

Dual Low Pass Filter

LPFD-3040+

50Ω Passband DC to 30 MHz & DC to 40 MHz

Maximum Ratings*

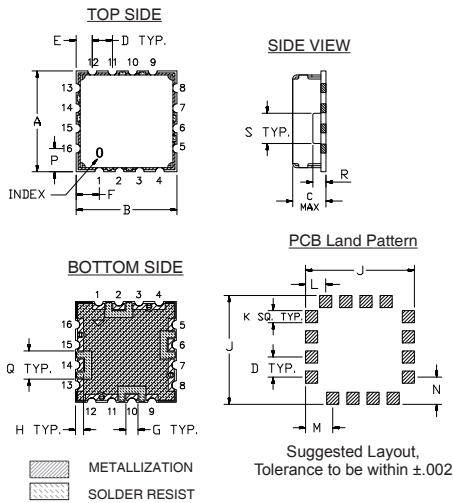
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

*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

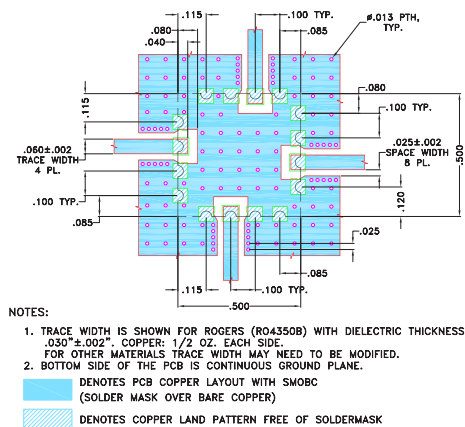
Outline Drawing



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



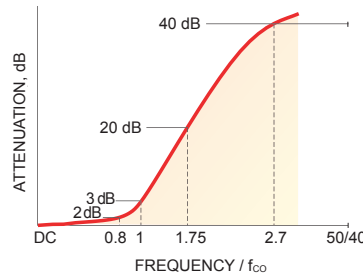
CASE STYLE: DV874

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

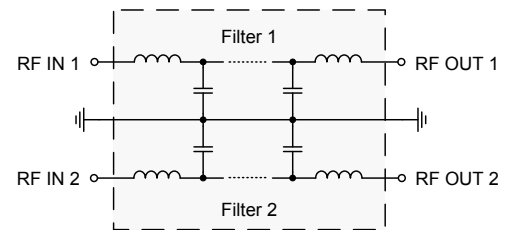
Low Pass Filter Electrical Specifications (T_{AMB} = 25°C)

STRUCTURE	PASSBAND (MHz) (Loss < 2dB)	f _{co} , MHz Nom.	STOPBAND (MHz)		CROSS OVER ISOLATION (dB) Typ.	VSWR (:1)	
			(Loss > 20dB)	(Loss > 40dB)		Passband Typ.	Stopband Typ.
Filter 1	DC - 30	40	70 - 110	110 - 2000	60	1.2	20
Filter 2	DC - 40	49	85 - 130	130 - 2000		1.2	20

Typical Frequency Response (for each of filter)



