

42.4GHz Surface Mount Bandpass Filter B424MB1S

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DESCRIPTION

DLI's surface mount catalog bandpass filters utilize DLI's low loss temperature stable materials which offer small size and minimal performance variation over temperature. The catalog BPF's are offered in a variety of frequency bands, which offers a drop in solution with highly repeatable performance.

FEATURES

- Small Size
- Surface Mount Package
- Moisture Sensitivity Level: MSL1
- Frequency Stable over Temperature
- Operating & Storage Temp: -55°C to +125°C
- 50Ω Characteristic Impedance

Packaging and Ordering Information:

To request Tape and Reel packaging, please order part number B424MB1S-T



SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Insertion Loss (dB)	40.5 - 43.5		3	3.25
Return Loss (dB)		10	12	
Low Side Rejection (dB)	DC - 37	30	35	
High Side Rejection (dB)	49.0 - 64.0	30	35	
CW Input Power** (W)				3
$\theta_{JC} \left(\frac{^{\circ}C}{W} \right)$	25			
Size (L x W x H)	0.275 x 0.080 x 0.070 in 6.52 x 2.032 x 1.778 mm			

*Electrical specifications based on typical probed performance at room temperature. Insertion loss shall vary ± 0.5 dB over temperature.

**Power rating assumes the component will be mounted to a PCB with good thermally conducting ground vias as outlined in the recommended PCB layout that are connected to an adequate heat sink. Max power is based on 125°C base temperature.

Information in this document is for informational and guideline purposes only. All information regarding the Product described in this datasheet is subject to change from time to time at Knowles Precision Devices' sole discretion. It is the customer's sole responsibility to evaluate the suitability of the Product in the customer's particular application. Knowles Precision Devices assumes no responsibility or liability for the use of the information contained within.

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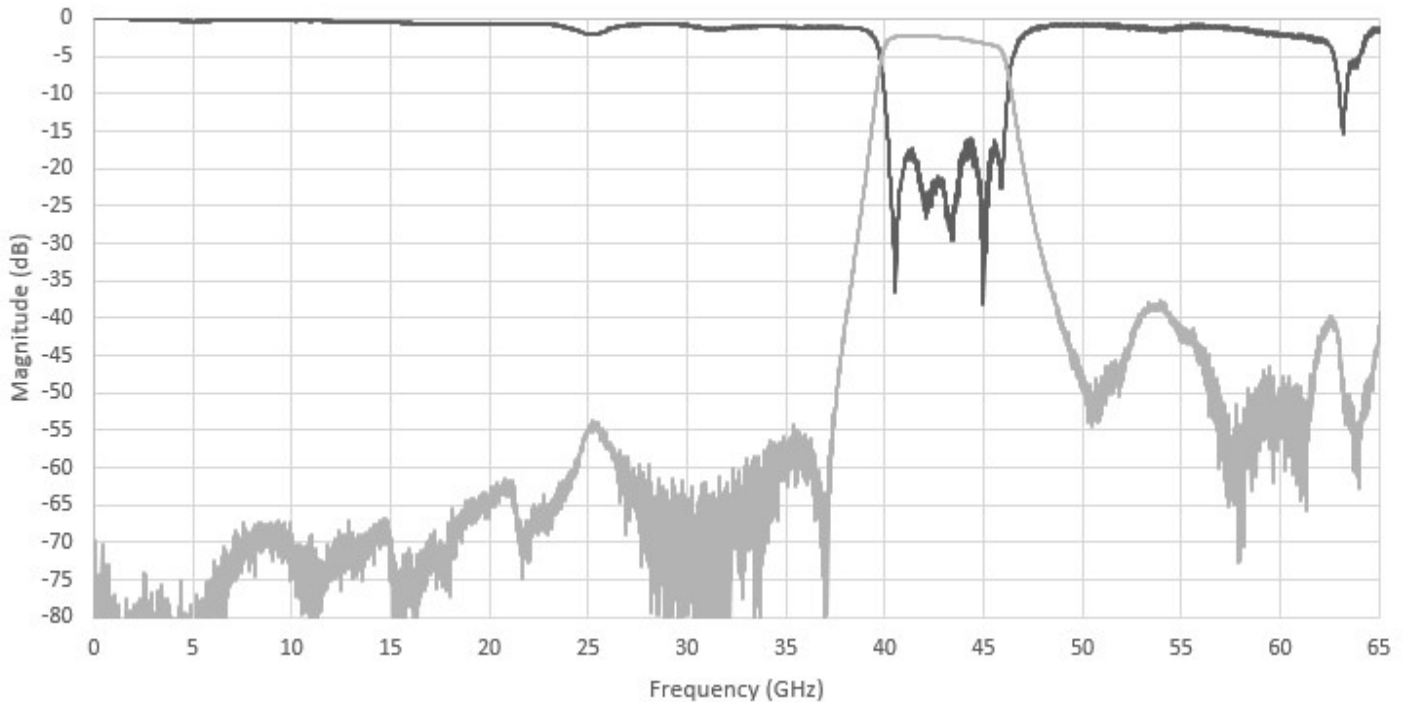
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Typical Measured Performance*



