

Surface Mount Low Pass Filter

SCLF-10+

50Ω DC to 10 MHz

Maximum Ratings

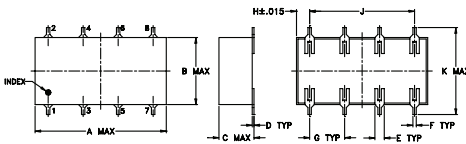
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W max.

Permanent damage may occur if any of these limits are exceeded.

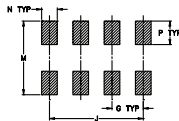
Pin Connections

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

Outline Drawing



PCB Land Pattern

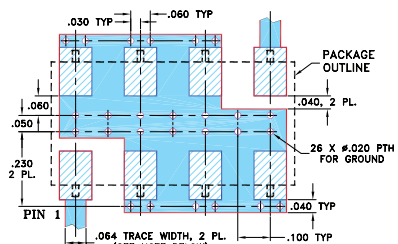


Outline Dimensions (inch)

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:
- 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.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

Features

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

Applications

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



Generic photo used for illustration purposes only
CASE STYLE: YY161

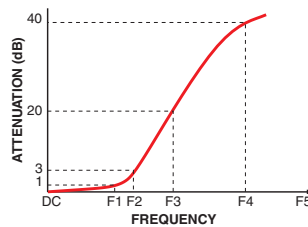
+RoHS Compliant

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

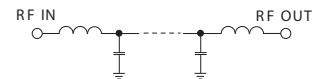
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-10	—	—	1.0	dB
	Freq. Cut-Off	F2	12.2	—	3.0	—	dB
	VSWR	DC-F1	DC-10	—	1.2	—	:1
Stop Band	Rejection Loss	F3-F4	14-16	20	—	—	dB
		F4-F5	16-230	40	—	—	dB
	VSWR	F3-F5	14-230	—	18	—	:1

Typical Frequency Response



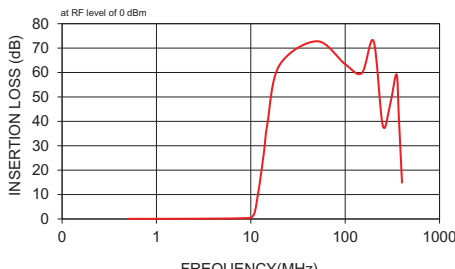
Electrical Schematic



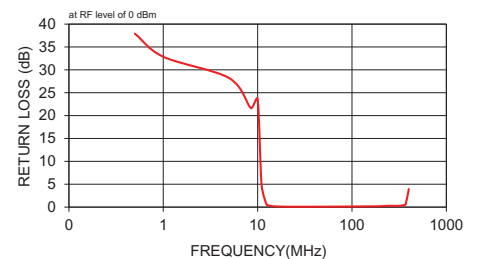
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)
	\bar{x}	σ	
0.50	0.06	0.00	37.92
1.00	0.07	0.00	32.86
5.00	0.17	0.00	28.19
8.50	0.35	0.01	21.64
10.00	0.56	0.01	23.57
11.00	2.70	0.10	5.02
12.40	14.39	0.33	0.59
12.60	16.31	0.35	0.48
13.80	27.59	0.45	0.25
15.00	39.05	0.65	0.18
20.00	62.85	0.71	0.09
50.00	72.81	1.31	0.09
100.00	63.39	0.90	0.13
150.00	59.75	0.82	0.16
200.00	72.82	4.08	0.19
250.00	38.33	0.93	0.29
300.00	47.06	0.58	0.26
350.00	59.23	1.29	0.40
370.00	42.02	0.85	0.61
400.00	14.91	0.74	3.95

SCLF-10+ INSERTION LOSS



SCLF-10+ RETURN LOSS



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