

Excellent Integrated System Limited

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[Johanson Technology Inc.](#)
[2500AT44M0400E](#)

For any questions, you can email us directly:

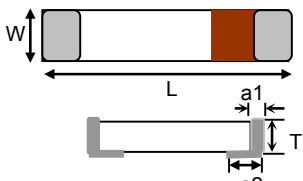
sales@integrated-circuit.com

"High Frequency Ceramic Solutions"


2.38GHz / 2.45GHz / 2.6GHz Wideband SMD Chip Antenna **P/N 2500AT44M0400**
 Designed for: BAN, Bluetooth, 802.11, WLAN, Zigbee, Proprietary Protocol, ISM, Smart Energy, WiMax
 Detail Specification: 5/24/2013 Page 1 of 9

General Specifications			
Part Number	2500AT44M0400		
Operating Frequency (MHz)	2300 - 2700		
Impedance	50 Ω		
Operating Temperature	-40 to +85°C		
Return Loss (2.3-2.7GHz)	9.5 dB min.		
Peak Gain @ 2.38GHz	2.0 dBi typ. (XZ-V)		
Average Gain @ 2.38GHz	0.0 dBi typ. (XZ-V)		
Peak Gain @ 2.45GHz	2.5 dBi typ. (XZ-V)		
Average Gain @ 2.45GHz	0.5 dBi typ. (XZ-V)		
Peak Gain @ 2.60GHz	2.0 dBi typ. (XZ-V)		
Average Gain @ 2.60GHz	0.0 dBi typ. (XZ-V)		
	Quantity per Reel	1,000	
	Recommended Storage Conditions	+5 ~ +35 °C, Humidity 45~75%RH	



Mechanical Specifications			
	In	mm	
L	0.315 ± 0.008	8.00 ± 0.20	
W	0.039 ± 0.008	1.00 ± 0.20	
T	0.039 ± 0.008	1.00 ± 0.20	
a	0.020 ± 0.008	0.50 ± 0.20	
a2	0.039 ± 0.008	1.00 ± 0.20	

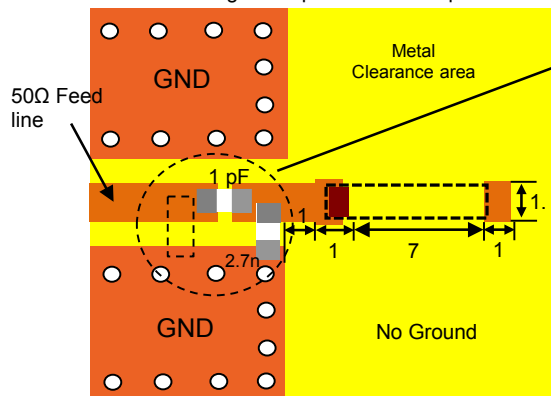
Terminal Configuration	
No.	Function
1	Feeding Point
2	NC



Mounting Considerations - Layout #1

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

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



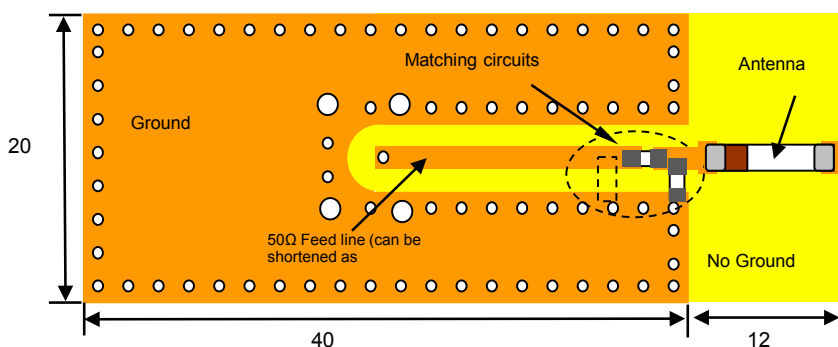
It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values are used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different. Go to: <http://johansontechnology.com/tuning> 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

