

## 25.4 GHz Surface Mount Low-Pass Filter L254XF3S

### DESCRIPTION

DLI brand high frequency surface mount catalog low pass filters. These LPF's incorporate DLI's high dielectric ceramic materials which provide 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 for high frequency attenuation.

### FEATURES

- Small Size
- Fully Shielded Component
- Solder Surface Mountable
- 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 L254XF3S-T, see additional data on page 4.



### SPECIFICATIONS\*

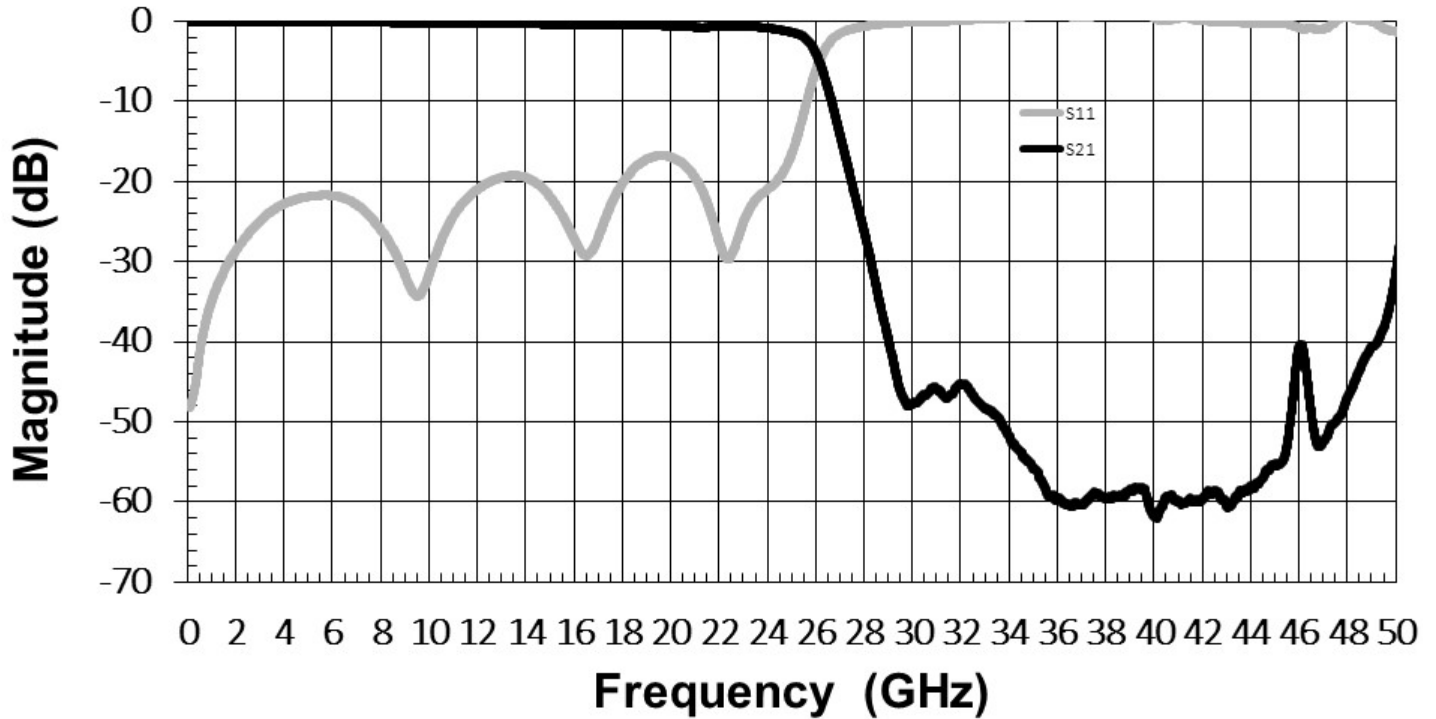
Parameter	Frequency (GHz)	Min	Typ.	Max
Insertion Loss* (dB)	DC - 25		1.4	2.2
Return Loss (dB)		15		
High side Rejection (dB)	29 - 50	30	35	
Input Power (W)	-			15
$\theta_{JC} \left( \frac{^{\circ}\text{C}}{\text{W}} \right)$	-		8	
Size (LxWxH)	0.220 x 0.140 x 0.093 in 5.59 x 3.56 x 2.36 mm			

