

High Frequency Ceramic Solutions

5.4 GHz Wideband Antenna

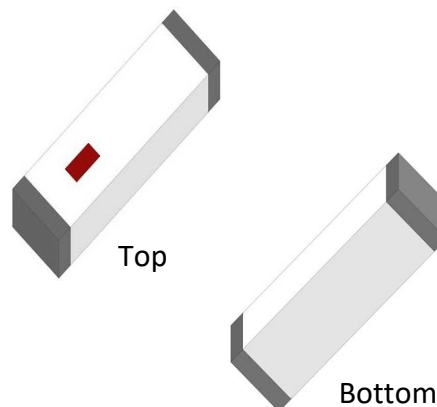
P/N 5400AT18A1000

Detail Specification: 8/4/2021

Page 1 of 5

General Specifications

Part Number	5400AT18A1000
Frequency (MHz)	5150 - 5875
Peak Gain (dBi typ.)	2.0 (XZ-V)
Average Gain (dBi typ.)	-2.5 (XZ-V)
Return Loss (dB)	9.5 min.
Impedance (Ω)	50
Power Capacity (W)	3 max. (CW)
Reel Quantity (pcs./reel)	3,000
Operating Temp	-40 to +85°C
Recommended Storage Conditions and Period for unused Product on T&R	+5°C to +35°C Humidity 45 to 75% RH 18 months max.

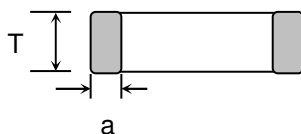
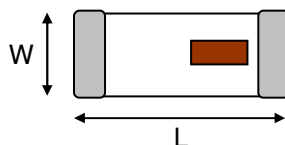


Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	e.g.. 5400AT18A1000S
		T & R	Suffix = E	e.g.. 5400AT18A1000E
	Evaluation Board	5400AT18A1000-EB1SMA (comes with 1 female SMA connector)		

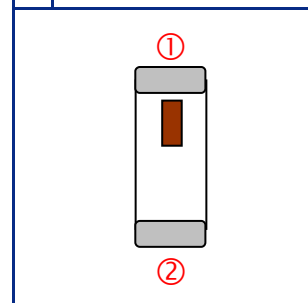
Mechanical Specifications

	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



Terminal Configuration

No.	Function
1	Feed
2	NC



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Page 2 of 5

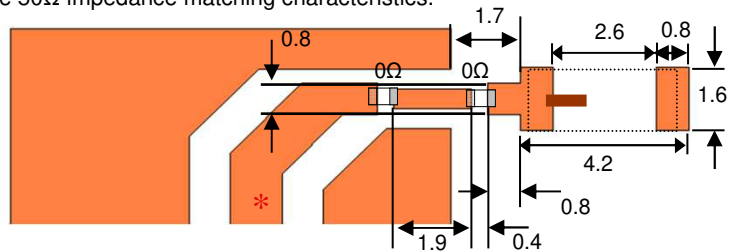
Mounting Considerations

Mount these devices with brown mark facing up.

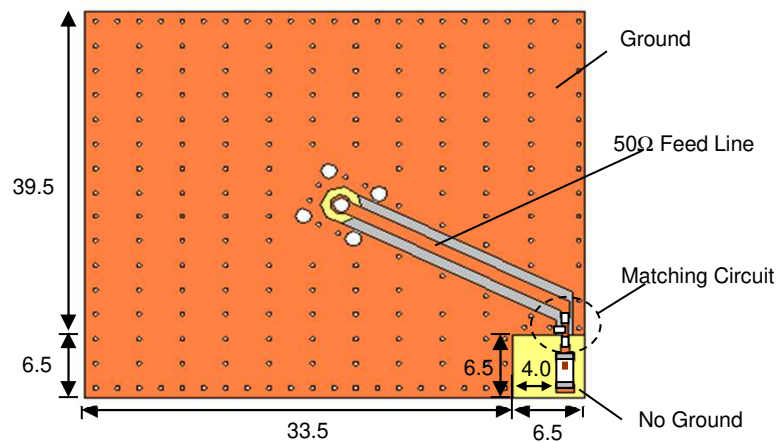
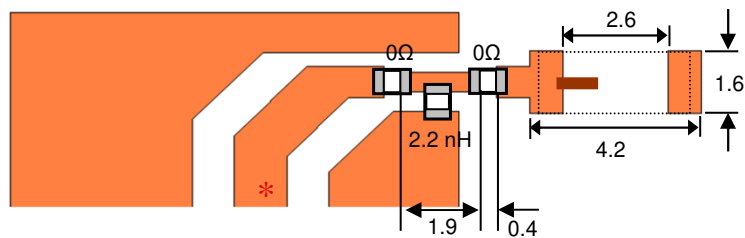
*Line width should be designed to provide 50Ω impedance matching characteristics.