Functional Schematic



Typical Performance Data at 25°C

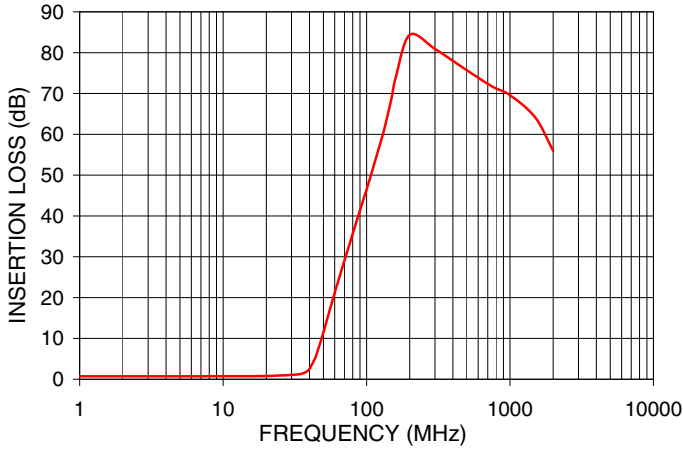
Freq. (MHz)	Filter 1			Filter 2			Cross Over Isolation (dB) between filters 1 & 2	Filter 1 Freq. (MHz)	Filter 2 Freq. (MHz)	Filter 2 Group Delay (nSec)
	I. Loss (dB)	R. Loss (dB)	σ	I. Loss (dB)	R. Loss (dB)	σ				
0.5	0.71	0.01	21.67	0.63	0.01	22.54	80.24	1.0	14.71	12.17
10.0	0.75	0.01	19.88	0.67	0.01	19.99	73.62	2.0	13.93	11.46
30.0	1.07	0.01	23.26	0.81	0.01	35.64	63.30	5.0	14.00	11.53
40.0	2.57	0.07	8.77	1.09	0.02	26.26	57.61	7.0	14.05	11.53
45.0	6.32	0.11	3.19	1.65	0.05	12.68	57.41	9.0	14.11	11.53
49.0	10.44	0.11	1.68	2.98	0.10	6.81	58.93	10.0	14.19	11.54
55.0	16.57	0.10	0.92	7.00	0.17	2.67	62.72	12.0	14.38	11.67
60.0	21.14	0.09	0.68	11.21	0.19	1.46	65.96	14.0	14.60	11.80
70.0	29.00	0.08	0.47	19.20	0.18	0.74	70.46	18.0	15.16	12.10
85.0	38.54	0.08	0.33	28.96	0.17	0.46	73.12	20.0	15.47	12.29
100.0	46.46	0.09	0.25	36.77	0.18	0.34	73.34	22.0	15.81	12.48
110.0	51.21	0.09	0.22	41.25	0.20	0.29	73.38	26.0	16.61	12.95
130.0	59.96	0.07	0.18	48.97	0.27	0.23	73.52	28.0	17.17	13.23
300.0	79.56	1.05	0.10	92.38	7.91	0.09	70.87	30.0	18.01	13.53
500.0	77.31	1.78	0.12	84.66	1.62	0.09	70.89	32.0	19.19	13.89
1000.0	70.18	0.57	0.21	81.14	1.79	0.18	64.31	34.0	20.85	14.38
1500.0	65.33	1.24	0.26	70.79	2.35	0.25	49.52	38.0	24.94	15.78
2000.0	57.08	1.20	0.26	58.56	1.29	0.29	42.45	40.0	26.03	16.83

Notes

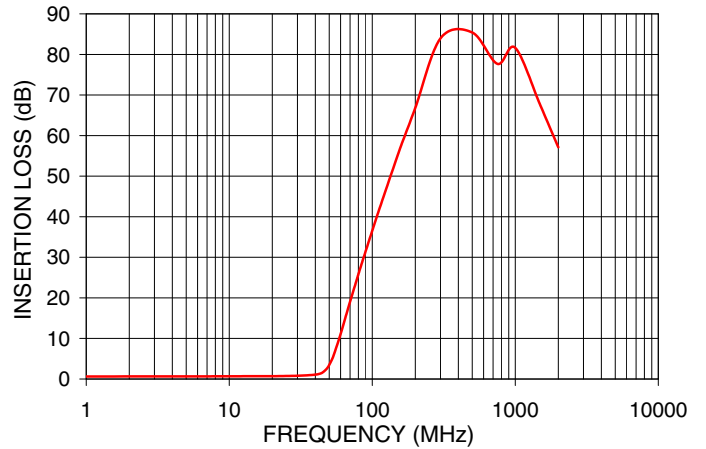
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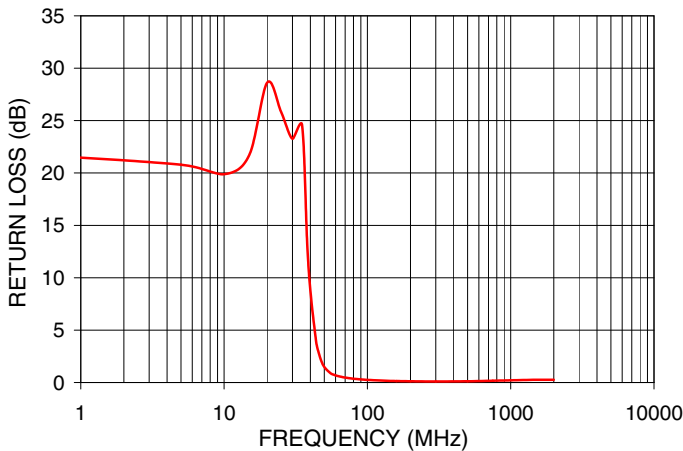
LOW PASS FILTER 1
INSERTION LOSS



