

High Frequency Ceramic Solutions

28GHz Band Pass Filter, Ceramic SMD

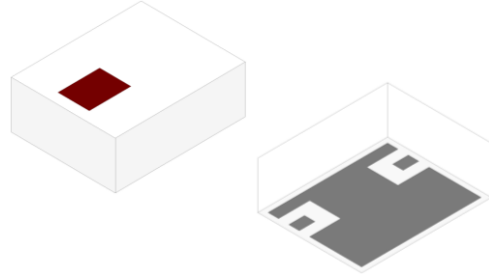
P/N 28R0BP39A3500

Detail Specification: 6/9/2021

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General Specifications

Part Number	28R0BP39A3500
Operational Frequency (GHz)	26.5 - 30.0
Insertion Loss (dB)	1.3 typ. (2.5 max.)
Return Loss (dB)	9.5 min.
Power Capacity (W)	1 (CW)
Reel Quantity (pcs/reel)	3000



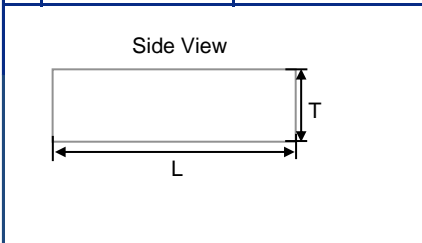
Attenuation		Operating Temp.	-40°C to +85°C
DC - 20GHz	31dB typ. (28dB min.)	Recommended Storage Conditions for Un-used Product on T&R	+5°C to +35°C Humidity 45 - 75% RH 18 months max.
20GHz - 24.5GHz	26dB typ. (20dB min.)		
32.5GHz - 33GHz	27dB typ. (20dB min.)		
33GHz - 40GHz	25dB typ. (20dB min.)		

Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	E.g. 28R0BP39A3500S
		T & R	Suffix = E	E.g. 28R0BP39A3500E
	Termination style	Ni/Sn	Suffix = All	E.g. 28R0BP39A3500 (E or S)
	Evaluation Board	Please contact our factory: www.johansontechnology.com/ask-a-question		

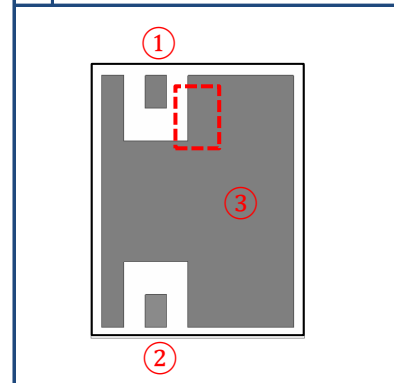
Mechanical Dimensions

	In	mm
L	0.098 ± 0.006	2.5 ± 0.15
W	0.079 ± 0.006	2.0 ± 0.15
T	0.035 max.	0.9 max.
a	0.008 +.004/-0.002	0.2 +0.1/-0.05
b	0.039 ± 0.004	1.0 ± 0.1
c	0.012 ± 0.004	0.3 ± 0.1
d	0.043 ± 0.004	1.1 ± 0.1



Terminal Configuration

No.	Function
1	IN/OUT
2	IN/OUT
3	GND



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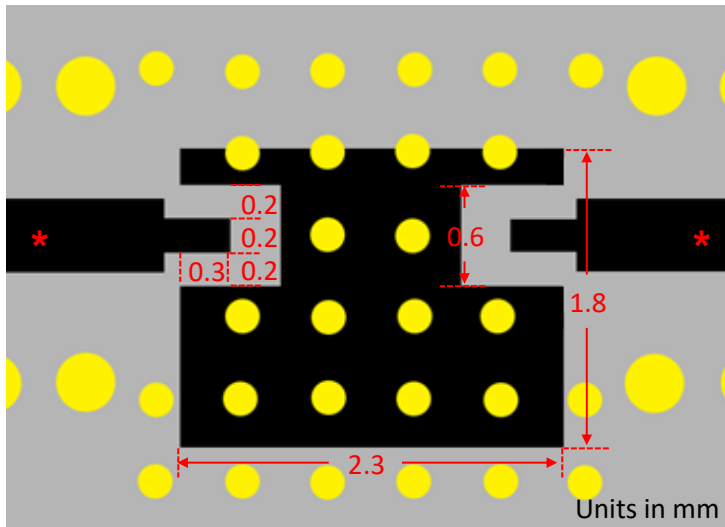
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Mounting Considerations

