

## 8.1 GHz Surface Mount Bandpass Filter

### B081RC0S

[www.knowlesc capacitors.com](http://www.knowlesc capacitors.com)

#### DESCRIPTION

One of DLI's surface mountable catalog bandpass filters. This 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
- Fully Shielded Component
- 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 B081RC0S-T, see additional data on page 5.

#### SPECIFICATIONS\*

Parameter	Frequency Range (GHz)	Min	Typ.	Max
Insertion Loss (dB)	6.0 - 11.0		2.0	2.75
Return Loss (dB)		13.0	15.0	
Low Side Rejection (dB)	DC - 5.5	23.0	25.0	
High Side Rejection (dB)	12.0 - 33.0	28.0	30.0	
Size (L x W x H)	0.190 x 0.100 x 0.090 in 4.83 x 2.54 x 2.29 mm			

\*Electrical specifications based on typical probed performance at room temperature. Insertion loss shall vary ±0.5dB over 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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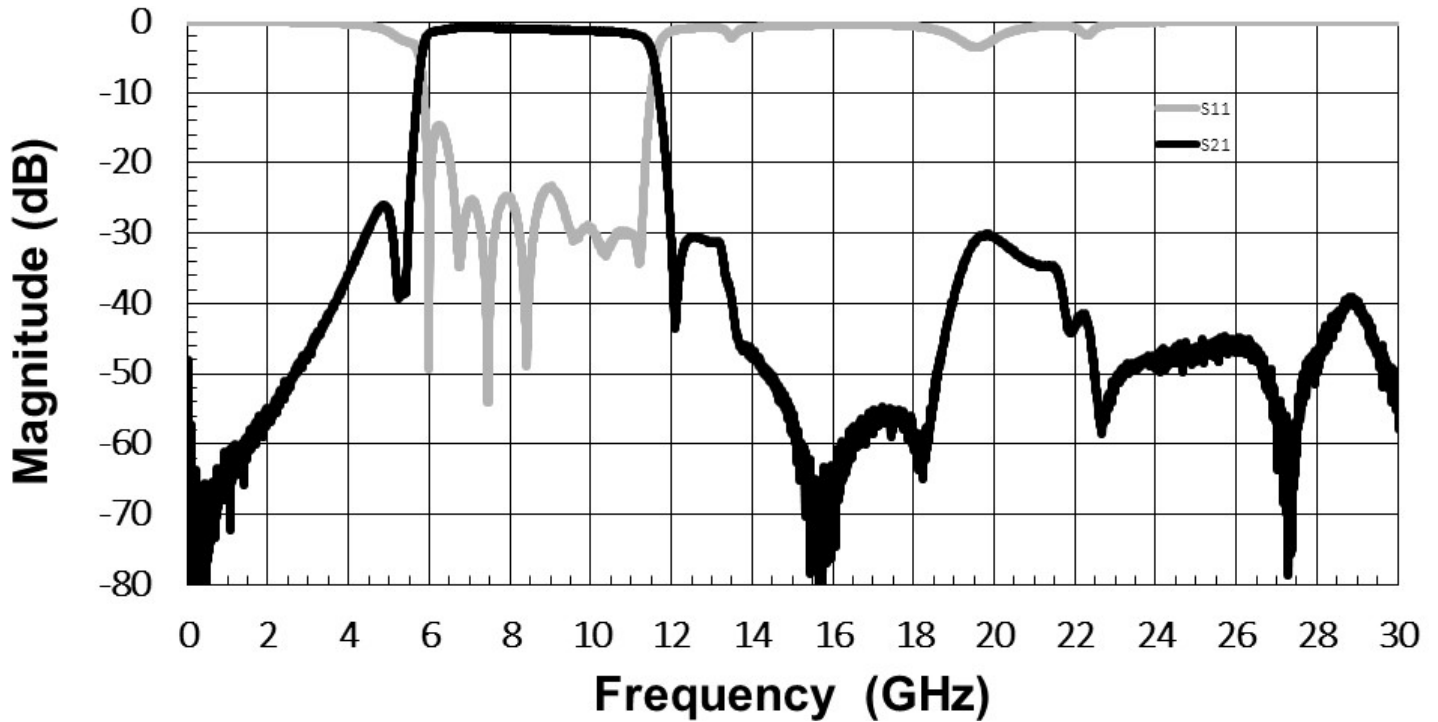
To Order Contact [KCCSales@knowles.com](mailto:KCCSales@knowles.com) | For Technical Inquiries Contact [DLIengineering@knowles.com](mailto:DLIengineering@knowles.com)

