 0.30

Terminal Configuration	
No.	Function
1	Feeding Point
2	NC (to trace)

Mounting Considerations (all units in mm)



We offer 2 free layout reviews as well as antenna tuning and characterization services (lab fee may apply). Go to page 2 for details.

The *length* of this PCB trace element must be followed, however the *shape* may be modified to conform to the designer's particular layout

* Line width should be designed to match 50Ω characteristic impedance (co-planar waveguide), depending on PCB material and thickness. The matching values above only apply to Johanson's evaluation board, see page two for more details or go to: www.johansontechnology.com/tuning

Johanson Technology, Inc. reserves the right to make design changes without notice.

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www.johansontechnology.com
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Ver 2.1

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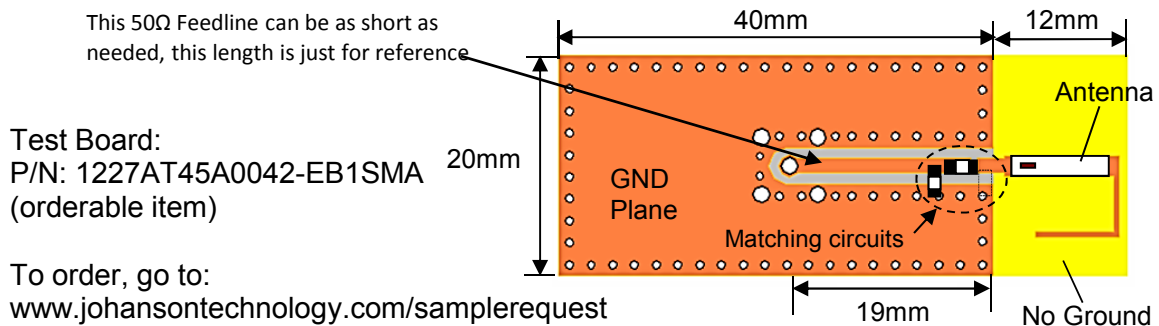
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Mounting Considerations

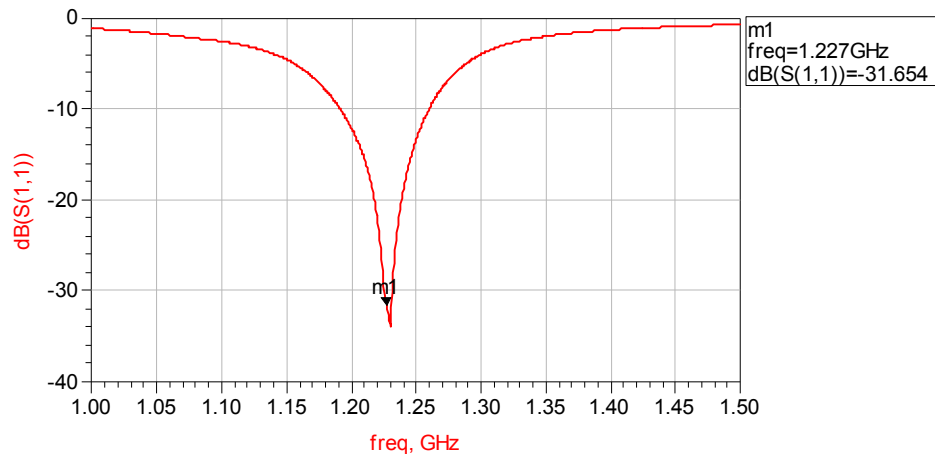
Note: It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values here are used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different, go to: [johansontechnology.com/tuning](http://www.johansontechnology.com/tuning) and see how to obtain the new values. Contact our RF Applications Eng Team at: <http://www.johansontechnology.com/component/techquestion>



We offer antenna layout/gerber reviews, PCB tuning, optimization, and characterization services, go to: www.johansontechnology.com/ipcantennaservices for details and instructions

Typical Electrical Characteristics (T=25°C)

