

# Surface Mount Low Pass Filter

## SXLP-1100+

50Ω DC to 1100 MHz

### The Big Deal

- Wide stopband Rejection, (>20 dB till 8.5 GHz)
- Good VSWR, 1.3:1 typical
- High rejection, 40 dB typical
- Flat Group delay, 1 ns typical



CASE STYLE: HF1139

### Product Overview

SXLP-1100+ is a 50Ω lowpass filter in a shielded Package (size of 0.44" x 0.74" x 0.27") fabricated using SMT technology. Covering up to 1100 MHz, these units offers low insertion loss, good matching within the passband and high rejection. This units uses a miniature high Q capacitors and air coil inductors for high reliability. In addition it has repeatable performance across production lots and consistent performance across temperature.

### Key Features

Feature	Advantages
Wide stopband (> 20 dB till 8.5 GHz)	Suitable for application which needs far-frequency attenuation, for e.g. Defense Communications.
Good VSWR, 1.3:1 typical over passband	The model has very good return loss which provides good matching when used with other devices.
High Rejection, 40 dB typical	This enables the filter to attenuate harmonics and spurious signals.
Flat Group delay characteristics (1 ns typical)	The model has a flat group delay of 1 ns which helps in reducing the signal distortion.



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IF/RF MICROWAVE COMPONENTS

For detailed performance specs  
& shopping online see web site

**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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](http://www.minicircuits.com/MCLStore/terms.jsp).

# Surface Mount Low Pass Filter

50Ω DC to 1100 MHz

## SXLP-1100+



CASE STYLE: HF1139  
PRICE: \$12.95 ea. QTY (1-9)

### Features

- Flat group delay, 1 ns typical over passband
- Wide stopband rejection, (>20dB till 8.5 GHz)
- Good VSWR, 1.3 typical in passband
- High rejection, 40 dB typical
- Shielded case
- Aqueous washable

### Applications

- Cable TV
- Receivers/transmitters
- Defense communications
- Harmonic rejection

### Electrical Specifications at 25°C

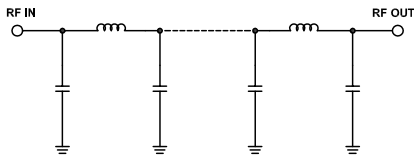
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 1100	—	0.9	dB
	Freq. Cut-Off	F2	1225	—	3.5	dB
	VSWR	DC-F1	DC - 1100	—	1.3	:1
Stop Band	Rejection Loss	F3-F4	1440 - 8500	20	35	dB
	VSWR	F3-F4	1440 - 8500	—	7	:1

### Maximum Ratings

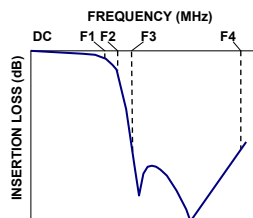
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1W max.

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

### Functional Schematic



### Typical Frequency Response

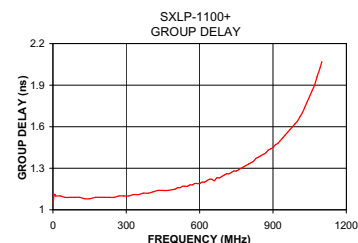
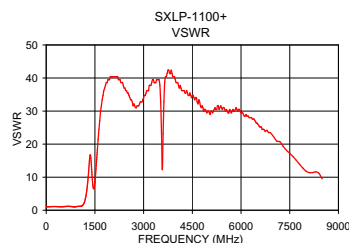
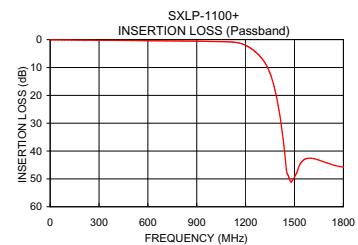
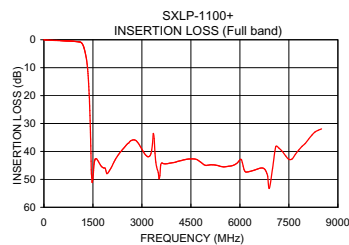


### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	0.02	1.00	1.00	1.05
30.0	0.05	1.02	5.00	1.11
70.0	0.09	1.04	10.00	1.10
230.0	0.20	1.12	50.00	1.09
650.0	0.39	1.16	70.00	1.09
1100.0	0.84	1.30	150.00	1.08
1180.0	2.00	2.51	200.00	1.09
1225.0	3.71	4.35	250.00	1.09
1250.0	5.02	5.95	350.00	1.11
1290.0	7.73	9.63	410.00	1.13
1350.0	15.58	16.56	450.00	1.14
1400.0	28.98	12.26	500.00	1.15
1420.0	36.47	9.43	550.00	1.17
1440.0	44.14	7.34	600.00	1.19
1550.0	38.36	14.62	700.00	1.25
3000.0	39.92	34.07	800.00	1.33
5000.0	45.67	29.96	900.00	1.45
6500.0	46.93	26.33	1000.00	1.64
7500.0	45.97	17.22	1050.00	1.82
8500.0	30.83	9.48	1100.00	2.07

+ RoHS compliant in accordance  
with EU Directive (2002/95/EC)

The + Suffix has been added in order to identify RoHS Compliance.  
See our web site for RoHS Compliance methodologies and qualifications.



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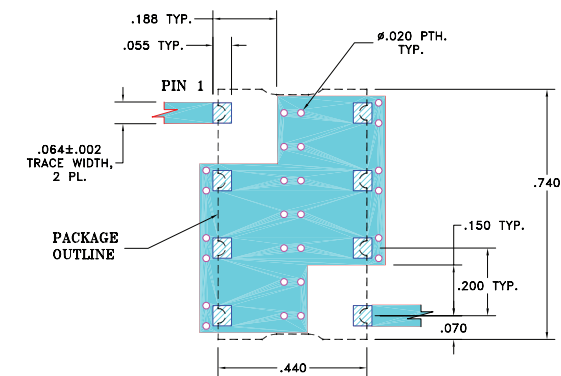
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REV. OR  
M130744  
SXLP-1100+  
EDR-10104U  
RAV/URJ/NY  
110418  
Page 2 of 3



Pad Connections

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

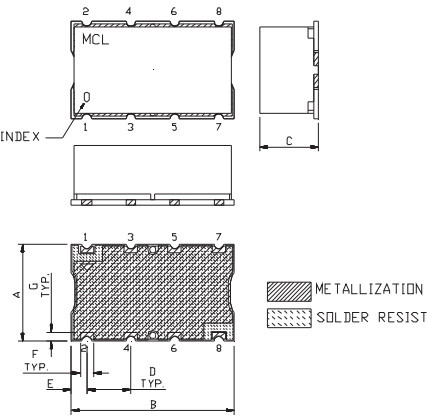
Demo Board MCL P/N: TB-368  
Suggested PCB Layout (PL-230)



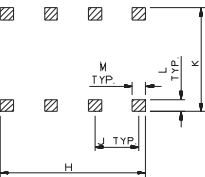
- NOTE:
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025"±.002". COPPER: 1/2 OZ. EACH SIDE.  
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

-  DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
-  DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Drawing



PCB Land Pattern



Outline Dimensions ( Inch mm )

A	B	C	D	E	F	G
.44	.74	.27	.200	.07	.060	.040
11.18	18.80	6.86	5.08	1.78	1.52	1.02
H	J	K	L	M		wt
.660	.200	.470	.055	.060		grams
16.76	5.08	11.94	1.40	1.52		30