

Non-Catalog Model

Frequency Mixer

Level 7 (LO Power +7 dBm)

LMX-124

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)	0.5		500	MHz
	RF (fL to fU)	0.5		500	MHz
	IF	0		500	MHz
Conversion Loss	mid band			6.5	dB
	Total Range			7.0	dB
LO-RF Isolation	Low Range	40	50		dB
	Mid Range	25	45		dB
	Upper Range	22	45		dB
LO-IF Isolation	Low Range	40	45		dB
	Mid Range	30	40		dB
	Upper Range	20	30		dB
1 dB Comp. Input Power			+1		dBm

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

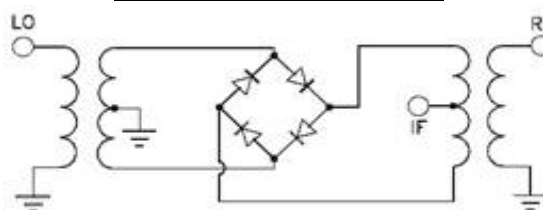
Mid Range = [10fL to fU/2]

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



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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)		
		+14	+17	+20		+14	+17	+20	+14	+17	+20
0.5	30.5	6.54	6.23	5.94	0.5	64.0	67.0	70.0	64.0	62.9	63.7
2.0	32.0	5.76	5.49	5.26	2.0	43.0	41.9	40.9	41.1	40.1	39.2
10.0	40.0	5.58	5.34	5.23	10.0	40.0	39.0	38.0	37.9	37.0	36.0
20.0	50.0	5.58	5.34	5.22	20.0	39.8	38.8	37.9	37.7	36.8	35.9
32.7	62.7	5.49	5.27	5.17	32.7	37.9	36.9	36.0	35.7	34.8	33.9
48.8	78.8	5.40	5.21	5.12	48.8	36.2	35.1	34.3	33.8	32.9	32.2
50.0	80.0	5.42	5.22	5.12	50.0	34.9	33.8	32.9	32.3	31.6	30.9
97.2	67.2	5.24	5.11	4.98	97.2	34.6	33.5	32.7	32.0	31.3	30.6
129.4	99.4	5.26	5.14	5.02	129.4	34.1	33.2	32.3	32.1	31.1	30.5
145.5	115.5	5.32	5.16	5.05	145.5	33.3	32.3	31.5	31.0	30.1	29.6
161.6	131.6	5.34	5.21	5.09	161.6	32.5	31.5	30.7	29.9	29.2	28.7
193.9	163.9	5.46	5.34	5.18	193.9	31.9	30.9	30.0	29.0	28.4	27.9
210.0	180.0	5.46	5.30	5.15	210.0	31.4	30.3	29.4	28.2	27.7	27.2
226.1	196.1	5.46	5.30	5.11	226.1	30.9	29.8	28.8	27.4	27.0	26.5
242.2	212.2	5.41	5.26	5.07	242.2	30.6	29.4	28.4	26.7	26.4	25.9
290.5	260.5	5.38	5.25	5.13	290.5	29.4	28.2	27.2	25.0	25.0	24.7
322.8	292.8	5.46	5.25	5.15	322.8	29.0	27.4	26.0	22.6	22.7	22.4
355.0	325.0	5.70	5.45	5.30	355.0	29.0	27.0	25.5	21.0	21.2	20.8
435.6	405.6	5.74	5.46	5.25	435.6	26.2	25.6	24.8	20.6	21.1	20.6
500.0	470.0	5.90	5.61	5.39	500.0	25.4	25.0	24.3	19.9	20.6	20.4

