

Surface Mount Low Pass Filter

SCLF-21.4+ SCLF-21.4

50Ω DC to 22 MHz

Maximum Ratings

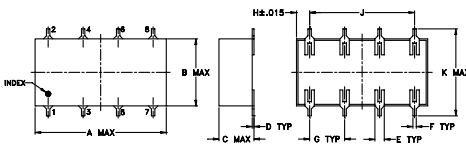
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

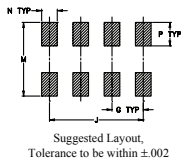
Pin Connections

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

Outline Drawing



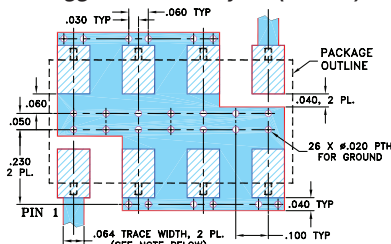
PCB Land Pattern



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.
■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
■ 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



Generic photo used for illustration purposes only
CASE STYLE: YY161

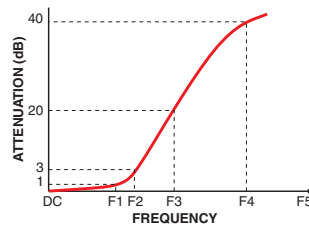
+RoHS Compliant

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

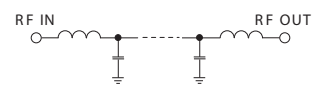
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	—	—	1.0	dB
	Freq. Cut-Off	F2	—	3.0	—	dB
	VSWR	DC-F1	DC-22	—	1.7	—
Stop Band	Rejection Loss	F3-F4	20	—	—	dB
		F4-F5	40	—	—	dB
	VSWR	F3-F5	32-200	—	—	—

Typical Frequency Response

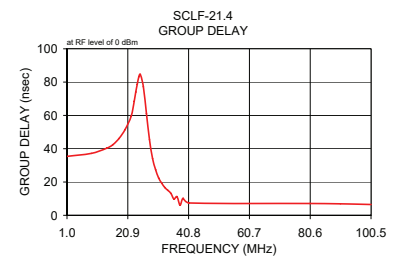
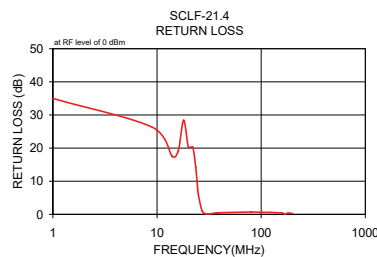
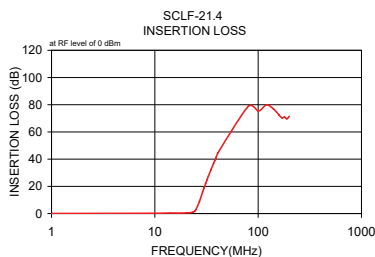


Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	\bar{v}	σ			
1.00	0.06	0.10	35.00	1.00	35.40
9.00	0.21	0.10	26.30	9.00	37.20
14.00	0.39	0.10	17.50	14.00	40.30
16.00	0.36	0.10	19.20	16.00	42.40
18.00	0.37	0.10	28.40	18.00	46.10
20.00	0.48	0.10	20.30	20.00	51.50
22.00	0.65	0.20	20.30	22.00	59.50
23.50	1.08	0.07	14.30	23.00	68.50
24.50	2.05	1.40	8.10	23.50	74.00
25.00	2.91	1.80	5.70	24.00	78.70
27.00	8.86	2.60	1.10	24.50	83.20
30.00	19.04	2.20	0.10	26.00	77.20
31.00	22.06	2.10	0.10	27.00	61.10
32.00	24.85	2.00	0.10	28.00	45.40
33.00	27.50	1.90	0.20	29.00	34.10
35.00	32.41	1.80	0.30	30.00	27.40
38.00	38.91	1.70	0.40	32.00	19.30
39.00	40.92	1.80	0.50	33.00	16.70
41.00	44.83	1.80	0.50	34.00	15.00
80.50	78.86	3.90	0.70	35.00	13.20
100.50	75.36	2.70	0.60	36.00	9.80
140.50	76.97	3.00	0.50	38.00	6.10
160.00	72.23	2.60	0.40	39.00	10.20
170.00	70.36	2.90	0.00	41.00	7.40
180.00	70.87	3.90	0.40	80.50	7.10
190.00	69.67	3.20	0.30	90.50	6.90
200.00	71.47	3.10	0.30	100.50	6.50



Notes

- A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

