

Dual Low Pass Filter

LPFD-7080+

50Ω Passband DC to 70 MHz & DC to 80 MHz

Maximum Ratings*

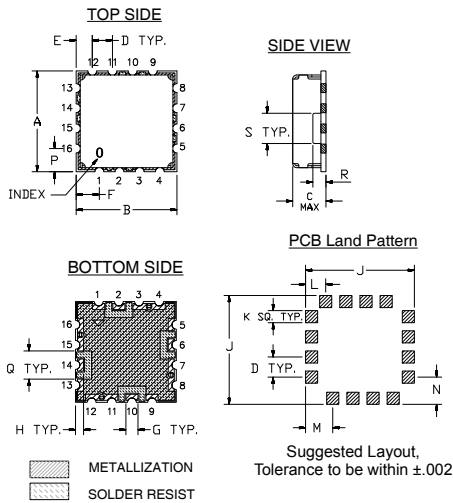
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 0.5W Max |

*Ratings are for each of the two filters in the package. Permanent damage may occur if any of these limits are exceeded.

Pin Connections

| | |
|----------|------------------------------|
| RF IN 1 | 2 (Filter 1) |
| RF OUT 1 | 14 (Filter 1) |
| RF IN 2 | 6 (Filter 2) |
| RF OUT 2 | 10 (Filter 2) |
| GROUND | 1,3,4,5,7,8,9,11,12,13,15,16 |

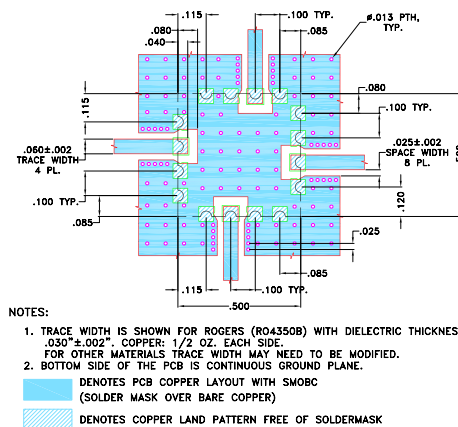
Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | | | |
|-------|-------|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | G | H | J |
| .500 | .500 | .195 | .100 | .080 | .115 | .060 | .040 | .540 |
| 12.70 | 12.70 | 4.95 | 2.54 | 2.03 | 2.92 | 1.52 | 1.02 | 13.72 |
| K | L | M | N | P | Q | R | S | wt. |
| .060 | .100 | .135 | .135 | .115 | .140 | .070 | .150 | grams |
| 1.52 | 2.54 | 3.43 | 3.43 | 2.92 | 3.56 | 1.78 | 3.81 | 1.0 |

Demo Board MCL P/N: TB-686 Suggested PCB Layout (PL-374)



Features

- High rejection
- Sharp insertion loss roll off
- Good VSWR, 1.2:1 typ. @ passband
- Small size dual filter, 0.5" x 0.5"
- Aqueous washable

Applications

- Wireless communications
- Receivers / Transmitters



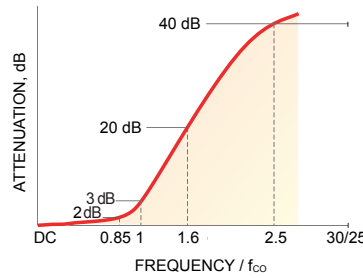
CASE STYLE: DV874
PRICE: \$21.95 ea. QTY (1-9)

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

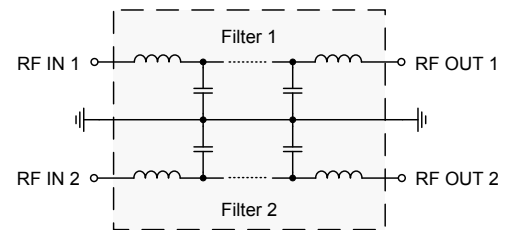
Low Pass Filter Electrical Specifications (T_{AMB} = 25°C)

| STRUCTURE | PASSBAND (MHz) (Loss < 2dB) | f _{co} , MHz Nom. (Loss 3dB) | STOPBAND (MHz) | | CROSS OVER ISOLATION (dB) Typ. | VSWR (:1) | |
|-----------|--------------------------------|---|----------------|---------------|-----------------------------------|------------------|------------------|
| | | | (Loss > 20dB) | (Loss > 40dB) | | Passband Typ. | Stopband Typ. |
| Filter 1 | DC - 70 | 80 | 135 - 200 | 200 - 2500 | 60 | 1.2 | 20 |
| Filter 2 | DC - 80 | 93 | 155 - 250 | 250 - 2500 | | 1.2 | 20 |

Typical Frequency Response (for each of filter)



