

Frequency Mixer

LRMS-5J

Level 7 (LO Power +7dBm) 5 to 1500 MHz



CASE STYLE: QQ569

Maximum Ratings

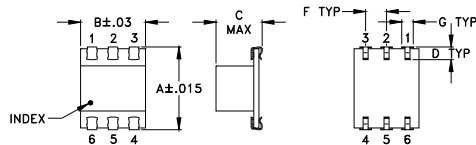
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

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

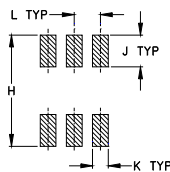
Pin Connections

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

Outline Drawing



PCB Land Pattern

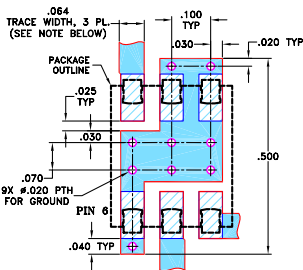


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.390	.31	.225	.060	--	.100	.045
9.91	7.87	5.72	1.52	--	2.54	1.14
H	J	K	L	M	wt	
.420	.120	.060	.100	--	grams	
10.67	3.05	1.52	2.54	--	0.50	

Demo Board MCL P/N: TB-44+ Suggested PCB Layout (PL-083)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. 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

- low conversion loss, 5.92 dB typ.
- excellent L-R isolation, 40 dB typ.
- aqueous washable
- J-leads for strain relief

Applications

- VHF/UHF
- satellite distribution
- cellular

Electrical Specifications

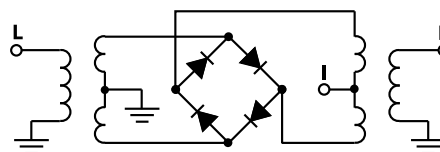
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)						
		L	M	U	L	M	U							
5-1500	DC-1000	60	40	40	20	30	18	55	30	30	18	15	8	12

1 dB COMP.: +1 dBm typ. L = low range [f_l to 10 f_l] M = mid range [10 f_l to f_u/2] U = upper range [f_u/2 to f_u]
Mid-Band m Total Range Max. Typ. Min. Typ. Min. Typ. Min. Typ. Min. Typ. Min. Typ. Min. Typ.

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
5.00	35.00	6.17	78.28	82.08	2.64	2.43
10.00	40.00	6.03	73.09	75.39	1.62	2.43
20.00	50.00	5.86	67.43	67.33	1.37	2.37
50.00	80.00	5.46	60.16	61.16	1.27	2.46
100.00	70.00	5.31	53.66	53.86	1.29	2.38
149.68	119.68	5.33	50.07	50.77	1.34	2.33
200.00	170.00	5.37	47.54	48.24	1.40	2.28
246.13	216.13	5.54	45.92	48.66	1.48	2.29
342.58	312.58	5.71	43.07	48.72	1.68	2.29
439.03	409.03	5.77	40.76	43.78	1.93	2.33
500.00	470.00	5.97	39.74	38.41	2.10	2.41
583.71	553.71	6.25	39.21	33.19	2.36	2.48
680.16	650.16	6.55	38.34	29.32	2.71	2.69
750.00	720.00	6.89	37.60	26.77	2.92	2.80
873.07	843.07	7.45	36.91	21.63	3.32	3.09
1000.00	970.00	7.70	35.50	18.14	3.56	3.20
1114.19	1084.19	7.76	33.72	16.32	3.69	3.18
1210.65	1180.65	8.02	32.50	14.96	3.73	3.19
1355.32	1325.32	8.41	30.92	13.25	3.75	3.12
1500.00	1470.00	8.83	28.64	12.28	3.83	2.98