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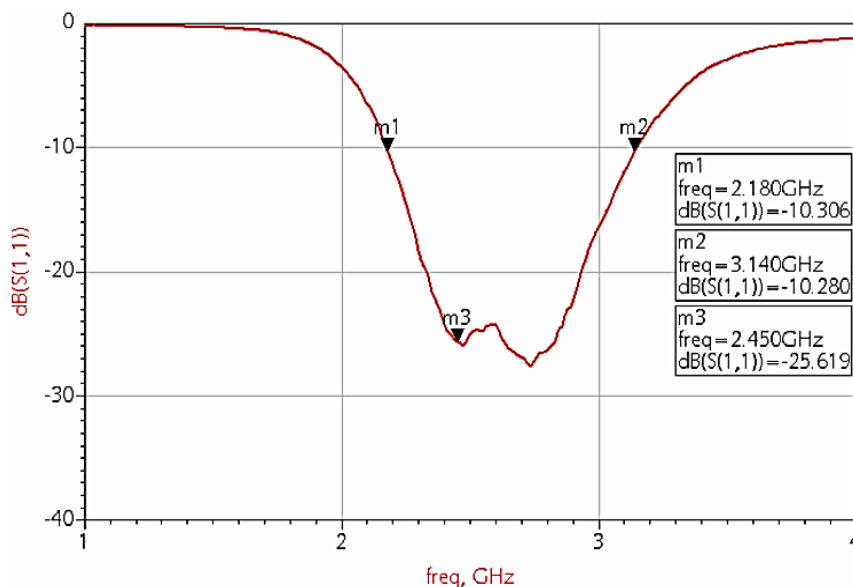
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Layout #1 example (units in mm)



