

Dual Low Pass Filter

LPFD-7080+

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

Maximum Ratings*

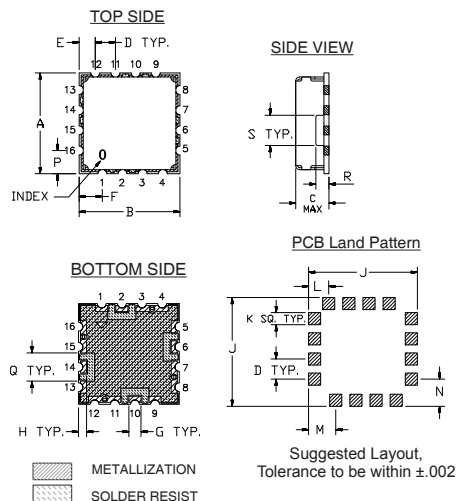
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

Pin Connections

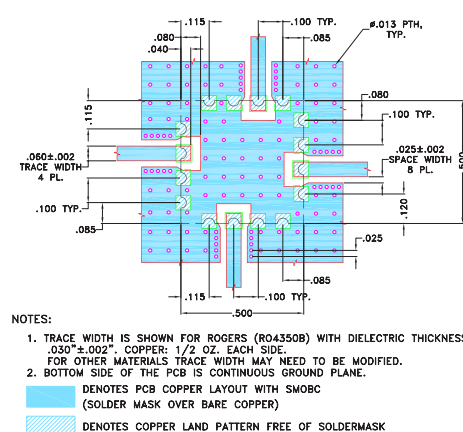
RF IN 1	2 (Filter 1)
RF OUT 1	14 (Filter 1)
RF IN 2	6 (Filter 2)
RF OUT 2	10 (Filter 2)
GROUND	1,3,4,5,7,8,9,11,12,13,15,16

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)

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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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



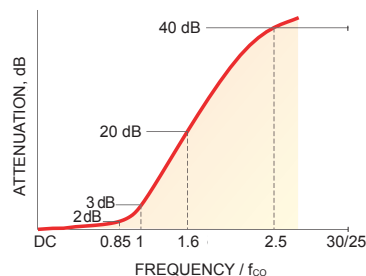
CASE STYLE: DV874

+RoHS Compliant

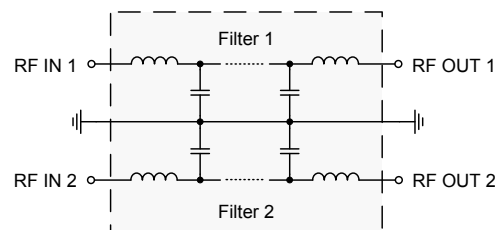
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

STRUCTURE	PASSBAND (MHz)	f _{co} , MHz Nom.	STOPBAND (MHz)		CROSS OVER ISOLATION (dB) Typ.	VSWR (:1)	
	(Loss < 2dB)	(Loss 3dB)	(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