Units: mm

a) Without Matching Circuits



b) With Matching Circuits



Orderable pre-tuned 50Ω EVB with a female SMA connector reference p/n: 5400AT18A1000-EB1SMA

Click here: <https://www.johansontechnology.com/request-a-sample>

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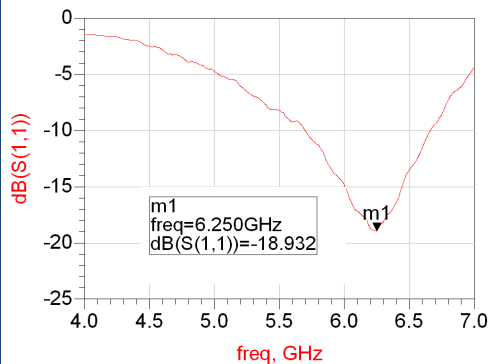
Detail Specification: 8/4/2021

Page 3 of 5

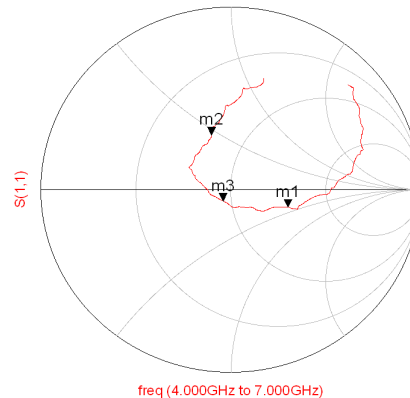
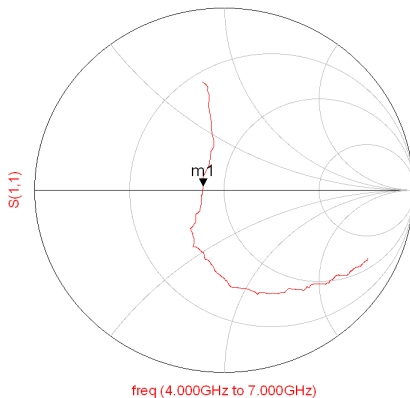
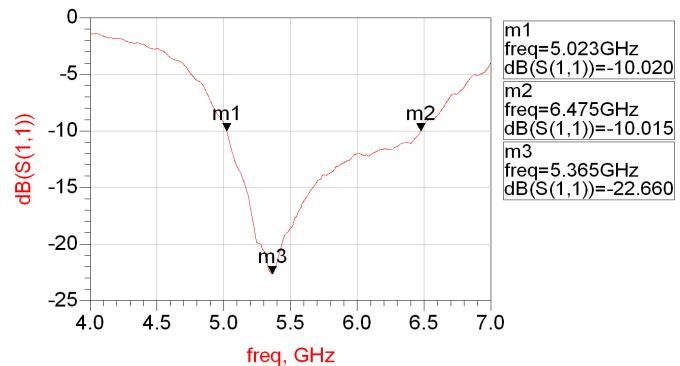
Typical Electrical Characteristics (T=25 °C)

Return Loss

a) Without Matching Circuits



b) With Matching Circuits



Need help designing the antenna in? Use our antenna design services! <https://www.johansontechnology.com/ipc-antenna-services>
2 Free layout reviews and if you need us to tune and characterize the antenna on your design (anechoic chamber) we can do that too (lab fee may apply for the latter).

