

Surface Mount Low Pass Filter

SCLF-21.4+ SCLF-21.4

50Ω DC to 22 MHz

Maximum Ratings

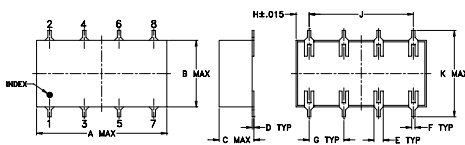
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

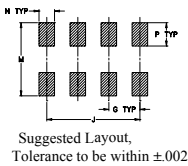
Pin Connections

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

Outline Drawing



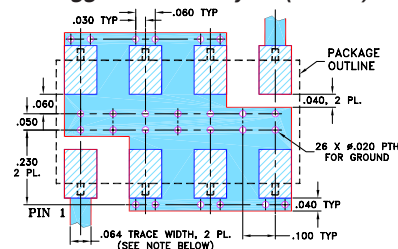
PCB Land Pattern



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



CASE STYLE: YY161

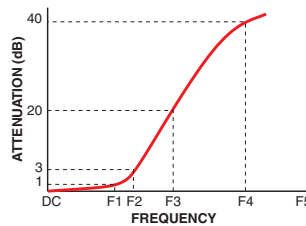
+RoHS Compliant

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

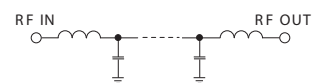
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-22	—	—	1.0	dB
	Freq. Cut-Off	F2	24.5	—	3.0	—	dB
	VSWR	DC-F1	DC-22	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	32-41	20	—	—	dB
		F4-F5	41-200	40	—	—	dB
	VSWR	F3-F5	32-200	—	—	—	:1

Typical Frequency Response

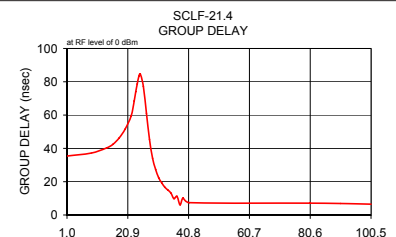
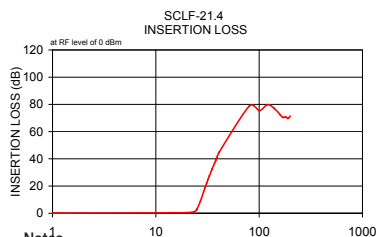


Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	\bar{x}	σ		
1.00	0.06	0.10	1.00	35.40
9.00	0.21	0.10	26.30	37.20
14.00	0.39	0.10	17.50	40.30
16.00	0.36	0.10	19.20	42.40
18.00	0.37	0.10	28.40	46.10
20.00	0.48	0.10	20.30	51.50
22.00	0.65	0.20	20.30	59.50
23.50	1.08	0.07	14.30	68.50
24.50	2.05	1.40	8.10	74.00
25.00	2.91	1.80	5.70	78.70
27.00	8.86	2.60	1.10	83.20
29.00	15.82	2.40	0.20	84.60
30.00	19.04	2.20	0.10	77.20
31.00	22.06	2.10	0.10	61.10
32.00	24.85	2.00	0.10	45.40
33.00	27.50	1.90	0.20	34.10
35.00	32.41	1.80	0.30	27.40
37.00	36.86	1.80	0.40	22.40
38.00	38.91	1.70	0.40	19.30
39.00	40.92	1.80	0.50	16.70
41.00	44.83	1.80	0.50	15.00
80.50	78.86	3.90	0.70	13.20
100.50	75.36	2.70	0.60	9.80
120.50	79.79	7.40	0.60	11.20
140.50	76.97	3.00	0.50	6.10
160.00	72.23	2.60	0.40	10.20
170.00	70.36	2.90	0.00	7.40
180.00	70.87	3.90	0.40	7.10
190.00	69.67	3.20	0.30	6.90
200.00	71.47	3.10	0.30	6.50



Notes

- A. Performance and test conditions 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.
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