Non-Catalog Model

Frequency Mixer LMX-113

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 : BB48

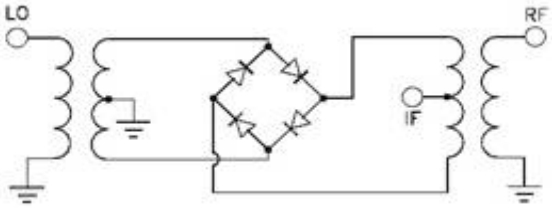
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency	**LO** (fL to fU)	5		1000	MHz
	RF (fL to fU)	5		1000	MHz
	IF	0		1000	MHz
Conversion Loss	**mid band**			7.0	dB
	Total Range			8.0	dB
LO-RF Isolation	**Low Range**	40	50		dB
	Mid Range	25	40		dB
	Upper Range	25	35		dB
LO-IF Isolation	**Low Range**	35	45		dB
	Mid Range	30	35		dB
	Upper Range	20	30		dB
1 dB Comp. Input Power			+1		dBm

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

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



Frequency Mixer LMX-113

Typical Performance Data

RF (MHz)	LO (MHz)	CONVERSION LOSS (dB) @LO (dBm)		
		+14	+17	+20
5.0	35.0	5.75	5.42	5.22
10.0	40.0	5.86	5.49	5.28
20.0	50.0	5.90	5.54	5.31
35.2	65.2	5.86	5.50	5.28
50.0	80.0	5.80	5.46	5.25
65.3	95.3	5.75	5.43	5.22
100.0	70.0	5.71	5.39	5.21
155.8	125.8	5.69	5.37	5.20
200.0	170.0	5.87	5.53	5.37
246.2	216.2	5.82	5.53	5.36
336.7	306.7	5.61	5.32	5.20
427.1	397.1	5.87	5.56	5.31
500.0	470.0	5.89	5.48	5.27
547.7	517.7	5.81	5.44	5.27
608.0	578.0	5.91	5.58	5.35
668.3	638.3	6.28	5.92	5.49
758.8	728.8	6.40	5.97	5.52
819.1	789.1	6.71	6.06	5.63
909.5	879.1	7.45	6.45	5.76
1000.0	970.0	7.89	6.93	6.05

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+14	+17	+20	+14	+17	+20
5.0	74.8	75.2	74.9	72.0	68.7	67.3
10.0	71.9	71.3	71.4	66.0	63.3	62.1
20.0	67.0	66.3	66.3	60.2	57.4	56.4
35.2	62.5	61.7	61.6	55.4	52.7	51.3
50.0	59.6	58.9	58.4	52.3	49.5	47.9
65.3	57.5	56.9	56.7	50.3	47.6	46.3
100.0	54.4	53.7	53.2	47.3	44.4	42.9
155.8	51.3	50.6	49.8	43.9	41.2	39.8
200.0	49.3	48.4	47.9	41.9	39.5	38.1
246.2	48.0	47.0	46.4	40.6	38.2	36.6
336.7	45.2	44.2	43.4	37.0	35.5	33.7
427.1	42.9	41.9	41.6	33.3	32.0	31.0
500.0	41.8	40.8	40.2	31.1	30.7	30.3
547.7	40.5	39.6	39.1	29.5	29.3	29.1
608.0	39.9	38.5	38.1	28.8	28.5	28.1
668.3	38.2	37.4	36.5	27.0	27.2	26.6
758.8	36.4	36.3	35.8	24.8	25.5	25.5
819.1	36.0	36.0	35.4	24.1	24.7	24.6
909.5	35.6	35.8	35.4	23.0	23.4	23.6
1000.0	36.3	36.4	36.0	22.7	23.1	23.2

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Typical Performance Data

RF/LO (MHz)	RF VSWR (:1) @LO (dBm)			LO VSWR (:1) @LO (dBm)		
	+14	+17	+20	+14	+17	+20
5.0	1.13	1.12	1.15	1.43	2.13	3.03
10.0	1.08	1.06	1.10	1.42	2.10	3.02
20.0	1.06	1.02	1.08	1.38	2.06	2.99
35.2	1.05	1.02	1.08	1.47	2.18	3.14
50.0	1.05	1.03	1.09	1.49	2.15	3.11
65.3	1.05	1.03	1.09	1.41	2.10	3.06
100.0	1.06	1.05	1.09	1.41	2.09	3.00
155.8	1.09	1.07	1.11	1.41	2.05	2.94
200.0	1.11	1.09	1.12	1.40	2.04	2.88
246.2	1.13	1.12	1.14	1.43	2.06	2.96
336.7	1.17	1.16	1.18	1.47	2.03	2.80
427.1	1.22	1.21	1.22	1.56	2.10	2.89
500.0	1.27	1.26	1.27	1.65	2.19	3.00
547.7	1.30	1.29	1.30	1.69	2.25	3.06
608.0	1.35	1.33	1.34	1.74	2.20	2.93
668.3	1.41	1.39	1.39	1.82	2.32	3.05
758.8	1.52	1.49	1.48	1.93	2.42	3.14
819.1	1.62	1.58	1.57	2.01	2.54	3.24
909.5	1.80	1.75	1.73	2.09	2.63	3.40
1000.0	2.03	1.98	1.94	2.03	2.44	3.20

