DIELECTRIC LABORATORIES
a Knowles Precision Devices brand

knowles PRECISION DEVICES

2-18GHz Surface Mount Bandpass Filter
B100RH4S

www.knowlescapacitors.com

DESCRIPTION

DLI's wideband, surface mount filter utilizes Knowles' unique multilayer filter technology to create a compact, wideband performance filter.

FEATURES

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

Packaging and Ordering information:

To request Tape and Reel packaging, please order part number B100RH4S-T

Certified System ISO 9001 QMI-SAI Global

Certified System AS 9100 QMI-SAI Global

RoHS 2015/863/EU Exemption-7a

SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Insertion Loss (dB)	2.0 - 18.0		2.0	3.0
Return Loss (dB)		10.0	15.0	
Low Side Rejection (dB)	DC - 1.0	25	35	
High Side Rejection (dB)	21.5 - 35.0	20	30	
CW Input Power** (W)	5			
Size (L x W x H)	0.340 x 0.170 x 0.085 in 8.64 x 4.32 x 2.16 mm			

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

2777 Route 20 East, Cazenovia, NY 13035| Ph.: (315)655-8710

To Order Contact KCCSales@knowles.com | For Technical Inquiries Contact DLIengineering@knowles.com

March 2025

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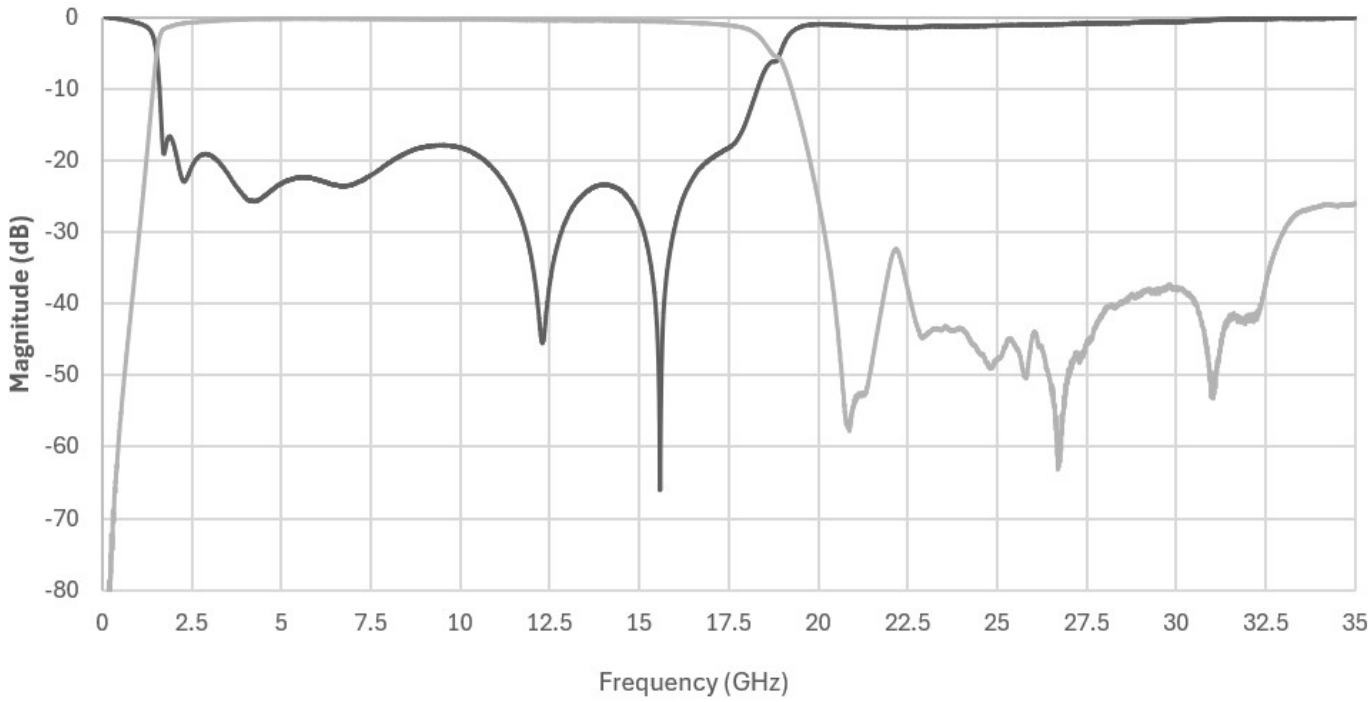
Typical Measured Performance



*Actual performance may vary. This measured data was acquired using the RF GSG probe test method, directly probing the backside of the filter.

