

# Ceramic Surface Mount Frequency Mixer WIDE BAND

## SIM-792LH+

Level 10 (LO Power +10 dBm) 2300 to 7900 MHz



Generic photo used for illustration purposes only

CASE STYLE: HV1195

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
IF Power	50mW

For extended temperature range, consult factory.  
Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

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

### Features

- wide bandwidth, 2300 to 7900 MHz
- low conversion loss, 6.0 dB typ.
- excellent IF BW, DC to 3000 MHz
- LTCC double balanced mixer
- tiny size, low profile, 0.08"
- useable as up and down converter
- protected by US patent 7,027,795

### Applications

- satellite up and down converters
- defense radar and communications
- line of sight links
- ISM
- WIFI
- blue tooth
- VSAT
- ISM

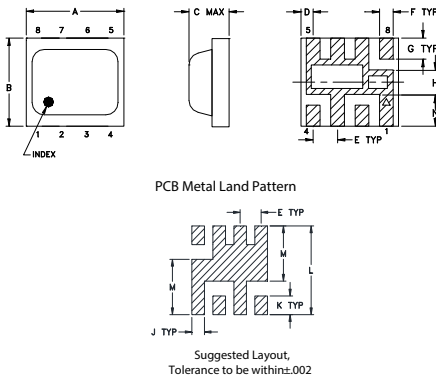
**+RoHS Compliant**

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

**Available Tape and Reel at no extra cost**

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200, 500

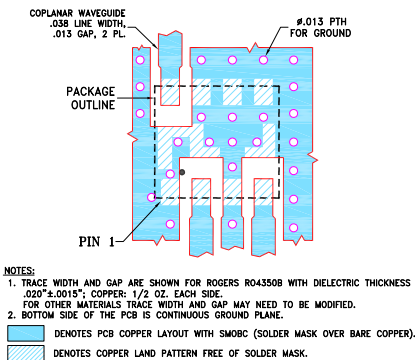
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.200	.180	.087	.025	.050	.028	.043
5.08	4.57	2.2098	0.64	1.27	0.71	1.09
H	J	K	L	M	N	wt
.050	.030	.043	.204	.127	0.065	grams
1.27	0.76	1.09	5.18	3.23	1.65	0.08

### Demo Board MCL P/N: TB-382 Suggested PCB Layout (PL-239)



### Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS* (dB)			LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 (dBm)
LO/RF $f_c - f_u$	IF	Typ.	$\sigma$	Max.	Typ.	Min.	Typ.	Min.	Typ.
2300-7900	DC-3000								
2300-3200		5.9	0.1	7.5	33	26	22	15	14
3200-3700		5.8	0.1	7.0	33	26	22	18	16
3700-4200		5.9	0.2	7.4	34	27	25	18	17
4200-7900		6.0	0.2	8.5	23	18	18	10	15

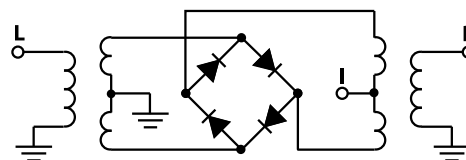
1 dB Compression: +5 dBm typ.

\* Conversion loss at 30 MHz IF.  $\sigma$  is a measure of repeatability from unit to unit.

### 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
2300.10	2330.10	6.53	31.65	19.49	2.02	3.94
2600.10	2630.10	6.17	37.57	22.02	2.24	2.69
2900.10	2930.10	5.93	34.54	21.86	2.18	2.22
3200.10	3230.10	5.81	30.68	22.44	2.11	1.96
3700.10	3730.10	6.00	31.31	22.17	1.88	1.92
4000.10	4030.10	6.05	33.70	25.10	1.86	2.12
4200.10	4230.10	6.04	32.33	28.76	1.98	2.20
4400.10	4430.10	6.49	32.06	29.82	2.47	2.35
4600.10	4630.10	6.18	30.83	22.66	2.16	2.46
4900.10	4930.10	6.88	30.01	16.73	3.15	2.63
5200.10	5230.10	6.76	28.94	15.88	3.08	2.82
5500.10	5530.10	6.30	27.31	17.28	2.54	2.94
5800.10	5830.10	5.98	25.61	19.18	2.07	2.68
6100.10	6130.10	5.83	24.20	22.10	1.65	2.06
6400.10	6430.10	5.94	23.21	27.53	1.60	1.27
6700.10	6730.10	6.40	23.58	31.64	1.56	1.29
7000.10	7030.10	6.73	22.55	34.87	1.68	1.78
7300.10	7330.10	6.62	22.13	22.89	1.82	2.40
7600.10	7630.10	7.26	22.83	18.59	2.27	2.84
7900.10	7930.10	7.13	25.60	15.46	2.72	3.32

