Surface Mount

Low Pass Filter

SXLP-16+

50Ω DC to 16 MHz

CASE STYLE: HF1139

The Big Deal

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

Product Overview

The SXLP-16+ 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 16 MHz band width, these units offer good matching within the passband and high rejection typical 40 dB. This model 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
Sharp roll-off	Sharp roll-off, this will attenuate frequencies closer to the passband with good rejection.
Good ultimate 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-16+ to be used in compact designs.

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Applications

- Defense system
- Test and measurement

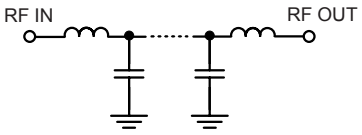
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-16	—	0.5	1.2	dB
	Freq. Cut-Off	F2	18.3	—	3.0	—	dB
	VSWR	DC-F1	DC-16	—	1.3	1.6	:1
Stop Band	Rejection Loss	F3	22	20	30	—	dB
		F4-F5	50-1000	—	40	—	dB
		F5-F6	1000-2200	—	30	—	dB
	VSWR	F3-F6	22-2200	—	20	—	:1

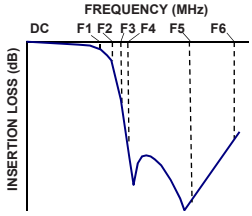
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W max.

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

Functional Schematic



Typical Frequency Response

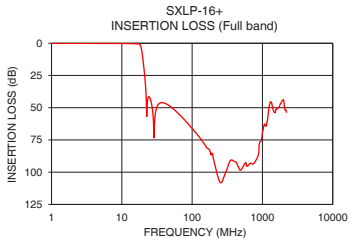


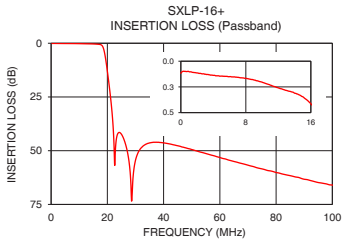
Typical Performance Data at 25°C

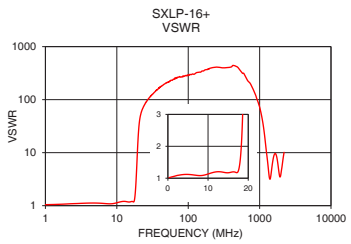
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.00	0.10	1.04	1.00	33.11
5.00	0.15	1.12	1.50	33.33
16.00	0.41	1.20	2.00	33.25
18.30	1.46	2.05	2.50	33.31
18.50	2.02	2.60	3.00	33.46
18.80	3.30	3.93	4.00	33.88
19.60	9.26	13.33	5.00	34.50
20.00	13.05	21.81	6.00	35.34
20.70	20.29	37.62	7.00	36.42
21.50	29.89	51.01	8.00	37.74
22.00	37.95	57.34	9.00	39.31
50.00	46.39	145.83	10.00	41.25
100.00	65.98	288.30	10.50	42.34
250.00	107.94	410.61	11.00	43.55
500.00	98.05	400.44	11.50	44.97
750.00	93.45	195.17	12.00	46.61
1000.00	69.26	72.51	12.50	48.45
1500.00	53.81	5.81	13.00	50.67
2000.00	44.17	4.19	14.00	56.28
2200.00	53.48	10.11	16.00	75.59

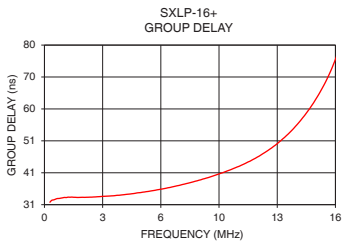
+RoHS Compliant

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









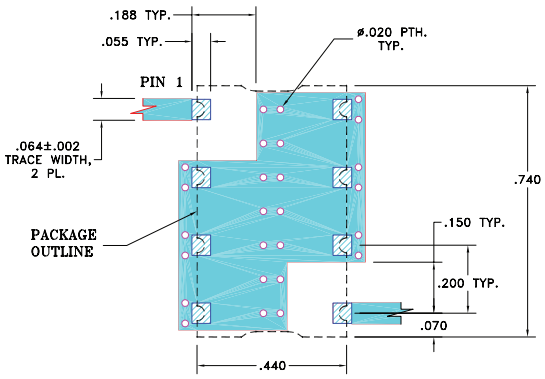
Notes

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

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)



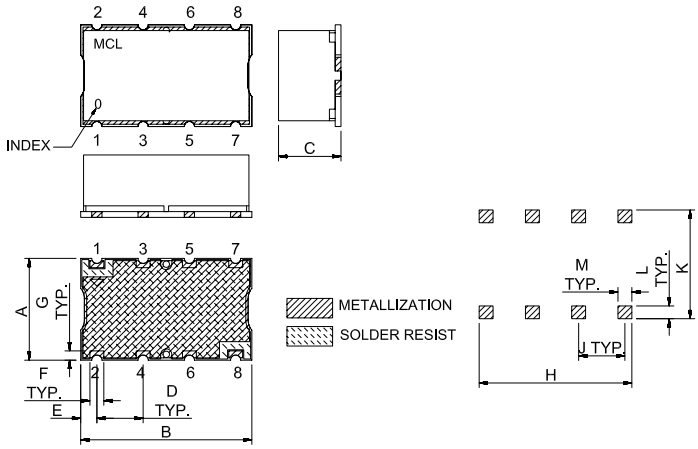
NOTE:

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

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