

Non-Catalog Model

Frequency Mixer

LRMS-1R

Level 7 (LO Power +7 dBm)

Important Note

This is a non-catalog model and can be manufactured on specific request.
Pricing and delivery information can be supplied upon request.



Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : QQQ130

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (fL to fU)	0.5		500	MHz
	RF (fL to fU)	0.5		500	MHz
	IF	0		500	MHz
Conversion Loss	mid band		5.8	7.0	dB
	Total Range			8.5	dB
LO-RF Isolation	Low Range	40	55		dB
	Mid Range	25	33		dB
	Upper Range	20	27		dB
LO-IF Isolation	Low Range	45	55		dB
	Mid Range	23	30		dB
	Upper Range	19	24		dB
1 dB Comp. Input Power			+1		dBm

Notes: Low Range = [fL to 10fL]
mid band = [2fL to fU/2]

Mid Range = [10fL to fU/2]

Upper Range = [fU/2 to fU]

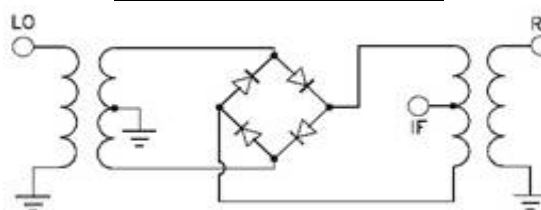
Phase detection, positive polarity

Hermetic sealed diodes

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

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

Electrical Schematics



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Typical Performance Data

RF (MHz)	LO (MHz)	CONVERSION LOSS (dB)			LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
		@LO (dBm)				@LO (dBm)			@LO (dBm)		
		+10	+13	+16		+10	+13	+16	+10	+13	+16
0.5	30.5	7.81	7.45	7.25	0.5	77.5	89.0	86.4	58.6	64.4	71.9
1.0	31.0	7.02	6.68	6.52	1.0	76.8	82.7	81.2	59.1	64.4	70.7
2.0	32.0	6.45	6.15	6.00	2.0	74.4	76.6	75.4	58.9	63.5	66.0
5.0	35.0	6.12	5.84	5.69	5.0	69.0	68.8	68.0	57.6	59.7	59.6
10.0	40.0	6.09	5.78	5.64	10.0	63.9	63.5	62.8	55.5	55.4	54.5
20.0	50.0	6.18	5.84	5.66	20.0	57.3	56.9	56.6	50.3	49.0	48.1
50.0	80.0	6.16	5.84	5.67	50.0	48.3	48.1	49.9	42.2	40.8	41.0
67.1	97.1	6.07	5.78	5.63	67.1	47.1	47.3	48.5	41.0	39.6	39.5
100.0	70.0	6.01	5.74	5.59	100.0	45.6	45.4	45.0	38.5	36.9	35.9
117.1	87.1	5.99	5.71	5.57	117.1	45.2	45.2	44.8	38.0	36.3	35.3
150.4	120.4	6.00	5.73	5.59	150.4	45.1	44.1	42.8	36.8	34.8	33.2
200.0	170.0	6.06	5.78	5.63	200.0	43.9	42.0	40.6	35.3	32.9	31.0
217.0	187.0	6.14	5.84	5.66	217.0	42.3	40.7	39.7	34.6	32.2	30.2
250.0	220.0	6.25	5.91	5.72	250.0	40.1	38.6	37.5	32.8	30.6	28.9
283.6	253.6	6.13	5.81	5.64	283.6	38.4	37.0	35.9	31.3	29.2	27.4
333.5	303.5	6.11	5.81	5.69	333.5	35.2	34.2	33.0	28.7	27.0	25.5
383.5	353.5	6.31	6.03	5.90	383.5	32.2	31.2	30.1	27.0	25.6	24.2
433.4	403.4	6.63	6.34	6.21	433.4	30.1	29.2	28.6	24.8	23.9	22.7
466.7	436.7	6.92	6.56	6.43	466.7	29.0	27.7	27.0	24.0	22.8	21.6
500.0	470.0	7.25	6.82	6.59	500.0	28.3	27.1	26.4	23.1	22.3	21.2