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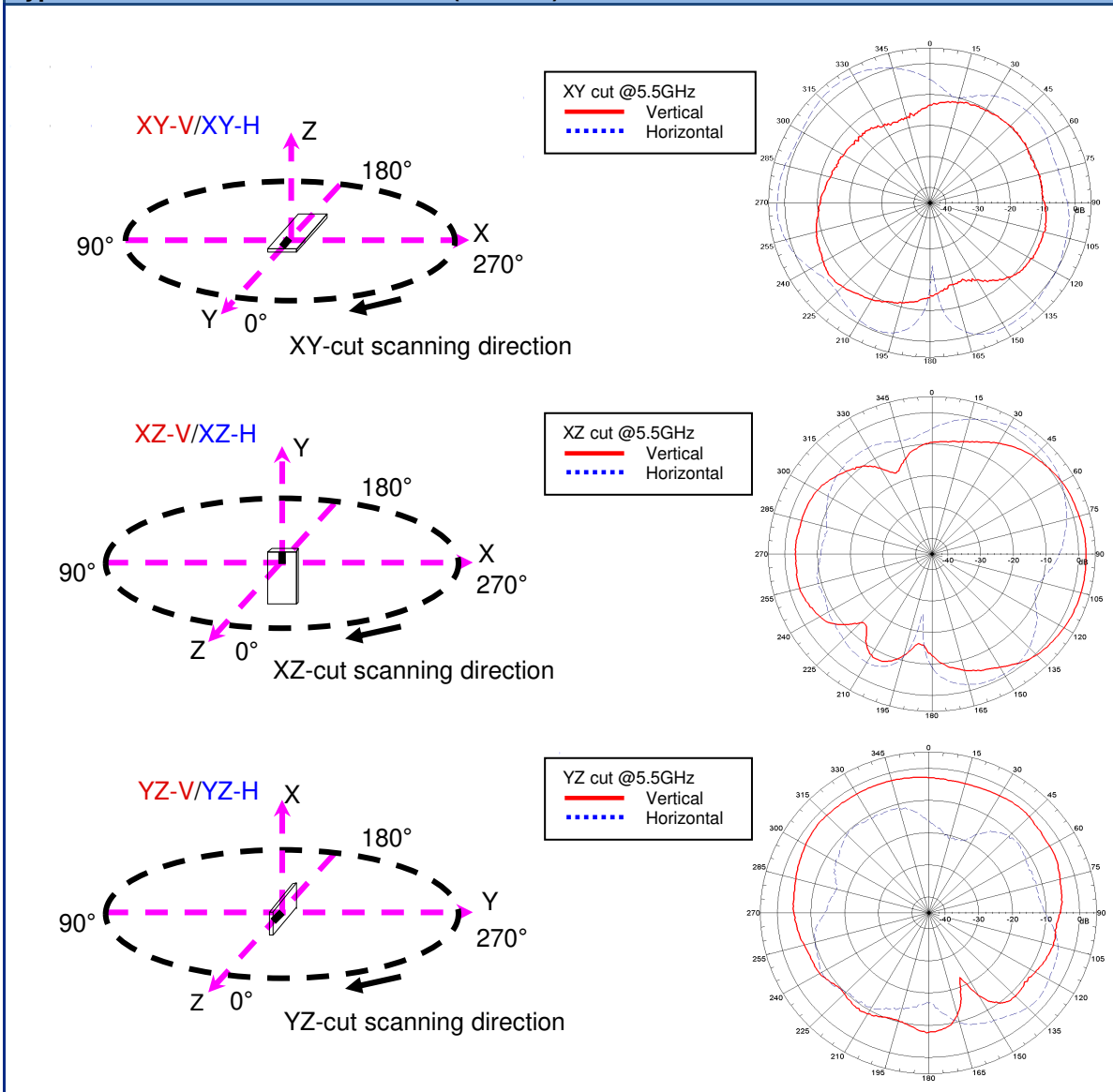
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Detail Specification: 8/4/2021

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Page 4 of 5

Typical Radiation Patterns @ 5.5GHz (T=25 °C)



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Page 5 of 5

Antenna layout review, tuning, and characterization services

<https://www.johansontechnology.com/ipc-antenna-services>

More SMD Chip Antennas at:

<https://www.johansontechnology.com/antennas>

Soldering Information

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

Antenna layout and tuning techniques (How to obtain the new antenna matching values)

<https://www.johansontechnology.com/tuning>

Packaging information

<https://www.johansontechnology.com/tape-reel-packaging>

RoHS Compliance

<https://www.johansontechnology.com/rohs-compliance>

MSL Info

<https://www.johansontechnology.com/msl-rating>

P/N Explanation and Breakdown

<https://www.johansontechnology.com/ipc-pn-explained>

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