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### 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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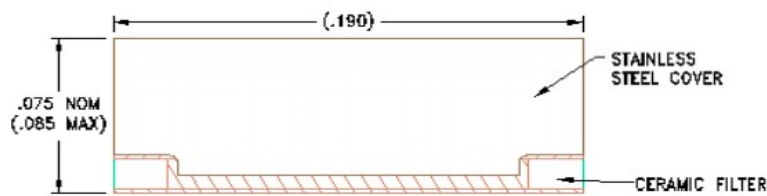
**Physical Dimensions**

Units = inches

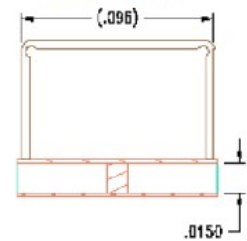
**Top View**



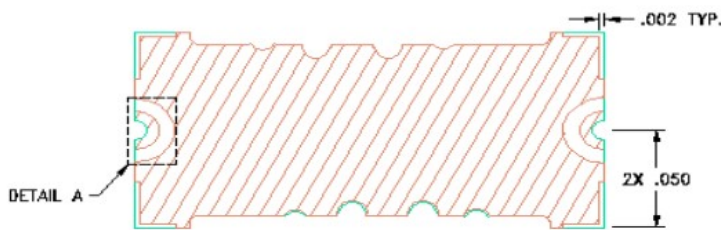
**Side View**



**End View**



**Bottom View**



**Notes :**

1. Termination Finish:

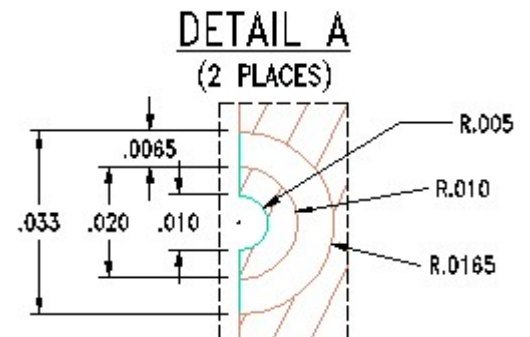
ENIG: 3 - 6 μinch Au over 50 μinch Ni

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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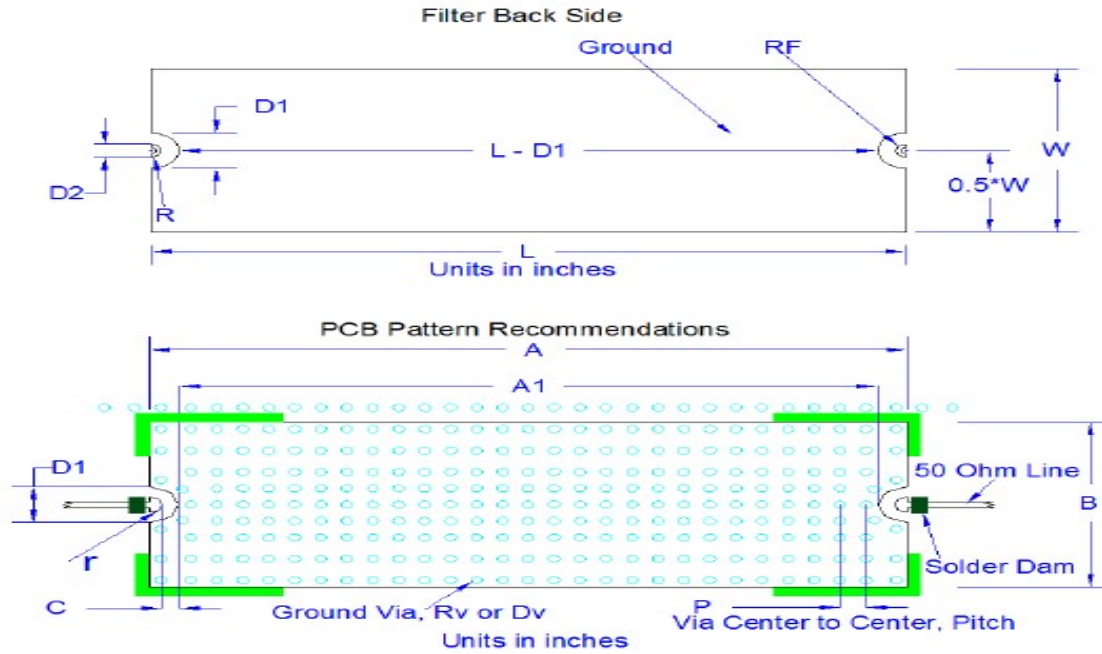
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**Recommended PCB Layout**



