

14.2 GHz CAVITY BANDPASS FILTER

C142KB0S Preliminary Datasheet

www.knowlesc capacitors.com

DESCRIPTION

DLI's 14.2GHz cavity bandpass filter offers unmatched size and performance in a surface mount configuration. Ceramic cavity resonator technology can be employed in conjunction with DLI's stable, high Q ceramics to create highly selective, small, low loss bandpass filters. The small, shielded nature of the ceramic filter implementation makes it an ideal choice for integration in low noise receiver front ends with the antenna and pre-amplifier.

FEATURES

- Small Size
- Frequency Stable over Temperature
- Solder Surface Mount Package
- Fully shielded
- Excellent Repeatability
- 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 **C142KB0S-T**



SPECIFICATIONS*

Parameter	Frequency Range (GHz)	Min*	Typ.	Max*
Insertion Loss (dB)	14.0 - 14.5	—	2.25	3
Return Loss (dB)		10	14	—
Low Side Rejection (dB)	12.9	50	55	—
	13.4	30	35	—
High Side Rejection (dB)	15.6	30	35	—
	16.6	50	55	—
Size (L x W x H)	0.636 x 0.238 x 0.064 inch 16.16 x 6.05 x 1.63 mm			

*Electrical specifications based on typical probed performance at room temperature. Insertion loss shall vary ± 0.5 dB over temperature.

