

High Frequency Ceramic Solutions

28GHz Band Pass Filter, Ceramic SMD

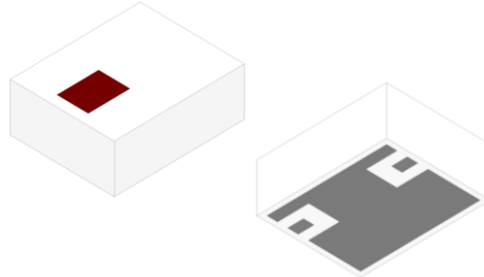
P/N 28R0BP39A2000

Detail Specification: 6/9/2021

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General Specifications

Part Number	28R0BP39A2000
Operational Frequency (GHz)	27.5 - 29.5
Insertion Loss (dB)	1.4 typ. (2.3 max.)
Return Loss (dB)	17 typ. (9.5 min.)
Group Delay (ns)	0.18 typ. (0.6 max.)
Power Capacity (W)	1 (CW)
Reel Quantity (pcs/reel)	3000



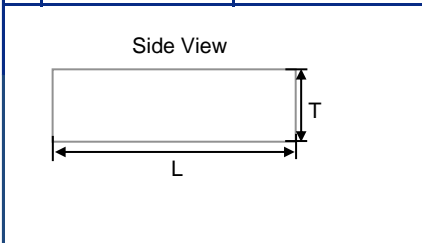
Attenuation		Operating Temp.	-40°C to +85°C
22GHz - 24GHz	25dB typ. (20dB min.)	Recommended Storage Conditions for Un-used Product on T&R	+5°C to +35°C Humidity 45 - 75% RH 18 months max.
32GHz - 35GHz	28dB typ. (20dB min.)		

Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	E.g. 28R0BP39A2000S
		T & R	Suffix = E	E.g. 28R0BP39A2000E
	Termination style	Ni/Sn	Suffix = All	E.g. 28R0BP39A2000 (E or S)
	Evaluation Board	Please contact our factory: www.johansontechnology.com/ask-a-question		

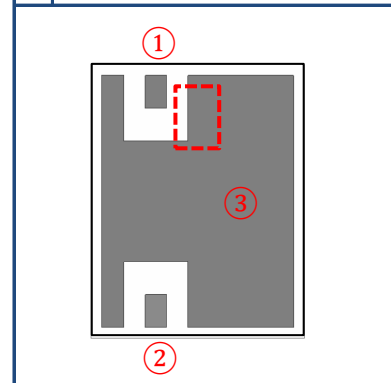
Mechanical Dimensions

	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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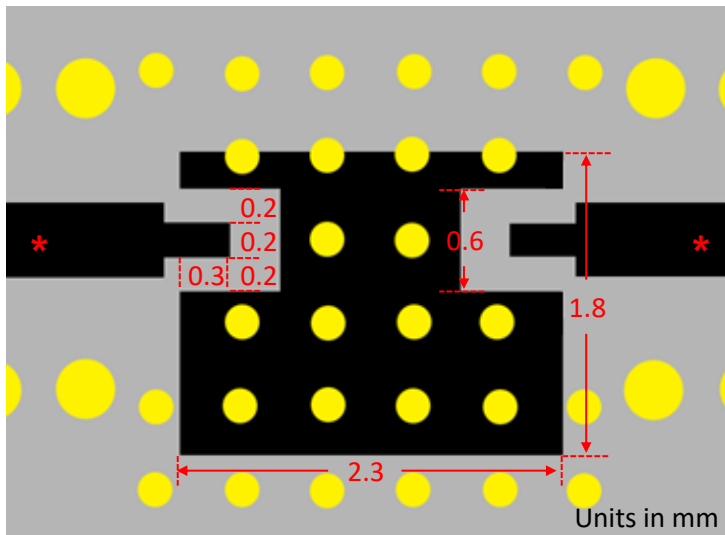
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Mounting Considerations

