

Non-Catalog Model

Frequency Mixer

Level 7 (LO Power +7 dBm)

LMX-149

Important Note

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



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CASE STYLE : BB48

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (fL to fU)	10		1500	MHz
	RF (fL to fU)	10		1500	MHz
	IF	0		1500	MHz
Conversion Loss	mid band			7.0	dB
	Total Range			9.0	dB
LO-RF Isolation	Low Range	40	55		dB
	Mid Range	35	45		dB
	Upper Range	20	30		dB
LO-IF Isolation	Low Range	40	50		dB
	Mid Range	25	40		dB
	Upper Range	12	20		dB
1 dB Comp. Input Power			+1		dBm

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

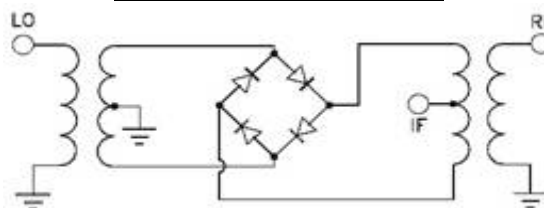
Mid Range = [10fL to fU/2]

Upper Range = [fU/2 to fU]

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

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

Electrical Schematics



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)		
		+7	+10	+13		+7	+10	+13	+7	+10	+13
10.0	40.0	5.89	5.55	5.41	10.0	64.0	67.0	65.3	64.0	67.0	63.8
20.0	50.0	5.95	5.61	5.44	20.0	64.0	61.1	59.6	64.0	60.0	58.0
145.5	115.5	5.91	5.65	5.54	145.5	46.3	45.2	44.1	44.0	43.2	42.6
190.6	160.6	5.96	5.73	5.59	190.6	44.5	43.1	42.0	41.8	41.3	40.6
235.8	205.8	6.02	5.77	5.60	235.8	43.2	41.7	40.6	40.4	40.0	39.3
326.1	296.1	5.90	5.68	5.53	326.1	41.0	39.5	38.6	38.2	37.9	37.2
416.4	386.4	6.16	5.87	5.68	416.4	39.2	38.1	37.2	36.2	35.9	35.4
500.0	470.0	6.08	5.77	5.56	500.0	38.1	37.3	36.7	34.5	34.6	34.6
551.8	521.8	6.07	5.79	5.59	551.8	37.4	36.7	36.2	33.5	33.6	33.3
642.1	612.1	6.19	5.89	5.65	642.1	36.8	36.5	36.1	31.9	32.2	32.2
732.4	702.8	6.45	6.08	5.81	732.4	36.8	37.0	36.7	30.5	31.3	31.4
822.7	792.7	6.68	6.26	5.93	822.7	36.8	37.1	37.3	29.1	30.1	31.1
913.0	883.3	7.15	6.56	6.16	913.0	37.0	37.2	37.5	28.5	29.3	29.7
1000.0	970.3	7.56	6.94	6.51	1000.0	37.5	37.6	37.9	28.4	29.1	29.9
1048.5	1018.6	7.69	7.22	6.77	1048.5	37.8	38.0	38.2	28.4	29.3	30.0
1138.8	1109.1	7.70	7.23	6.81	1138.8	38.3	38.8	38.9	28.1	29.1	29.8
1229.1	1199.1	7.74	7.24	6.82	1229.1	38.5	39.0	40.1	28.0	29.0	29.7
1319.4	1289.5	7.85	7.39	7.02	1319.4	38.5	38.9	39.0	28.2	28.9	29.7
1409.7	1380.0	7.99	7.38	7.05	1409.7	38.5	38.9	40.0	27.6	28.9	30.2
1500.0	1469.9	8.14	7.40	7.15	1500.0	39.6	40.1	40.3	28.9	29.6	31.0