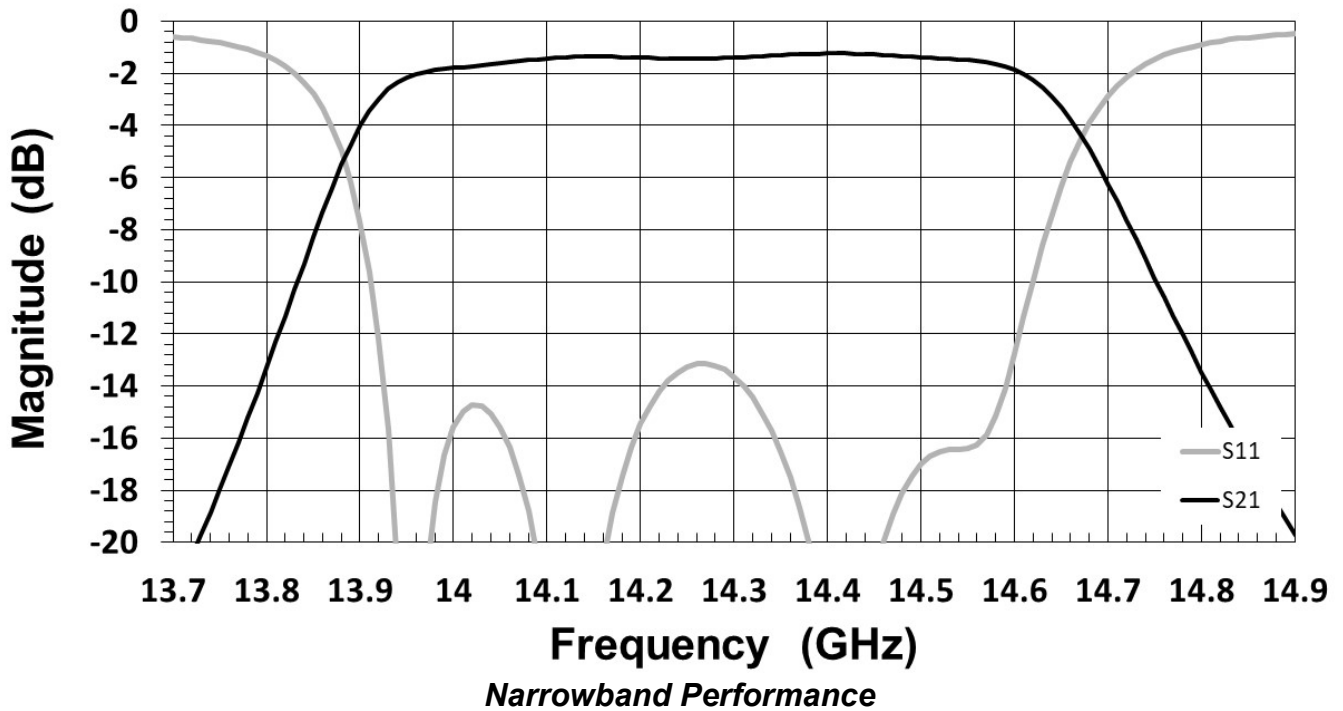
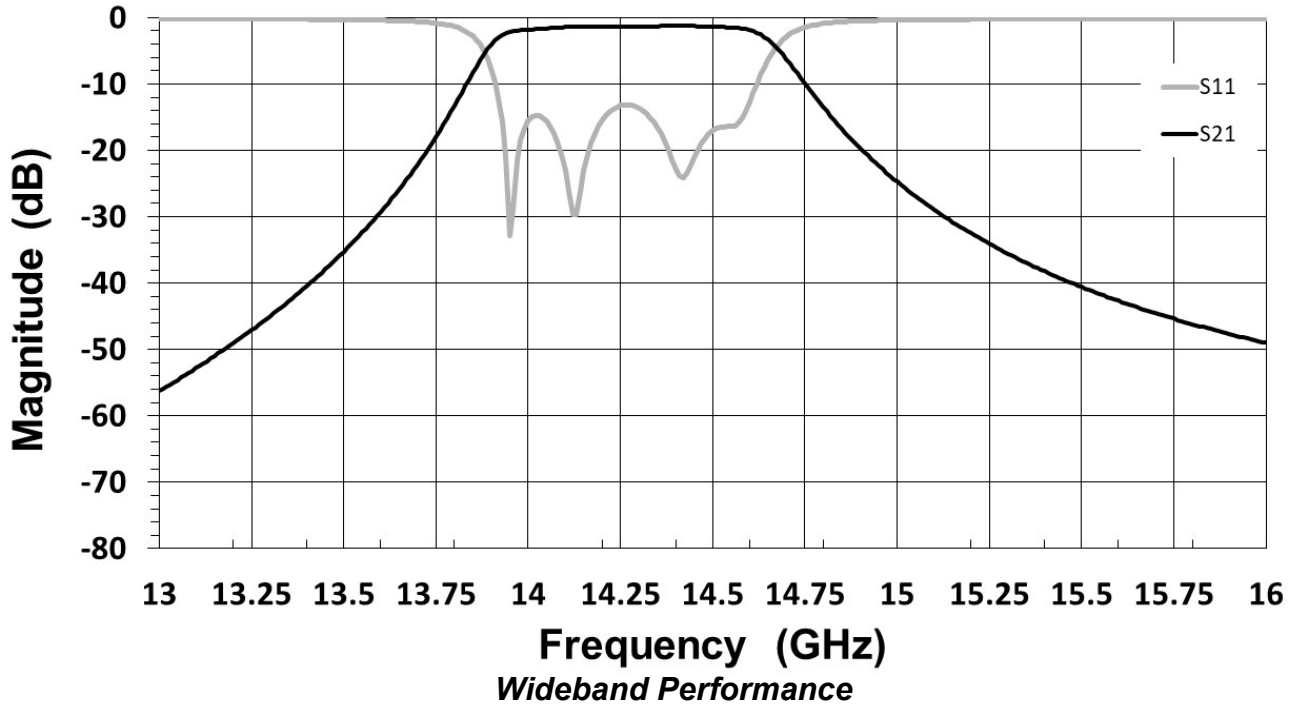
2777 Route 20 East, Cazenovia, NY 13035 | Ph.: (315)655-8710

To Order Contact KCCSales@knowles.com | For Technical Inquiries Contact DLIengineering@knowles.com

14.2 GHz CAVITY BANDPASS FILTER

C142KB0S Preliminary Datasheet

SIMULATED PERFORMANCE



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

To Order Contact KCCSales@knowles.com | For Technical Inquiries Contact DLengineering@knowles.com

