

9.0GHz Surface Mount Differential Lowpass Filter L095XG4S

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DESCRIPTION

DLI's differential lowpass filter utilizes 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 L095XG4S-T

SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Insertion Loss (dB)	DC - 9.0		1.0	1.5
Return Loss (dB)		10.0	15.0	
High Side Rejection (dB)	11.0 - 20.0	20.0	25.0	
CW Input Power** (W)				10
$\theta_{JC} \left(\frac{^{\circ}\text{C}}{\text{W}} \right)$	7.5			
Size (L x W x H)	0.200 x 0.175 x 0.113 in 5.08 x 4.45 x 2.87 mm			

*Electrical specifications based on typical mounted performance at room temperature. Insertion loss shall vary $\pm 0.5\text{dB}$ 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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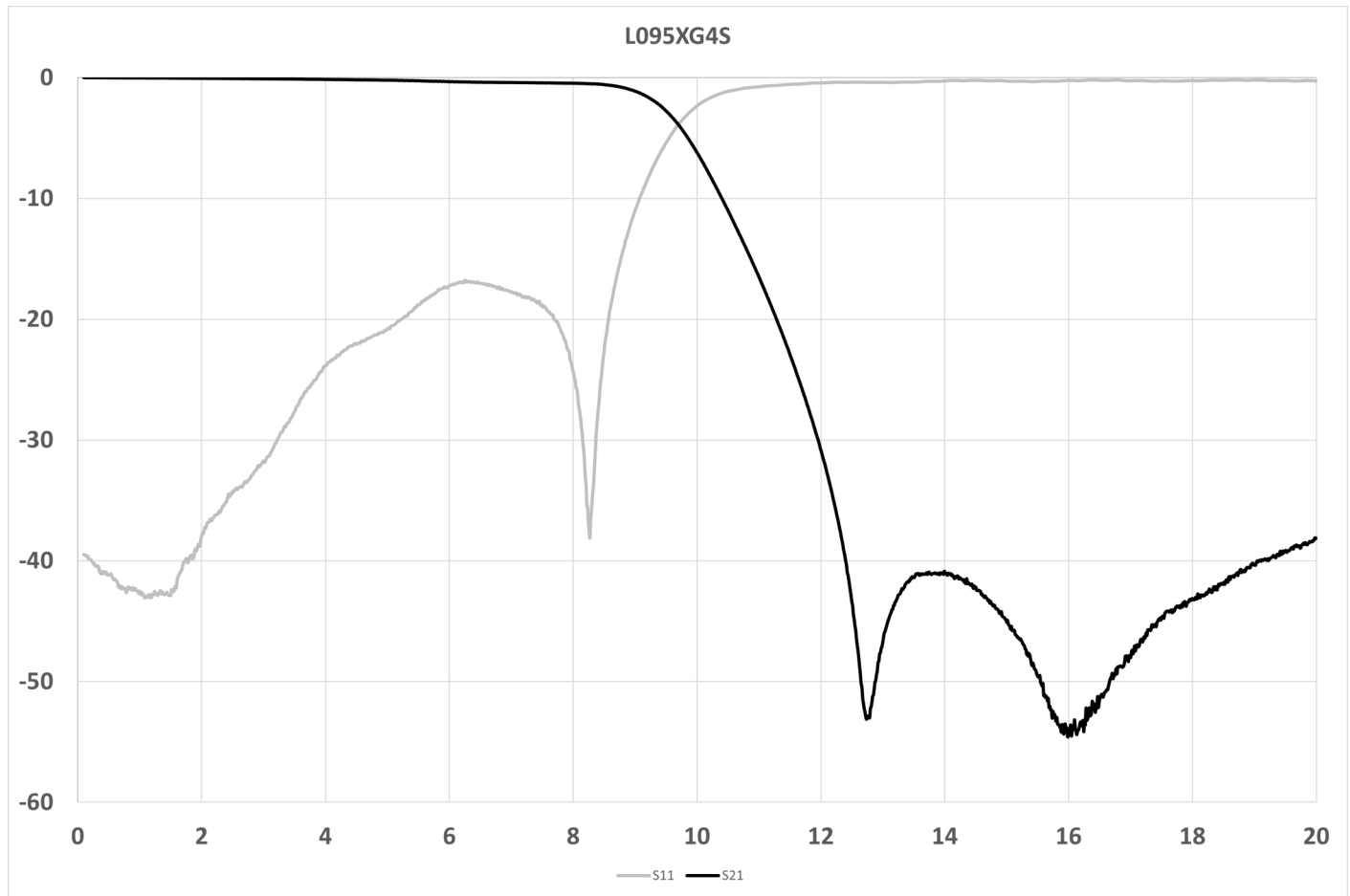
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Typical Measured Performance



*Typical de-embedded measured performance mounted on a connectorized test fixture. DEB is 0.010in RO4350B with 50.00ohm CPW ground traces going into the ports at room temperature.

