

# Plug-In Frequency Mixer

## SBL-2LH+

Level 10 (LO Power +10 dBm) 5 to 1000 MHz



CASE STYLE: A06  
PRICE: \$13.15 ea. QTY (10)

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

### Maximum Ratings

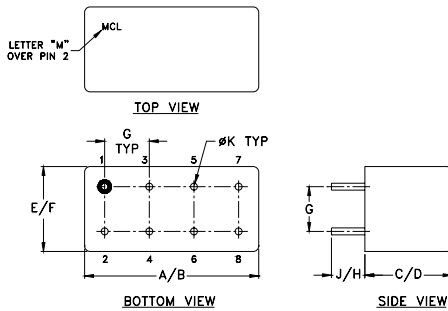
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

### Pin Connections

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

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

### 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	

### Features

- excellent conversion loss, 5.9 dB typ.
- high L-R isolation, 61 dB typ. L-I isolation, 54 dB typ.
- rugged welded construction

### Applications

- VHF
- defense & federal communications

### Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF f <sub>L</sub> -f <sub>U</sub>	IF	Mid-Band m		Total Range Max.	Total Range Max.	L		M		U		L		M		U	
		$\bar{X}$	$\sigma$			Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
5-1000	DC-1000	5.9	.09	7.5	9.5	67	45	61	30	57	30	68	40	54	30	43	20

1 dB COMP.: +5 dBm typ.

L = low range [f<sub>L</sub> to 10 f<sub>L</sub>]  
m = mid band [2f<sub>L</sub> to f<sub>L</sub>/2]

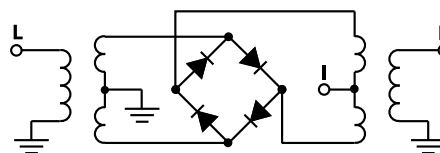
M = mid range [10 f<sub>L</sub> to f<sub>L</sub>/2]

U = upper range [f<sub>L</sub>/2 to f<sub>U</sub>]

### Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
5.00	35.00	5.97	52.74	87.33	1.25	2.82
10.00	40.00	5.89	52.59	81.78	1.18	2.63
20.00	50.00	5.90	52.51	76.47	1.16	2.68
50.00	80.00	5.96	52.73	68.83	1.18	2.62
95.45	65.45	6.01	52.59	68.37	1.19	2.50
100.00	70.00	6.04	52.35	67.59	1.21	2.50
185.91	155.91	5.82	52.03	63.99	1.22	2.40
200.00	170.00	5.77	52.24	62.23	1.23	2.48
276.36	246.36	5.75	51.93	58.87	1.23	2.38
366.82	336.82	5.81	52.59	53.25	1.22	2.39
457.27	427.27	5.88	47.42	55.40	1.21	2.42
487.42	457.42	5.91	45.90	49.79	1.20	2.42
500.00	470.00	5.94	48.30	46.54	1.19	2.43
547.73	517.73	6.07	57.22	40.10	1.18	2.44
638.18	608.18	6.63	48.69	37.95	1.15	2.49
728.64	698.64	7.20	42.92	36.76	1.11	2.47
819.09	789.09	7.24	41.04	32.27	1.05	2.47
909.55	879.55	7.27	41.87	29.47	1.15	2.57
969.85	939.85	7.69	44.77	28.21	1.30	2.60
1000.00	970.00	7.81	50.08	26.90	1.38	2.59

### Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

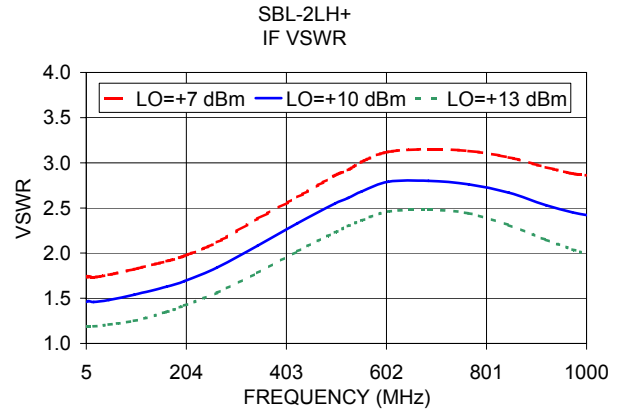
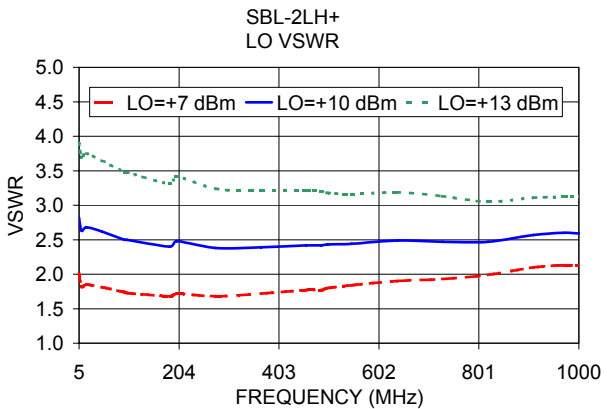
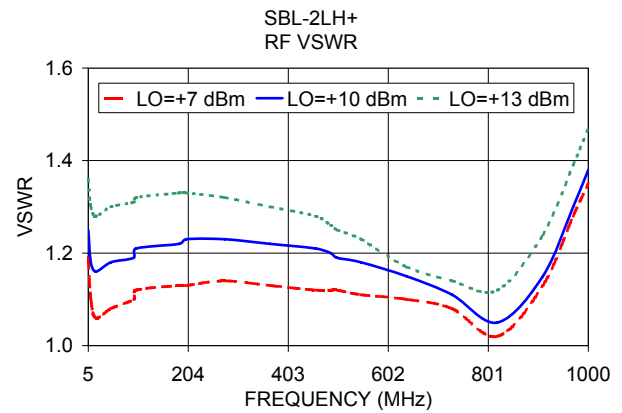
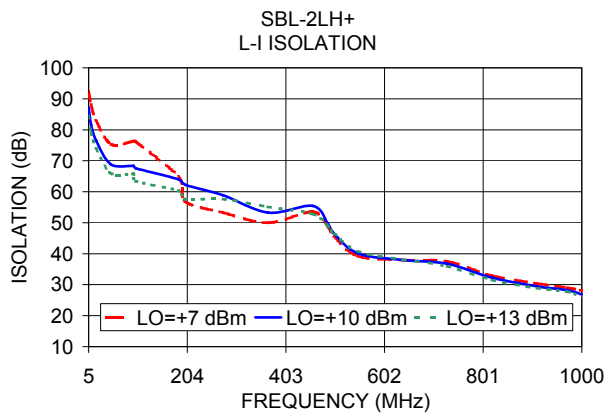
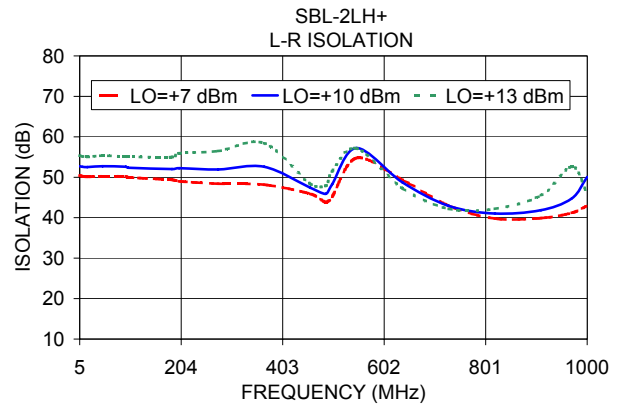
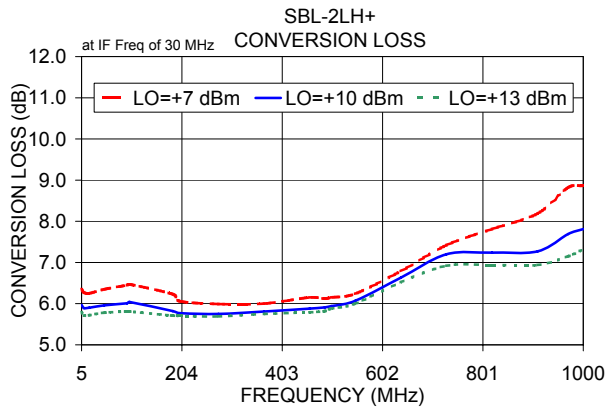
For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

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-Circuits' 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).

REV. B  
M113397  
SBL-2LH+  
DJ/TD/CP/AM  
071022  
Page 1 of 2



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

**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).