# 18.5GHz Wirebond Lowpass Filter
# L185XF4W

www.knowlescapacitors.com

## DESCRIPTION

DLI brand high frequency wire bond lowpass filters utilize DLI's high dielectric ceramic materials which provide small size and minimal performance variation over temperature. The catalog LPF's are offered with the same footprint in a variety of frequency bands to provide a drop in solution with highly repeatable performance.

## FEATURES

- Small Size
- Fully Shielded Component
- Wire bond
- 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 L185XF4W-T, see additional details on page 4.

## SPECIFICATIONS*

| Parameter | Frequency Range (GHz) | Min | Typ. | Max |
|---|---|---|---|---|
| **Insertion Loss (dB)** | DC - 18 | | 1.3 | 2.2 |
| **Return Loss (dB)** | | 12.0 | | |
| **High Side Rejection (dB)** | 20.5 - 40.0 | | 28.0 | |
| **CW Input Power** (W)** | | | | 8.8 |
| $\theta_{JC}$ $\left(\frac{°C}{W}\right)$ | 8.5 | | | |
| **Size (L x W x H)** | 0.220 x 0.140 x 0.113 in<br>5.59 x 3.56 x 2.87 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 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.

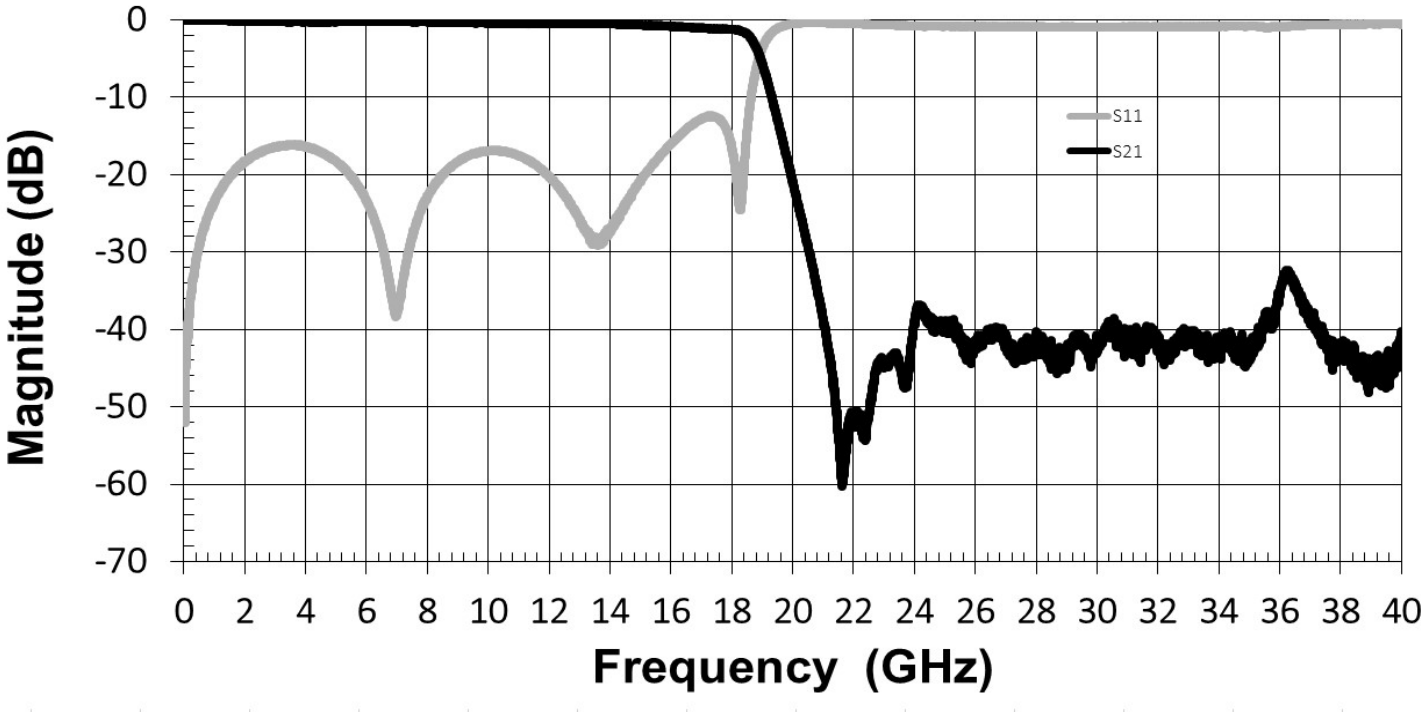
Information in this document is for informational and guideline purposes only. All information regarding the Product described in this datasheet is subject to change from time to time at Knowles Precision Devices' sole discretion. It is the customer's sole responsibility to evaluate the suitability of the Product in the customer's particular application. Knowles Precision Devices assumes no responsibility or liability for the use of the information contained within.