### Electrical Schematic



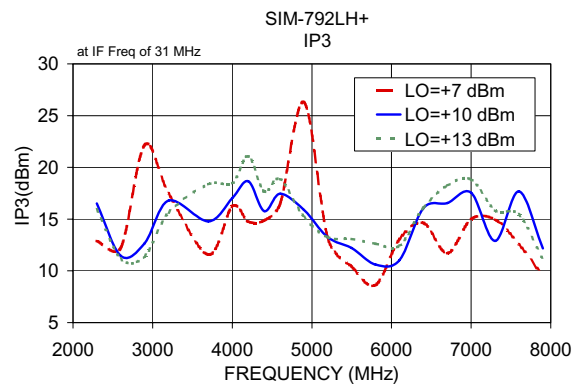
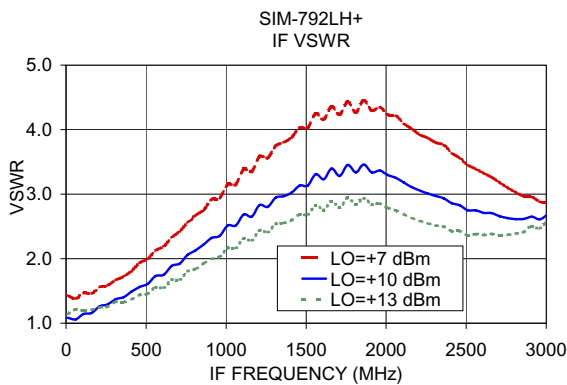
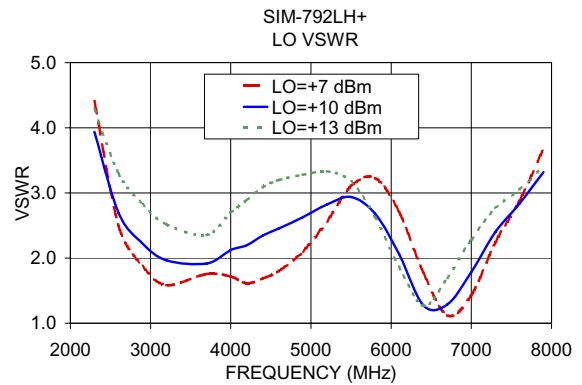
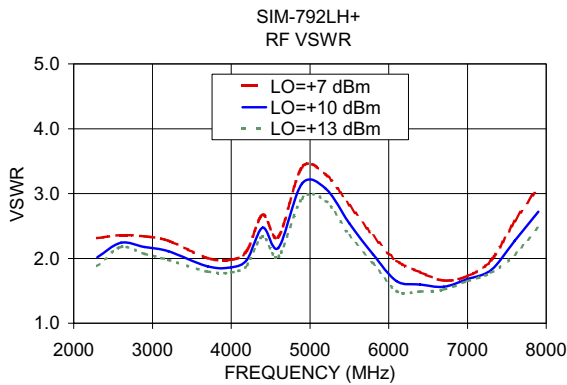
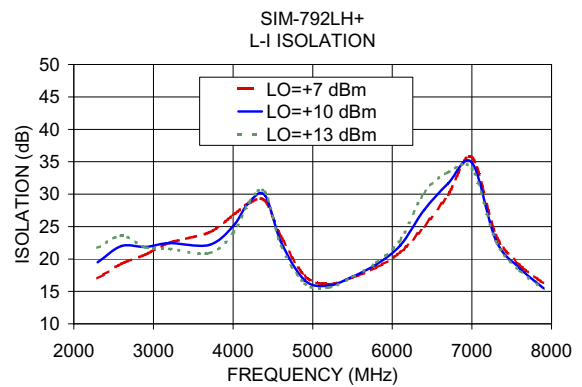
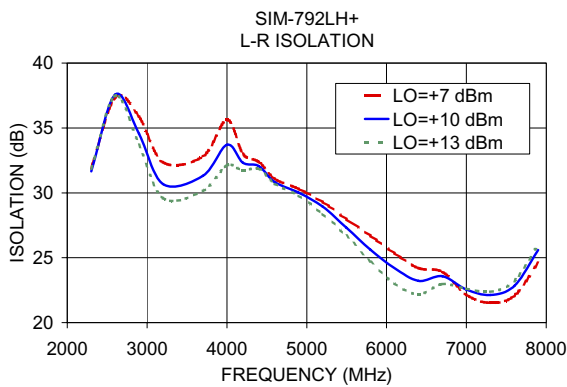
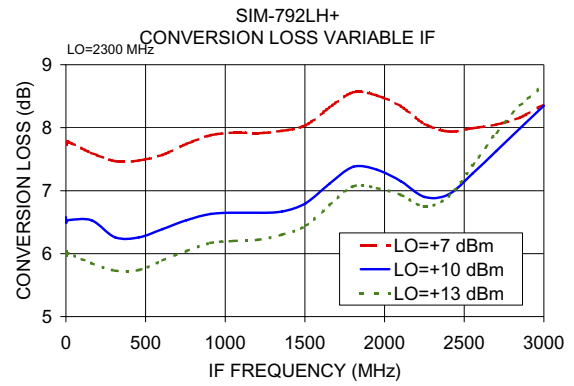
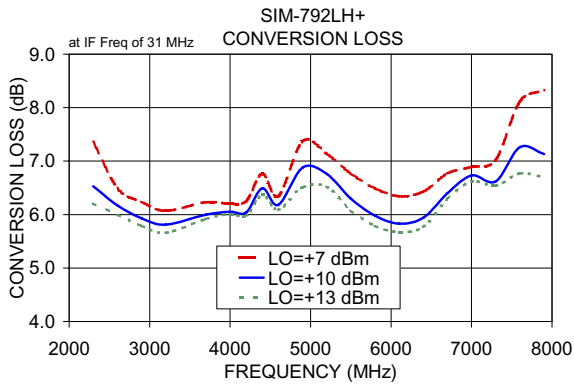
### Notes

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