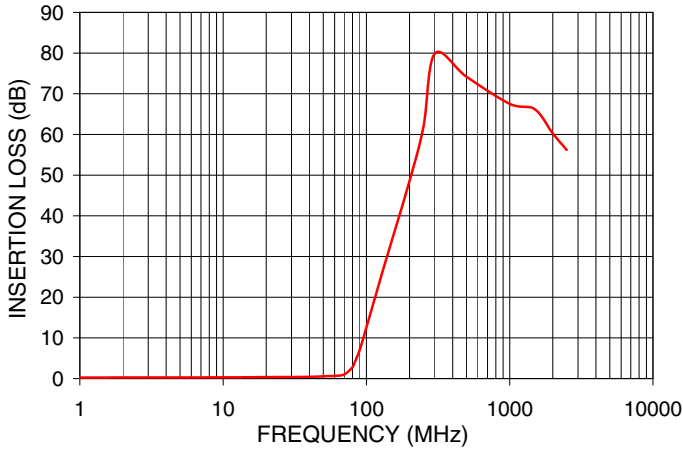
Functional Schematic



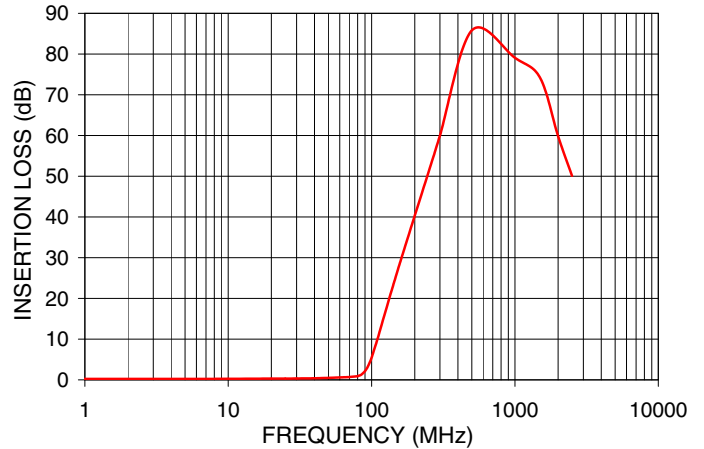
Typical Performance Data at 25°C

| Freq. (MHz) | Filter 1 | | | Filter 2 | | | Cross Over Isolation (dB) between filters 1 & 2 | Filter 1 Freq. (MHz) | Filter 2 Freq. (MHz) | Filter 2 Group Delay (nSec) |
|-------------|--------------|--------------|-------|--------------|--------------|-------|--|----------------------|----------------------|-----------------------------|
| | I. Loss (dB) | R. Loss (dB) | σ | I. Loss (dB) | R. Loss (dB) | σ | | | | |
| 0.5 | 0.25 | 0.01 | 29.65 | 0.23 | 0.01 | 30.43 | 91.07 | 1.0 | 8.71 | 7.70 |
| 10.0 | 0.31 | 0.01 | 24.16 | 0.26 | 0.01 | 28.06 | 85.80 | 3.5 | 7.24 | 6.22 |
| 70.0 | 1.01 | 0.03 | 16.31 | 0.70 | 0.01 | 23.57 | 62.72 | 5.0 | 7.26 | 6.21 |
| 80.0 | 2.77 | 0.18 | 5.81 | 0.93 | 0.02 | 20.26 | 60.18 | 10.0 | 7.16 | 6.16 |
| 93.0 | 8.78 | 0.36 | 1.59 | 2.99 | 0.15 | 5.76 | 61.51 | 15.0 | 7.22 | 6.20 |
| 95.0 | 9.87 | 0.37 | 1.36 | 3.63 | 0.17 | 4.73 | 62.07 | 20.0 | 7.29 | 6.24 |
| 100.0 | 12.58 | 0.37 | 0.99 | 5.58 | 0.21 | 2.94 | 63.67 | 25.0 | 7.39 | 6.31 |
| 135.0 | 28.39 | 0.32 | 0.39 | 20.92 | 0.20 | 0.53 | 71.02 | 30.0 | 7.54 | 6.39 |
| 140.0 | 30.25 | 0.32 | 0.36 | 22.79 | 0.19 | 0.48 | 71.15 | 35.0 | 7.72 | 6.51 |
| 155.0 | 35.43 | 0.30 | 0.29 | 27.92 | 0.17 | 0.36 | 71.62 | 40.0 | 7.94 | 6.63 |
| 200.0 | 48.59 | 0.27 | 0.20 | 40.20 | 0.15 | 0.22 | 70.58 | 45.0 | 8.20 | 6.78 |
| 250.0 | 61.85 | 0.26 | 0.17 | 50.46 | 0.37 | 0.18 | 69.69 | 50.0 | 8.51 | 6.93 |
| 300.0 | 79.88 | 0.69 | 0.14 | 58.56 | 0.82 | 0.13 | 68.75 | 55.0 | 8.94 | 7.13 |
| 500.0 | 74.18 | 2.26 | 0.14 | 80.02 | 3.37 | 0.09 | 66.98 | 60.0 | 9.62 | 7.36 |
| 1000.0 | 67.53 | 0.49 | 0.21 | 78.51 | 0.58 | 0.16 | 67.67 | 66.0 | 10.89 | 7.81 |
| 1500.0 | 66.18 | 2.87 | 0.26 | 71.46 | 1.54 | 0.23 | 50.65 | 70.0 | 12.01 | 8.28 |
| 2000.0 | 60.25 | 4.58 | 0.27 | 57.38 | 1.46 | 0.26 | 43.79 | 75.0 | 13.20 | 9.10 |
| 2500.0 | 56.20 | 7.32 | 0.31 | 47.80 | 1.38 | 0.29 | 39.95 | 80.0 | 13.27 | 10.14 |

