

Surface Mount Low Pass Filter

50Ω DC to 420 MHz

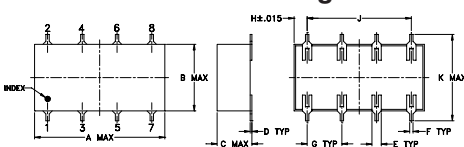
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.
Permanent damage may occur if any of these limits are exceeded.	

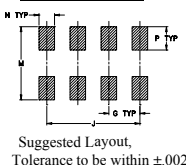
Pin Connections

INPUT	1
OUTPUT	8
GROUND	2,3,4,5,6,7

Outline Drawing



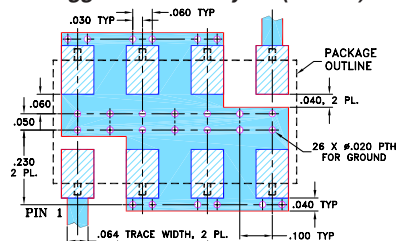
PCB Land Pattern



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08
H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

Demo Board MCL P/N: TB-187+ Suggested PCB Layout (PL-049)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- wide selection of cut-off frequencies
- excellent rejection
- custom models available

Applications

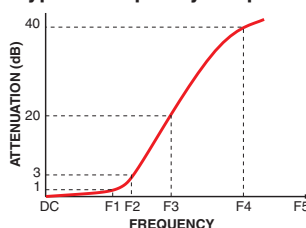
- defense communications
- receivers/transmitters
- harmonic rejection of VCOs

Electrical Specifications

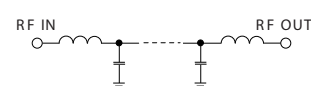
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-420	—	—	1.0 dB
	Freq. Cut-Off	F2	470	—	3.0	dB
	VSWR	DC-F1	DC-420	—	1.7	:1
Stop Band	Rejection Loss	F3-F4	750-920	20	—	dB
		F4-F5	920-2000*	40	—	dB
	VSWR	F3-F5	750-2000	—	18	:1

* Loss > 35 dB

Typical Frequency Response

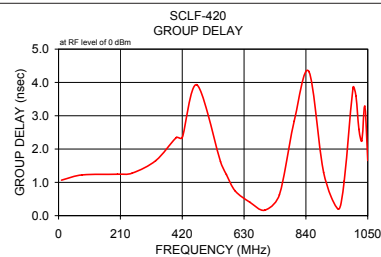
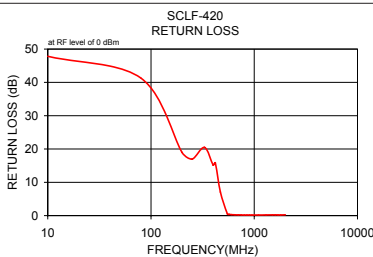


Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ		
10.00	0.04	0.00	10.00	1.07
80.00	0.08	0.00	80.00	1.22
200.00	0.21	0.01	200.00	1.24
250.00	0.27	0.02	250.00	1.28
330.00	0.29	0.01	330.00	1.65
400.00	0.50	0.06	400.00	2.35
420.00	0.53	0.06	420.00	2.35
470.00	2.49	1.23	470.00	3.93
550.00	17.69	1.79	550.00	1.62
570.00	21.36	1.72	570.00	1.23
600.00	26.69	1.66	600.00	0.74
650.00	34.68	1.72	650.00	0.40
700.00	43.00	2.04	700.00	0.16
750.00	51.76	2.98	750.00	0.63
800.00	62.84	3.27	800.00	2.83
850.00	64.45	2.45	850.00	4.33
900.00	63.75	3.07	900.00	1.30
950.00	62.98	1.70	950.00	0.20
1100.00	68.72	2.09	970.00	1.04
1300.00	75.55	4.58	1000.00	3.84
1500.00	58.79	0.80	1010.00	3.60
1600.00	57.39	0.75	1020.00	2.59
1700.00	55.84	0.38	1030.00	2.25
1800.00	53.61	0.44	1040.00	3.29
2000.00	52.95	0.61	1050.00	1.66



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