Orderable EVB p/n: 2500AT44M0400-EB1SMA

Return Loss - with Matching Circuits

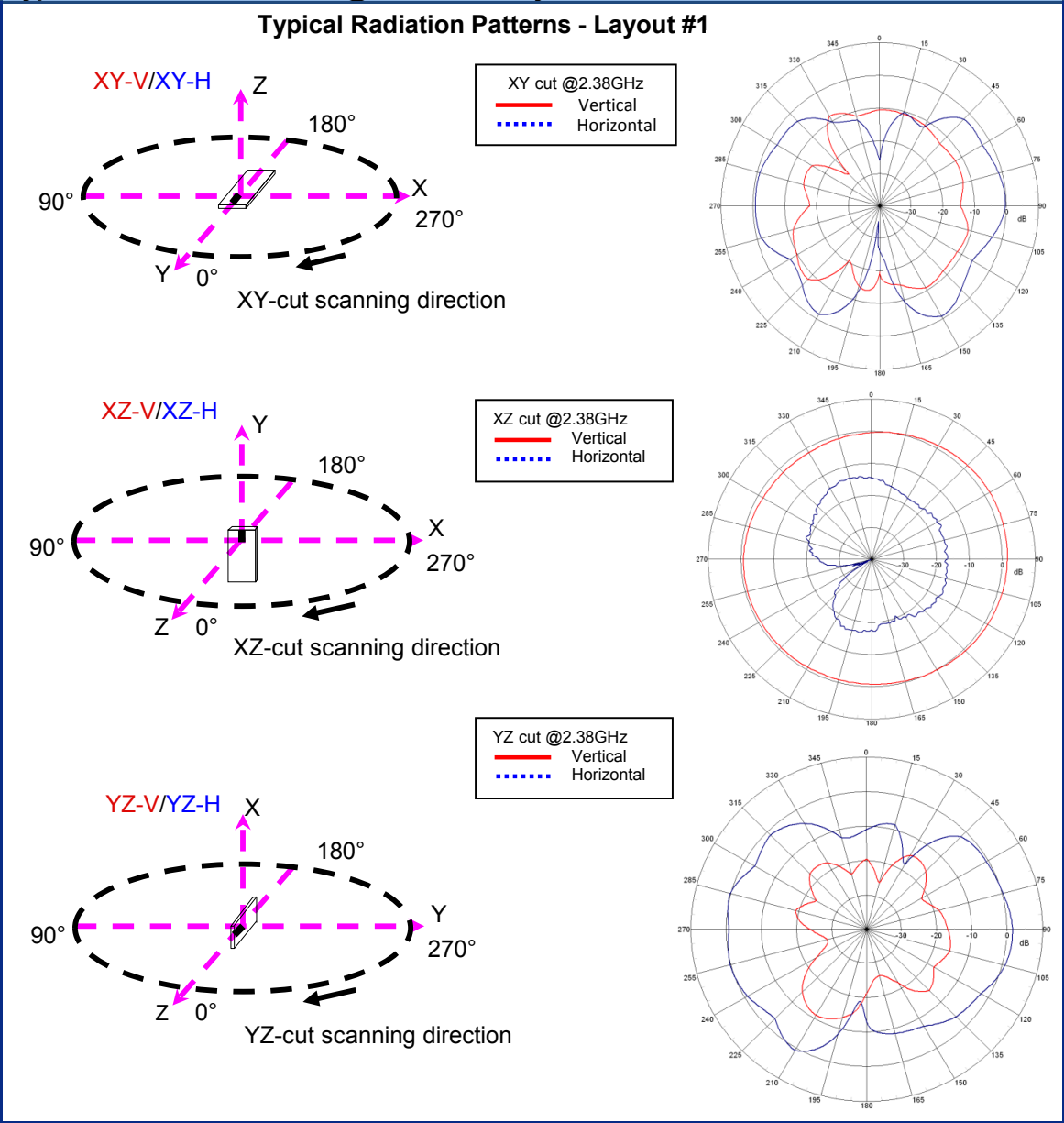


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Typical Radiation Patterns @ 2.38GHz - Layout #1

