

4.5GHz Surface Mount Bandpass Filter B042RC3S

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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
- 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 B042RC3S-T.



SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Insertion Loss (dB)	3.3 - 5.7	-	6.5	6.5
Return Loss (dB)		10.0	10.0	-
Low Side Rejection (dB)	DC - 2.875	40.0	45.0	-
High Side Rejection (dB)	6.25 - 11.0	40.0	45.0	-
CW Input Power** (W)				10
$\theta_{JC} \left(\frac{^{\circ}C}{W} \right)$	7.5			
Size (L x W x H)	0.900 x 0.320 x 0.158 in 22.86 x 8.13 x 4.01 mm			

*Electrical specifications based on typical mounted 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.

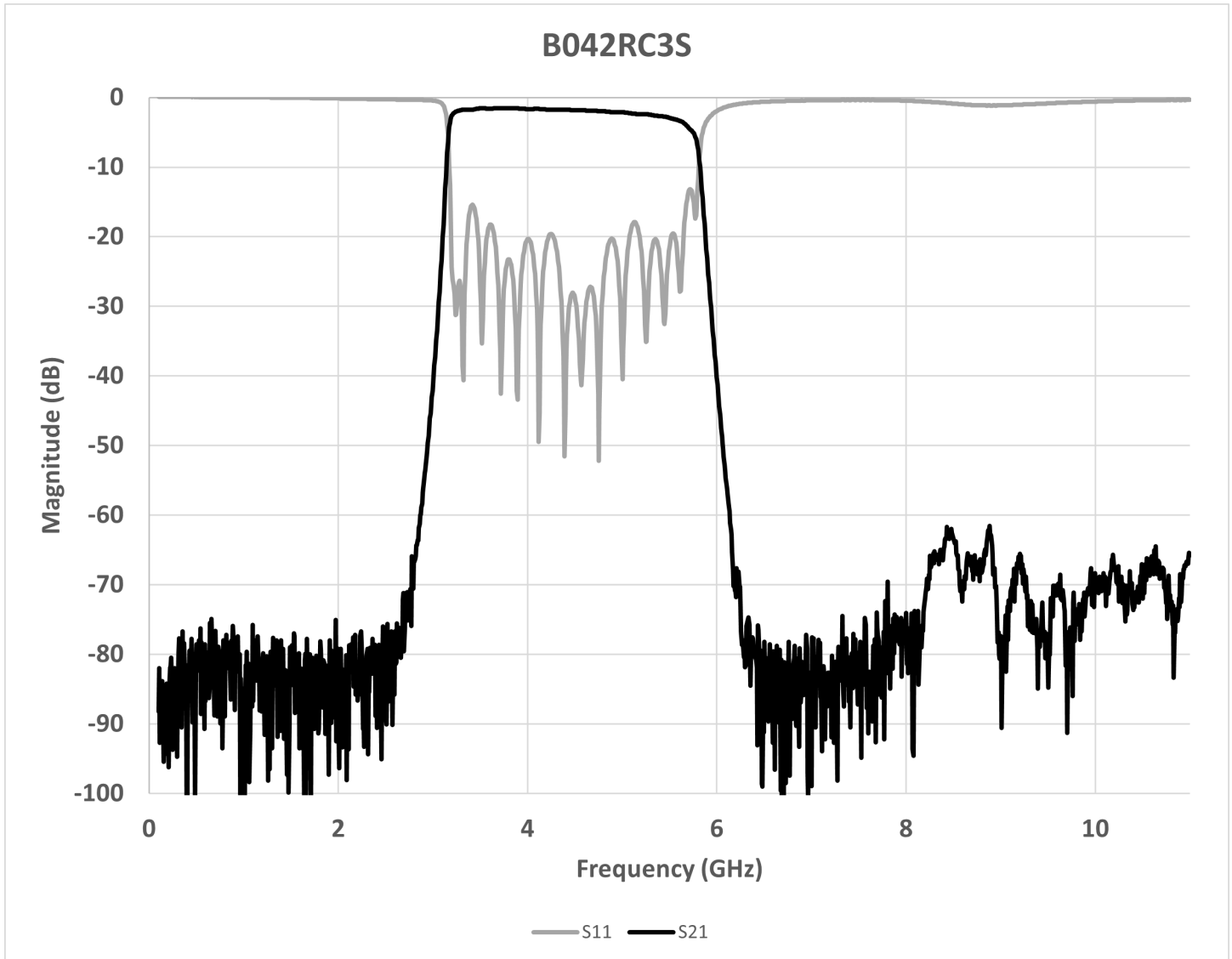
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Typical Measured Performance



