

Plug-In Frequency Mixer

SBL-1+

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

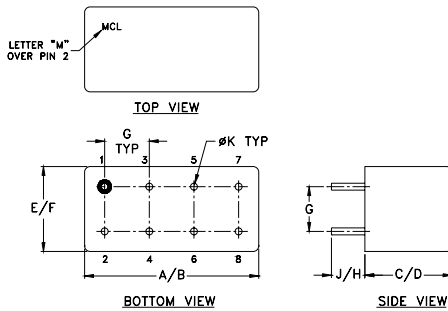
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

LO	8
RF	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

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band		Total	Typ.	L		M		U		L		M		U	
f_L - f_U		\bar{X}	σ	Range		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 [$2 f_L$ to $f_U/2$]

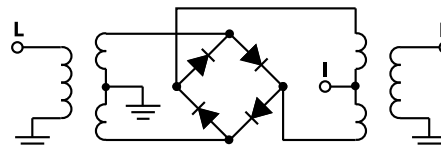
M = mid range [$10 f_L$ to $f_U/2$]

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

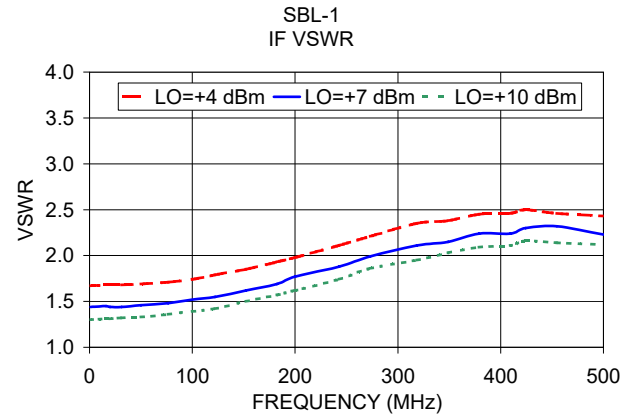
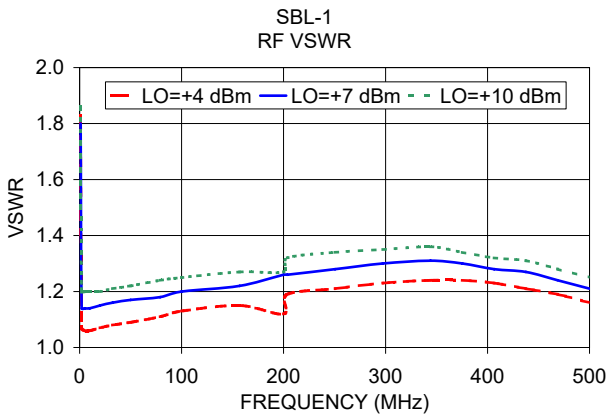
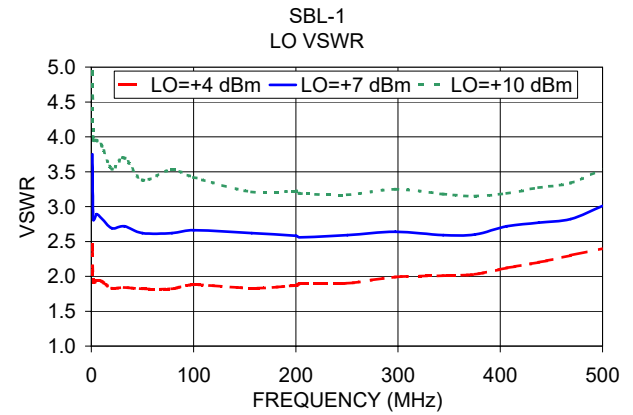
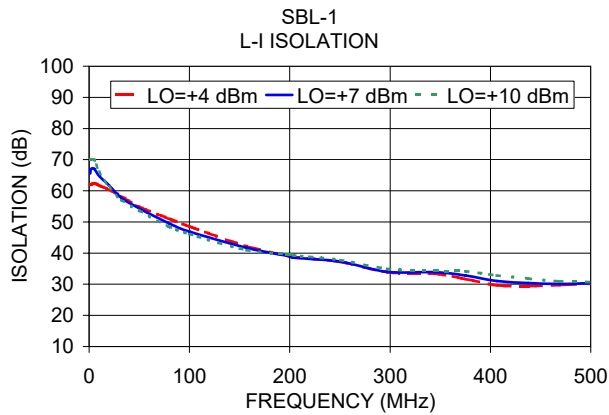
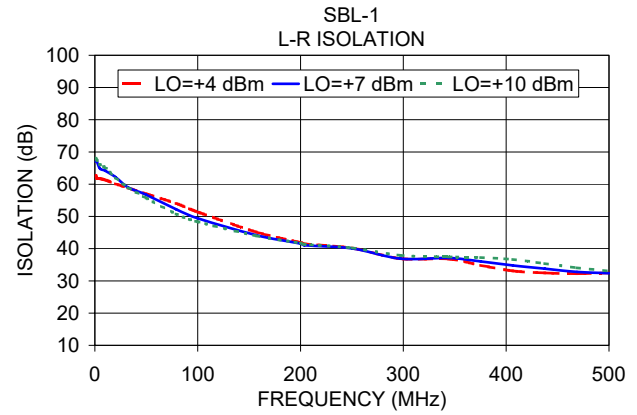
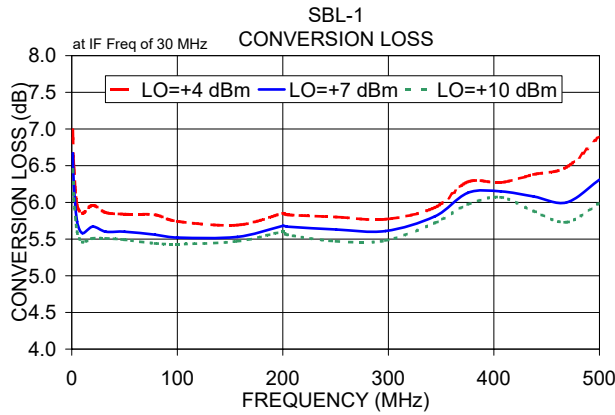
Electrical Schematic



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.
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