

# Plug-In Frequency Mixer

## SBL-1X+

Level 7 (LO Power +7 dBm) 10 to 1000 MHz



Generic photo used for illustration purposes only

CASE STYLE: A06

**+RoHS Compliant**

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

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

### Pin Connections

LO	8
RF	3,4 <sup>^</sup>
IF	1
GROUND	2,5,6,7
CASE GROUND	2,5,6,7

<sup>^</sup> pins must be connected together externally

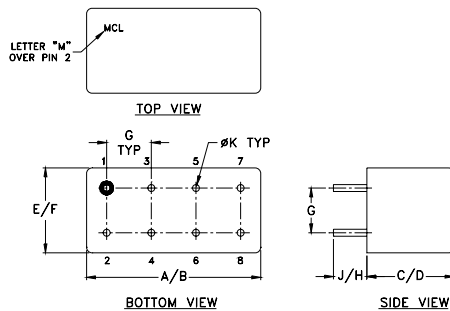
### Features

- excellent conversion loss, 5.88 dB typ.
- good L-R & L-I isolation, 40 dB typ.
- rugged welded construction

### Applications

- VHF/UHF
- defense & satellite communications

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.285	.310	.370	.400
19.56	20.32	7.24	7.87	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	5.2	

### Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
		L	M	U	L	M	U
10-1000	5.88	50	40	30	50	45	35

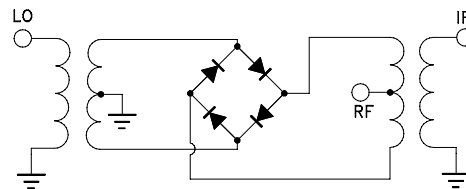
1 dB COMP.: +1 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]  
m = mid band [ $2 f_L$  to  $f_U/2$ ]

### Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
10.00	40.00	52.58	57.65	1.11	2.50
20.00	50.00	51.57	56.10	1.07	2.58
50.00	80.00	48.88	51.40	1.07	2.46
100.00	70.00	44.82	46.42	1.08	2.54
160.32	130.32	42.05	42.49	1.10	2.40
200.00	170.00	40.99	40.75	1.12	2.34
253.50	223.50	40.18	39.56	1.16	2.31
315.63	285.63	38.29	37.94	1.23	2.35
377.76	347.76	35.80	36.81	1.29	2.38
439.88	409.88	33.93	35.80	1.34	2.48
500.00	470.00	31.47	35.23	1.37	2.51
564.13	534.13	30.58	33.53	1.36	2.60
626.26	596.26	29.34	34.86	1.33	2.65
657.32	627.32	29.13	35.78	1.27	2.64
719.45	689.45	28.51	35.11	1.27	2.84
781.58	751.58	28.01	34.75	1.40	3.02
812.64	782.64	27.68	33.85	1.51	3.03
874.76	844.76	27.52	32.09	1.88	3.15
936.89	906.89	27.40	30.31	2.10	3.11
1000.00	970.00	27.28	30.12	2.89	3.07