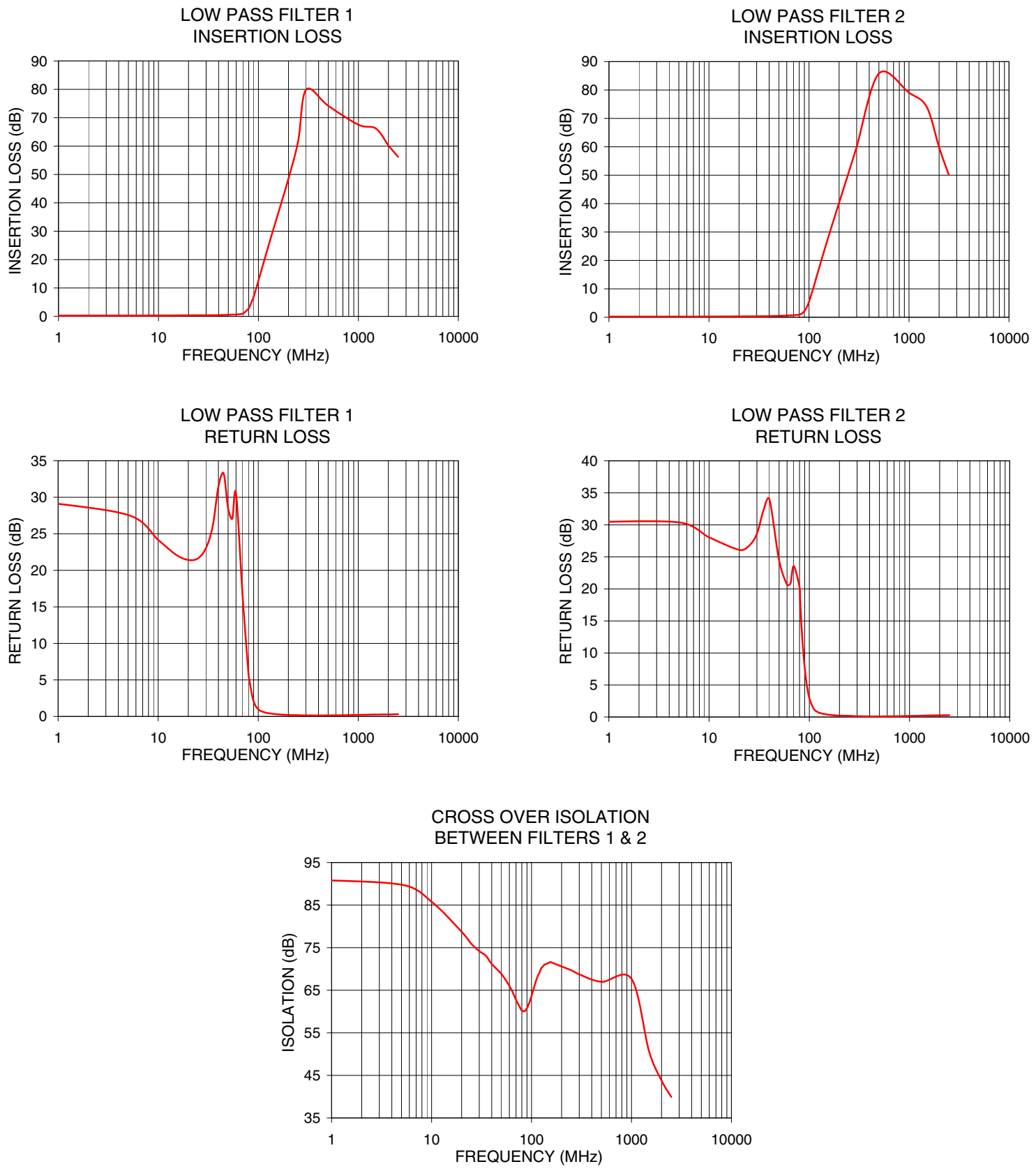
Typical Frequency Response
(for each of filter)

Functional Schematic



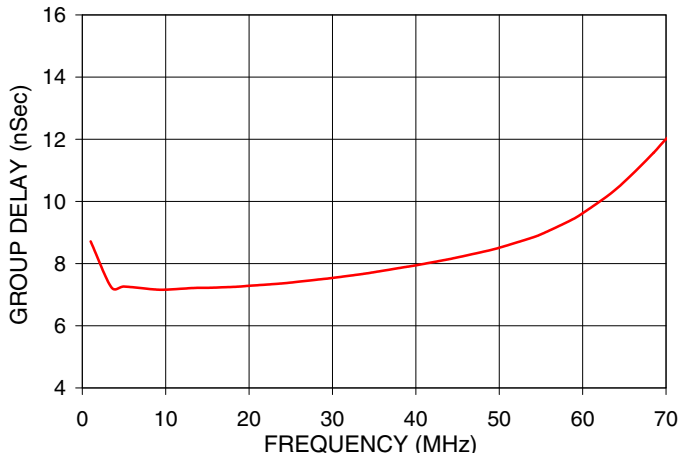
Typical Performance Data at 25°C

Freq. (MHz)	Filter 1			Filter 2			Cross Over	Freq. (MHz)	Filter 1 Group Delay (nSec)	Filter 2
	I. Loss (dB)	R. Loss (dB)		I. Loss (dB)	R. Loss (dB)	Isolation (dB)				
	\bar{x}	σ		\bar{x}	σ	between filters 1 & 2				
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

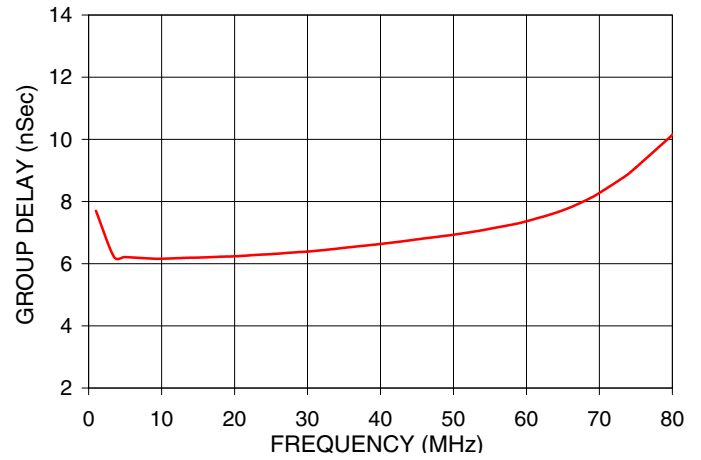


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LOW PASS FILTER 1
GROUP DELAY



LOW PASS FILTER 2
GROUP DELAY



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