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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)		
	+7	+10	+13	+7	+10	+13		+7	+10	+13	+10		
10.0	1.25	1.16	1.11	1.83	2.77	3.83	10.0	1.81	1.54	1.38	10.0	230.0	-0.08
50.0	1.20	1.10	1.03	1.89	2.94	4.19	50.0	1.78	1.53	1.38	20.0	229.4	-0.08
100.0	1.20	1.10	1.04	1.75	2.68	3.70	100.0	1.76	1.52	1.37	48.0	225.0	-0.09
145.5	1.20	1.10	1.06	1.77	2.62	3.52	145.5	1.73	1.52	1.37	50.0	224.9	-0.09
200.0	1.21	1.13	1.09	1.76	2.59	3.54	200.0	1.72	1.53	1.38	100.0	226.5	-0.09
280.9	1.23	1.17	1.14	1.83	2.54	3.50	280.9	1.69	1.52	1.40	162.2	228.7	-0.12
371.2	1.27	1.22	1.20	1.88	2.63	3.45	371.2	1.67	1.54	1.45	200.2	226.3	-0.16
461.5	1.31	1.30	1.28	2.00	2.83	3.56	461.5	1.65	1.55	1.50	276.3	234.0	-0.27
506.7	1.33	1.34	1.32	2.05	2.74	3.58	506.7	1.66	1.58	1.54	390.4	206.6	-0.53
597.0	1.39	1.41	1.40	2.21	2.80	3.67	597.0	1.65	1.62	1.60	466.5	210.3	-0.51
687.3	1.49	1.53	1.52	2.36	3.19	3.98	687.3	1.71	1.69	1.70	504.5	213.0	-0.58
777.6	1.62	1.66	1.66	2.55	3.30	4.11	777.6	1.76	1.76	1.75	580.6	217.2	-0.89
867.9	1.77	1.83	1.79	2.76	3.65	4.32	867.9	1.82	1.84	1.80	656.7	205.9	-1.08
958.2	1.97	2.03	2.00	3.03	3.80	4.46	958.2	1.88	1.92	1.87	770.8	189.7	-1.47
1003.3	2.08	2.17	2.12	3.11	3.93	4.39	1003.3	1.91	1.96	1.92	808.8	188.1	-1.63
1093.6	2.36	2.41	2.38	3.42	4.20	4.79	1093.6	1.92	1.98	1.94	884.9	193.9	-2.09
1183.9	2.52	2.63	2.58	3.55	4.18	4.72	1183.9	1.88	1.95	1.92	961.0	181.6	-2.31
1274.2	2.68	2.95	2.81	3.65	4.32	4.73	1274.2	1.82	1.90	1.86	1000.0	177.7	-2.13
1364.5	2.84	3.22	2.92	3.90	3.99	4.54	1364.5	1.76	1.82	1.76	1250.0	156.9	-2.29
1500.0	3.05	3.43	3.09	4.28	3.48	4.32	1500.0	1.69	1.72	1.64	1500.0	152.4	-2.17

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060612
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IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED RoHS compliant

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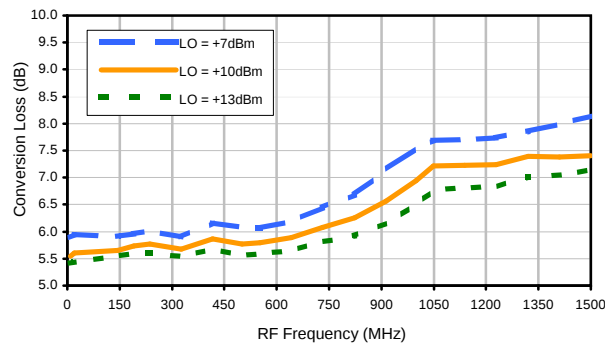


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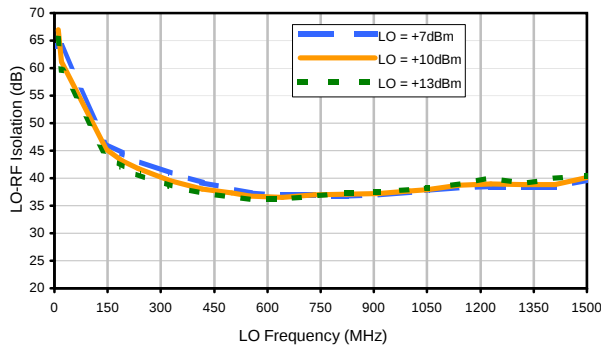


