

28.8GHz Surface Mount Lowpass Filter

L288XC3S

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DESCRIPTION

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

FEATURES

- Small Size
- Fully Shielded Component
- Solder Surface Mountable
- Moisture Sensitivity Level: MSL1
- 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 L288XC3S-T, see additional data on page 5.

SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Insertion Loss (dB)	DC - 27.0		1.5	1.75
Return Loss (dB)		10.0	15.0	
High Side Rejection (dB)	34.0 - 50.0	40.0	45.0	
CW Input Power** (W)				8.8
$\theta_{JC} \left(\frac{^{\circ}\text{C}}{\text{W}} \right)$			8.5	
Size (L x W x H)	0.220 x 0.140 x 0.098 in 5.59 x 3.56 x 2.5 mm			



*Electrical specifications based on typical probed 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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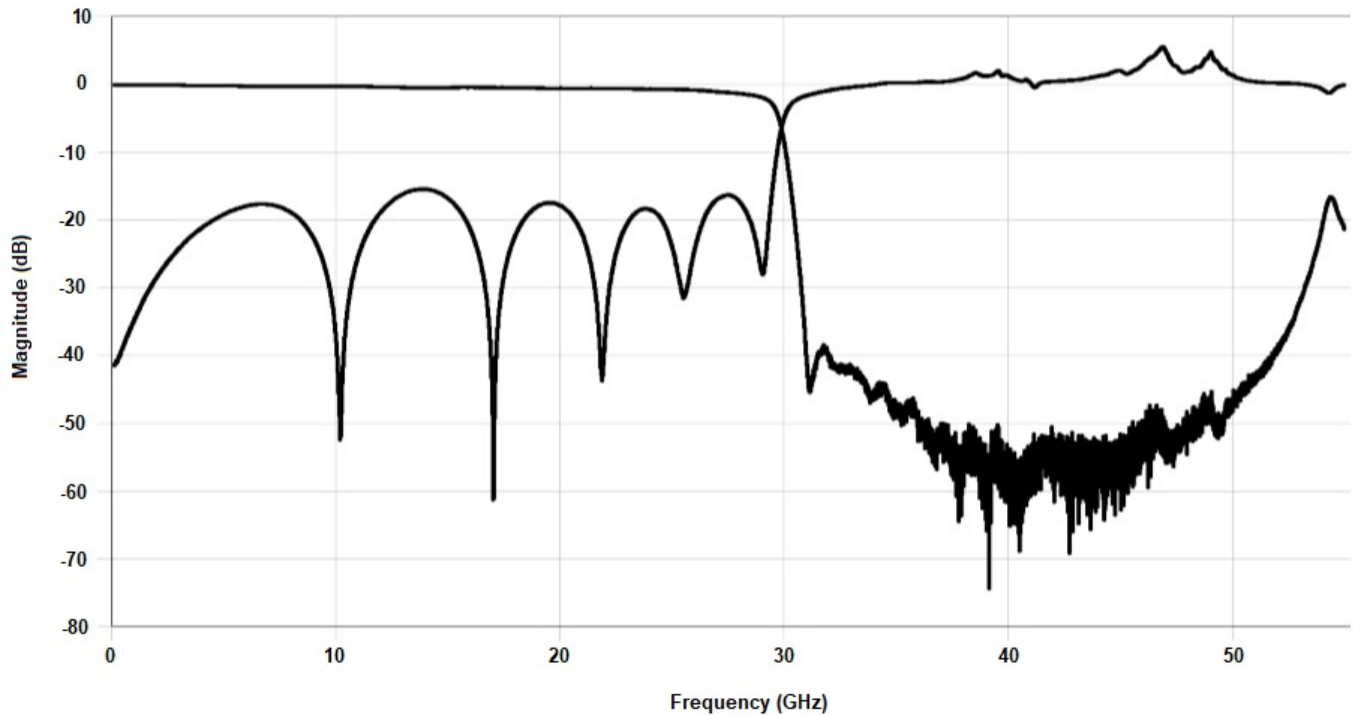
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Typical Measured Performance



*Typical de-embedded measured performance mounted on a connectorized test fixture. DEB is 0.010in RO4350B with 50.0Ohm CPW ground traces going into the ports at room temperature.