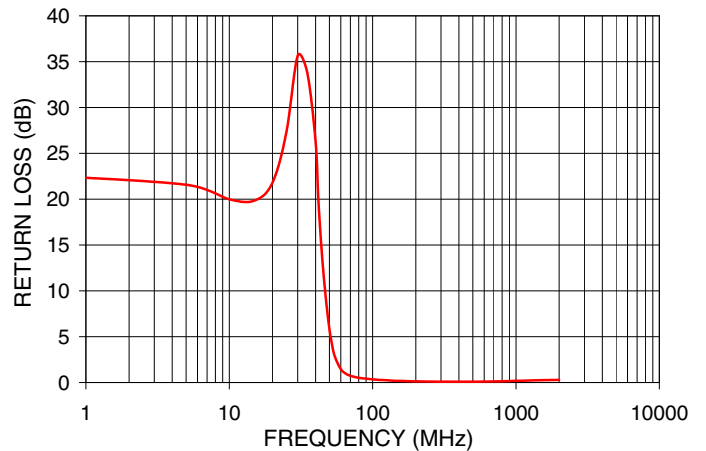
LOW PASS FILTER 2
INSERTION LOSS



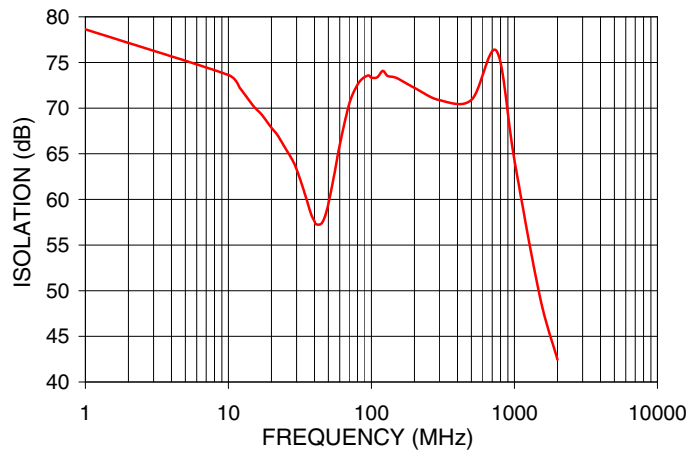
LOW PASS FILTER 1
RETURN LOSS



LOW PASS FILTER 2
RETURN LOSS



CROSS OVER ISOLATION
BETWEEN FILTERS 1 & 2

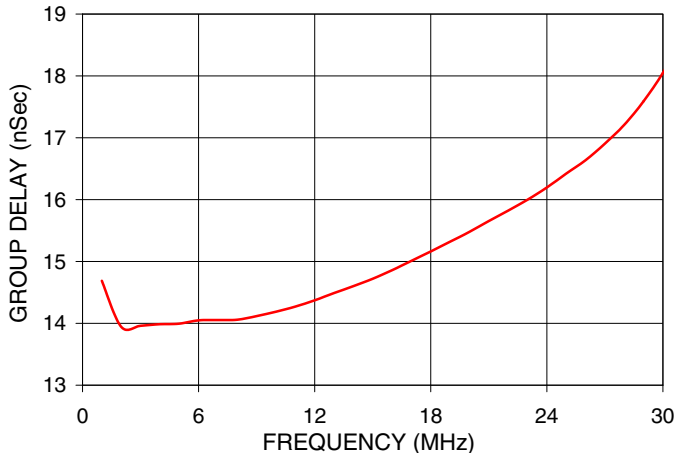


Notes

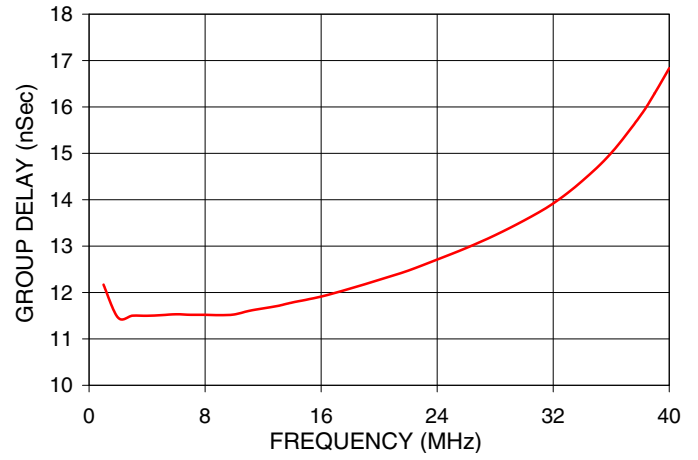
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LOW PASS FILTER 1
GROUP DELAY



LOW PASS FILTER 2
GROUP DELAY



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