

Surface Mount Low Pass Filter

50Ω DC to 45 MHz

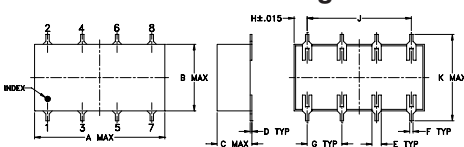
Maximum Ratings

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.	

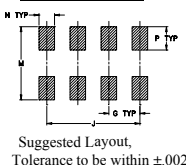
Pin Connections

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

Outline Drawing



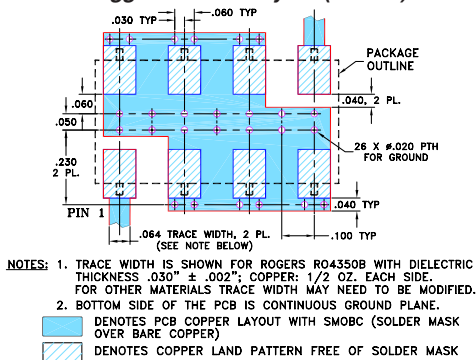
PCB Land Pattern



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)



Features

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

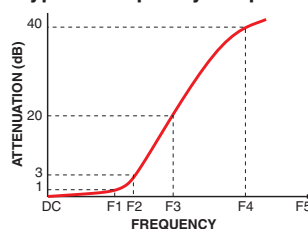
Applications

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

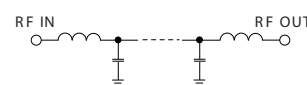
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-45	—	—	1.0 dB
	Freq. Cut-Off	F2	55	—	3.0	dB
	VSWR	DC-F1	DC-45	—	1.7	:1
Stop Band	Rejection Loss	F3-F4	70-90	20	—	dB
		F4-F5	90-200	40	—	dB
	VSWR	F3-F5	70-200	—	18	:1

Typical Frequency Response



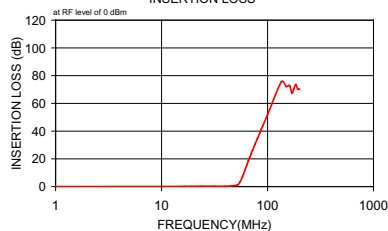
Electrical Schematic



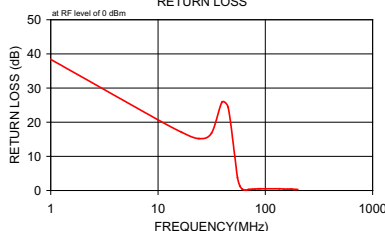
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ		
1.00	0.03	0.00	1.00	16.00
10.00	0.12	0.10	10.00	15.85
16.50	0.18	0.10	16.50	16.14
24.00	0.30	0.10	24.00	16.72
31.50	0.31	0.10	31.50	18.50
39.50	0.31	0.10	39.50	21.04
45.00	0.49	0.10	45.00	26.38
52.00	1.22	0.20	48.00	27.16
55.00	3.37	0.60	50.00	31.44
58.00	7.23	0.80	52.00	34.88
61.00	11.68	0.90	54.00	36.74
64.00	15.98	0.90	55.00	35.95
66.00	18.68	0.80	58.00	27.09
68.00	21.26	0.80	60.00	21.94
70.00	23.69	0.80	61.00	20.02
72.00	26.02	0.80	63.00	15.60
76.00	30.42	0.80	64.00	14.21
80.00	34.44	0.80	66.00	11.74
85.00	39.13	0.70	68.00	10.93
87.00	41.06	0.80	70.00	9.31
90.00	43.71	0.90	72.00	7.86
100.00	51.96	1.50	74.00	6.26
135.00	75.54	9.90	76.00	7.02
150.00	72.20	4.30	78.00	7.76
161.50	72.82	3.90	80.00	5.54
170.00	67.46	2.80	85.00	2.62
177.00	70.41	5.00	87.00	2.41
184.50	73.51	4.80	90.00	2.38
192.50	70.37	4.70	100.00	2.04
200.00	70.36	5.50	131.00	1.81

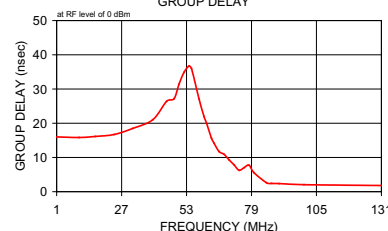
SCLF-45
INSERTION LOSS



SCLF-45
RETURN LOSS



SCLF-45
GROUP DELAY



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

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