

Surface Mount Low Pass Filter

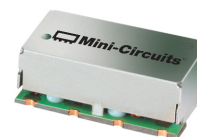
SXLP-13+

50Ω

DC to 13 MHz

The Big Deal

- Low insertion Loss typical 0.5 dB
- Sharp roll-off
- Wide stop band rejection till 2200 MHz
- Very good VSWR typical 1.3:1
- Miniature shielded package



Generic photo used for illustration purposes only
CASE STYLE: HF1139

Product Overview

The SXLP-13+ is a lowpass filter in a shielded package (size of 0.440" x 0.740" x 0.270") fabricated using SMT technology. Covering DC to 13 MHz band width, these units offer good matching within the passband and high rejection 44 dB typical. This model uses 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
Sharp roll-off	Sharp roll-off, this will attenuate frequencies closer to the passband with good rejection.
High rejection	This enables the filters to attenuate spurious signals and reject harmonics for broadband frequency.
Small size, 0.440" x 0.740" x 0.270"	The small surface mount package enables the SXLP-13+ to be used in compact designs.

Notes

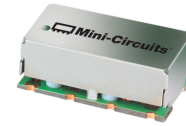
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Features

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Applications

- Receivers / Transmitters
- Broadcasting
- Remote controlled sensors

Electrical Specifications at 25°C

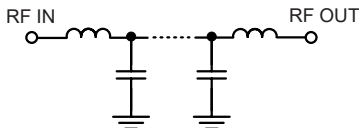
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-13	—	0.5	1.2 dB
	Freq. Cut-Off	F2	15.1	—	3.0	dB
	VSWR	DC-F1	DC-13	—	1.3	:1
Stop Band	Rejection Loss	F3	18.5	20	30	dB
		F4-F5	20-2200	28	44	dB
	VSWR	F3-F5	18.5-2200	—	20	:1

Maximum Ratings

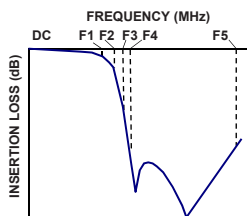
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W max.

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

Functional Schematic



Typical Frequency Response

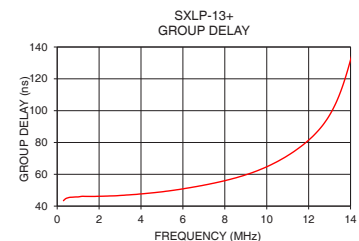
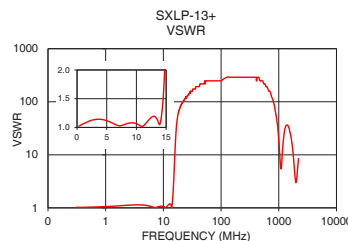
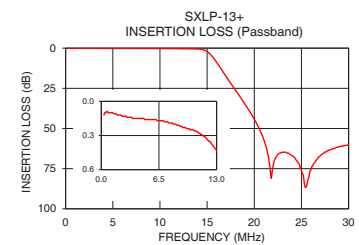
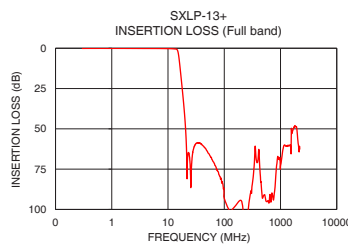


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
0.3	0.12	1.02	0.3	43.42
1.0	0.10	1.06	0.5	45.16
8.0	0.19	1.04	1.0	45.77
13.0	0.43	1.19	2.0	46.18
14.5	0.89	1.50	3.0	46.69
15.0	2.11	2.77	4.0	47.67
15.1	2.53	3.21	5.0	48.98
15.2	3.02	3.76	6.0	50.84
16.0	8.79	13.49	7.0	53.17
17.3	20.12	45.72	8.0	55.97
18.0	26.10	59.91	8.5	57.68
18.5	30.37	66.82	9.0	59.68
20.0	44.23	82.73	9.5	61.98
100.0	93.13	248.17	10.0	64.72
500.0	91.46	248.17	10.5	67.95
1000.0	73.03	19.54	11.0	71.76
1500.0	60.11	32.18	11.5	76.20
2000.0	54.06	3.02	12.0	81.46
2100.0	61.22	4.88	12.5	88.07
2200.0	62.60	8.51	13.0	97.19

+RoHS Compliant

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



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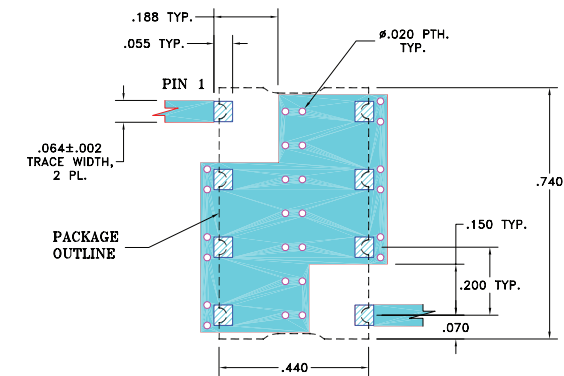
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Pad Connections

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

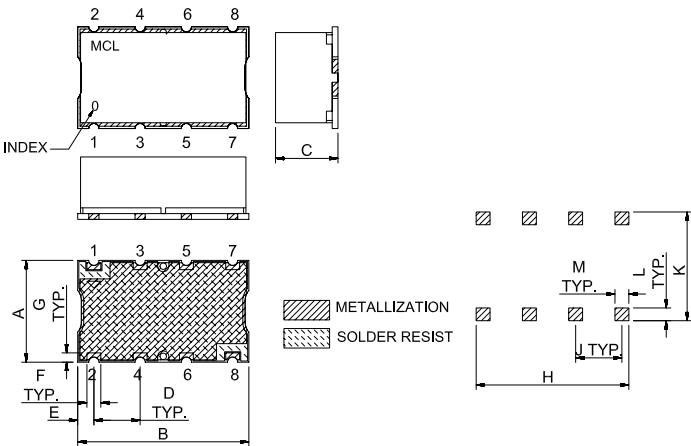
Demo Board MCL P/N: TB-368+
Suggested PCB Layout (PL-230)



- 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



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

Note: Please refer to case style drawing for details

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