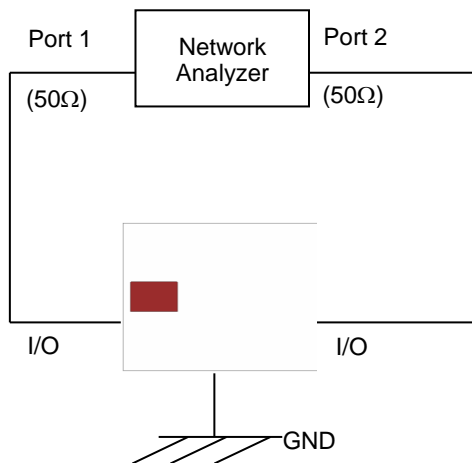


- Solder Pads
- GND
- GND Vias

* Co-planar waveguide transmission line designed to 50Ω

If you would like the CAD of this PCB layout, contact one of our applications engineers at:
<https://www.johansontechnology.com/ask-a-question>

Measuring Diagram



Port 1: Filter IN/OUT

Port 2: Filter IN/OUT

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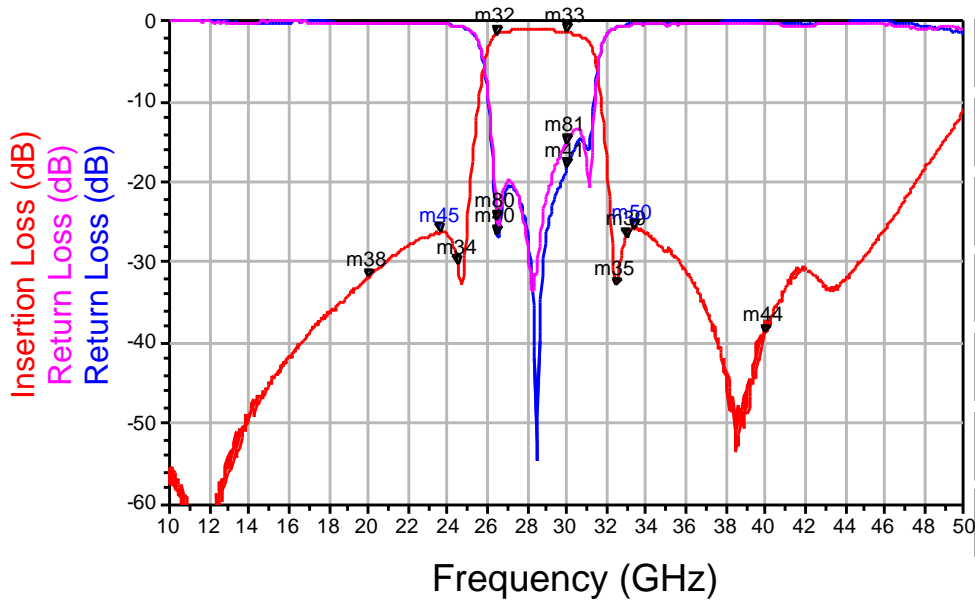
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Typical Electrical Characteristics (T=25 °C)

Low-band Insertion Loss & Return Loss



m32 freq=26.50GHz dB(S(1,2))=-1.623	m40 freq=26.50GHz dB(S(1,1))=-26.495	m80 freq=26.50GHz dB(S(2,2))=-24.690
m33 freq=30.00GHz dB(S(1,2))=-1.397	m41 freq=30.00GHz dB(S(1,1))=-18.191	m81 freq=30.00GHz dB(S(2,2))=-15.157
m34 freq=24.50GHz dB(S(1,2))=-30.173	m45 freq=23.63GHz dB(S(1,2))=-26.147	
m35 freq=32.50GHz dB(S(1,2))=-32.868	m50 freq=33.39GHz dB(S(1,2))=-25.827	

If you would like to request the s-parameter file,
Send us a message at: <https://www.johansontechnology.com/ask-a-question>

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Band-pass Filters

<https://www.johansontechnology.com/band-pass-filters>

RoHS Compliance

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

Packaging information

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

Soldering Information

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

Layout Files, s-parameters and any other technical questions

<https://www.johansontechnology.com/ask-a-question>

MSL Info

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

Recommended Storage Condition and Max Shelf Life

<https://www.johansontechnology.com/recommended-storage-conditions>

Antenna layout and tuning techniques

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

Antenna layout review, tuning, and characterization services

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

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