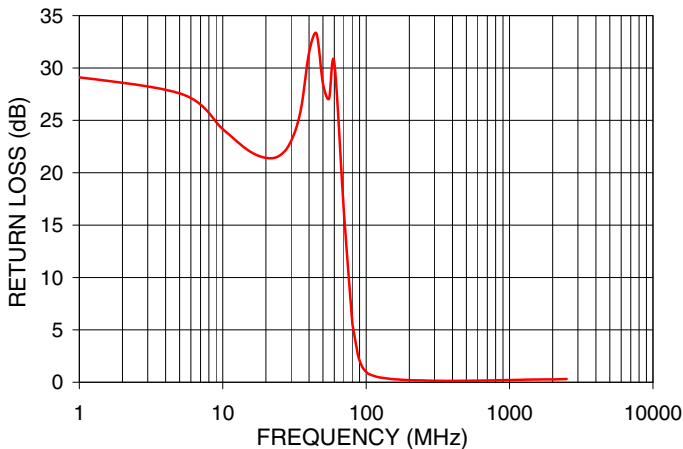
LOW PASS FILTER 1
INSERTION LOSS



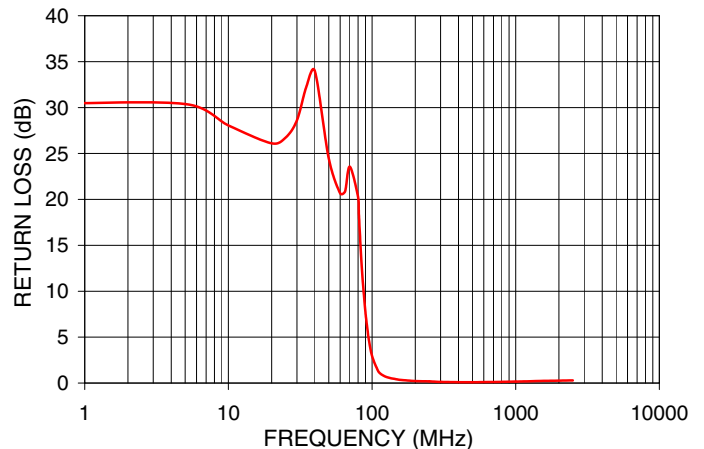
LOW PASS FILTER 2
INSERTION LOSS



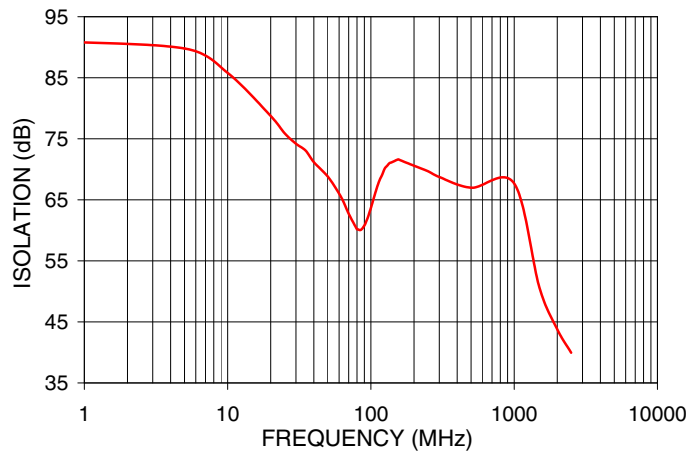
LOW PASS FILTER 1
RETURN LOSS



LOW PASS FILTER 2
RETURN LOSS



CROSS OVER ISOLATION
BETWEEN FILTERS 1 & 2

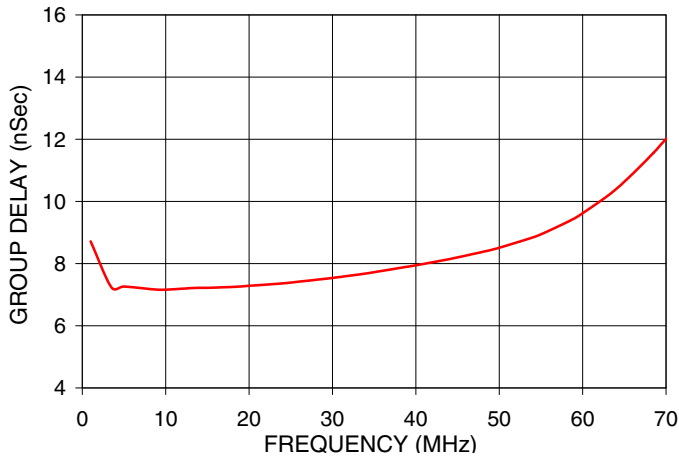


For detailed performance specs & shopping online see web site

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LOW PASS FILTER 1
GROUP DELAY



LOW PASS FILTER 2
GROUP DELAY

