

Surface Mount Low Pass Filter

50Ω DC to 190 MHz

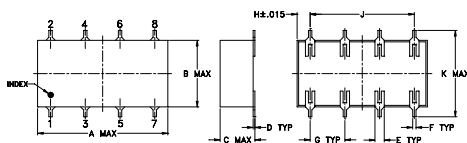
Maximum Ratings

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.	

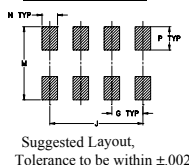
Pin Connections

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

Outline Drawing



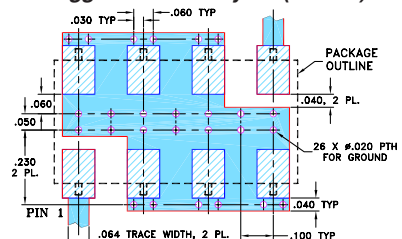
PCB Land Pattern



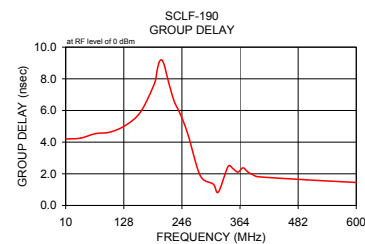
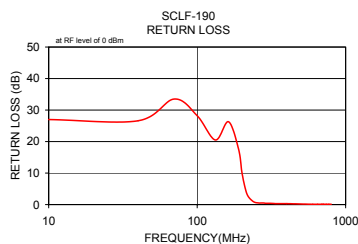
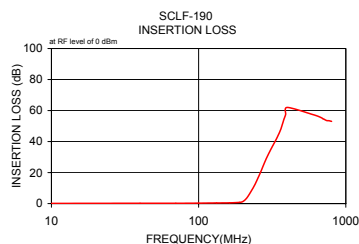
Outline Dimensions (inch mm)

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

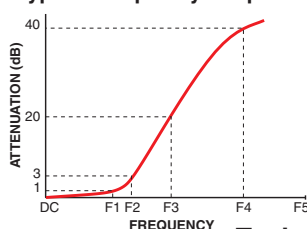
Applications

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

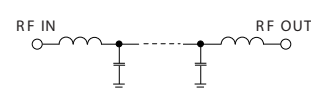
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-190	—	1.0	dB
	Freq. Cut-Off	F2	210	3.0	—	dB
	VSWR	DC-F1	DC-190	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	290-390	20	—	dB
		F4-F5	390-800	40	—	dB
	VSWR	F3-F5	290-800	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		
10.00	0.12	0.10	27.00	4.20
40.00	0.19	0.10	26.60	4.25
70.00	0.21	0.10	33.50	4.54
100.00	0.27	0.10	28.20	4.63
132.50	0.41	0.10	20.50	5.08
162.50	0.49	0.10	26.30	5.93
190.00	0.77	0.10	17.60	7.69
200.00	1.38	0.10	10.40	8.44
210.00	3.05	0.10	5.40	9.07
220.00	5.72	0.10	2.70	9.20
240.00	11.88	0.10	0.90	8.88
260.00	18.95	0.30	0.50	7.66
270.00	22.68	0.40	0.50	6.61
280.00	26.25	0.50	0.50	5.96
290.00	29.54	0.60	0.40	5.22
310.00	35.11	0.80	0.40	4.32
340.00	42.33	1.20	0.30	3.16
360.00	47.49	1.60	0.30	2.12
370.00	50.87	2.40	0.30	1.62
380.00	54.42	3.60	0.30	1.34
390.00	57.49	3.20	0.30	0.85
400.00	62.02	5.20	0.30	2.48
600.00	57.37	2.30	0.10	2.31
647.50	56.32	1.40	0.10	2.11
687.50	55.21	1.80	0.10	2.38
702.50	54.51	0.90	0.10	2.11
710.00	54.45	1.30	0.10	1.94
740.00	53.58	1.30	0.10	1.82
770.00	53.44	1.40	0.10	1.62
800.00	53.04	1.10	0.10	1.45

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

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