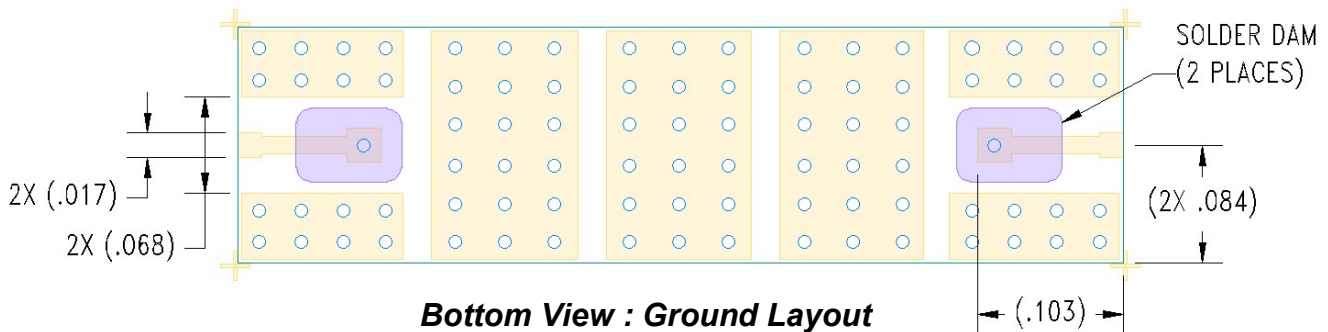
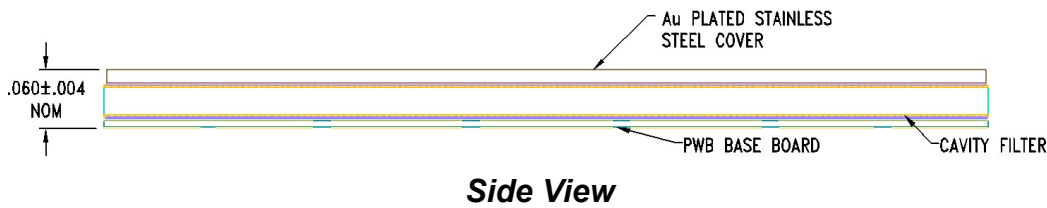
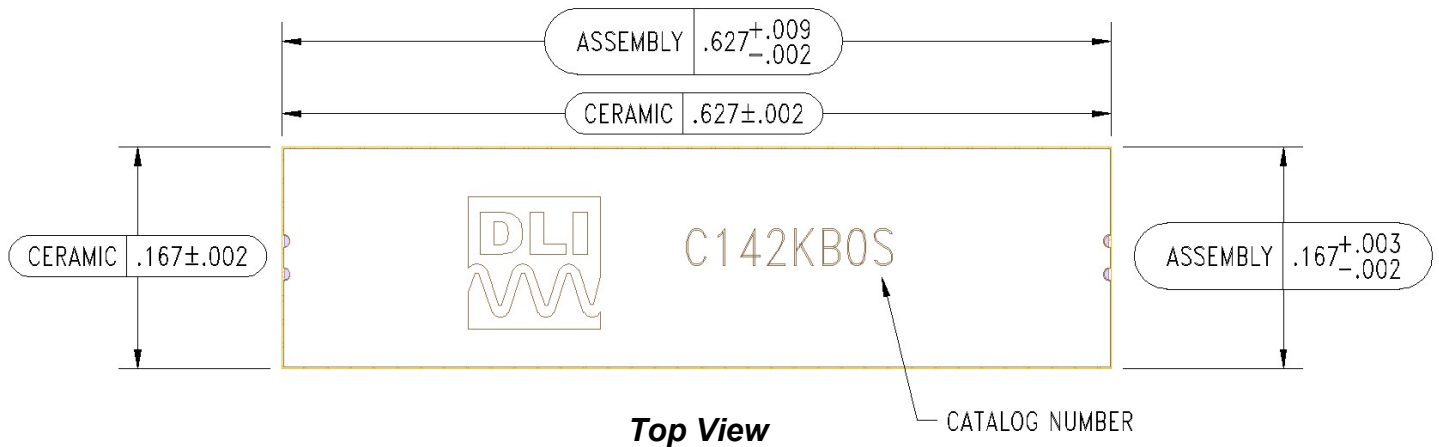
14.2 GHz CAVITY BANDPASS FILTER