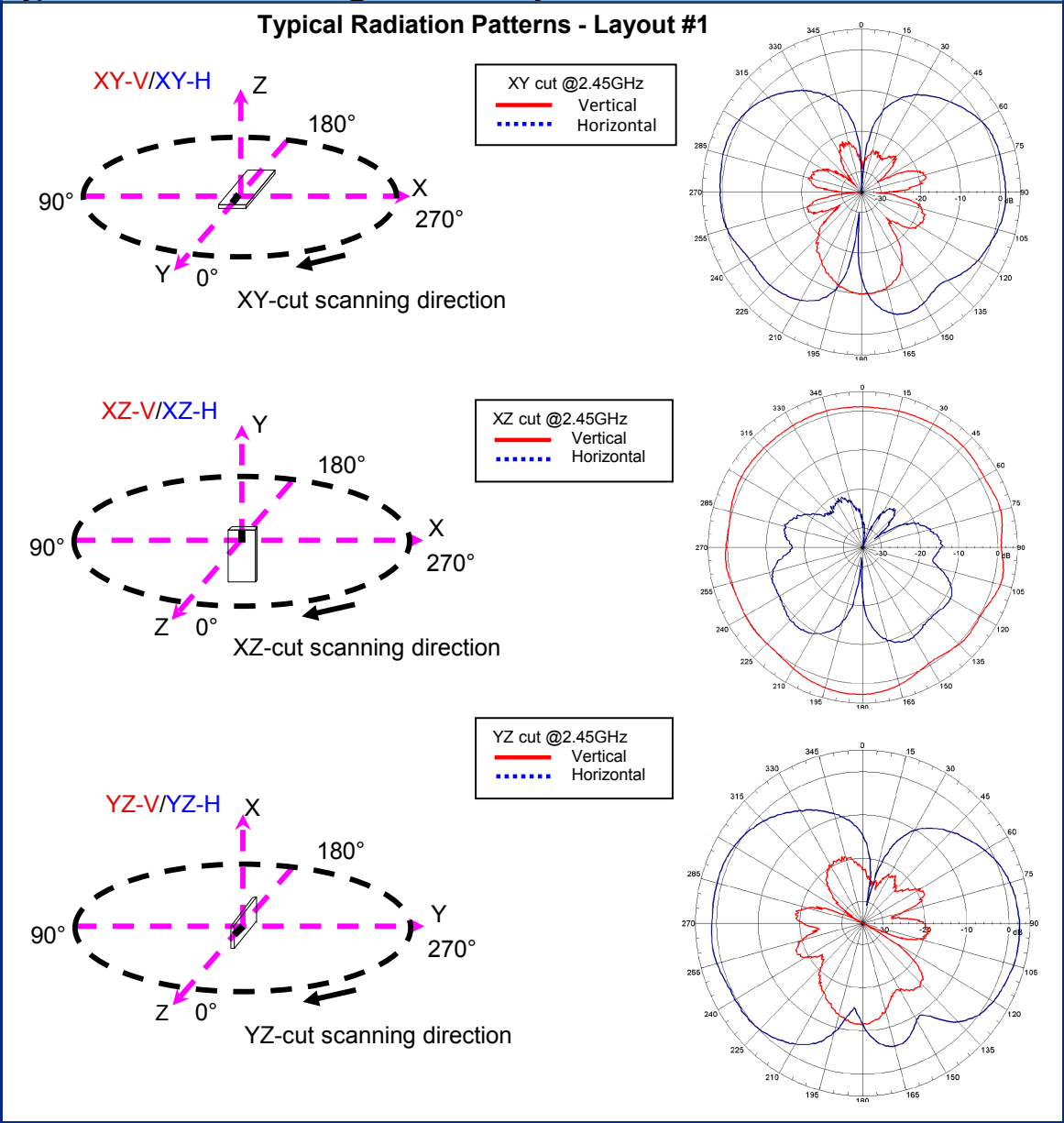


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Typical Radiation Patterns @ 2.45GHz - Layout #1

