

Frequency Mixers

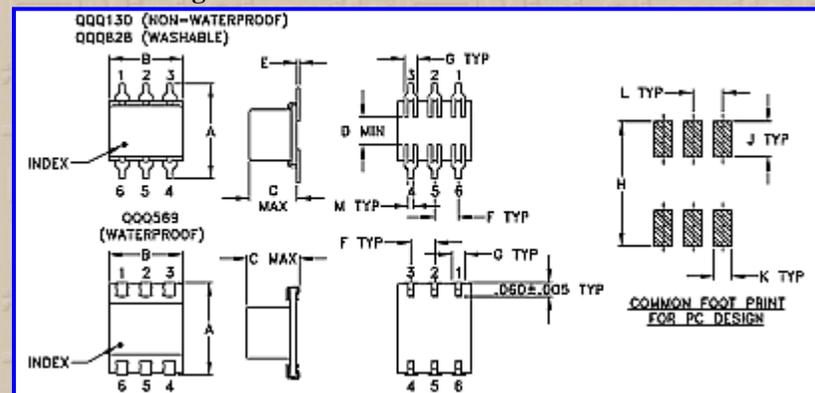
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LO Power Level 13 dBm

Pin Configuration

Port	LO	RF	IF	Gnd	Ext.	Case	Gnd	Not Used
w	1	4	5	2,3,6	-	-	-	-

Outline Drawing



Case Style - QQQ569 (inch,mm) weight: 0.5 grams.

A	B	C	D	E	F	G	H	J
.390	.31	.225			.100	.045	.420	.120
9.906	7.874	5.715			2.540	1.143	10.668	3.048
K	L	M	N	P	Q	R	S	T
.060	.100							
1.524	2.540							

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

Material and Finish:

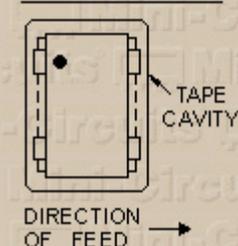
Case material: ceramic. Lead finish: tin-lead plate or tin plate

Special Tolerances:

Lead width ±.005 inch.

Packaging:

UNIT ORIENTATION



Packaging information:

Tape Width(mm): 32

Reel Size(inches): 13

Device Cavity Pitch(mm): 16

Devices Per Reel: 500

Notes:

- For Surface Mount Environmental Specifications, please click [here](#).
- 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.

LRMS-5MHJ



Electrical Specifications

LRMS-5MHJ LO Power Level 13 dBm

Frequency MHz	Max. Conversion Loss dB	Min. LO-RF Isolation dB			Min. LO-IF Isolation dB				
		L	M	U	L	M	U		
10.00-1500	DC-900	9.0	9.5	40	20	18	30	18	8

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

RF MHz	LO MHz	Conversion Loss (dB)			ISO (MHz)	Isolation L-R (dB)			Isolation L-I (dB)		
		LO +10 dBm	LO +13 dBm	LO +16 dBm		LO +10 dBm	LO +13 dBm	LO +16 dBm	LO +10 dBm	LO +13 dBm	LO +16 dBm
10.000	40.000	6.19	5.67	5.41	10.000	75.02	72.72	71.13	64.92	71.62	72.43
20.000	50.000	5.91	5.34	5.11	20.000	68.86	69.32	68.89	58.72	67.42	69.79
50.000	80.000	5.67	5.13	4.83	50.000	63.03	64.80	65.49	52.46	61.00	68.55
100.000	70.000	5.34	4.84	4.61	100.000	55.25	57.53	59.59	44.78	52.99	63.30
149.688	119.688	5.29	4.83	4.64	149.688	49.18	51.47	54.06	38.90	47.61	54.72
200.000	170.000	5.22	4.84	4.66	200.000	42.62	45.11	47.66	33.29	42.45	50.33
289.375	259.375	5.71	5.23	4.92	289.375	40.53	42.74	44.83	31.70	40.45	47.39
382.500	352.500	6.15	5.65	5.17	382.500	37.75	40.00	42.00	29.04	38.72	39.28
429.063	399.063	6.33	5.74	5.43	429.063	36.23	38.30	39.79	28.28	38.06	37.13
500.000	470.000	6.69	5.96	5.54	500.000	34.56	36.54	38.40	27.19	37.26	32.19
568.750	538.750	7.04	6.21	5.76	568.750	33.85	36.02	38.14	27.80	36.79	27.85
661.875	631.875	7.27	6.31	5.86	661.875	32.14	34.63	36.57	27.98	31.64	24.96
750.000	720.000	7.90	6.75	6.17	750.000	30.64	32.69	33.86	27.83	27.81	22.50
801.563	771.563	8.21	7.02	6.38	801.563	30.07	32.12	33.03	27.37	26.48	22.48
894.688	864.688	8.69	7.51	6.87	894.688	29.08	31.35	32.02	25.70	22.10	19.21
1000.000	970.000	8.85	8.06	7.47	1000.000	27.23	29.45	30.79	22.14	18.64	16.09
1127.500	1097.500	8.67	8.09	7.67	1127.500	25.53	27.46	29.11	19.50	16.61	14.31
1267.188	1237.188	8.60	8.18	8.07	1267.188	24.74	26.47	27.96	15.66	13.75	12.02
1406.875	1376.875	8.64	8.33	8.30	1406.875	24.15	26.08	27.52	13.49	12.44	11.22
1500.000	1470.000	9.20	8.59	8.44	1500.000	23.67	25.44	26.71	11.82	11.30	10.43

