12 to 18 GHz Bandpass Filter

AFL05158

Features

- Small Size
- Fully Shielded Component
- Frequency Stable over Temperature -55°C to +125°C

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 Ku-Band, Radar and Military Communications.

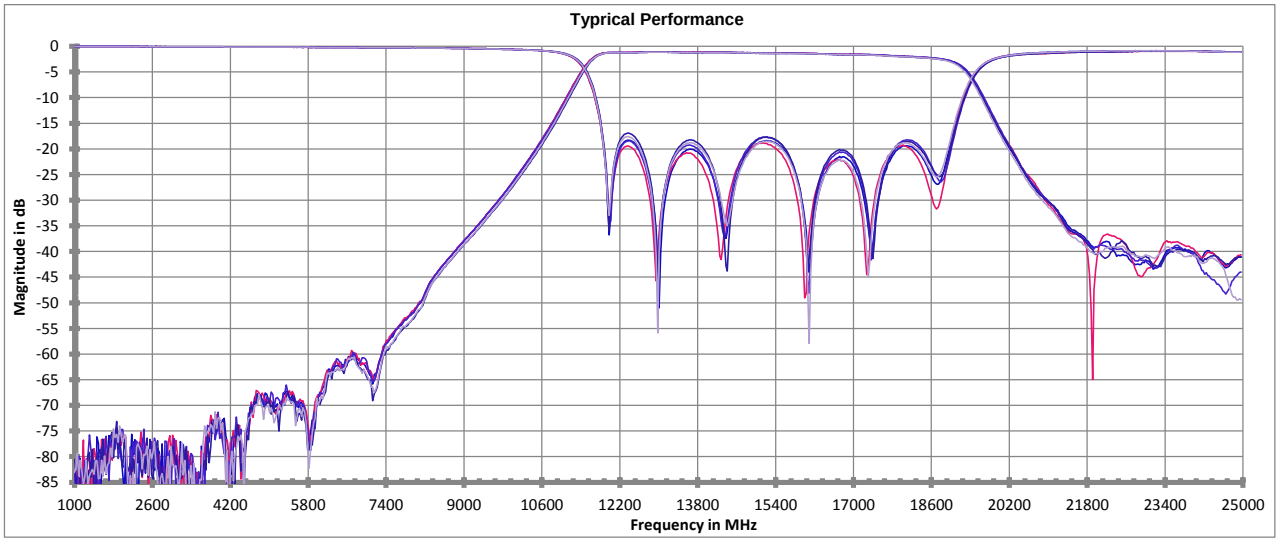
Electrical Specifications

Center Frequency	15000 MHz	
Passband	12000 - 18000 MHz	
Insertion Loss (@Fc)	3.1 dB	@ 25°C
	3.6 dB	-40°C to +85°C
VSWR	1.67:1	12000 MHz to 18000 MHz*
Rejection	40 dB	dc to 7600 MHz
	30 dB	22500 MHz to 25000 MHz
Usable Temp Range	-55 to +125 degree C	

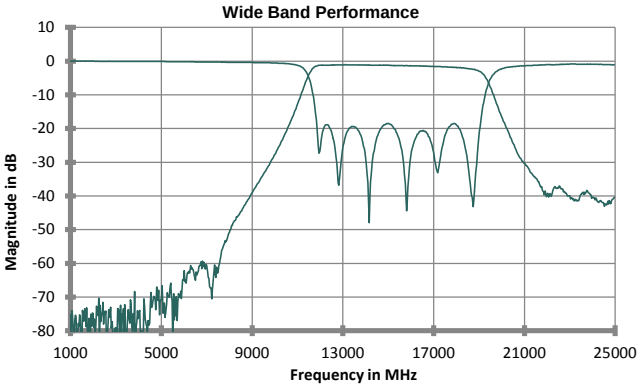
*50 Ohm System

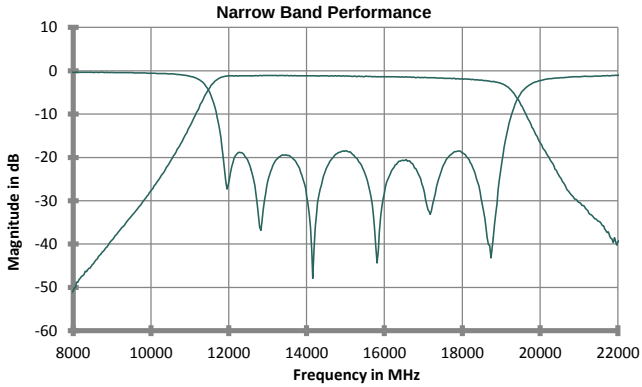
Mechanical

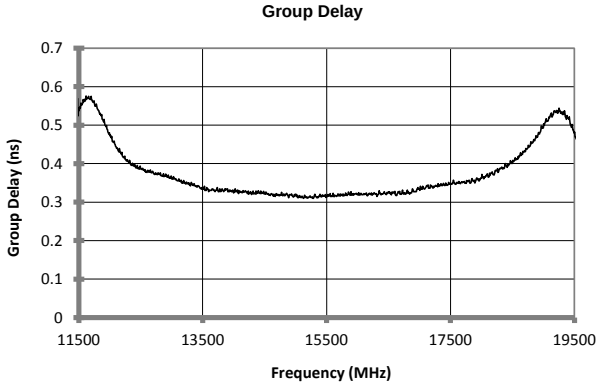
Footprint LxW	0.550 x 0.150	inch
	[13.97 x 3.81]	mm
Height	0.098 [2.49]	Inch [mm]