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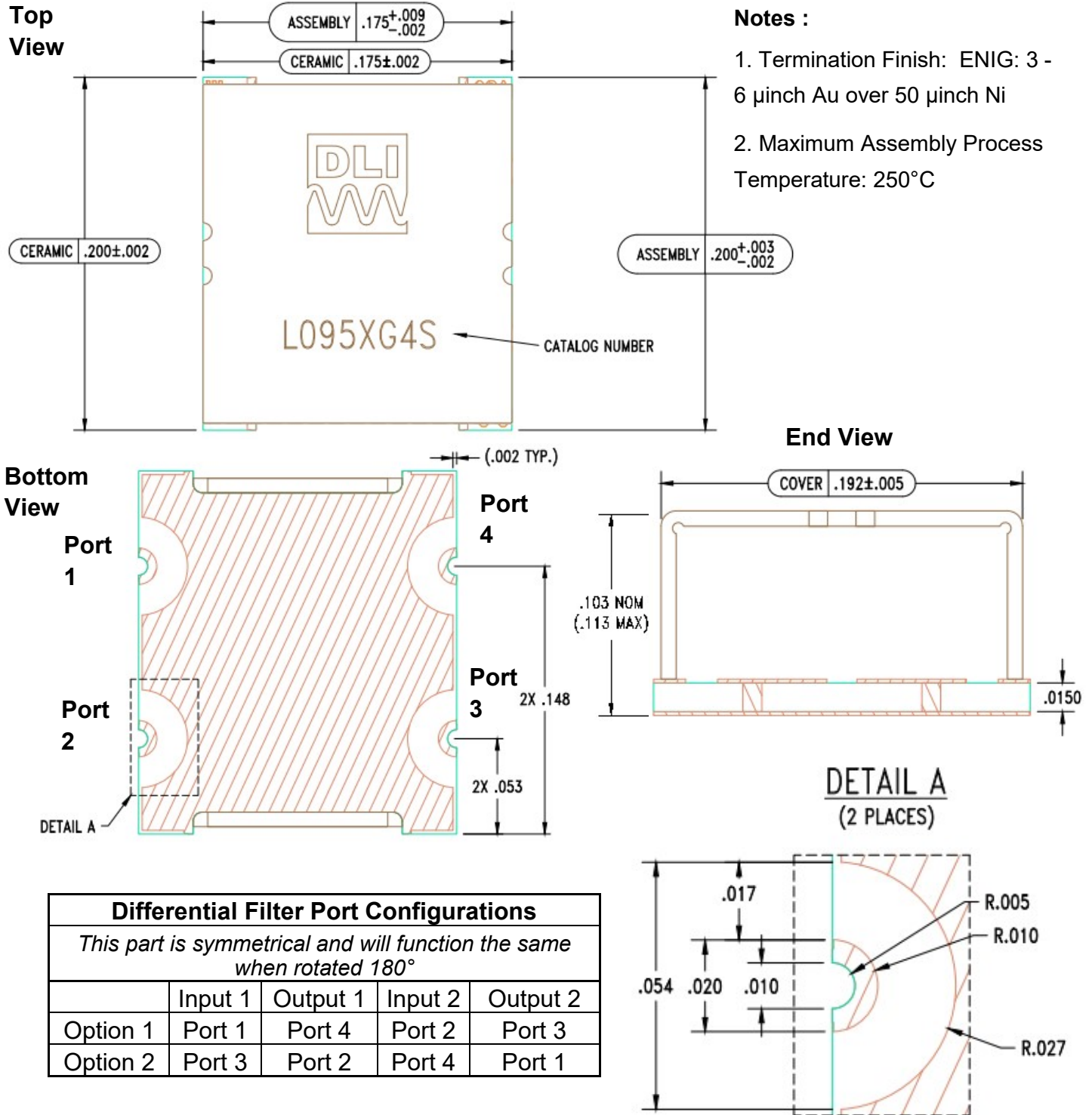
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Physical Dimensions

Units = inches

Notes :

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



Differential Filter Port Configurations				
<i>This part is symmetrical and will function the same when rotated 180°</i>				
	Input 1	Output 1	Input 2	Output 2
Option 1	Port 1	Port 4	Port 2	Port 3
Option 2	Port 3	Port 2	Port 4	Port 1

