8 to 12 GHz Bandpass Filter

AFL05196

Features

- Small Size
- Fully Shielded Component
- Frequency Stable over Temperature

Description

Surface mount, fully shielded, thin film filter designed for use on PCB 8-12 mils thick with permitivity of 3.0-3.8.

Applications include X-Band, Radar and Military Communications.

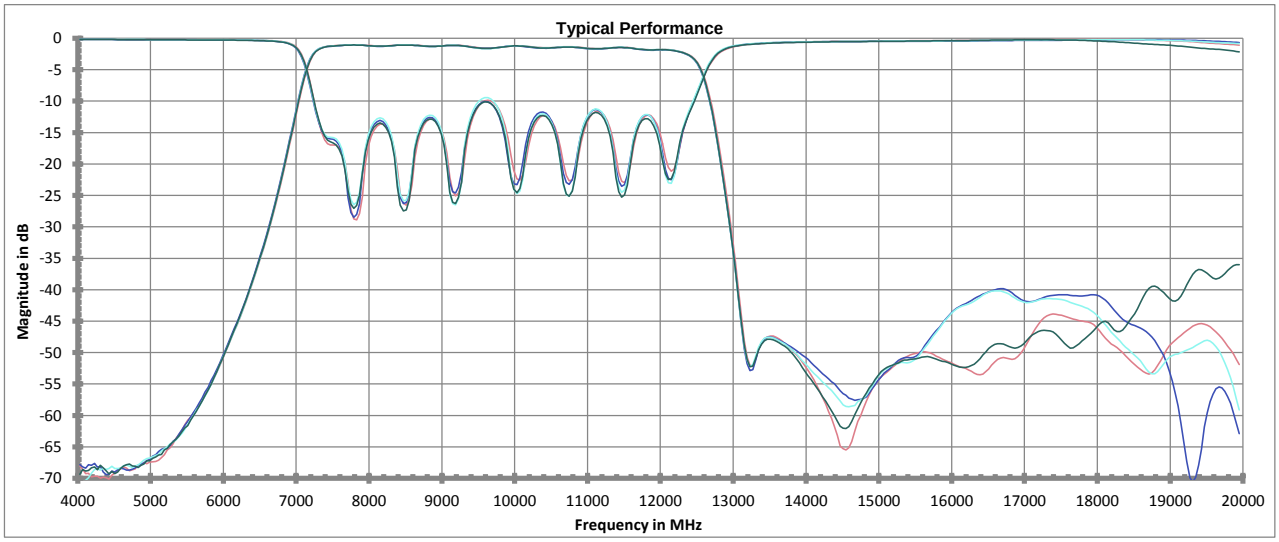
Electrical Specifications

Center Frequency	10000 MHz	
Passband	8000 - 12000 MHz	
Insertion Loss (@Fc)	2.5 dB	@ 25C
	3.0 dB	-40C to +85C
VSWR	2.0:1	8000 MHz to 12000 MHz*
Rejection	40 dB	dc to 6000 MHz
	40 dB	14000 MHz to 18000 MHz
Usable Temp Range	-55 to +125 degree C	

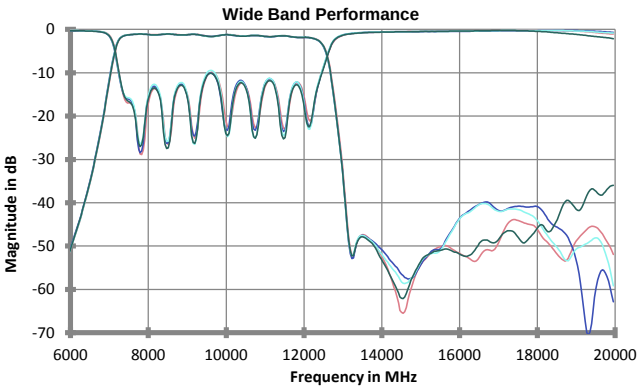
*50 Ohm System

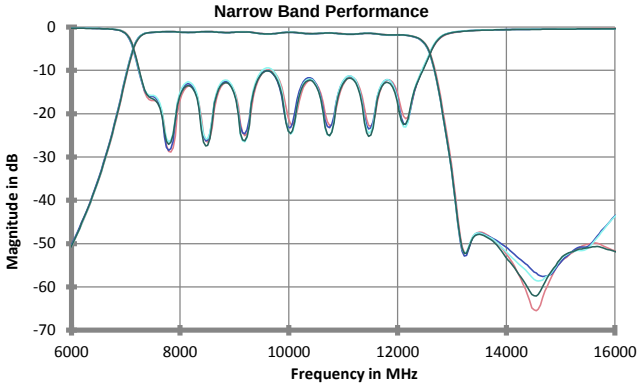
Mechanical

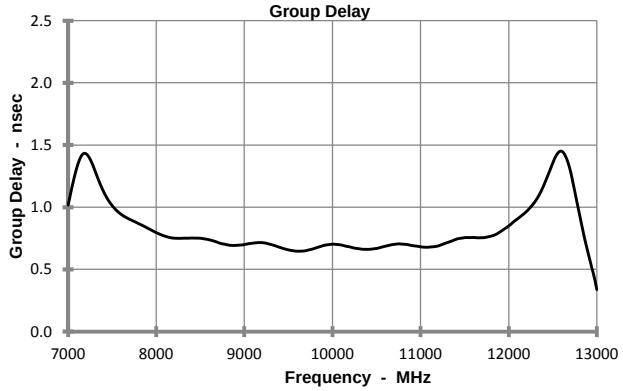
Footprint LxW	0.400 x 0.180	inch
	[10.16 x 4.57]	mm
Height	0.1 [2.54]	Inch [mm]