Typical Performance Curves

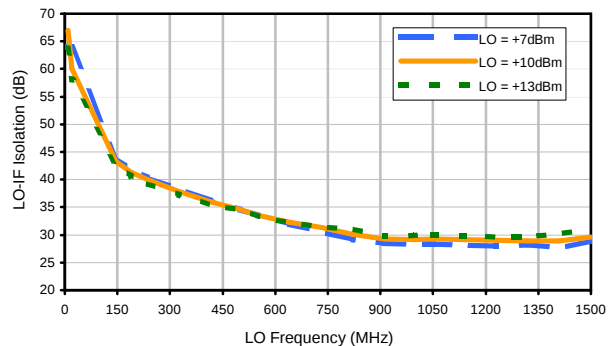
Conversion Loss



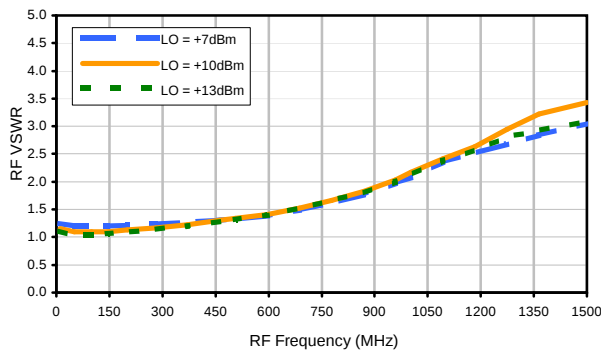
LO-RF Isolation



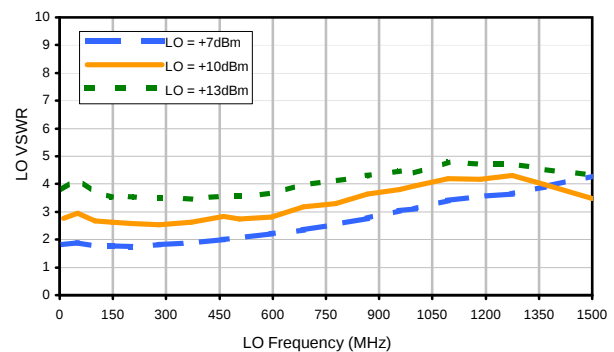
LO-IF Isolation



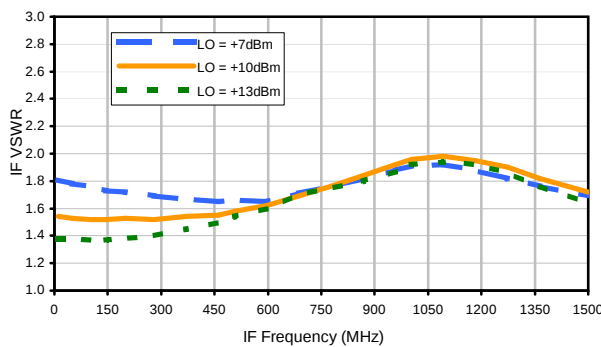
RF VSWR



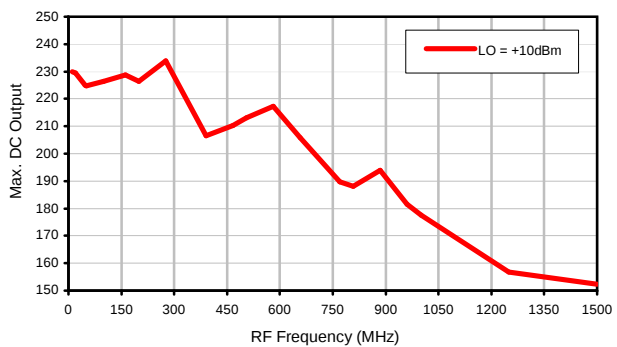
LO VSWR



IF VSWR



Max. DC Output



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