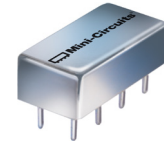


Plug-In Frequency Mixer

SBL-1+

Level 7 (LO Power +7 dBm) 1 to 500 MHz



CASE STYLE: A06

Maximum Ratings

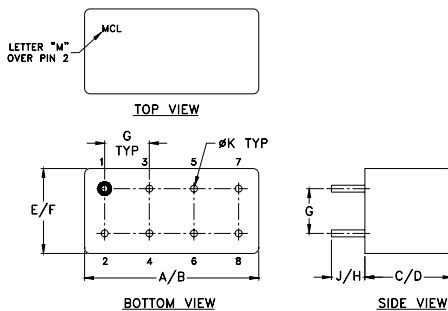
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

LO	8
RF	1
IF	3,4 [^]
GROUND	2,5,6,7

[^] 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, 5.6 dB typ.
- high L-R isolation, 45 dB typ. L-I isolation, 40 dB typ.
- rugged welded construction

Applications

- VHF
- defense & federal communications

+RoHS Compliant

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

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF f_L - f_U	IF	Mid-Band m		Total Range Max.	Total Range Max.	L		M		U		L		M		U	
		\bar{X}	σ			Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
1-500	DC-500	5.60	.09	7.0	8.0	60	45	45	35	40	25	45	35	40	25	30	20

1 dB COMP.: +1 dBm typ.

L = low range [f_L to $10 f_L$]

m = mid band [$2f_L$ to $f_U/2$]

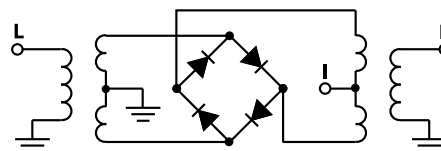
M = mid range [$10 f_L$ to $f_U/2$]

U = upper range [$f_U/2$ to f_U]

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
1.00	31.00	6.67	67.00	65.61	1.80	3.75
2.00	32.00	6.24	67.00	67.00	1.14	2.81
5.00	35.00	5.74	64.84	67.00	1.14	2.89
10.00	40.00	5.58	64.19	64.81	1.14	2.83
20.00	50.00	5.67	62.22	61.69	1.15	2.69
32.19	62.19	5.60	59.04	57.74	1.16	2.72
50.00	80.00	5.60	56.71	54.39	1.17	2.62
78.97	48.97	5.56	52.21	49.67	1.18	2.62
100.00	70.00	5.52	49.41	46.90	1.20	2.66
156.94	126.94	5.53	44.20	41.66	1.22	2.62
200.00	170.00	5.68	41.56	38.98	1.26	2.58
203.72	173.72	5.67	41.05	38.52	1.26	2.56
250.50	220.50	5.63	40.04	37.29	1.28	2.59
297.29	267.29	5.61	36.90	33.97	1.30	2.64
344.07	314.07	5.81	37.11	33.88	1.31	2.59
375.26	345.26	6.13	36.02	32.79	1.30	2.60
406.44	376.44	6.15	34.80	31.05	1.28	2.72
437.63	407.63	6.08	33.79	30.39	1.27	2.77
468.82	438.82	6.00	32.80	30.12	1.24	2.82
500.00	470.00	6.31	32.36	30.37	1.21	3.01