L	W	D1	D2	R	r	A	A1	B	C
0.19	0.10	0.033	0.02	0.5*D2	R	L+0.002	L - D1	W+0.002	0.0065

**Note:**

Unit = inches

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

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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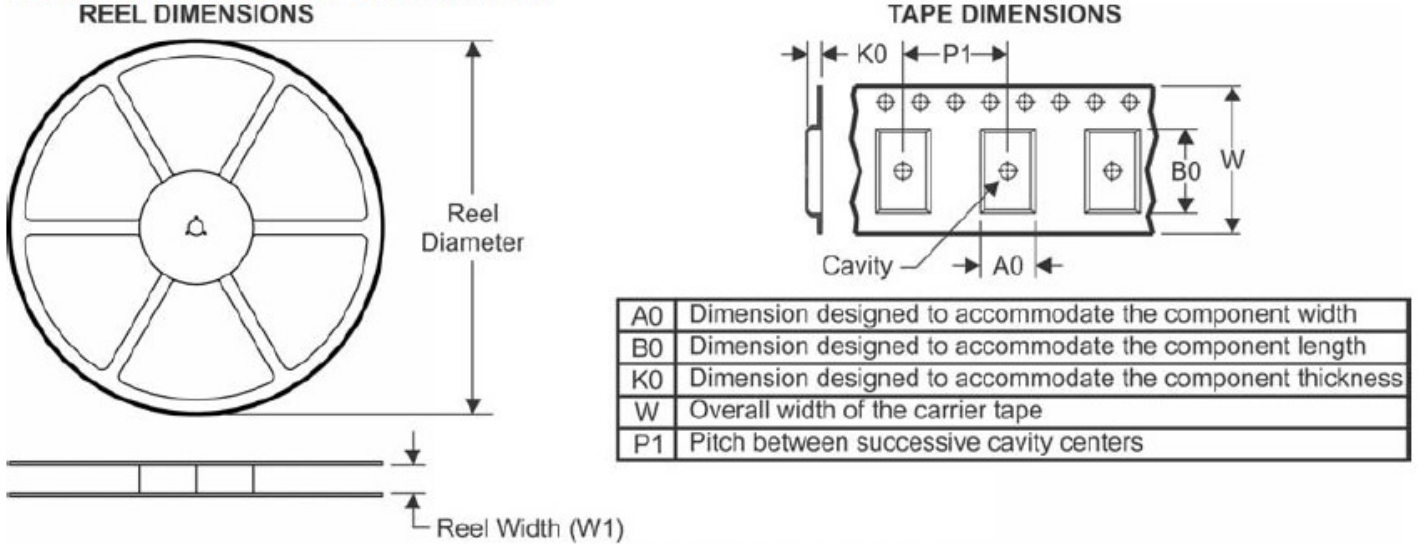
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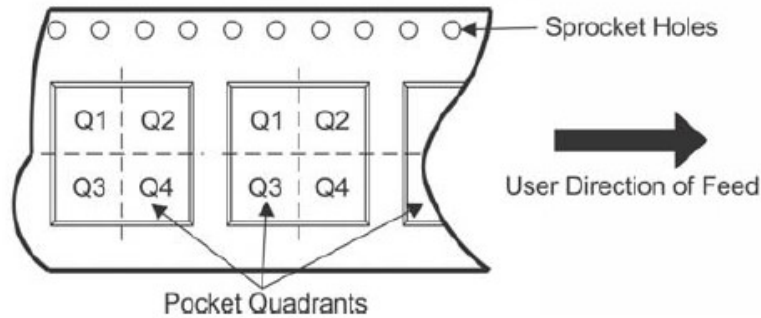
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**TAPE AND REEL INFORMATION**



**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
B081RC0S-T	SMD	180	12.4	2.8	5.3	2.4	4	12	Q1&2

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