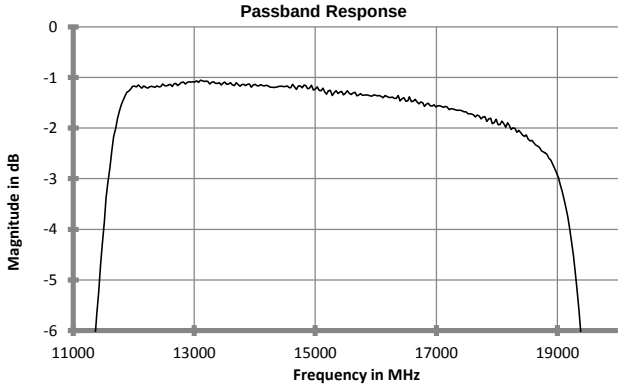


Catalog specifications subject to change without notice

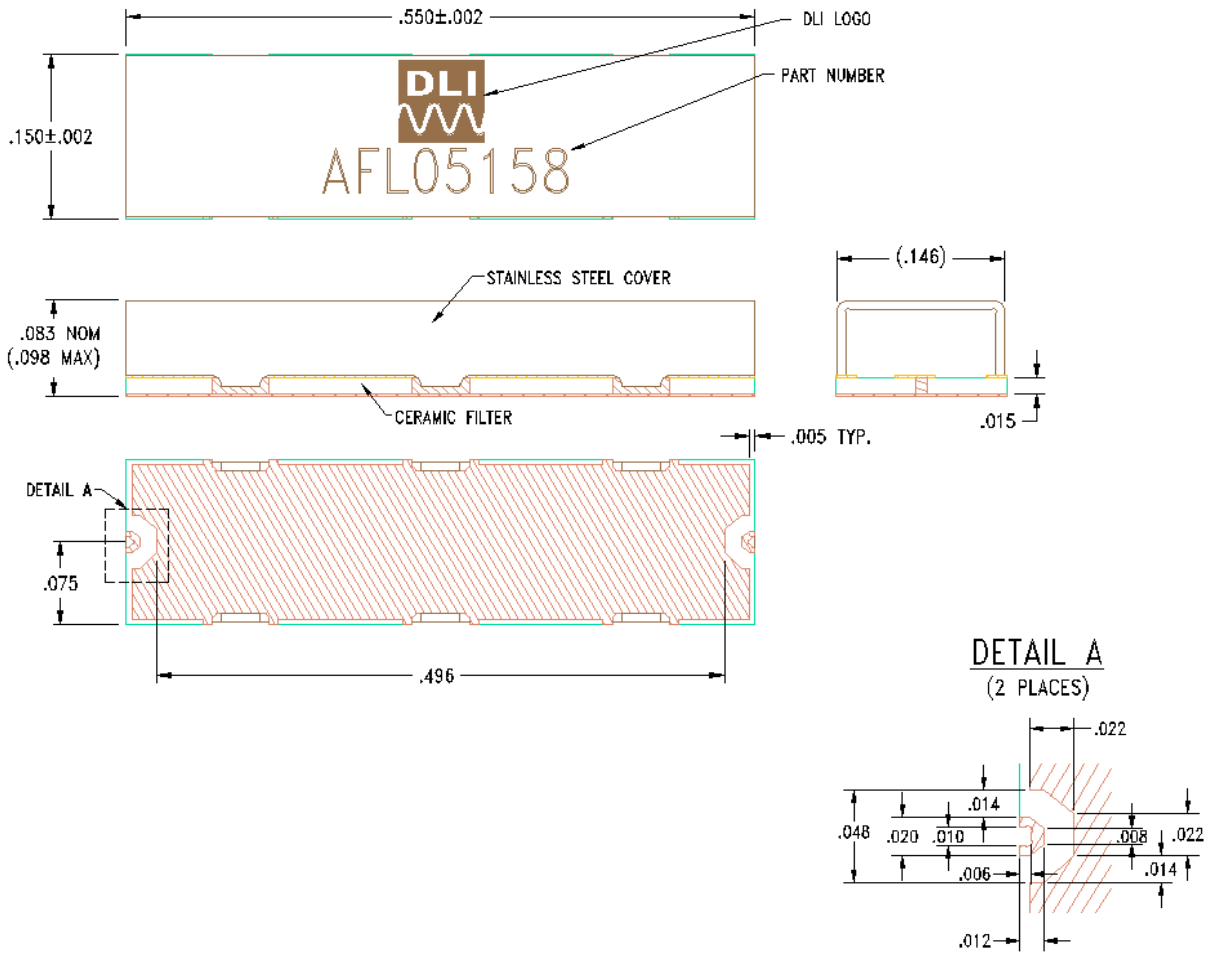

Wide Band Performance
Magnitude in dB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1000
5000
9000
13000
17000
21000
25000
Frequency in MHz


Narrow Band Performance
Magnitude in dB
10
0
-10
-20
-30
-40
-50
-60
8000
10000
12000
14000
16000
18000
20000
22000
Frequency in MHz


Group Delay
Group Delay (ns)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
11500
13500
15500
17500
19500
Frequency (MHz)


Passband Response
Magnitude in dB
0
-1
-2
-3
-4
-5
-6
11000
13000
15000
17000
19000
Frequency in 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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