

# Ceramic Surface Mount Frequency Mixer WIDE BAND

## SIM-73L+

### Level 4 (LO Power +4 dBm) 2400 to 7000 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
RF 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, 2400 to 7000 MHz
- low conversion loss, 6.2 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
- aqueous washable
- protected by US patent 7,027,795

#### Applications

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

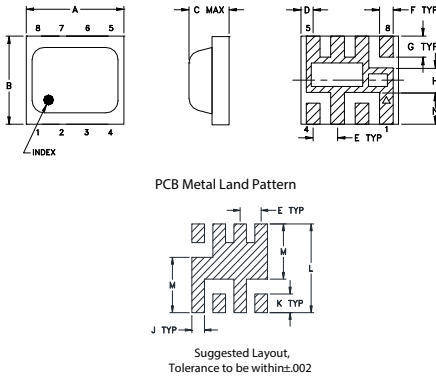
**+RoHS Compliant**

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

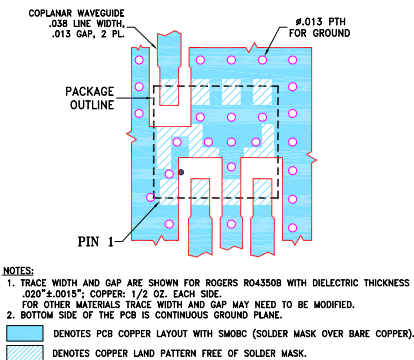
#### Outline Drawing



#### Outline Dimensions (inch)

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 at center band (dBm)		
	LO/RF $f_L - f_U$	IF	Typ. $\sigma$ Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ.			
<b>2400-7000</b>	<b>DC-3000</b>									
2400-3200			6.3	0.1	8.5	35	28	20	14	10
3200-4200			6.1	0.1	7.8	32	27	26	20	12
4200-7000			6.0	0.2	8.5	23	17	18	11	9

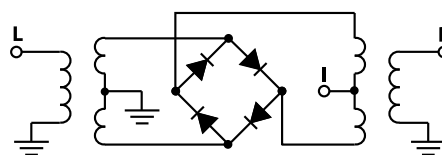
1 dB Compression: +1 dBm typ.

\* 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 +4dBm	LO +4dBm	LO +4dBm	LO +4dBm	LO +4dBm
2400.00	2431.00	6.89	35.71	17.07	2.65	2.95
2500.00	2531.00	6.57	37.21	17.53	2.82	2.44
2700.00	2731.00	6.19	39.47	19.32	2.87	1.96
2900.00	2931.00	6.05	34.89	22.18	2.83	1.72
3100.00	3131.00	5.90	32.79	24.37	2.73	1.74
3300.00	3331.00	6.11	32.25	27.18	2.76	1.88
3500.00	3531.00	6.29	31.58	28.20	2.70	2.03
3700.00	3731.00	6.19	31.36	29.17	2.41	2.29
4000.00	4031.00	6.26	33.62	35.84	2.70	2.11
4400.00	4431.00	6.28	30.28	21.82	3.38	1.87
4800.00	4831.00	7.37	30.30	16.05	4.73	2.03
5200.00	5231.00	6.64	28.00	17.21	3.43	2.77
5600.00	5631.00	6.18	25.85	20.00	2.75	2.66
5900.00	5931.00	5.89	25.08	22.79	2.20	2.60
6100.00	6131.00	5.78	24.38	26.07	2.05	3.49
6300.00	6331.00	5.73	23.41	29.97	1.68	2.46
6500.00	6531.00	5.84	23.16	29.13	1.61	1.72
6700.00	6731.00	5.88	23.17	26.55	1.61	1.54
6900.00	6931.00	5.73	22.21	26.06	1.36	1.25
7000.00	7031.00	5.78	21.68	24.72	1.44	1.20

