

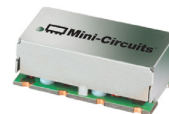
Surface Mount Low Pass Filter

SXLP-400+

50Ω DC to 400 MHz

The Big Deal

- Low Insertion Loss (0.7 dB typical)
- High rejection (60 dB typical)
- Good VSWR (1.36:1 typical)
- Miniature shielded package



CASE STYLE: HF1139

Product Overview

SXLP-400+ is a lowpass filter fabricated using SMT technology. Covering up to 400 MHz, these units offer low insertion loss, good matching within the passband and high rejection. This model also offers flat group delay characteristics. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Wide rejection up to 6000 MHz	This enables the filter to attenuate spurious signals and reject harmonics over a broad band of frequency.
Good VSWR, 1.36:1 typical over Passband	The model has very good return loss which provides good matching when used with other devices.
Sharp roll off shape factor, 1.2	Sharp shape factor helps in adjacent channel rejection and hence increased selectivity.
Small size, 0.44" x 0.74" x 0.27"	The small surface mount package enables the SXLP-400+ to be used in compact designs.

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



Surface Mount Low Pass Filter

SXLP-400+

50Ω DC to 400 MHz



CASE STYLE: HF1139

Features

- Flat group delay over passband
- Good VSWR, 1.36:1 typical over passband
- High rejection, 60 dB typical
- Shielded case
- Aqueous washable

Applications

- Test equipment
- Receivers/transmitters
- Harmonic rejection
- Military

Electrical Specifications at 25°C

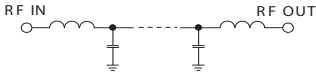
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC - 400	—	0.7	1.5	dB
	Freq. Cut-Off	F2	435	—	3.5	—	dB
	VSWR	DC-F1	DC - 400	—	1.36	—	:1
Stop Band	Rejection Loss	F3-F4	500 - 2400	20	27	—	dB
	VSWR	F3-F4	500 - 2400	—	20	—	:1

Maximum Ratings

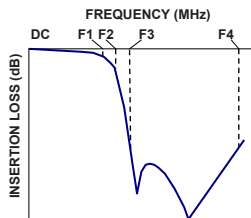
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1W max.

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

Functional Schematic



Typical Frequency Response

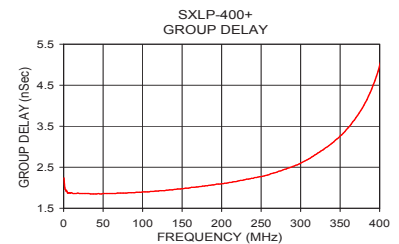
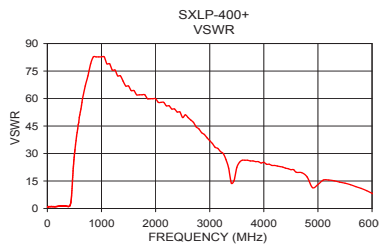
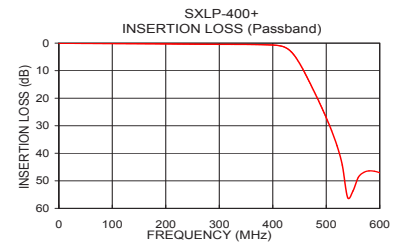
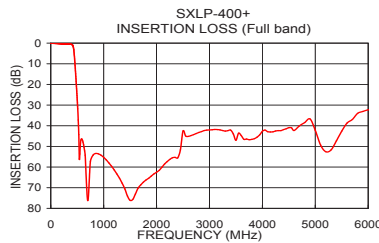


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
0.5	0.03	1.01	0.5	2.24
26.0	0.08	1.03	20.0	1.86
100.0	0.16	1.05	40.0	1.85
220.0	0.32	1.20	80.0	1.87
360.0	0.50	1.15	100.0	1.90
400.0	0.69	1.11	120.0	1.92
422.0	1.47	1.87	130.0	1.94
435.0	3.27	3.49	140.0	1.96
448.0	6.72	7.25	160.0	2.00
464.0	12.43	15.00	200.0	2.10
484.0	20.36	24.14	220.0	2.16
500.0	27.18	29.46	240.0	2.23
550.0	53.70	41.37	280.0	2.45
700.0	81.04	66.82	290.0	2.52
1000.0	55.96	82.73	300.0	2.60
1500.0	75.12	66.82	320.0	2.82
1750.0	67.54	62.05	340.0	3.09
2000.0	62.91	59.91	360.0	3.46
2200.0	57.66	56.04	380.0	4.01
2400.0	55.66	52.65	400.0	4.98

+RoHS Compliant

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



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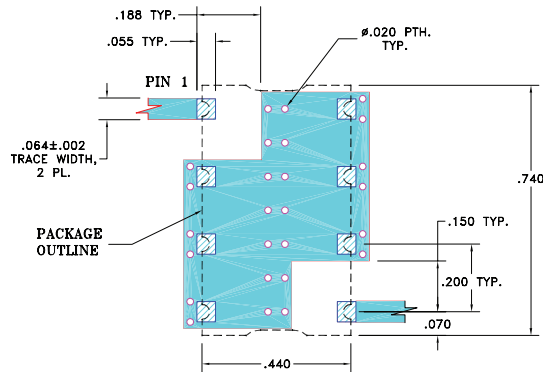
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M160153
SXLP-400+
EDR-9972UF1
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Pad Connections



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

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

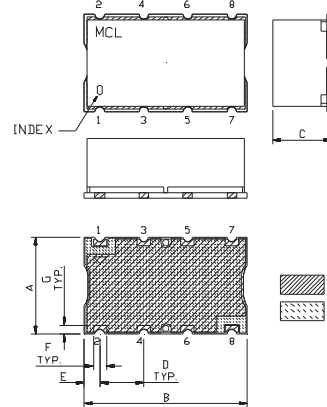


NOTE:

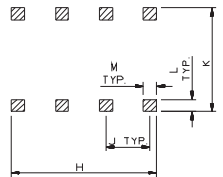
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025" ± .002". COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

-  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	3.0	

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