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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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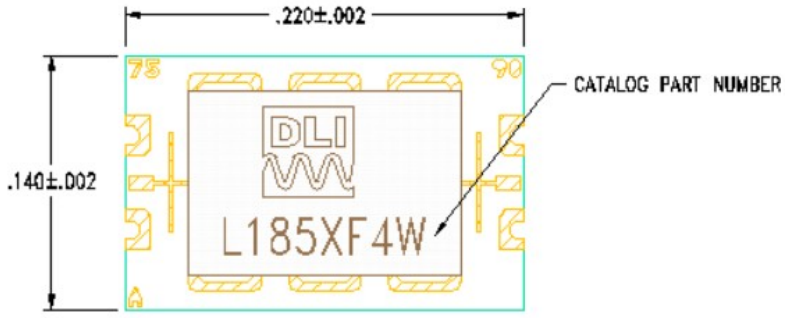
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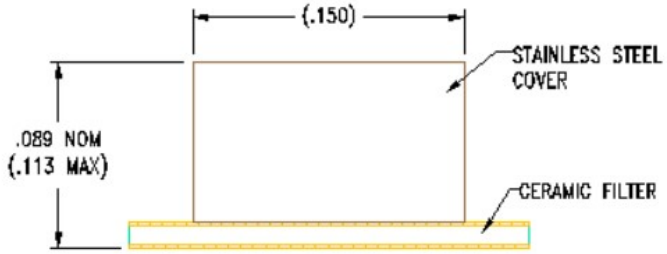
## Physical Dimensions

Units = inches

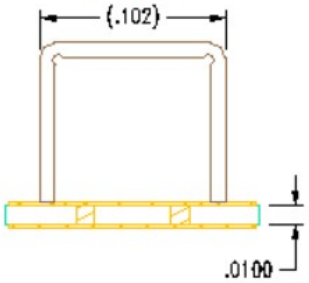
### Top View



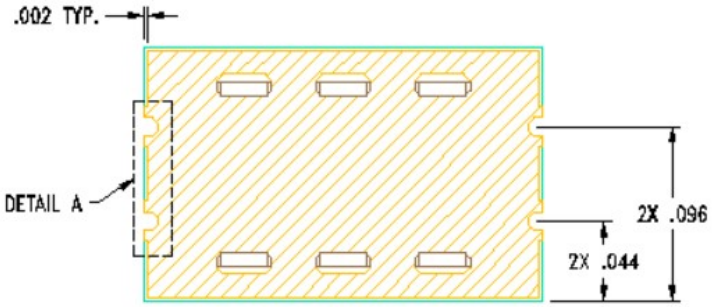

### Side View

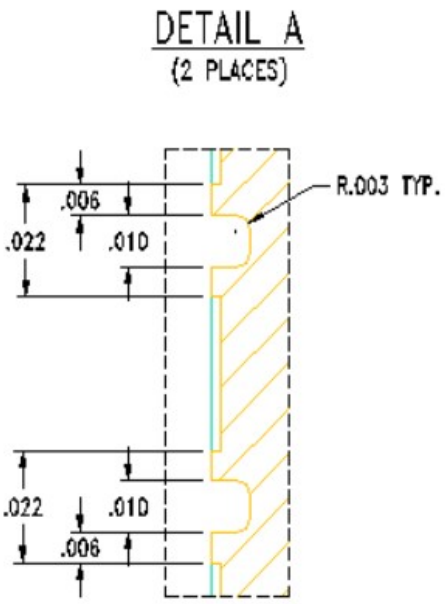



### End View




### Bottom View




**Notes :**

1. Termination Finish: Gold
2. Maximum Assembly Process Temperature: 250°C

**Tolerances:**

For values with 3 decimal places ±0.001

For values with 4 decimal places ±0.0005

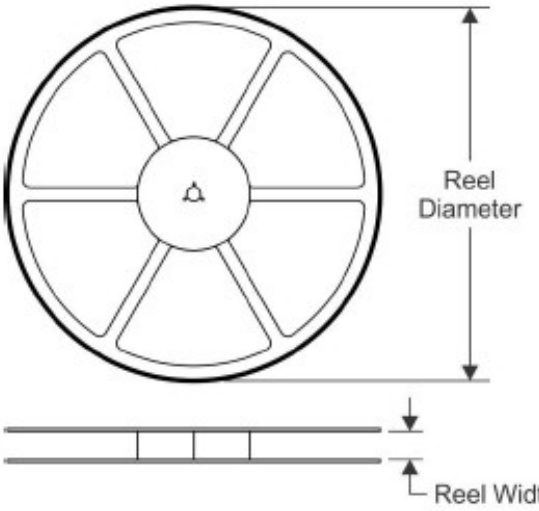

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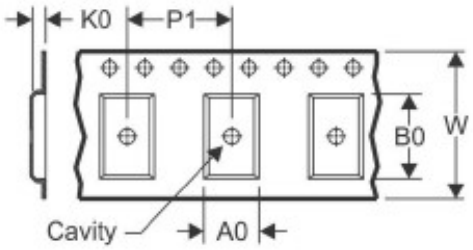
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## TAPE AND REEL INFORMATION

### REEL DIMENSIONS

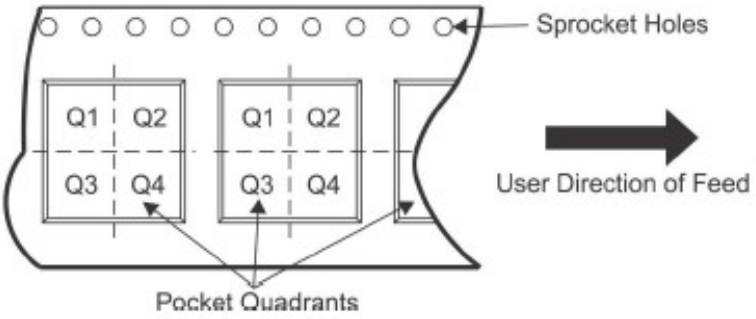



### TAPE DIMENSIONS




| | |
|---|---|
| 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 |
|---|---|---|---|---|---|---|---|---|---|
| L185XF4W-T | SMD | 180 | 16.4 | 4.6 | 6.7 | 3.2 | 8 | 16 | Q1&2 |