\*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 via's 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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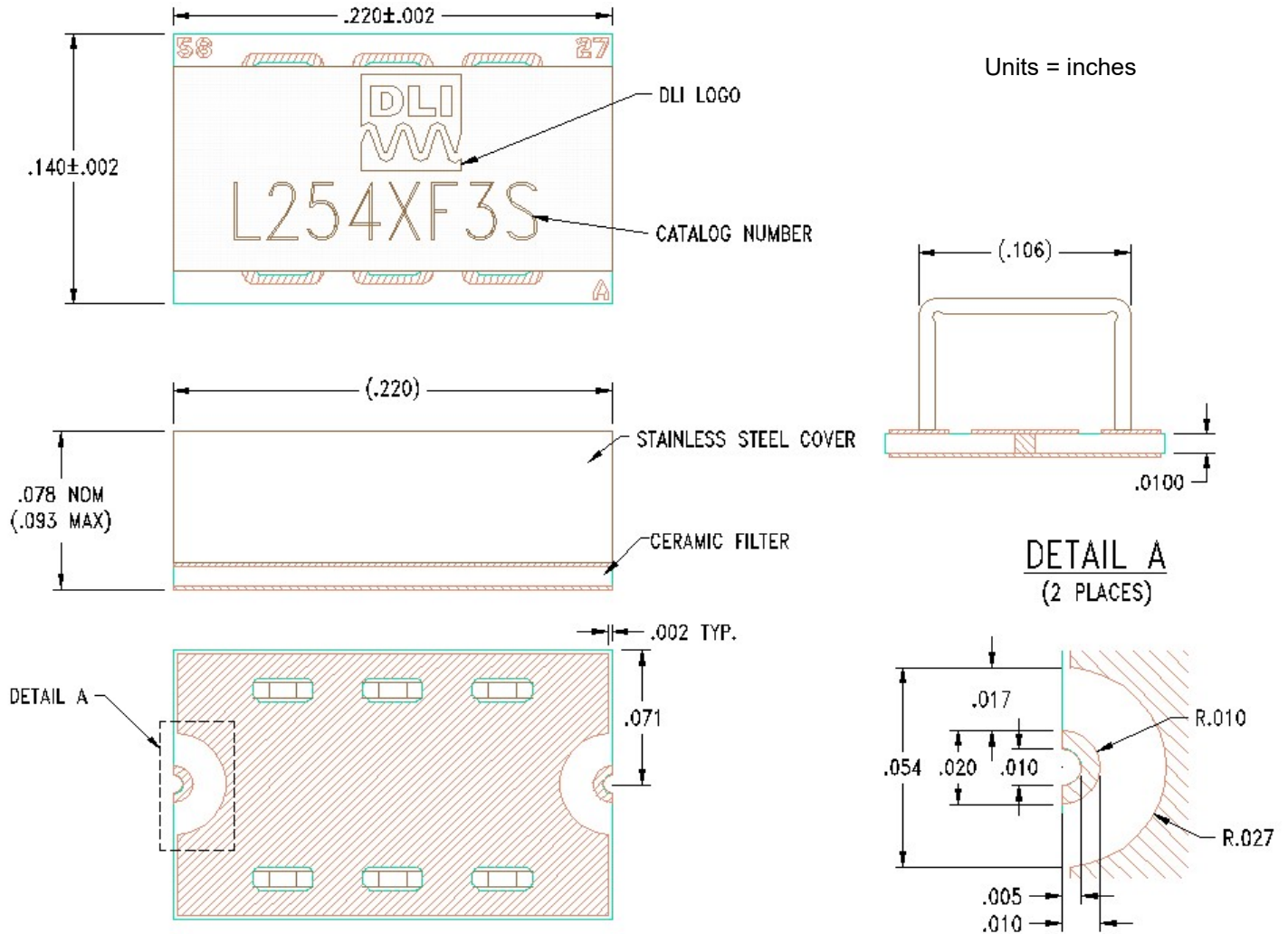
**Typical Measured Performance**