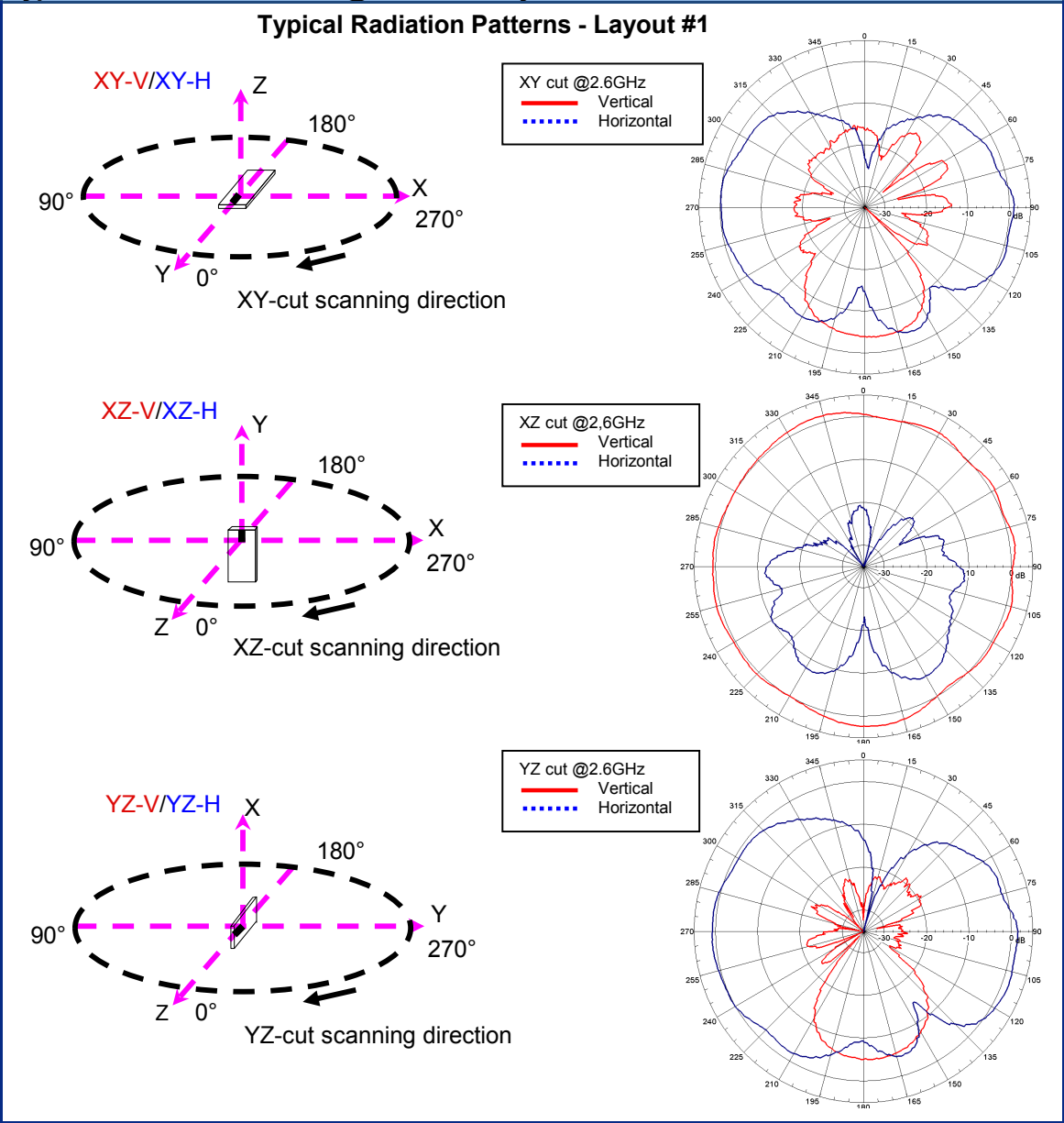


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Typical Radiation Patterns @ 2.6GHz - Layout #1



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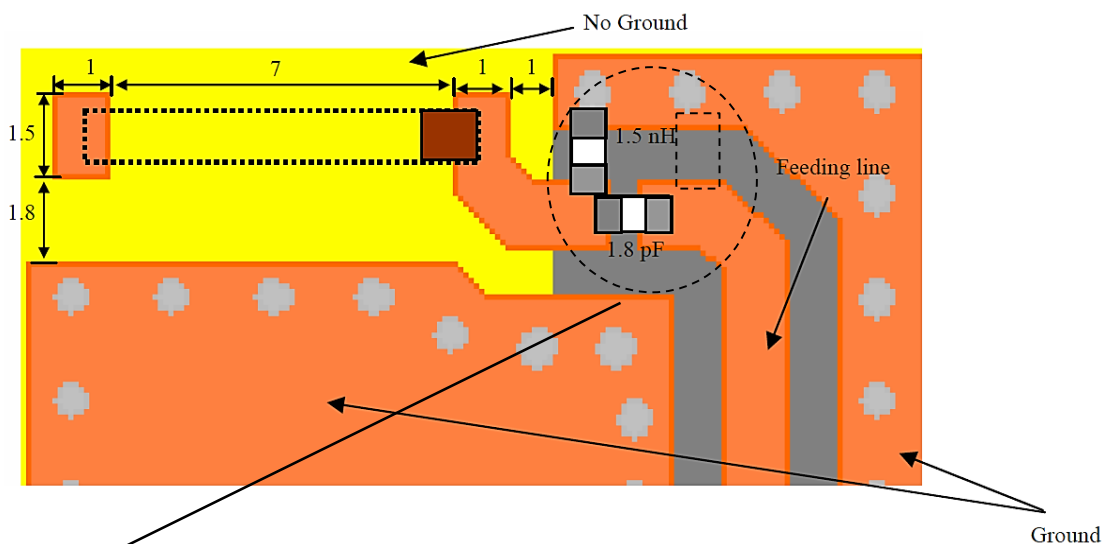
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Alternate layout - Layout #2

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

Layout #2 example (units in mm)**



It is recommended that the designer leave available slots for a "pi" (or shunt-series-shunt) network. The antenna matching network values are used when antenna is mounted on Johanson's evaluation board. The matching values on client's PCB will be different.

