


# Frequency Mixers

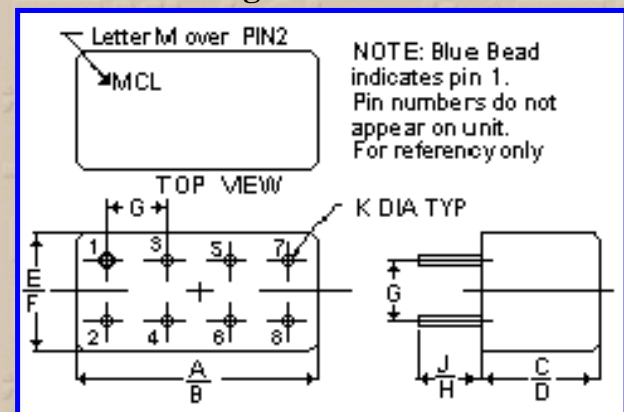
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## LO Power Level 10 dBm

### Pin Configuration

Port	LO	RF	IF	Gnd	Ext.	Case Gnd	Not Used
m	8	1	3	2,5,6,7	2,5,6,7	4	

### Outline Drawing



Case Style - A06 (inch,mm ) weight: 5.2 grams.

A	B	C	D	E	F	G	H	J
.770	.800	.285	.310	.370	.400	.200	.20	.14
19.558	20.320	7.239	7.874	9.398	10.160	5.080	5.080	3.556
K	L	M	N	P	Q	R	S	T
.031								
0.787								

Tolerance: .x ± .1 .xx ± .03 .xxx ± .015 inch.

Material and Finish:

Header material: C.R.S. Pin material: #52 alloy. Finish: electro tin, hot-oil flowed. Cover material:upro-nickel.

Mounting:

Insulated spacer available. Request P/N B14-045-01.

Pin's meniscus (of header): 0.015" max.

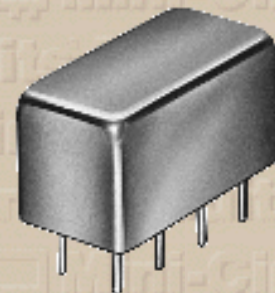
Special Tolerances:

Pin diameter ±.005 inch.

### Notes:

- +10 dBm LO, up to +5 dBm RF
- Absolute maximum power, voltage and current ratings:
  - RF power, 50mW
  - Peak IF current, 40mA
- Non-hermetic
- General Quality Control Procedures and Environmental Specifications are given in [Mini-Circuits Guarantees Quality](#). Hi-Rel, MIL description are given in [Hi-Rel and MIL](#)
- Prices and Specifications subjects to change without notice.

## SBL-11LH



### Electrical Specifications

#### SBL-11LH LO Power Level 10 dBm

Frequency MHz		Max. Conversion Loss dB		Min. LO-RF Isolation dB			Min. LO-IF Isolation dB		
LO/RF	IF	Mid-Band	Total Range	L	M	U	L	M	U
5.00-2000	10-600	8.5	9.5	45	30	20	35	20	16

L=low range( $f_L$  to  $10f_L$ ) M=mid range( $10f_L$  to  $f_U/2$ ) U=upper range( $f_U/2$  to  $f_U$ )