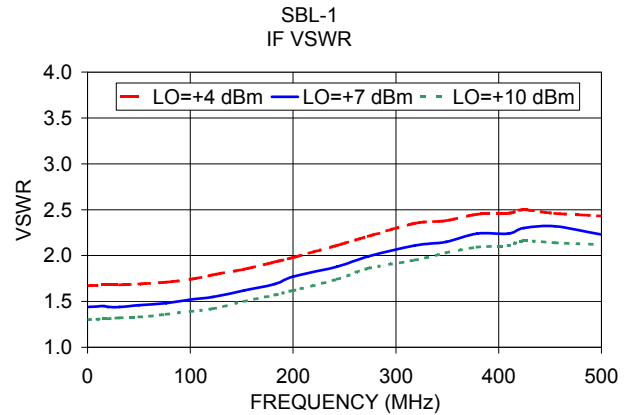
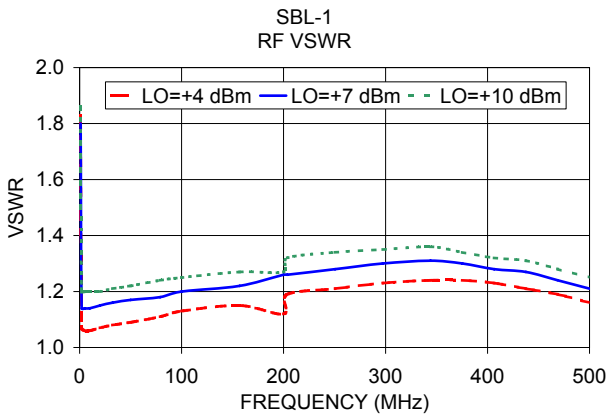
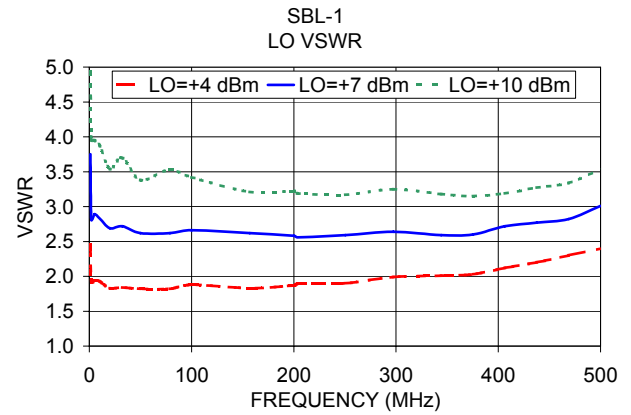
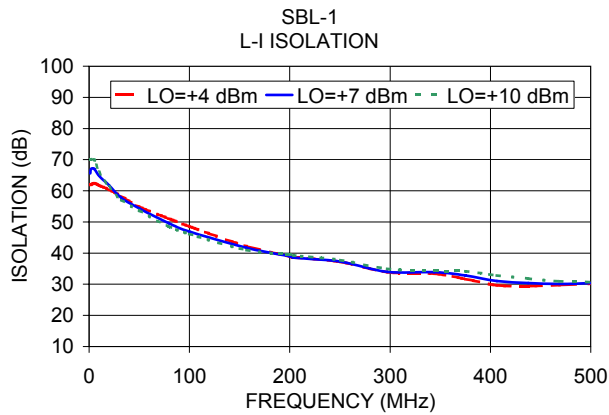
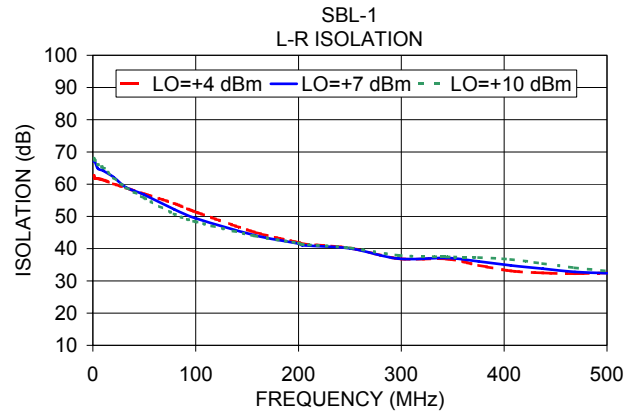
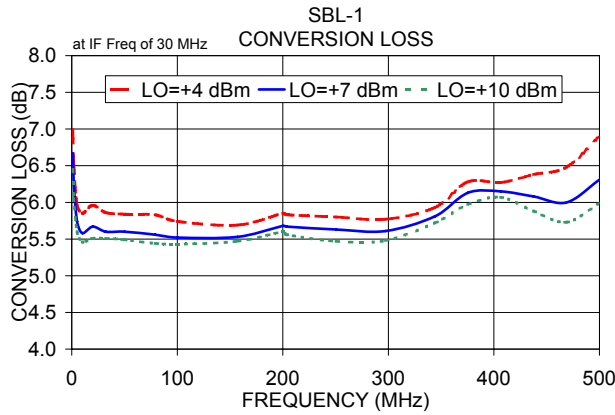
Electrical Schematic



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.
- The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp





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