Return Loss / With Matching Circuits



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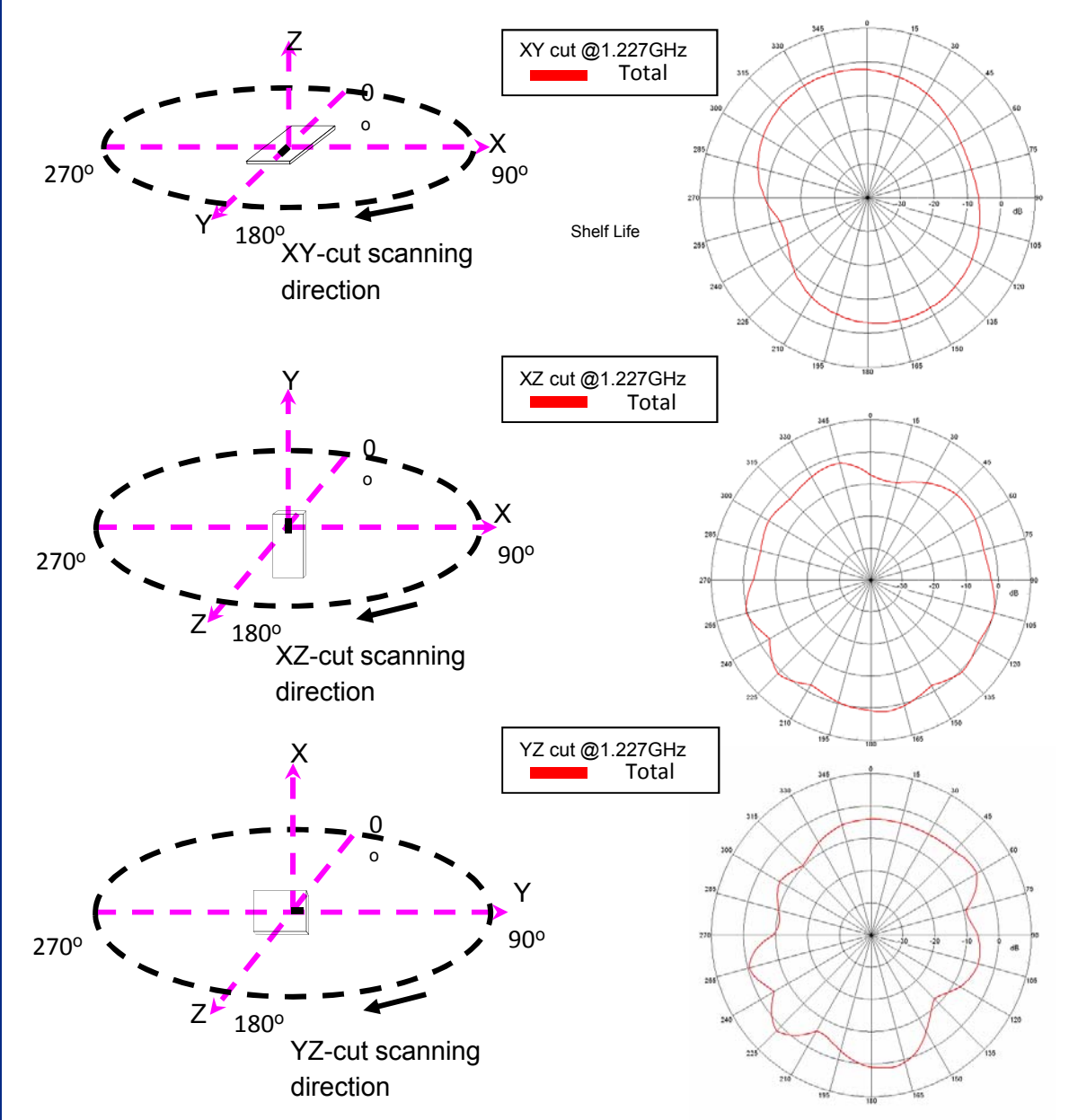
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Typical Electrical Characteristics (T=25°C) Radiation Patterns



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