#### Electrical Schematic



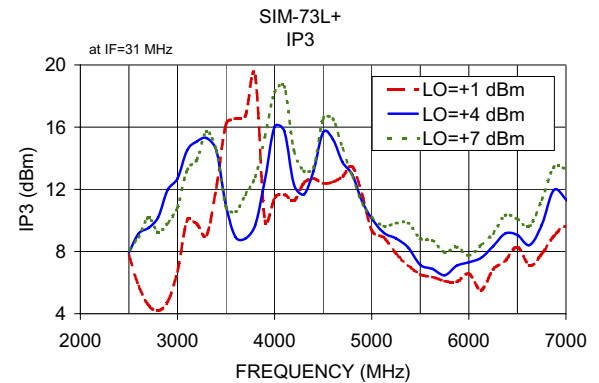
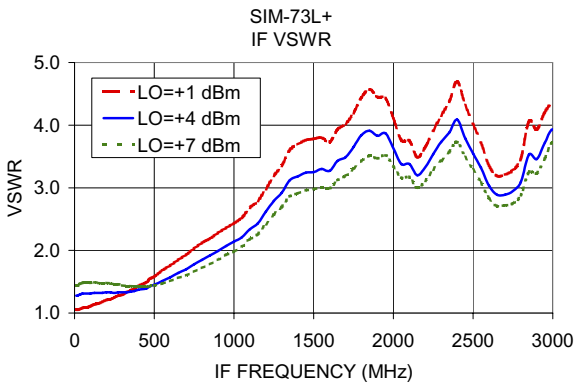
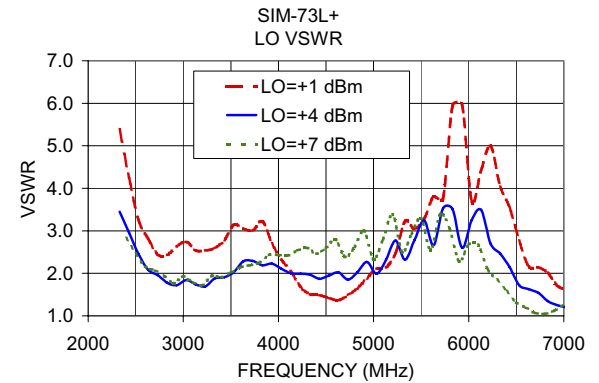
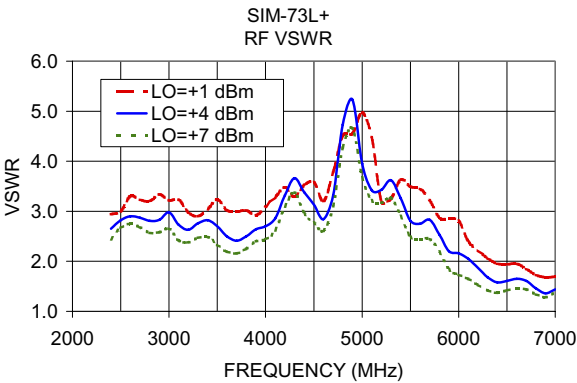
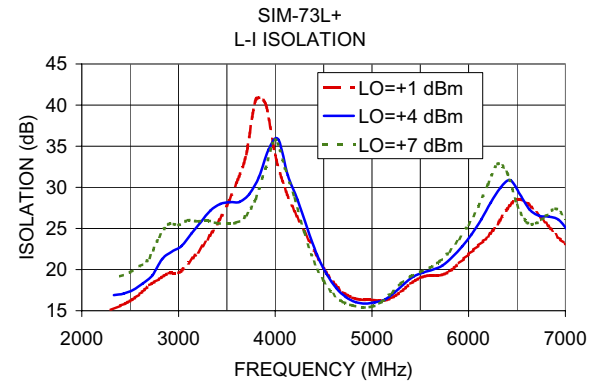
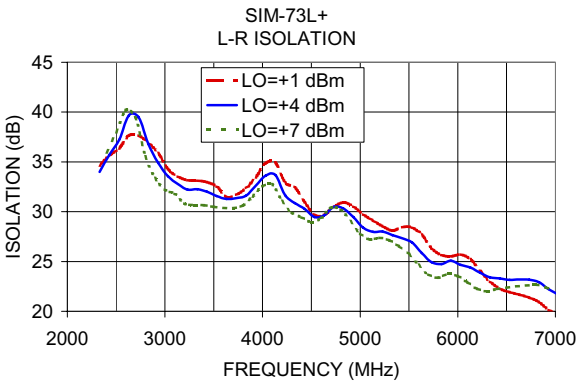
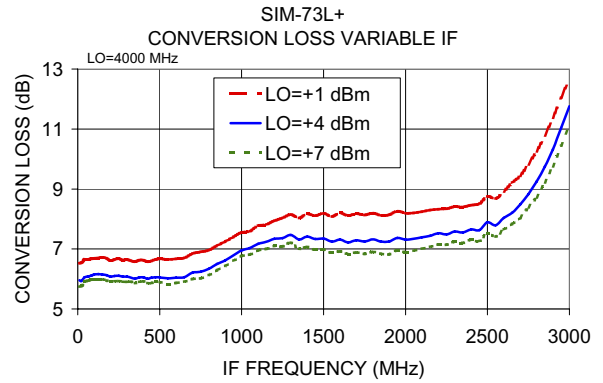
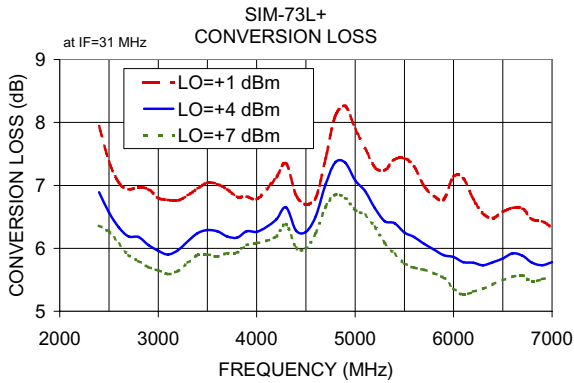
#### Notes

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