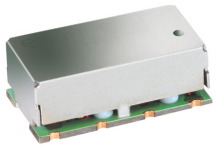
Surface Mount

Low Pass Filter

SXLP-8+

50Ω DC to 8 MHz



CASE STYLE: HF1139

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

Features

- high rejection
- sharp cut-off
- shielded package
- aqueous washable
- low cost

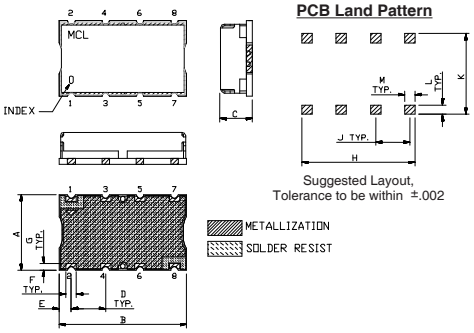
Applications

- defense communications
- receivers / transmitters
- harmonic rejection

+RoHS Compliant

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

Outline Drawing

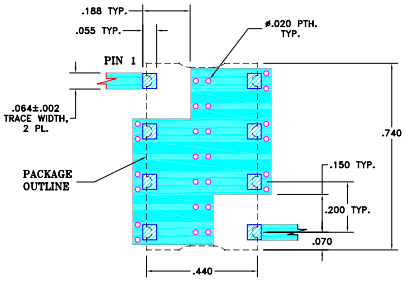


Outline Dimensions (inch / mm)

A	B	C	D	E	F
.44	.74	.27	.200	.07	.060
11.18	18.80	6.86	5.08	1.78	1.52

G	H	J	K	L	M	wt.
.040	.660	.200	.470	.055	.060	grams
1.02	16.76	5.08	11.94	1.40	1.52	3.0

Demo Board MCL P/N: TB-368
Suggested PCB Layout (PL-230)



NOTE:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025"±.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.

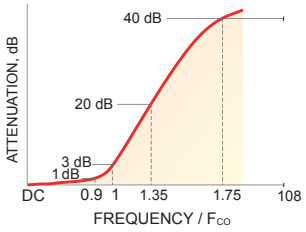
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

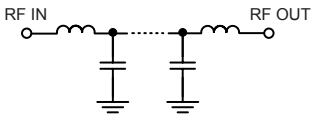
Low Pass Filter Electrical Specifications (T_{AMB}= 25°C)

PASSBAND (MHz)	fco, MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
				Passband Typ.	Stopband Typ.
(Loss < 1dB)	(Loss 3dB)	(Loss > 20dB)	(Loss > 40dB)		
DC - 8	9.2	12.5 - 16.5	16.5 - 1000	1.7	18

Typical Frequency Response



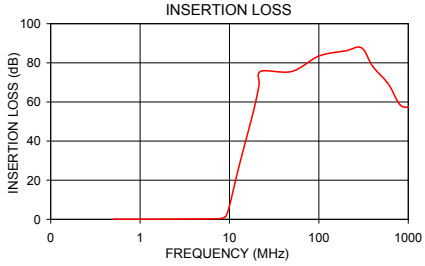
Functional Schematic



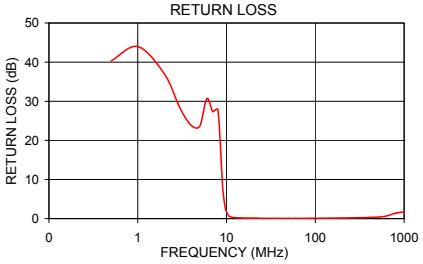
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB) $\bar{x}$	Insertion Loss (dB) σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
0.5	0.06	0.00	40.31	0.5	79.92
2.6	0.12	0.01	31.02	2.0	91.19
5.4	0.24	0.01	25.18	2.5	92.76
8.0	0.39	0.02	27.83	3.0	93.55
8.8	0.81	0.12	11.54	3.5	91.93
9.2	1.77	0.32	6.29	4.0	95.65
9.5	3.15	0.50	3.80	4.5	99.70
10.0	6.61	0.65	1.64	5.0	101.97
10.8	13.16	0.63	0.58	5.5	103.46
12.5	25.40	0.56	0.24	6.0	109.39
16.5	46.36	0.91	0.14	7.0	120.18
30.0	73.63	6.96	0.08	7.4	127.53
50.0	74.71	4.84	0.07	7.6	131.20
100.0	79.98	4.41	0.10	7.8	139.44
200.0	83.65	3.30	0.16	8.0	146.44
400.0	76.92	1.37	0.30	8.2	156.94
600.0	71.35	2.38	0.56	8.6	180.69
800.0	63.32	4.82	1.39	9.0	204.83
1000.0	60.15	2.66	1.71	9.2	205.46

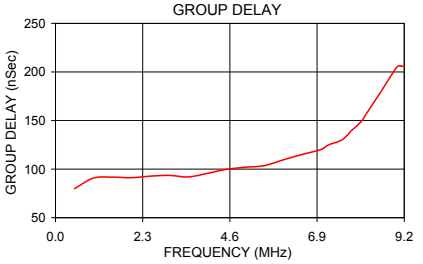
SXLP-8+
INSERTION LOSS



SXLP-8+
RETURN LOSS



SXLP-8+
GROUP DELAY



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