### Typical Performance Data

SBL-11LH		Conversion Loss (dB)			ISO	Isolation L-R (dB)			Isolation L-I (dB)		
RF MHz	LO MHz	LO +7 dBm	LO +10 dBm	LO +13 dBm	LO (MHz)	LO +7 dBm	LO +10 dBm	LO +13 dBm	LO +7 dBm	LO +10 dBm	LO +13 dBm
5.000	35.000	6.93	6.55	6.32	5.000	66.46	71.57	74.37	62.26	64.17	65.17
10.000	40.000	6.62	6.31	6.09	10.000	66.09	68.83	71.33	66.49	67.23	67.03
20.000	50.000	6.67	6.29	6.06	20.000	67.08	69.62	72.32	77.78	79.82	71.72
50.000	80.000	6.62	6.24	6.05	50.000	66.40	69.03	71.69	74.90	73.13	65.79
100.000	70.000	6.62	6.23	6.05	100.000	62.70	65.20	67.26	73.30	67.00	60.91
200.000	170.000	6.83	6.54	6.29	200.000	61.40	63.38	66.04	72.40	65.78	59.70
204.500	174.500	6.97	6.62	6.33	204.500	55.54	58.53	60.34	65.41	56.32	51.36
404.000	374.000	8.11	7.13	6.38	404.000	54.11	56.35	58.12	60.62	52.67	48.01
500.000	470.000	7.60	6.89	6.48	500.000	49.18	52.61	55.63	45.98	41.12	38.33
603.500	573.500	7.67	6.84	6.41	603.500	47.43	48.02	49.12	44.62	40.44	36.84
803.000	773.000	7.88	7.41	7.19	803.000	51.32	55.35	59.14	35.92	32.96	31.14
1000.000	970.000	7.79	7.38	7.14	1000.000	50.26	58.31	56.22	47.73	44.18	36.60
1002.500	972.500	7.79	7.38	7.15	1002.500	64.88	63.25	57.86	30.93	31.13	29.57
1200.000	1170.000	7.14	6.67	6.47	1200.000	54.71	60.14	59.01	30.31	31.22	30.17
1335.000	1305.000	8.53	7.76	7.39	1335.000	39.62	40.52	41.76	27.73	29.47	30.66
1500.000	1470.000	8.98	7.94	7.40	1500.000	37.34	36.05	34.39	26.38	25.50	26.52
1667.500	1637.000	7.77	6.93	6.58	1667.500	29.23	29.45	30.37	59.64	59.66	59.52
1867.000	1837.000	7.27	6.71	6.48	1867.000	34.07	35.05	36.24	45.27	45.23	45.16
1933.500	1903.500	7.25	6.76	6.49	1933.500	36.54	38.82	41.21	36.77	36.88	36.36
2000.000	1970.000	7.24	6.78	6.51	2000.000	37.97	40.63	43.51	30.92	30.77	30.42

RF/LO	VSWR RF port			VSWR LO port			IF	VSWR IF port		
FREQ. (MHz)	LO +7 dBm	LO +10 dBm	LO +13 dBm	LO +7 dBm	LO +10 dBm	LO +13 dBm	FREQ. (MHz)	LO +7 dBm	LO +10 dBm	LO +13 dBm
5.000	2.26	2.22	2.14	2.07	2.66	3.61	10.000	1.82	1.81	1.84
10.000	1.86	1.78	1.69	1.63	2.35	3.36	20.000	1.39	1.45	1.54
20.000	1.74	1.65	1.57	1.59	2.38	3.41	50.000	1.19	1.27	1.39
50.000	1.79	1.68	1.58	1.52	2.31	3.30	86.000	1.12	1.20	1.33
100.000	1.86	1.73	1.62	1.46	2.20	3.14	100.000	1.10	1.19	1.32
200.000	2.04	1.89	1.76	1.47	2.12	2.96	146.000	1.05	1.14	1.30
325.270	2.35	2.13	1.95	1.51	2.05	2.83	192.000	1.04	1.13	1.26
500.000	3.00	2.65	2.40	1.55	1.95	2.63	200.000	1.04	1.13	1.27
545.450	3.23	2.85	2.59	1.55	1.92	2.59	252.000	1.02	1.12	1.26
705.590	3.76	3.45	3.20	1.80	1.85	2.33	300.000	1.01	1.13	1.24
865.720	3.89	3.77	3.62	2.11	1.86	2.17	313.000	1.01	1.12	1.27
1000.000	3.72	3.72	3.67	2.42	1.84	1.95	328.000	1.00	1.13	1.27
1085.900	3.48	3.46	3.42	2.47	1.81	1.81	358.000	1.01	1.14	1.28
1246.040	3.12	3.01	2.96	2.81	1.78	1.53	403.000	1.04	1.16	1.31
1406.170	3.10	2.88	2.70	2.83	1.71	1.27	449.000	1.08	1.20	1.35
1566.300	3.53	3.22	2.94	2.71	1.57	1.09	500.000	1.14	1.27	1.42
1733.110	3.63	3.29	2.94	2.35	1.40	1.22	509.000	1.15	1.28	1.43
1893.240	3.05	2.77	2.54	1.73	1.32	1.48	555.000	1.23	1.37	1.52
1946.620	3.21	3.01	2.77	1.63	1.32	1.58	585.000	1.30	1.44	1.59
2000.000	3.20	3.01	2.79	1.47	1.34	1.65	600.000	1.34	1.48	1.64

Click Above for Actual Performance Data.



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P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

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