

Ceramic Surface Mount Frequency Mixer WIDE BAND

SIM-762H+

Level 17 (LO Power +17 dBm) 2300 to 7600 MHz



Generic photo used for illustration purposes only

CASE STYLE: HV1195

Maximum Ratings

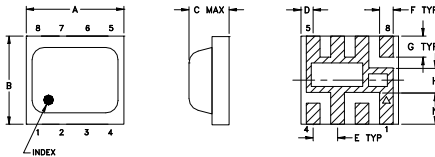
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	200mW

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

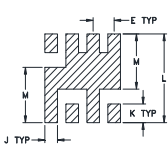
Pin Connections

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

Outline Drawing



PCB Metal Land Pattern

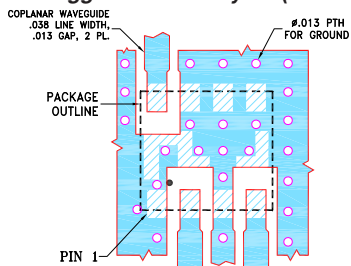


Suggested Layout, Tolerance to be within ±0.02

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)



- NOTES:
- TRACE WIDTH AND GAP ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .022" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

Features

- wide bandwidth, 2300 to 7600 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
- 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

Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS* (dB)	LO-RF ISOLATION (dB)		LO-IF ISOLATION (dB)		IP3 (dBm)	
		Typ.	Min.	Typ.	Min.		
LO/RF $f_L - f_U$	IF	Typ.	σ	Max.	Typ.	Min.	Typ.
2300-7600	DC-3000						
2300-3200		6.0	0.1	9.0	35	27	25
3200-3700		5.8	0.1	7.0	31	26	25
3700-4200		5.9	0.2	7.4	32	26	25
4200-7600		6.0	0.2	8.9	23	17	25

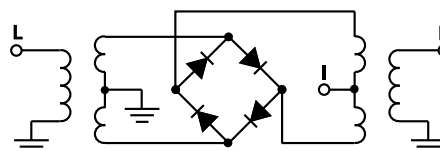
1 dB Compression: +14 dBm typ.

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

Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)		Isolation L-R (dB)		VSWR RF Port (:1)		VSWR LO Port (:1)	
	LO	LO +17dBm	LO	LO +17dBm	LO	LO +17dBm	LO	LO +17dBm
2300.10	2331.00	7.04	32.18	16.80	2.29	4.30		
2500.10	2531.00	6.55	36.45	18.89	2.44	2.74		
2700.10	2731.00	5.82	38.79	20.72	2.48	2.03		
3000.10	3031.00	5.95	34.64	21.82	2.46	1.83		
3300.10	3331.00	5.70	31.60	23.91	2.48	1.55		
3600.10	3631.00	5.95	32.01	24.07	2.23	1.63		
3900.10	3931.00	5.81	32.07	25.84	2.35	1.63		
4200.10	4231.00	6.33	30.84	30.80	2.46	1.65		
4500.10	4531.00	6.06	31.88	25.52	2.91	1.99		
4800.10	4831.00	7.18	29.30	17.07	3.12	2.30		
5100.10	5131.00	7.07	27.98	14.86	2.96	2.73		
5400.10	5431.00	6.87	27.26	15.51	2.93	3.30		
5700.10	5731.00	6.76	26.29	16.61	2.36	3.24		
6000.10	6031.00	6.08	24.89	17.89	1.84	3.24		
6500.10	6531.00	6.20	24.21	23.70	1.85	1.60		
6900.10	6931.00	6.41	23.06	25.91	2.27	1.26		
7300.10	7331.00	6.84	21.77	19.06	2.54	2.18		
7600.10	7631.00	8.11	24.39	15.26	3.34	3.79		
7800.10	7831.00	9.11	26.69	13.72	3.73	3.95		
8000.10	8031.00	10.13	27.17	11.55	4.03	5.28		