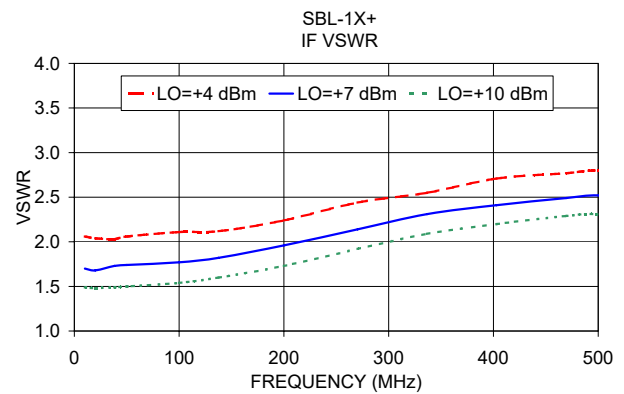
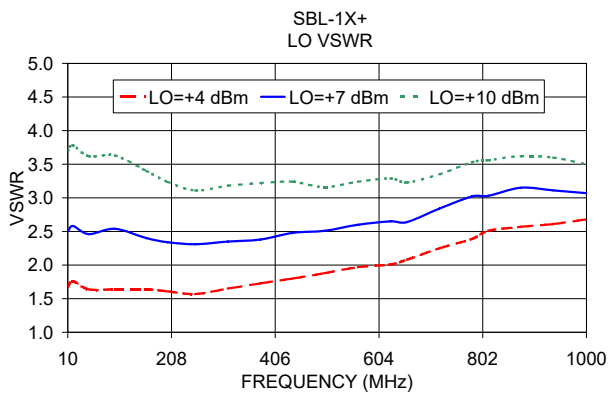
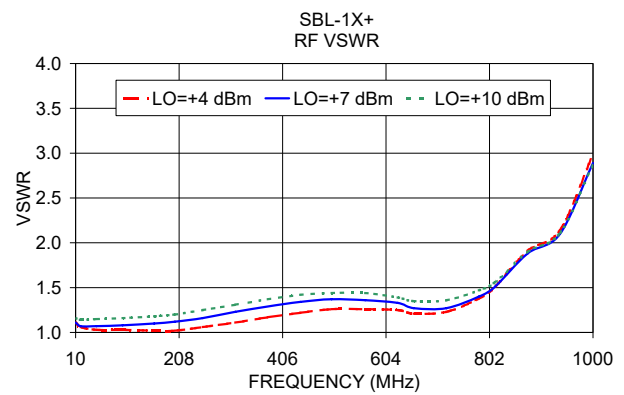
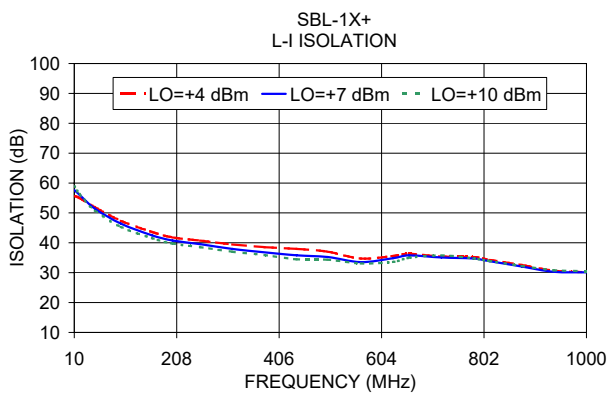
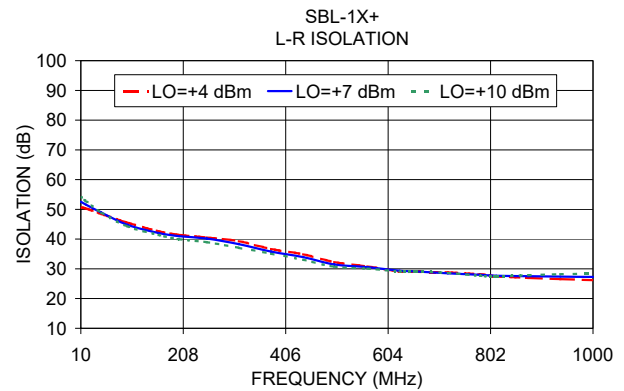
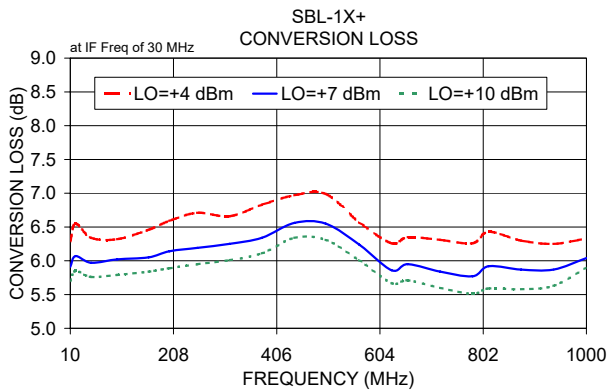
### Electrical Schematic



### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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