RF/LO	VSWR RF port			VSWR LO port			IF	VSWR IF port			Ø detection		
	FREQ. (MHz)	LO +10 dBm	LO +13 dBm	LO +16 dBm	LO +10 dBm	LO +13 dBm		LO +16 dBm	FREQ. (MHz)	LO +10 dBm	LO +13 dBm	LO +16 dBm	FREQ. MHz
10.000	1.82	1.72	1.66	1.31	2.09	3.34	5.000	1.51	1.15	1.06	10.00	494.00	0.05
20.000	1.60	1.47	1.39	1.27	2.05	3.20	10.000	1.52	1.15	1.06	20.00	491.80	0.09
50.000	1.55	1.39	1.28	1.34	2.09	3.15	20.000	1.52	1.15	1.06	50.00	532.40	0.20
100.000	1.57	1.40	1.28	1.30	2.06	3.14	50.000	1.28	1.09	1.08	100.00	493.60	0.37
149.688	1.61	1.43	1.31	1.27	1.99	2.88	83.971	1.53	1.16	1.07	149.69	489.30	0.83
200.000	1.66	1.48	1.36	1.28	1.97	2.88	110.294	1.53	1.16	1.06	200.00	519.20	0.95
289.375	1.76	1.59	1.46	1.34	1.97	2.83	162.941	1.53	1.16	1.07	289.38	517.70	3.25
382.500	1.91	1.72	1.60	1.43	1.98	2.80	200.000	1.54	1.16	1.07	382.50	461.10	5.40
429.063	1.99	1.79	1.67	1.48	2.07	2.92	215.588	1.54	1.16	1.07	429.06	460.20	6.05
500.000	2.13	1.91	1.77	1.55	2.06	2.81	268.235	1.54	1.16	1.07	500.00	403.00	8.05
568.750	2.25	2.02	1.87	1.61	2.11	2.81	320.882	1.52	1.16	1.08	568.75	434.00	10.02
661.875	2.40	2.18	2.01	1.74	2.23	2.89	373.529	1.51	1.15	1.08	661.88	372.30	14.12
750.000	2.56	2.32	2.18	1.86	2.32	2.97	426.177	1.49	1.14	1.08	750.00	417.80	18.21
801.563	2.66	2.41	2.27	2.00	2.44	3.15	478.824	1.46	1.12	1.09	801.56	374.50	21.66
894.688	2.79	2.56	2.43	2.18	2.61	3.27	531.471	1.42	1.10	1.11	894.69	400.70	23.39
1000.000	2.89	2.72	2.59	2.32	2.70	3.33	610.441	1.35	1.05	1.15	1000.00	427.80	22.17
1127.500	2.95	2.85	2.77	2.63	2.90	3.45	689.412	1.26	1.01	1.22	1127.50	424.30	17.52

1267.188	3.04	3.03	3.00	3.02	3.14	3.57	768.382	1.19	1.16	1.33	1267.19	394.10	25.82
1406.875	3.21	3.25	3.29	3.65	3.52	3.81	847.353	1.13	1.20	1.39	1406.88	360.90	33.65
1500.000	3.34	3.40	3.50	4.20	3.82	4.03	900.000	1.12	1.26	1.44	1500.00	407.70	27.87

Click Above for Actual Performance Data.



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