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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)		
	+14	+17	+20	+14	+17	+20		+14	+17	+20	+17		
5.0	1.19	1.13	1.12	1.69	2.58	4.03	5.0	1.49	1.34	1.20	0.5	-229.0	0.18
19.6	1.18	1.09	1.04	1.62	2.43	3.75	19.6	1.50	1.34	1.20	33.2	-234.6	0.25
34.1	1.18	1.09	1.02	1.67	2.54	3.83	34.1	1.49	1.34	1.20	49.3	-236.6	0.28
48.7	1.18	1.09	1.02	1.70	2.55	3.78	48.7	1.49	1.34	1.20	50.0	-236.7	0.28
50.0	1.18	1.09	1.02	1.70	2.52	3.78	50.0	1.49	1.34	1.20	65.4	-236.6	0.31
63.2	1.18	1.09	1.02	1.64	2.41	3.62	63.2	1.49	1.34	1.20	81.5	-238.5	0.36
92.4	1.17	1.08	1.01	1.61	2.37	3.42	92.4	1.50	1.35	1.21	97.6	-240.6	0.46
100.0	1.17	1.08	1.01	1.61	2.30	3.30	100.0	1.50	1.35	1.21	100.0	-239.8	0.48
106.9	1.17	1.08	1.01	1.59	2.29	3.32	106.9	1.50	1.35	1.22	113.7	-237.5	0.47
136.0	1.16	1.07	1.02	1.63	2.34	3.35	136.0	1.52	1.37	1.23	129.8	-238.2	0.63
150.6	1.15	1.07	1.03	1.60	2.27	3.28	150.6	1.52	1.37	1.24	145.9	-237.5	0.61
165.2	1.15	1.07	1.03	1.61	2.27	3.21	165.2	1.52	1.38	1.25	162.0	-237.1	0.86
179.7	1.14	1.07	1.04	1.63	2.33	3.26	179.7	1.53	1.39	1.26	178.1	-235.2	0.97
194.3	1.14	1.07	1.05	1.62	2.32	3.24	194.3	1.55	1.40	1.27	194.2	-235.5	0.84
208.8	1.14	1.07	1.06	1.62	2.31	3.16	208.8	1.56	1.40	1.28	210.3	-237.2	0.83
252.5	1.13	1.08	1.08	1.62	2.30	3.12	252.5	1.58	1.43	1.31	258.6	-237.6	1.46
325.3	1.14	1.13	1.14	1.71	2.37	3.17	325.3	1.64	1.48	1.36	322.9	-219.8	2.48
398.1	1.21	1.21	1.23	1.77	2.45	3.30	398.1	1.72	1.55	1.44	403.4	-212.3	2.18
470.9	1.31	1.32	1.33	1.89	2.58	3.38	470.9	1.77	1.61	1.51	467.8	-219.4	2.68
500.0	1.36	1.37	1.37	1.95	2.62	3.42	500.0	1.78	1.63	1.53	500.0	-217.7	2.55

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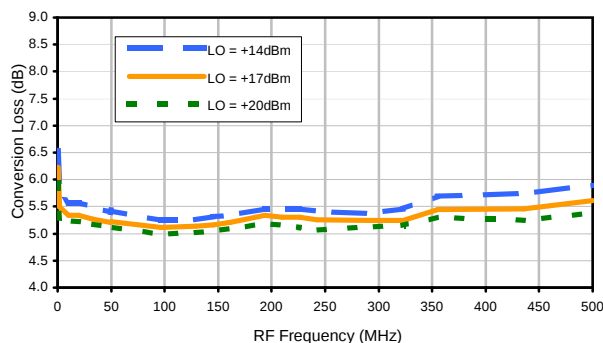


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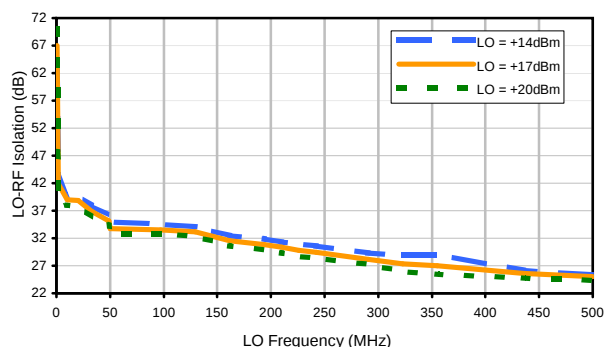