*Typical de-embedded measured performance mounted on a connectorized test DEB (0.010in RO4350B with 50Ω CPW ground traces), tested at room temperature

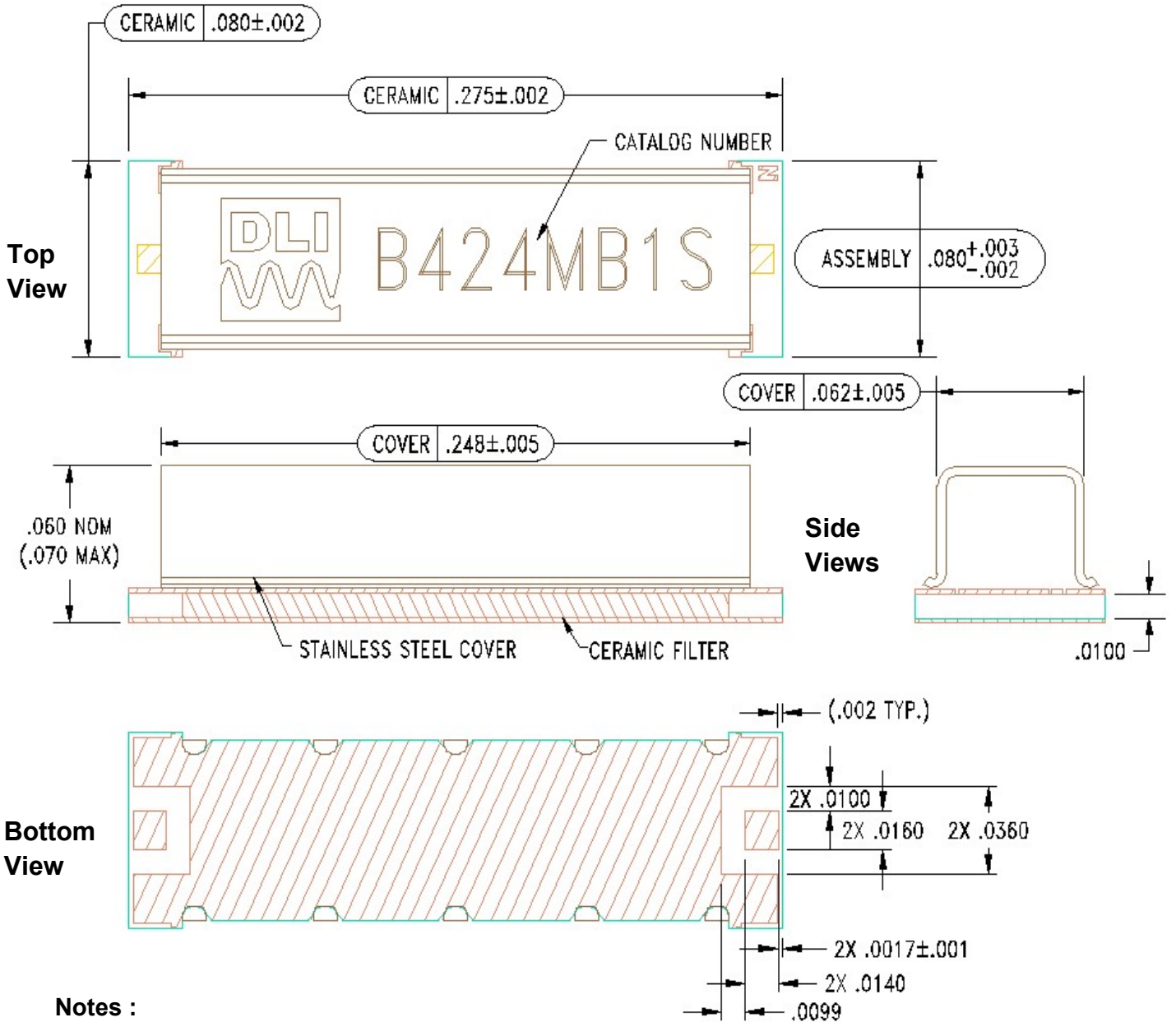
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Physical Dimensions