*Typical de-embedded measured performance mounted on a connectorized test fixture. DEB is

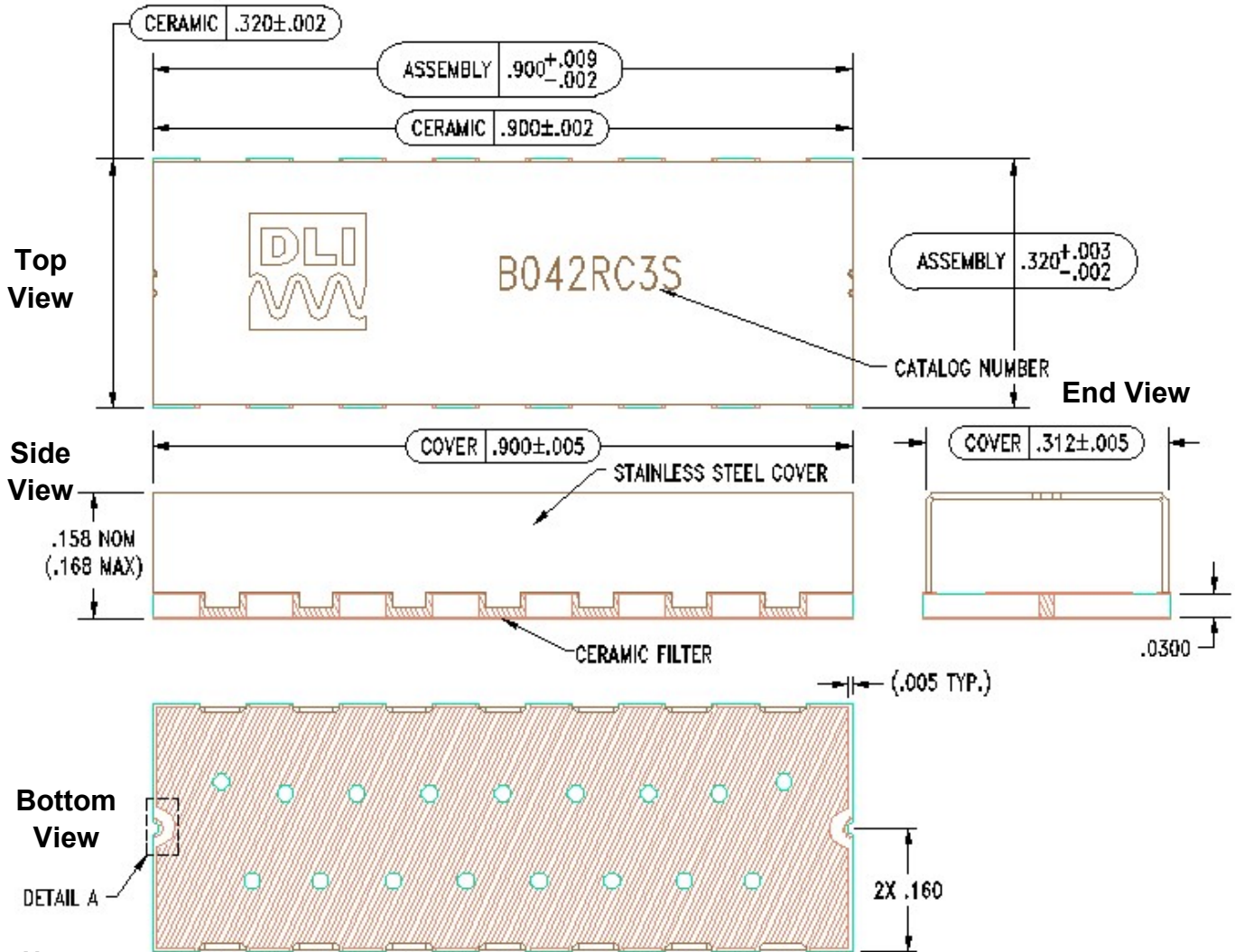
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Physical Dimensions

Units = inches



Notes :