Electrical Schematic



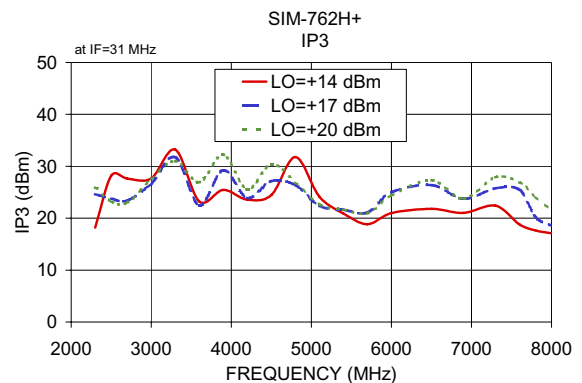
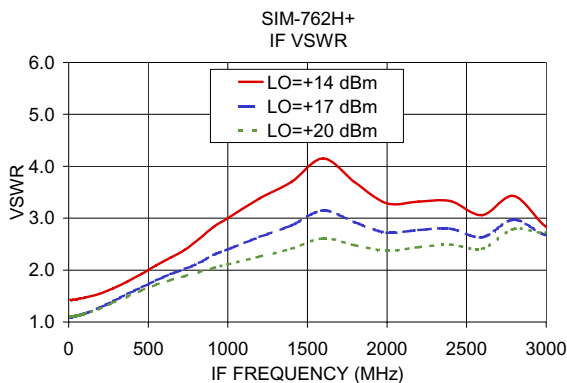
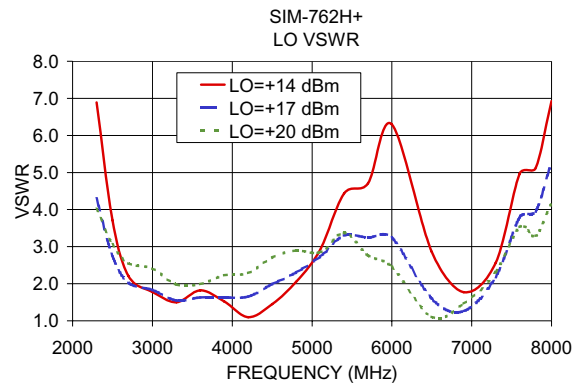
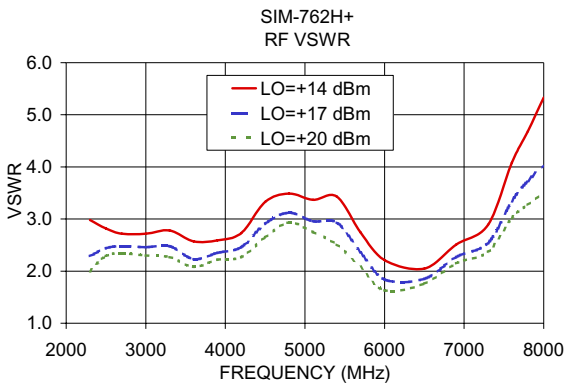
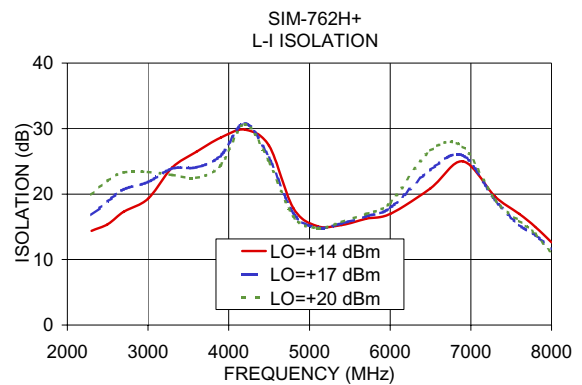
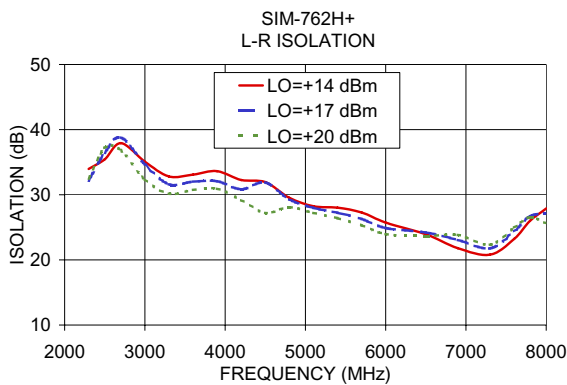
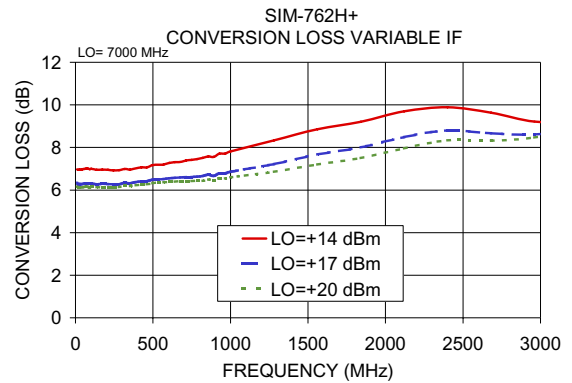
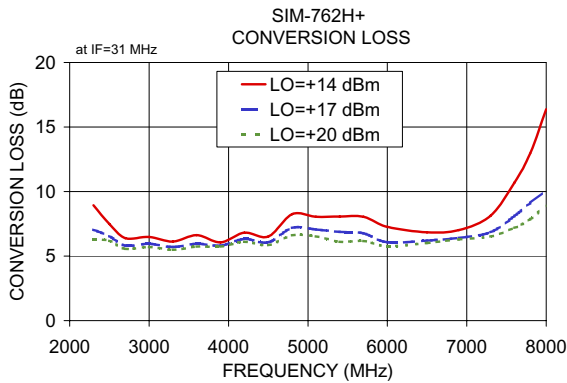
Notes

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