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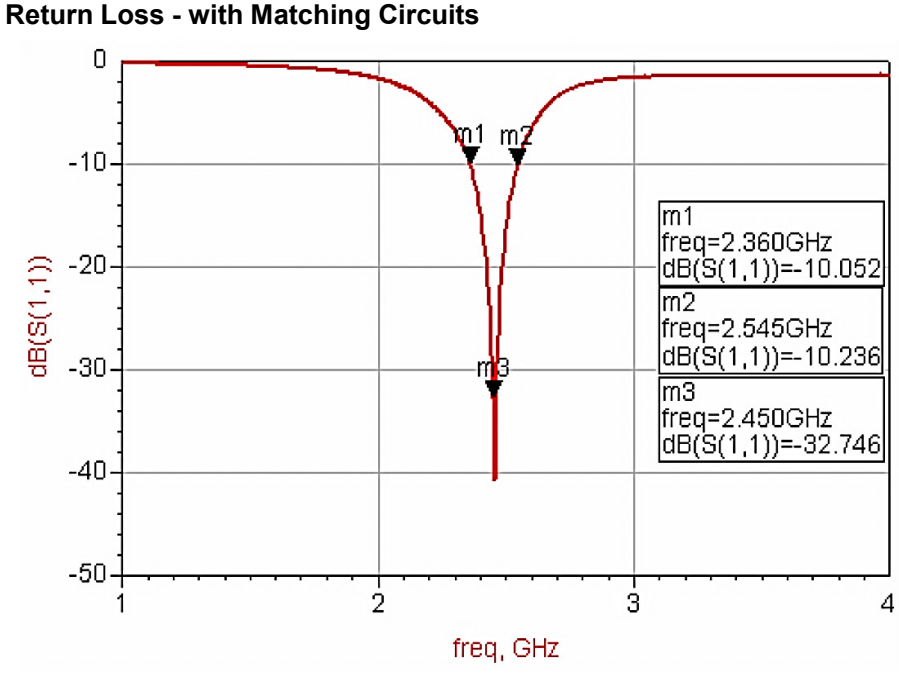
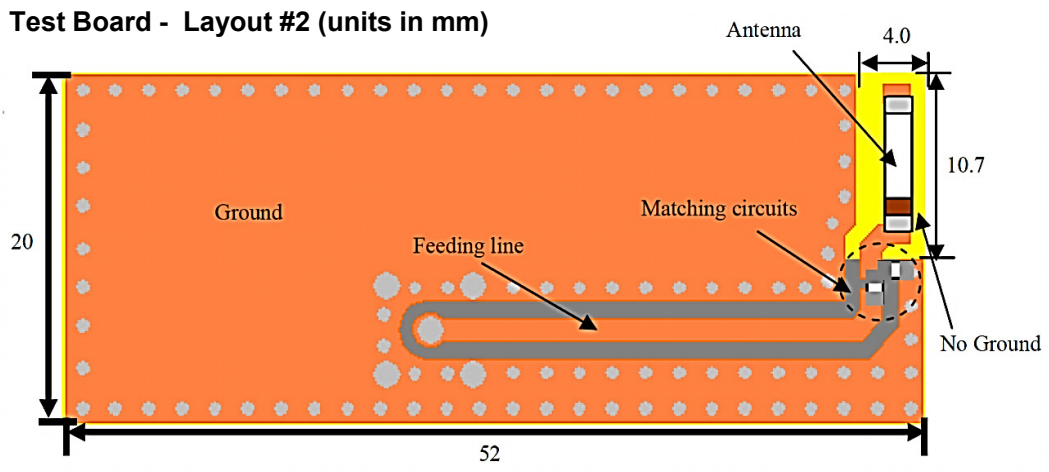
**Bandwidth is about 190MHz in this configuration