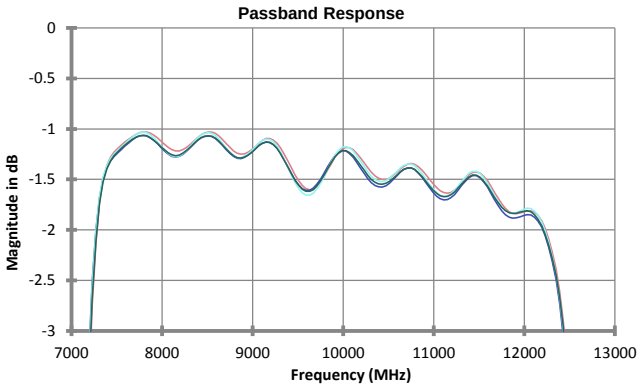


Catalog specifications subject to change without notice

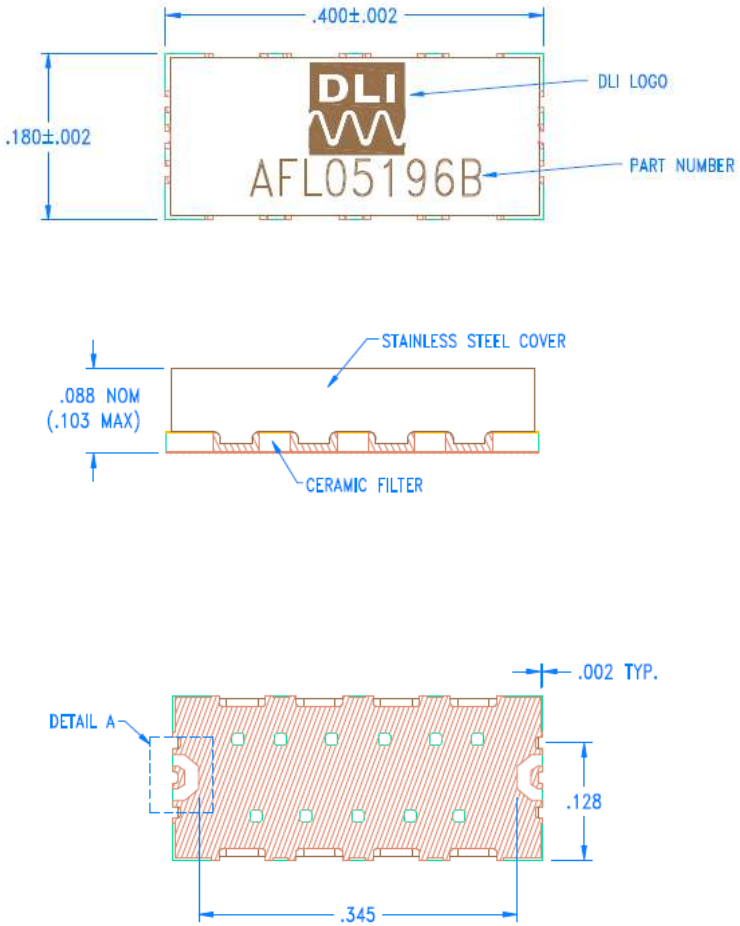

Wide Band Performance
Magnitude in dB
0
-10
-20
-30
-40
-50
-60
-70
6000
8000
10000
12000
14000
16000
18000
20000
Frequency in MHz


Narrow Band Performance
Magnitude in dB
0
-10
-20
-30
-40
-50
-60
-70
6000
8000
10000
12000
14000
16000
Frequency in MHz


Group Delay
Group Delay - nsec
2.5
2.0
1.5
1.0
0.5
0.0
7000
8000
9000
10000
11000
12000
13000
Frequency - MHz


Passband Response
Magnitude in dB
0
-0.5
-1
-1.5
-2
-2.5
-3
7000
8000
9000
10000
11000
12000
13000
Frequency (MHz)

Mechanical Drawing



All units in inches

Mounting Information

PCB ground pattern length and width can be 0.002-0.003 inches larger than filter footprint.
Dimensions of filter launch and PCB launch pattern should be closely matched.
It is suggested that PCB ground metal be pulled back from RF I/O trace to account for component alignment tolerance. Ground via depth and spacing should be set so as not to create any resonances at the frequency of operation.
Reference SMT Filter Mounting application note for additional mounting information.

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