Typical Performance Curves

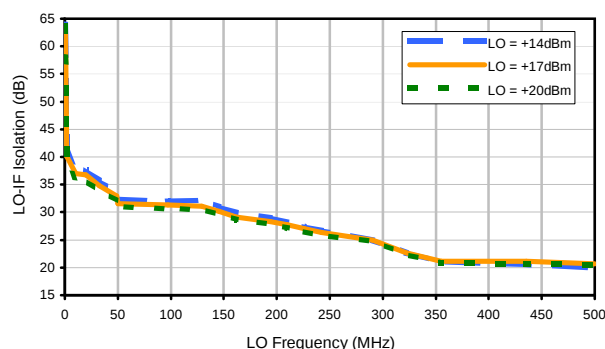
Conversion Loss



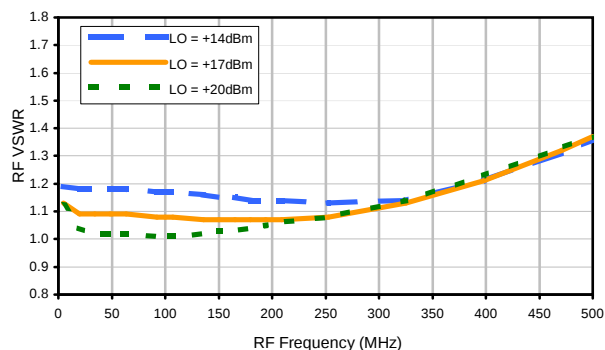
LO-RF Isolation



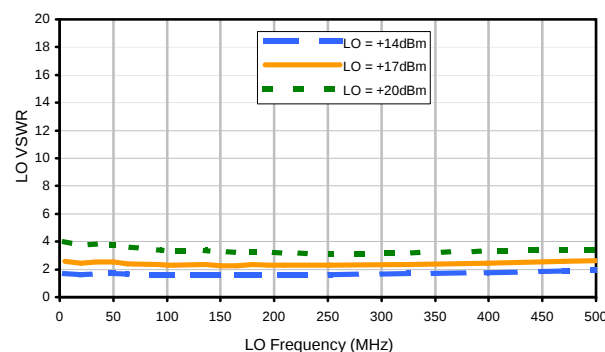
LO-IF Isolation



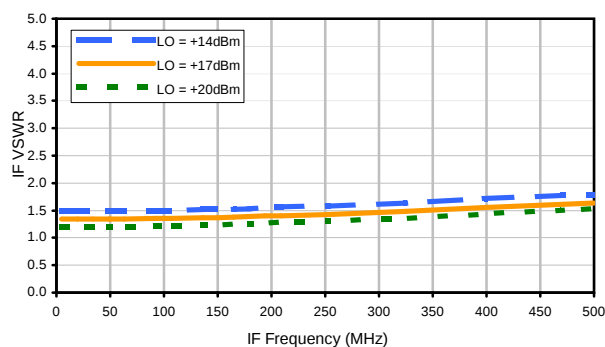
RF VSWR



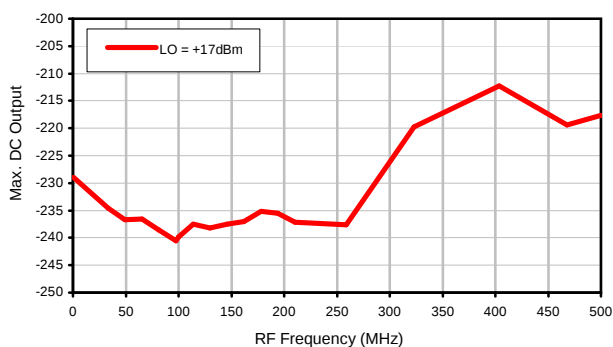
LO VSWR



IF VSWR



Max. DC Output



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