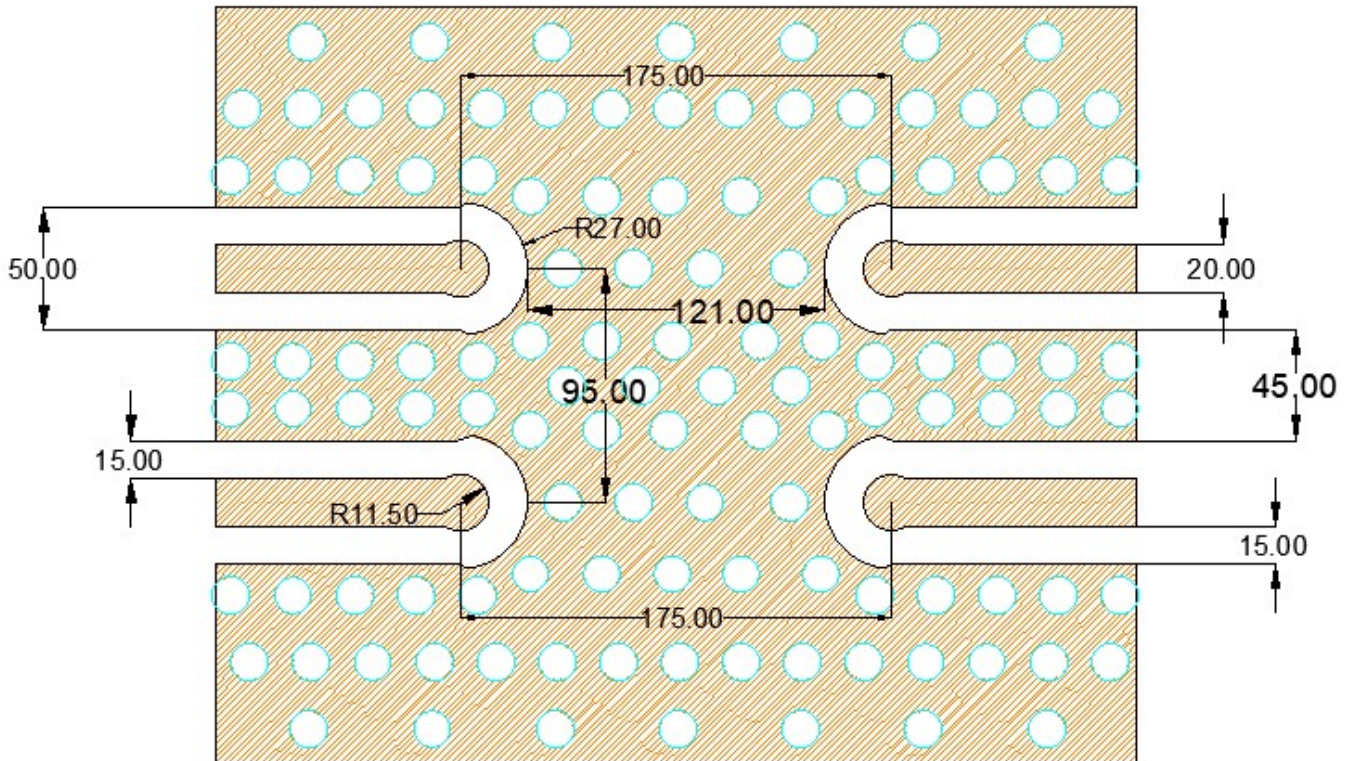
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Recommended PCB Layout

Units = mils

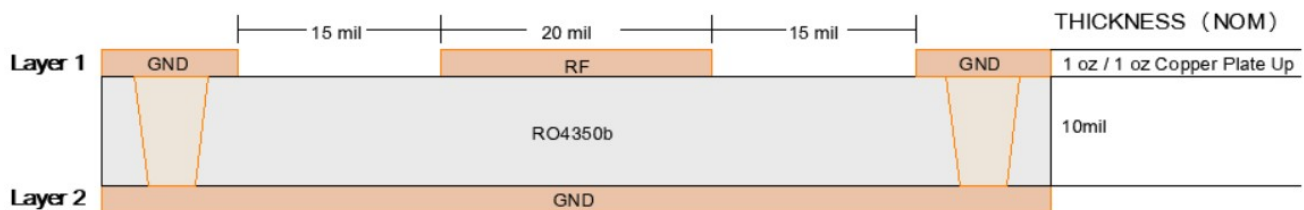


PCB RECOMMENDED STACKUP

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



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

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