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Typical Electrical Characteristics (T=25 °C)

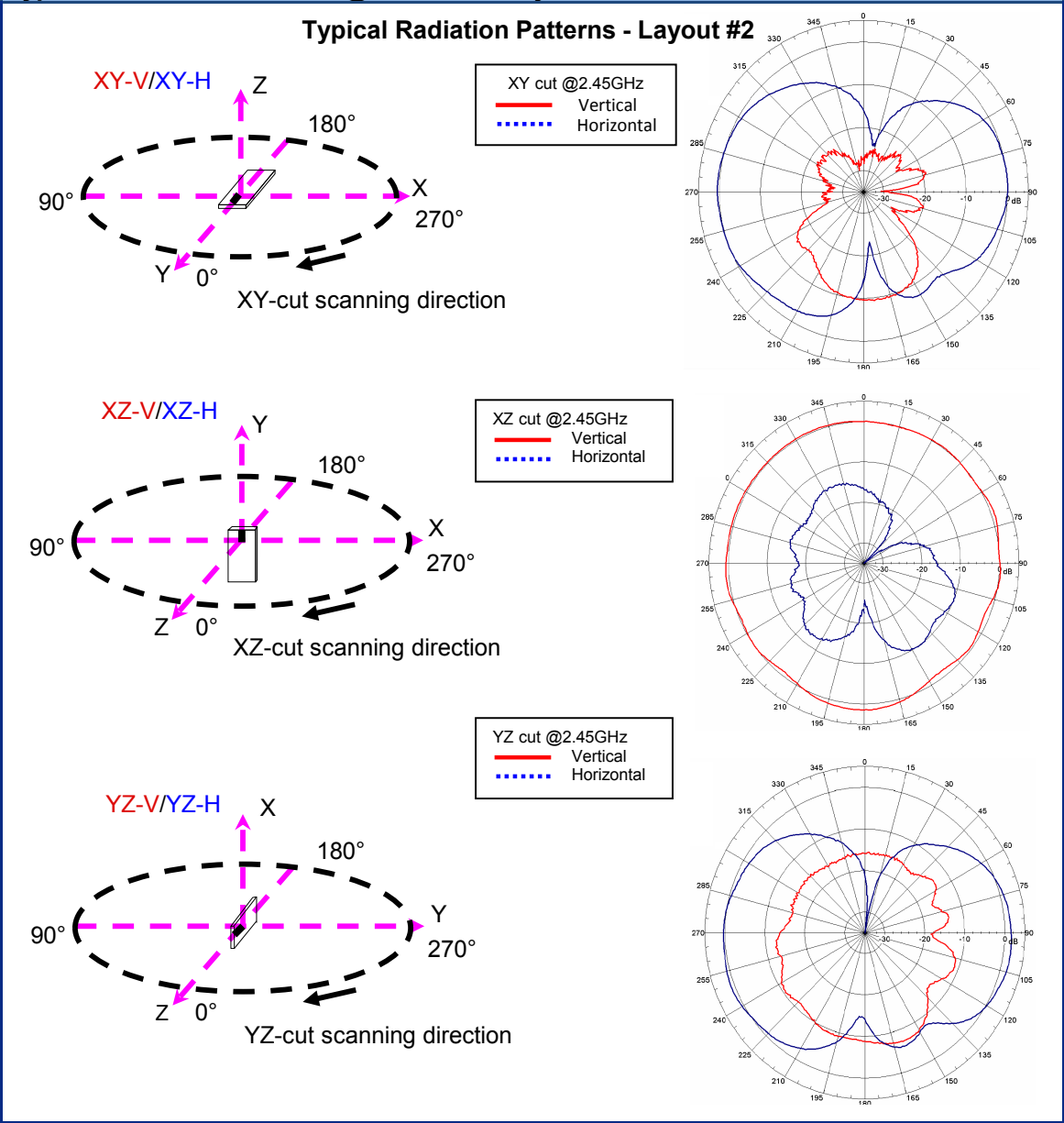


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Typical Radiation Patterns @ 2.45GHz - Layout #2