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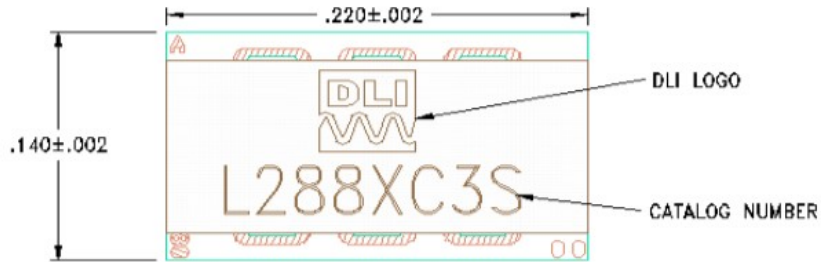
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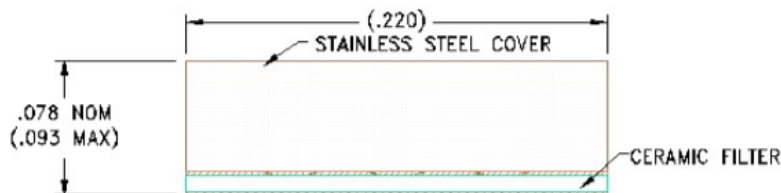
Physical Dimensions

Units = inches

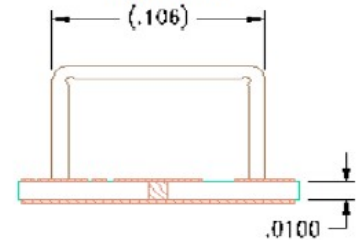
Top View



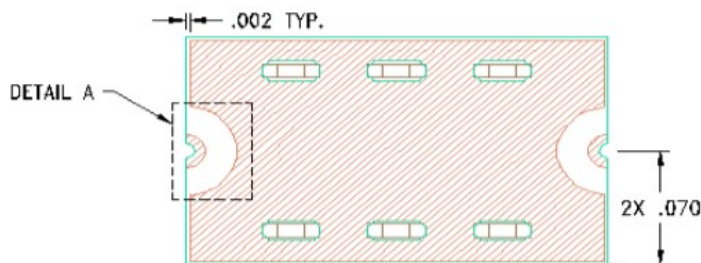
Side View



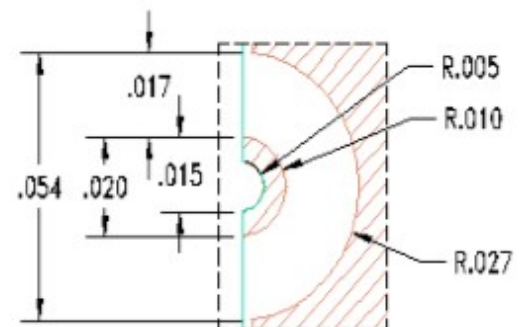
End View



Bottom View



DETAIL A (2 PLACES)



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

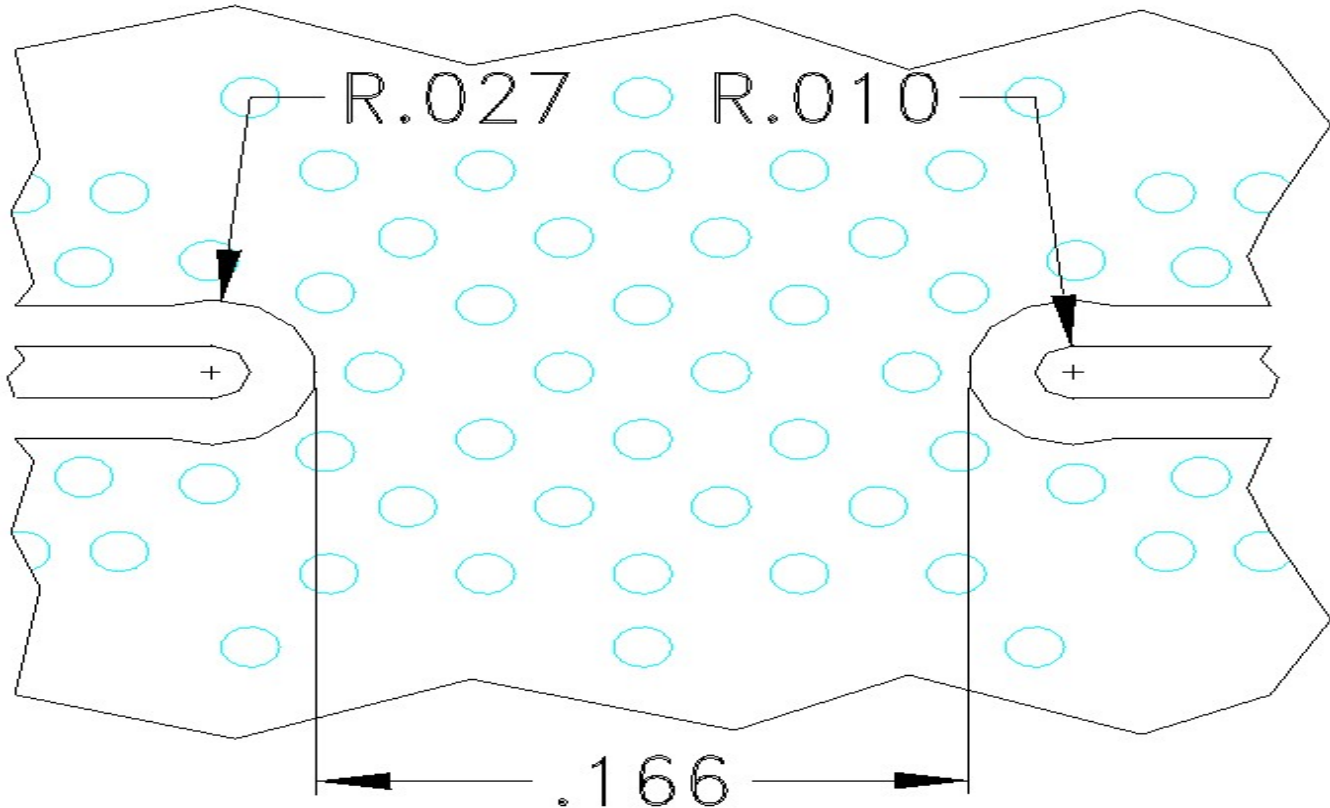
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Recommended PCB Layout