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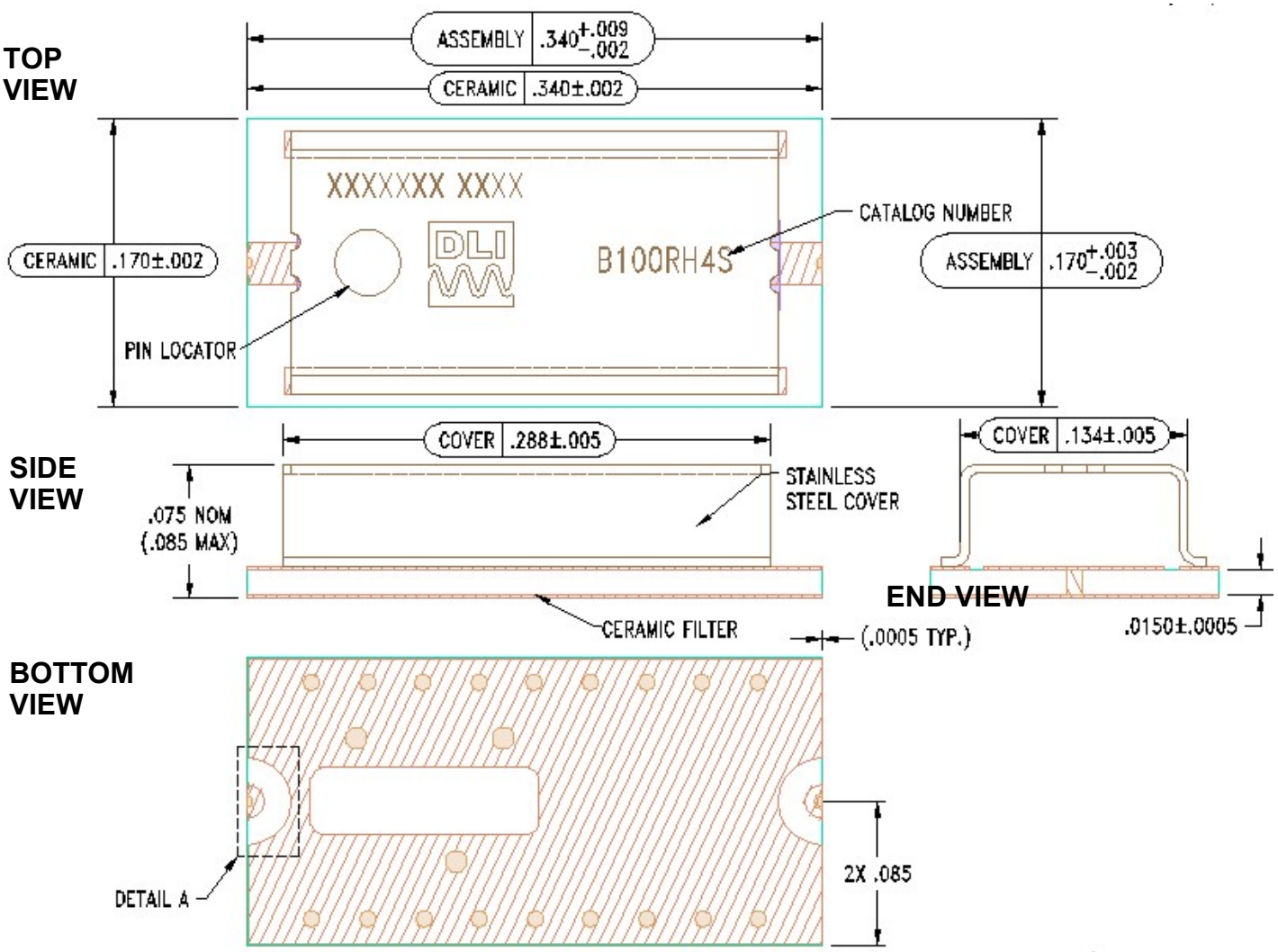
Physical Dimensions

Units = inches

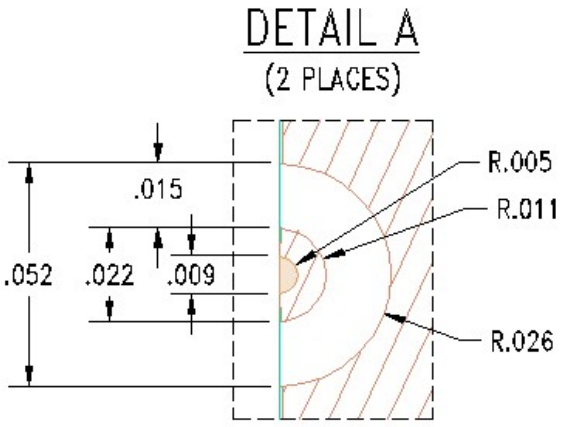


Notes :