C142KB0S Preliminary Datasheet

www.knowlesc capacitors.com

Physical Dimensions

Units = inches



Notes :

1. Mounting Surface Metallization:
 - 3 - 6 uinch Au OVER
 - 100 uinch MIN Ni
2. Maximum Assembly Process Temperature: 250°C

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

To Order Contact KCCSales@knowles.com | For Technical Inquiries Contact DLIengineering@knowles.com

14.2 GHz CAVITY BANDPASS FILTER

C142KB0S Preliminary Datasheet

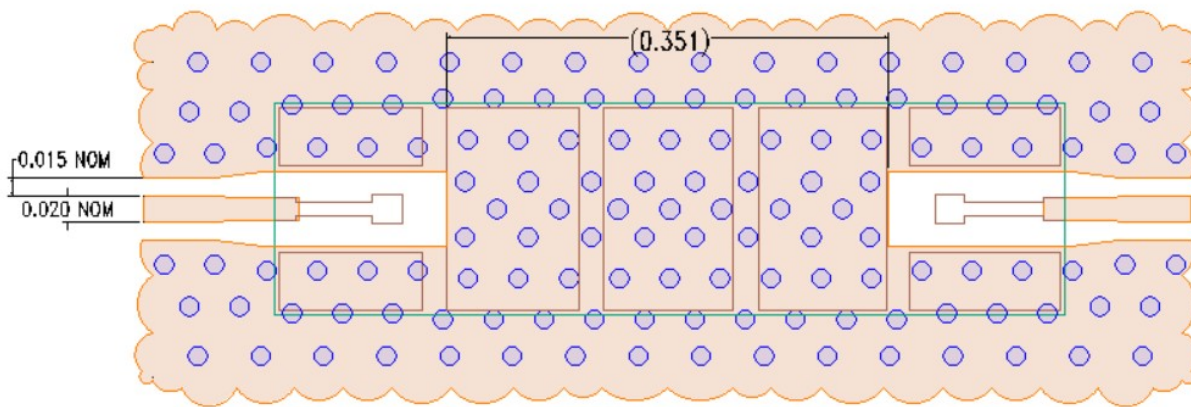
www.knowlescapacitors.com

PCB RECOMMENDED FOOTPRINT / RECOMMENDED SOLDER STENCIL

Dimensions are specified below in inches

Solder paste thickness = 0.004" - 0.006"

- Finished solder thickness = 0.002" - 0.003"

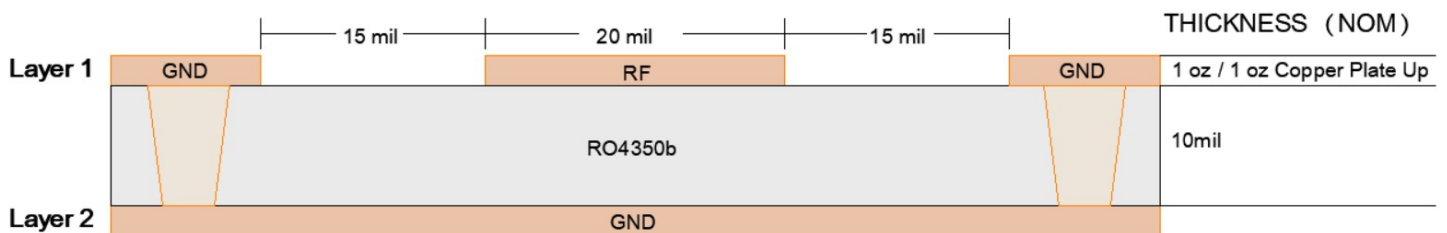


PCB RECOMMENDED STACKUP

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



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

To Order Contact KCCSales@knowles.com | For Technical Inquiries Contact DLengineering@knowles.com