Note:

Unit = inches

- 50 Ω trace dimensions are application specific.
- Ensure adequate grounding beneath the filter.

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

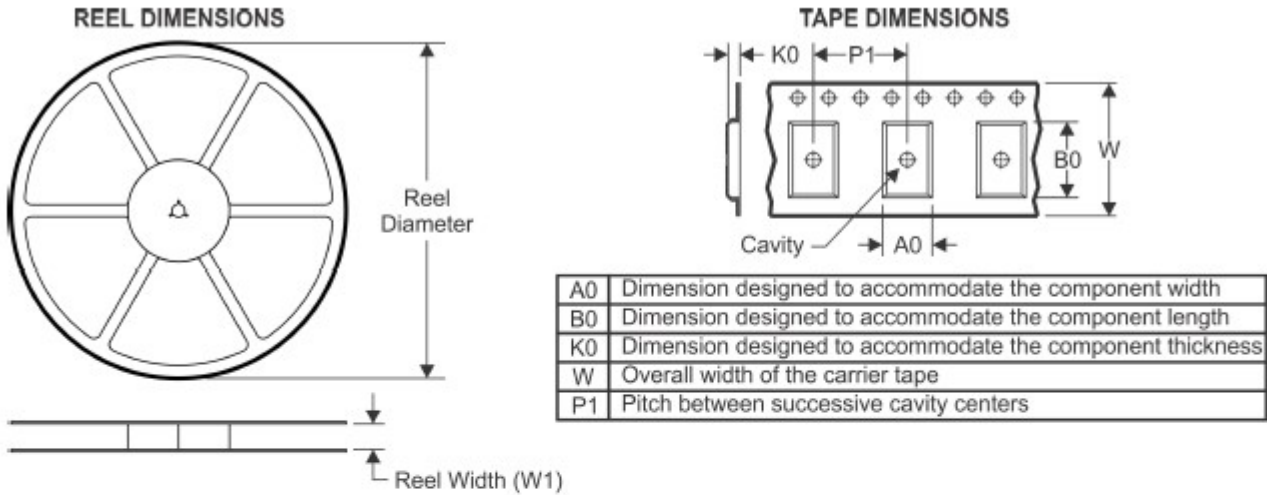
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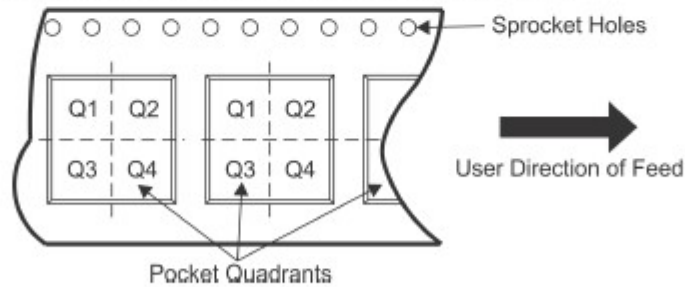
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TAPE AND REEL INFORMATION



QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
L288XC3S-T	SMD		2	250	180.0	12.5	4.10	6.0	3.84	8.0	12.0	Q1&2

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