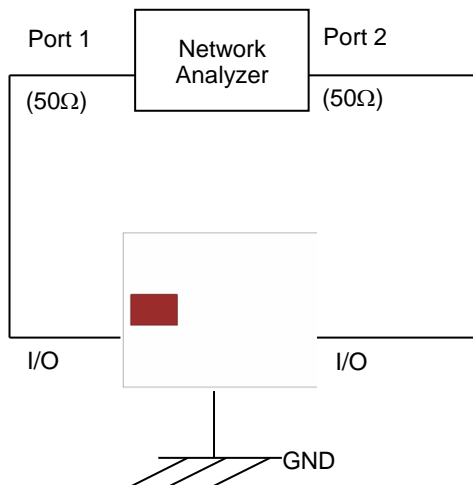


-  Solder Pads
-  GND
-  GND Vias

* 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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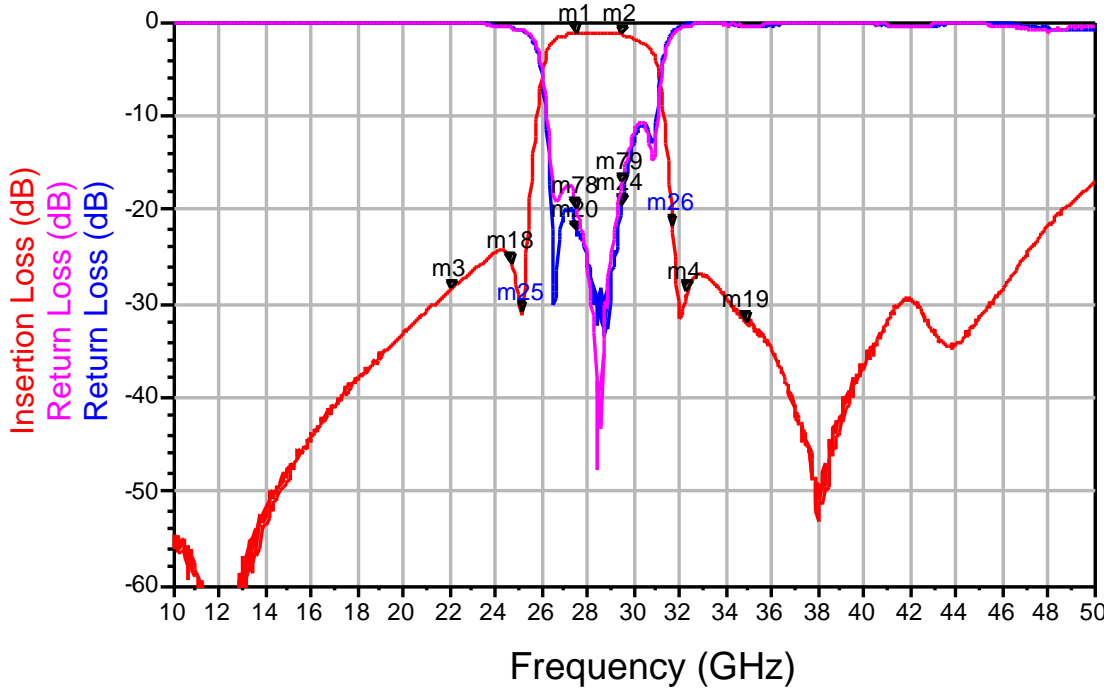
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Typical Electrical Characteristics (T=25 °C)

Insertion Loss & Return Loss



m1 freq=27.50GHz dB(S(1,2))=-1.218	m20 freq=27.50GHz dB(S(1,1))=-22.255	m78 freq=27.50GHz dB(S(2,2))=-19.779
m2 freq=29.50GHz dB(S(1,2))=-1.358	m24 freq=29.50GHz dB(S(1,1))=-19.438	m79 freq=29.50GHz dB(S(2,2))=-17.124
m3 freq=22.10GHz dB(S(1,2))=-28.406	m18 freq=24.68GHz dB(S(1,2))=-25.622	m25 freq=25.17GHz dB(S(1,2))=-30.900
m4 freq=32.33GHz dB(S(1,2))=-28.710	m19 freq=34.90GHz dB(S(1,2))=-31.876	m26 freq=31.68GHz dB(S(1,2))=-21.536

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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