Electrical Schematic

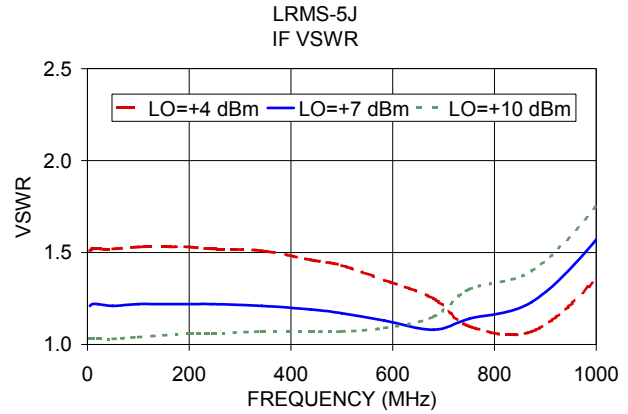
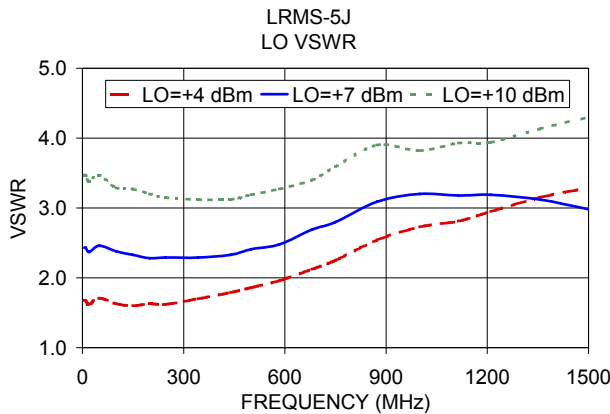
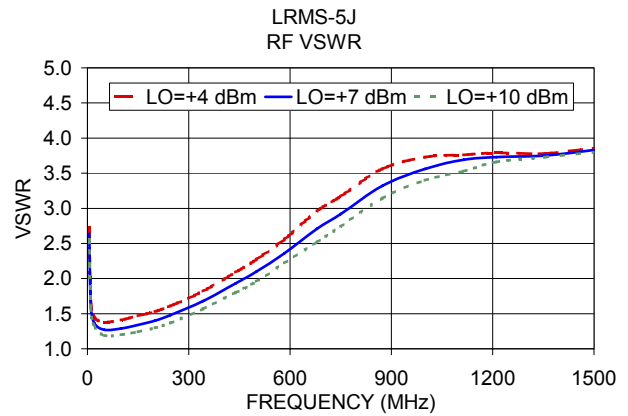
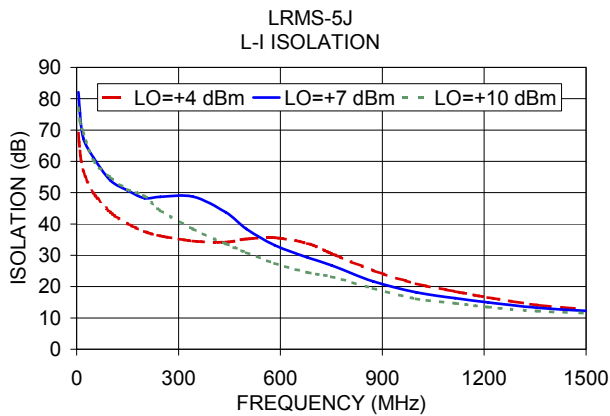
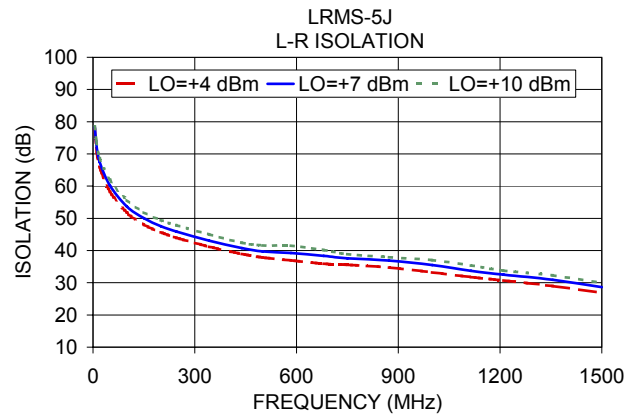
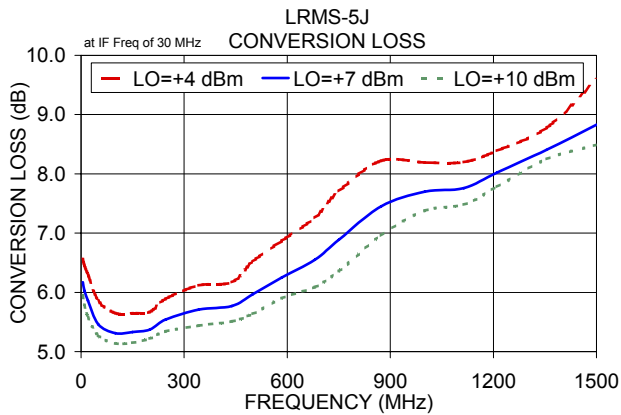


Notes
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NON-CATALOG

Performance Charts

LRMS-5J



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