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

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**Physical Dimensions**



**Notes :**

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

**Tolerances:**

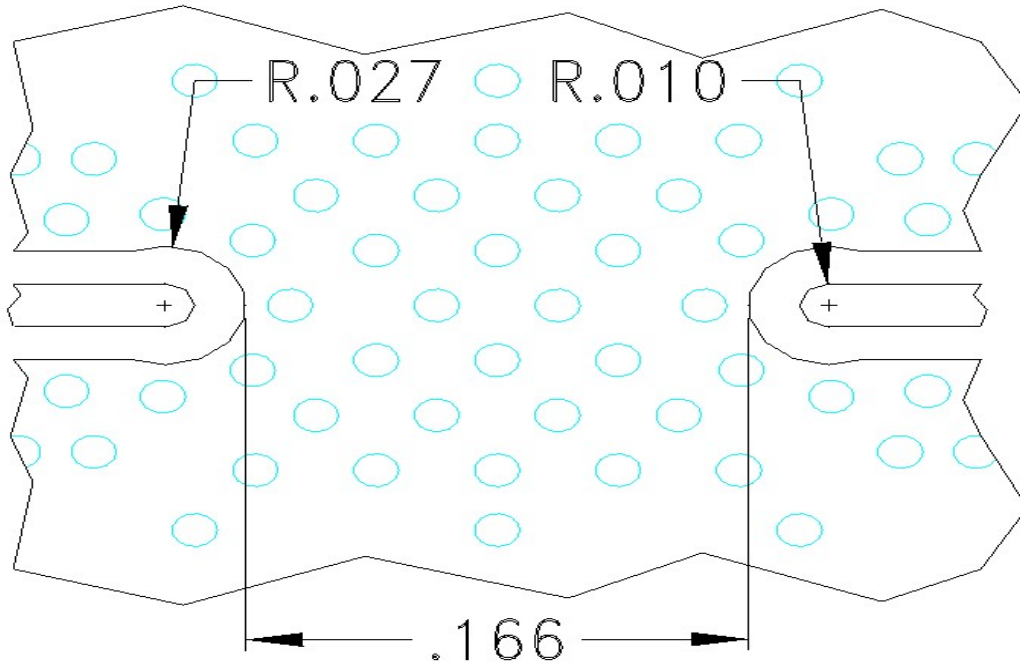
- For values with 3 decimal places ±0.001  
For values with 4 decimal places ±0.0005

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

To Order Contact [KCCSales@knowles.com](mailto:KCCSales@knowles.com) | For Technical Inquiries Contact [DLIengineering@knowles.com](mailto:DLIengineering@knowles.com)

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**Recommended PCB Layout**



**Note:**

- 50Ω trace dimensions are application specific.
- Ensure adequate grounding beneath the part.
- Trace feed locations can be horizontal, vertical or angled.

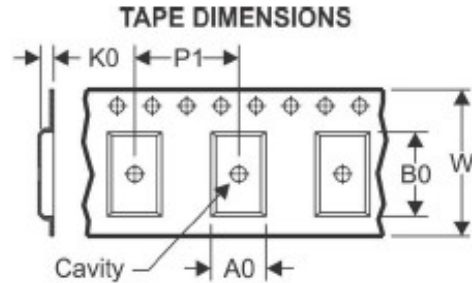
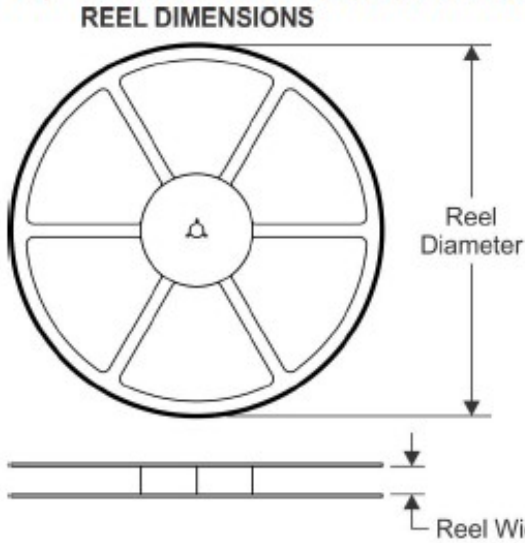
For more information on how to mount this SMD part, refer to the SMD Guide, available in the Thin Film section of <https://www.knowlescapacitors.com/Support/Resources>

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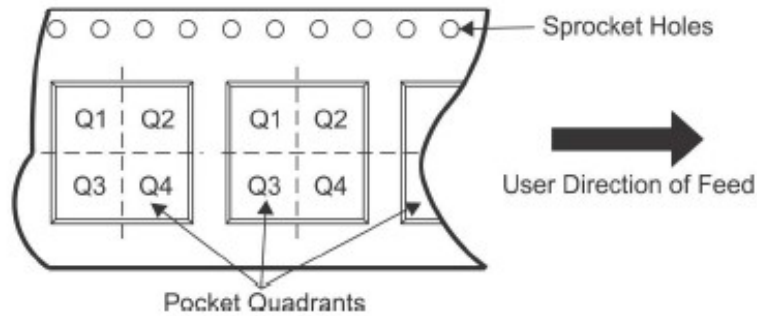
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**TAPE AND REEL INFORMATION**



A0	Dimension designed to accommodate the component width
B0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

**QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE**



\*All dimensions are nominal

Device	Package Type	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
L254XF3S	SMD	180	12.4	4.2	5.8	2.7	8	12	Q1&2

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