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Typical Performance Data

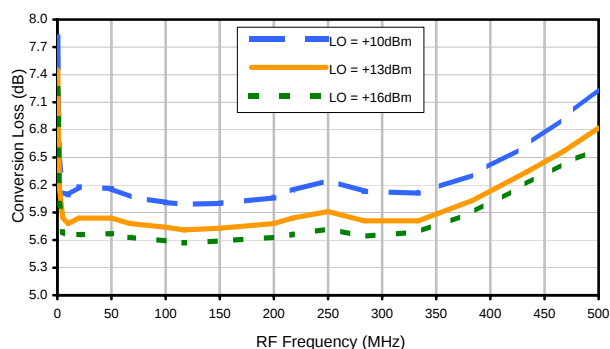
RF/LO (MHz)	RF VSWR (:1)			LO VSWR (:1)			IF (MHz)	IF VSWR (:1)			LO/RF (MHz)	max. DC output (mV)	DC Offset (mV)
	@LO (dBm)			@LO (dBm)				@LO (dBm)			@LO (dBm)		
	+10	+13	+16	+10	+13	+16		+10	+13	+16	+13		
5.0	1.13	1.11	1.12	1.58	2.27	3.21	5.0	1.41	1.24	1.12	0.5	233.1	-0.09
10.0	1.10	1.05	1.07	1.57	2.27	3.08	10.0	1.41	1.25	1.13	1.0	240.6	-0.08
20.0	1.09	1.02	1.05	1.68	2.43	3.34	20.0	1.41	1.24	1.13	5.0	245.9	-0.07
34.1	1.09	1.01	1.05	1.75	2.52	3.51	34.1	1.40	1.24	1.12	10.0	246.2	-0.06
50.0	1.09	1.01	1.05	1.77	2.50	3.52	50.0	1.41	1.24	1.12	20.0	245.3	-0.05
63.2	1.09	1.02	1.06	1.77	2.50	3.50	63.2	1.41	1.24	1.12	33.8	242.3	-0.03
77.8	1.09	1.03	1.06	1.72	2.48	3.45	77.8	1.41	1.24	1.13	50.0	238.7	-0.01
92.4	1.09	1.04	1.06	1.69	2.43	3.36	92.4	1.41	1.24	1.13	50.5	238.6	-0.01
100.0	1.10	1.04	1.06	1.67	2.40	3.33	100.0	1.41	1.24	1.13	67.1	235.6	-0.02
150.6	1.11	1.07	1.09	1.66	2.38	3.21	150.6	1.42	1.25	1.13	117.1	236.7	-0.22
194.3	1.13	1.09	1.11	1.63	2.29	3.12	194.3	1.42	1.26	1.14	167.0	245.0	0.09
223.4	1.15	1.11	1.13	1.63	2.29	3.10	223.4	1.43	1.27	1.15	200.0	241.0	0.37
250.0	1.16	1.13	1.14	1.63	2.25	3.03	250.0	1.42	1.25	1.14	217.0	238.6	0.89
296.2	1.19	1.17	1.18	1.64	2.28	3.03	296.2	1.44	1.28	1.16	266.9	244.0	1.77
325.3	1.22	1.19	1.20	1.67	2.30	2.97	325.3	1.46	1.29	1.18	300.2	249.6	2.52
354.4	1.25	1.22	1.24	1.68	2.23	2.87	354.4	1.46	1.30	1.18	333.5	251.5	4.04
398.1	1.29	1.28	1.29	1.72	2.29	2.91	398.1	1.46	1.30	1.19	383.5	243.6	5.99
427.2	1.32	1.31	1.32	1.73	2.24	2.82	427.2	1.46	1.31	1.20	416.8	235.0	7.51
470.9	1.38	1.37	1.38	1.81	2.34	2.95	470.9	1.46	1.31	1.21	466.7	221.1	9.24
500.0	1.43	1.43	1.43	1.83	2.31	2.89	500.0	1.45	1.31	1.21	500.0	216.5	11.38