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Additional Info

Part Number Explanation

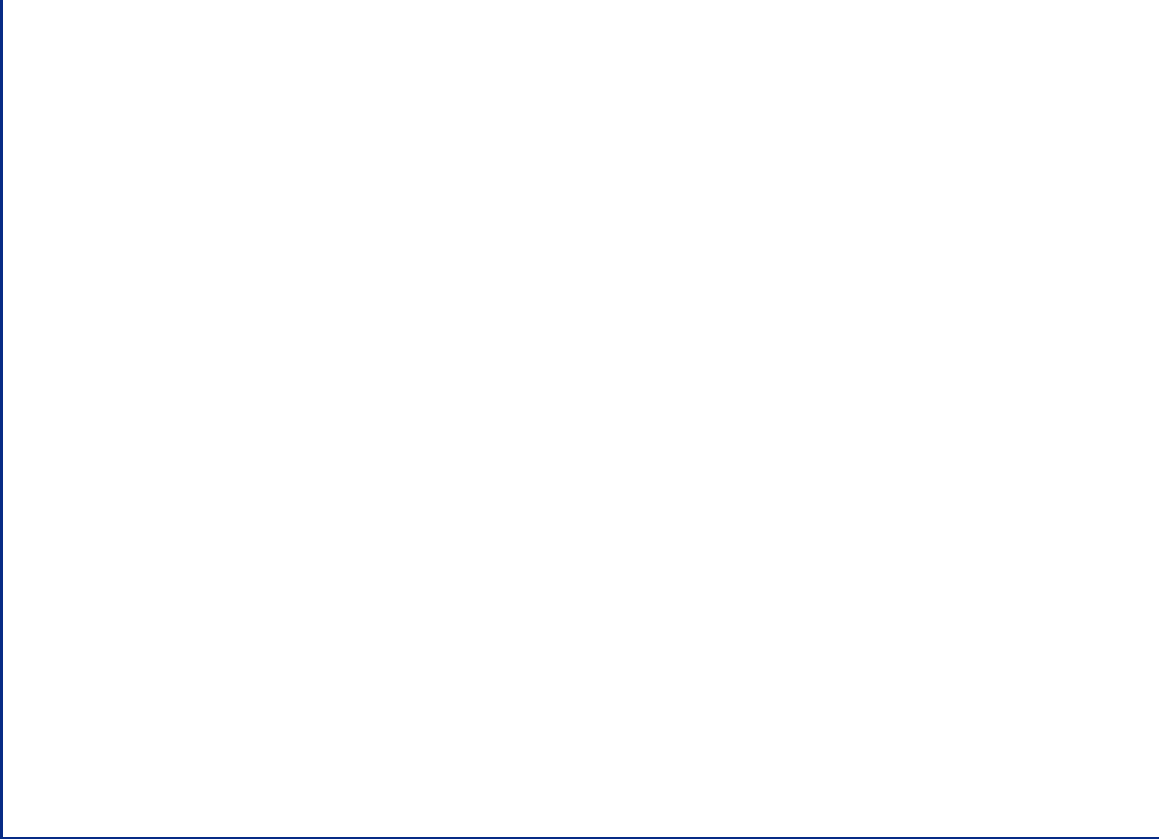
P/N Suffix	Packing Style	Bulk	Suffix = S	eg. 2500AT44M0400S
		T & R	Suffix = T	eg. 2500AT44M0400E
	Evaluation Board	SMA	Suffix = -EB1SMA	eg. 2500AT44M0400-EB1SMA

Tape & Reel Specifications

<http://www.johansontechnology.com/ipcpackaging.html>

Soldering Profile

<http://www.johansontechnology.com/ipcsoldering-profile>



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