1. Termination Finish:

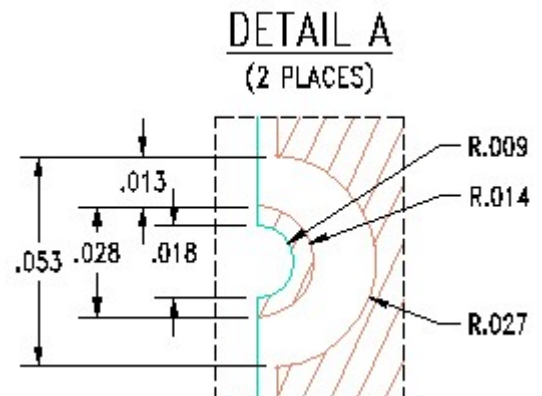
ENIG: 3 - 6 μinch Au over 50 μinch Ni

2. Maximum Assembly Process Temperature: 250°C

Tolerances:

For values with 3 decimal places ± 0.001

For values with 4 decimal places ± 0.0005



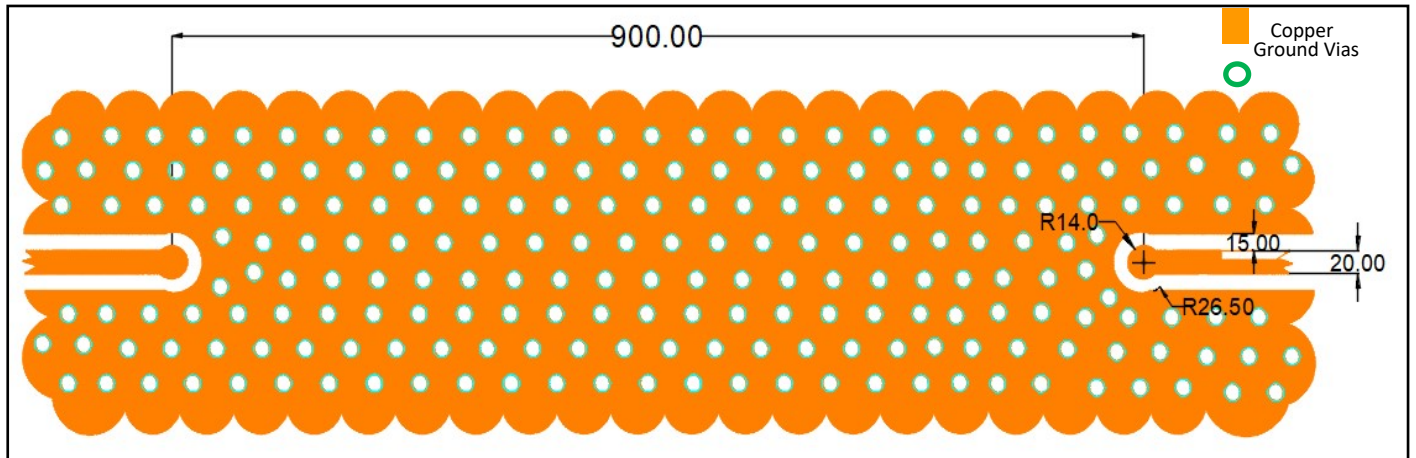
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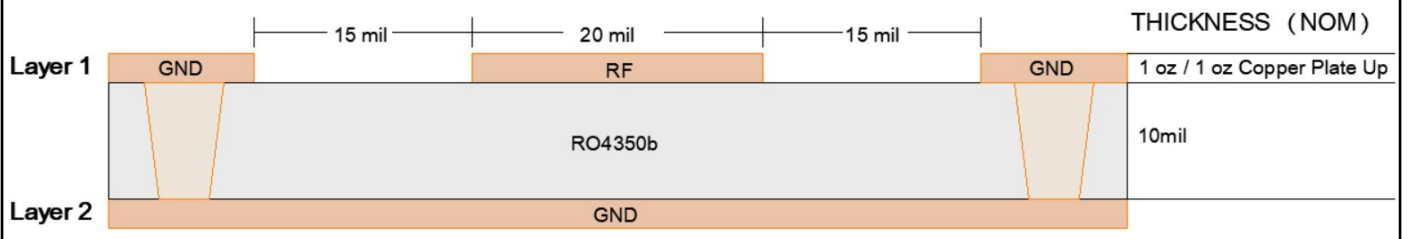
Units = mils

Recommended PCB Layout



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
 CPWVG : 20mil trace width, 15mil gaps



Note:

- 50Ω trace dimensions are application specific.
- 50Ω trace dimensions are designed for 10mil thick R04350B Rogers Board .
- 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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