1. Termination Finish: ENIG : Au 2-3µ" over Ni 20-30µ"

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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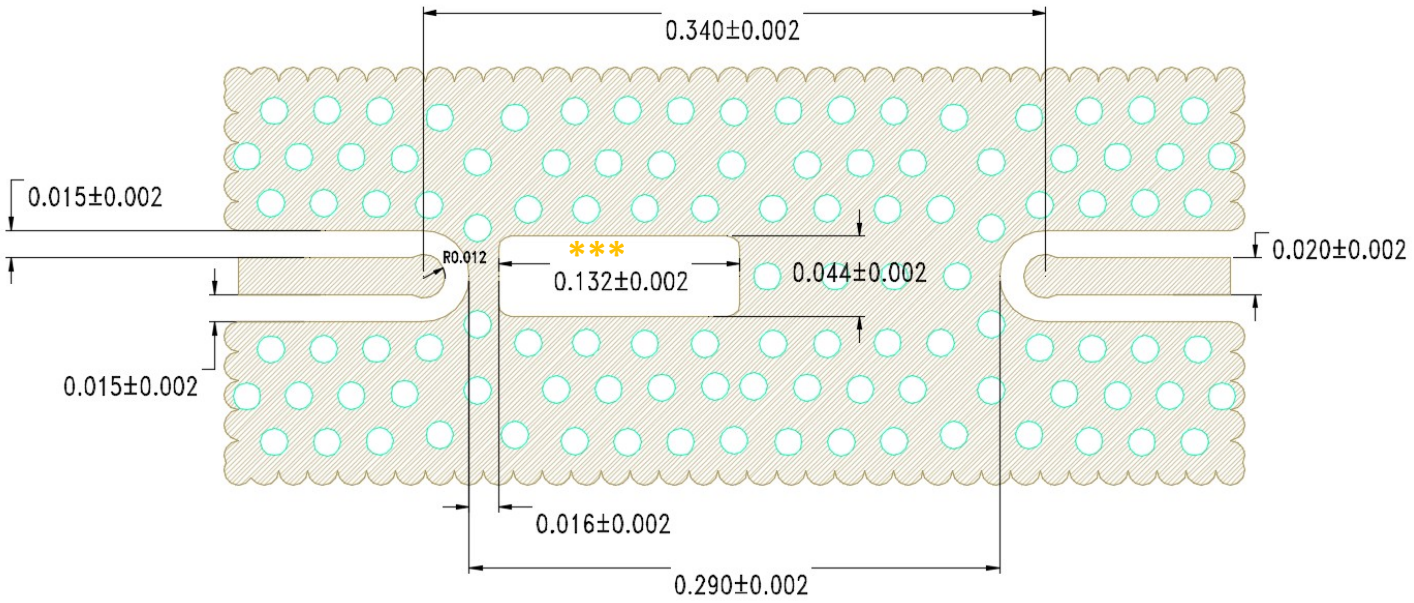
Recommended PCB Layout

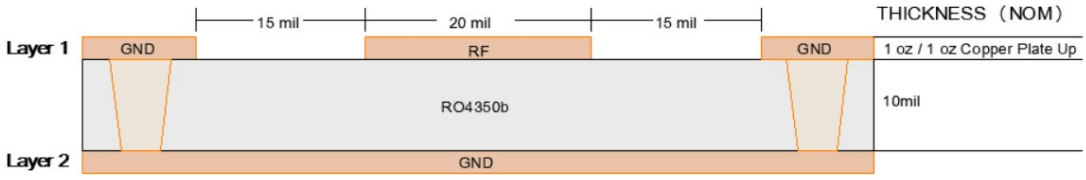
Unit = inch



PCB RECOMMENDED STACKUP

Filter is matched to RF layer stackup seen below
Dimensions are specified below in inches (not to scale)

Board material	:	RO4350b
Board material design dk	:	3.66
CPWG	:	20mil trace width, 15mil gaps



Note:

- 50Ω trace dimensions are application specific.
- Ensure adequate grounding beneath the part.
- *** Note avoid copper within the voided area in the center under 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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