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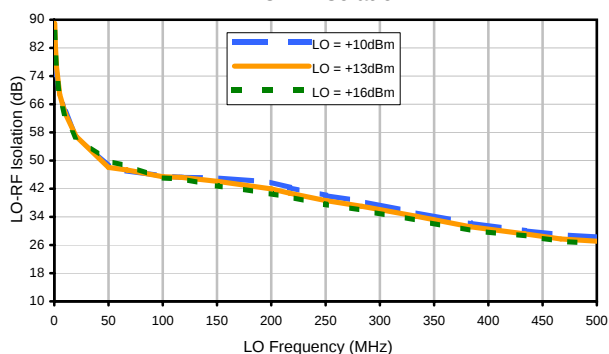
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Typical Performance Curves

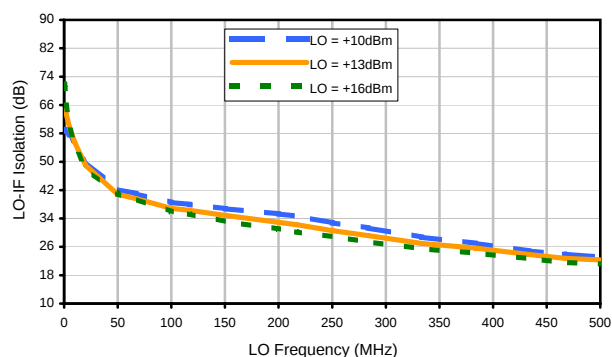
Conversion Loss



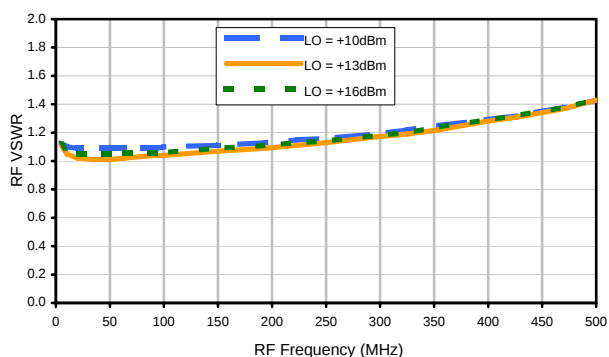
LO-RF Isolation



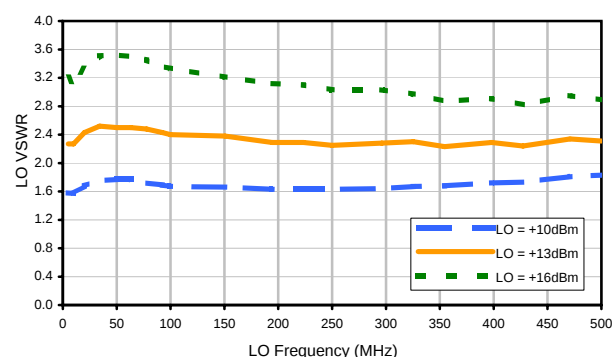
LO-IF Isolation



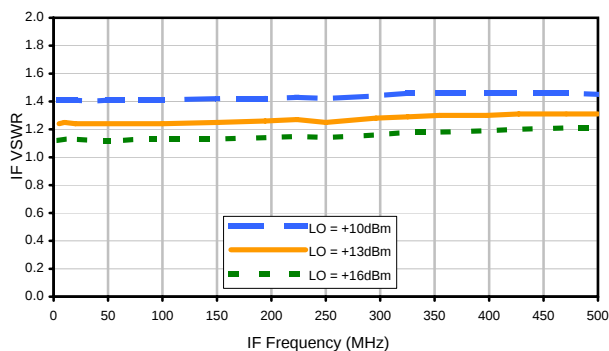
RF VSWR



LO VSWR



IF VSWR



Max. DC Output

