

# Low Pass Filter

## VLFX-1300

50Ω DC to 1300 MHz (40 dB Isolation up to 20 GHz)

### Maximum Ratings

Operating Temperature -55°C to 100°C

Storage Temperature -55°C to 100°C

RF Power Input\* 10W max. at 25°C

\*Passband rating, derate linearly to 3.5W at 100°C ambient.

### Features

- very good isolation, 40 dB up to 20 GHz
- 21 sections
- excellent power handling, 10W
- temperature stable LTCC internal structure
- re-entry frequency > 20 GHz
- rugged unibody construction
- protected by US patent 6,943,646

### Applications

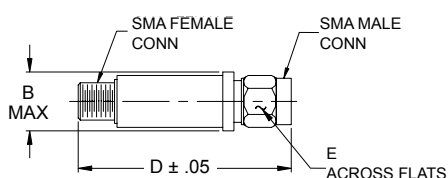
- harmonic rejection
- transmitters/receivers
- lab use
- test instrumentation



CASE STYLE: FF1118

| Connectors | Model     | Price       | Qty.  |
|------------|-----------|-------------|-------|
| SMA        | VLFX-1300 | \$39.95 ea. | (1-9) |

### Outline Drawing



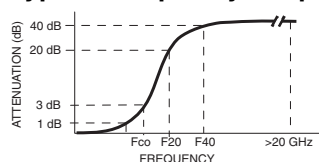
### Outline Dimensions (inch mm)

| B     | D     | E    | wt.   |
|-------|-------|------|-------|
| .410  | 2.67  | .312 | grams |
| 10.41 | 67.82 | 7.92 | 17.0  |

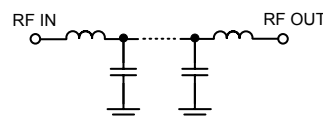
### Low Pass Filter Electrical Specifications @ 25°C

| MODEL NO. | PASSBAND (MHz)<br>(Loss < 1.2dB)<br>Max. | Fco, MHz<br>Nom<br>(Loss 3 dB)<br>Typ | STOPBAND (MHz)<br>(Loss, dB) |             | VSWR (:1)        |                  | NO. OF SECTIONS |
|-----------|------------------------------------------|---------------------------------------|------------------------------|-------------|------------------|------------------|-----------------|
|           |                                          |                                       | F20<br>Min.                  | F40<br>Typ. | Stopband<br>Typ. | Passband<br>Typ. |                 |
| VLFX-1300 | DC-1300                                  | 1925                                  | 2300                         | 2500-20000  | 10               | 1.2              | 21              |

### Typical Frequency Response

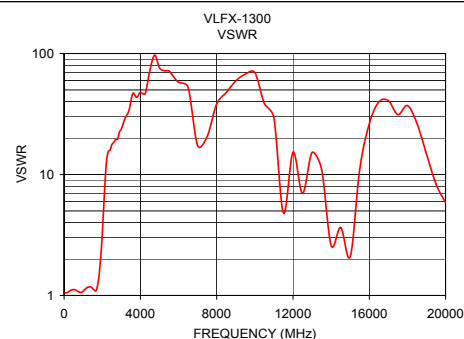
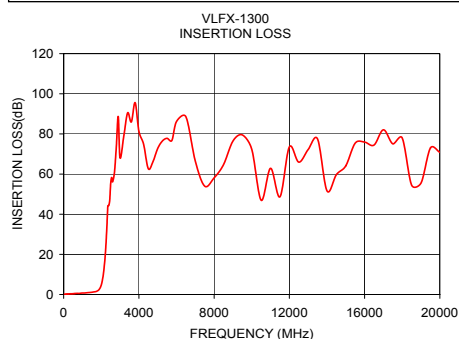


### Functional Schematic



### Typical Performance Data @ 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50              | 0.21                | 1.05      |
| 300             | 0.34                | 1.09      |
| 600             | 0.46                | 1.11      |
| 1300            | 0.95                | 1.18      |
| 1600            | 1.27                | 1.10      |
| 1750            | 1.58                | 1.20      |
| 1850            | 2.14                | 1.56      |
| 1925            | 3.07                | 2.15      |
| 2100            | 9.35                | 6.43      |
| 2300            | 33.88               | 15.28     |
| 2500            | 55.25               | 17.62     |
| 3000            | 68.08               | 23.79     |
| 4000            | 81.32               | 47.72     |
| 5000            | 72.73               | 76.04     |
| 7500            | 53.99               | 20.63     |
| 10000           | 72.31               | 69.62     |
| 12500           | 65.95               | 6.98      |
| 15000           | 64.17               | 2.10      |
| 17500           | 75.05               | 31.26     |
| 20000           | 70.82               | 5.83      |



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RF/IF MICROWAVE COMPONENTS

REV. A  
M97025  
VLFX-1300  
EDU-0399  
ED-11930A/18  
URJ/AD/CP  
080916  
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