Units = inches (in)



Notes :

1. Termination Finish:
ENIG: 3 - 6 μinch Au over 50 μinch Ni
2. Maximum Assembly Process Temperature: 250°C

Tolerances:

- For values with 3 decimal places ±0.001
- For values with 4 decimal places ±0.0005

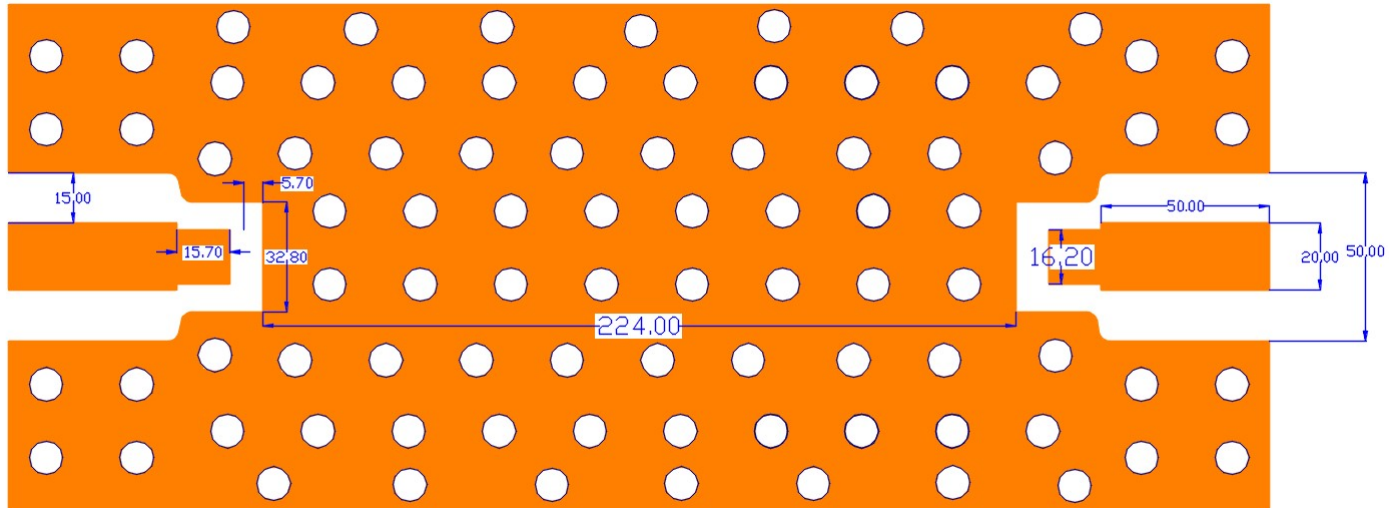
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Recommended PCB Layout

Unit : mil



○ PWB Ground Via

■ PWB Top Metallization

Note:

- 50Ω trace dimensions are application specific.
- 50Ω trace dimensions are designed for 10mil thick R04350B Rogers Board .
 - 15 mils (0.38mm) trace width
 - 5 mils (0.127mm) spacing between the trace and ground
- Ensure adequate grounding beneath the part.

For further details and best practices, reference the **Microwave Products Guide**, available at: <https://www.knowlescapacitors.com/Support/Catalogs>

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