IF (MHz)	IF VSWR (:1) @LO (dBm)		
	+14	+17	+20
5.0	1.48	1.29	1.14
10.0	1.49	1.29	1.15
20.0	1.49	1.29	1.15
35.2	1.48	1.29	1.14
50.0	1.48	1.29	1.15
65.3	1.49	1.29	1.15
100.0	1.50	1.30	1.16
155.8	1.53	1.33	1.19
200.0	1.55	1.35	1.21
246.2	1.58	1.38	1.24
336.7	1.64	1.43	1.29
427.1	1.70	1.50	1.35
500.0	1.75	1.55	1.40
547.7	1.80	1.59	1.45
608.0	1.81	1.61	1.47
668.3	1.84	1.66	1.52
758.8	1.85	1.68	1.55
819.1	1.84	1.69	1.57
909.5	1.81	1.65	1.55
1000.0	1.75	1.59	1.50

LO/RF (MHz) @LO (dBm) +17	max. DC output (mV)	DC Offset (mV)
5.0	-241.7	-0.09
10.0	-241.0	-0.09
20.0	-239.1	-0.09
35.2	-242.8	-0.08
50.0	-247.3	-0.08
65.3	-244.7	-0.08
100.0	-244.0	-0.10
155.8	-244.0	-0.13
200.0	-257.5	-0.03
246.2	-260.2	-0.04
336.7	-228.7	0.74
427.1	-232.2	0.38
500.0	-252.3	0.34
547.7	-242.1	0.70
608.0	-218.4	1.19
668.3	-193.2	1.30
758.8	-214.9	2.01
819.1	-208.8	2.92
909.5	-192.6	3.72
1000.0	-198.1	3.94

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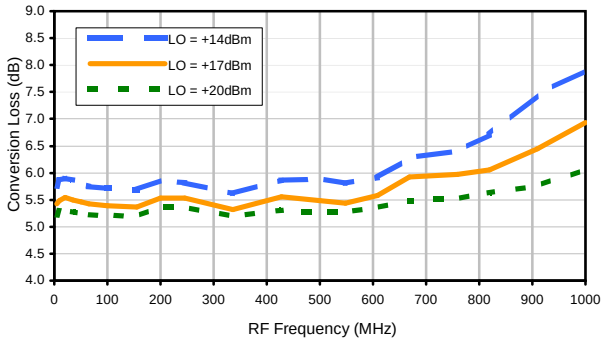
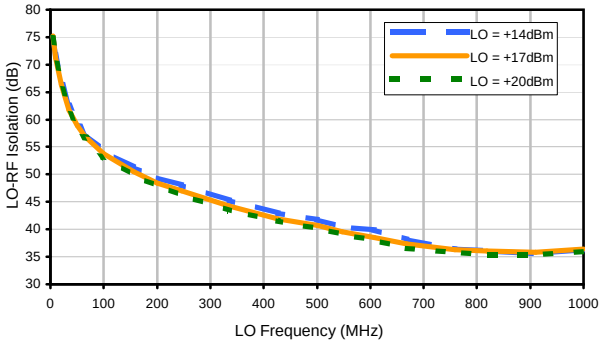
Typical Performance Curves

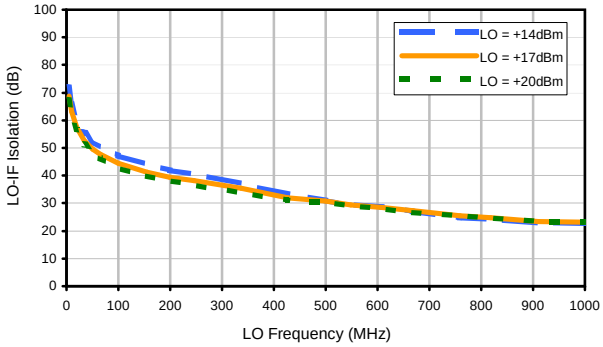
Conversion Loss



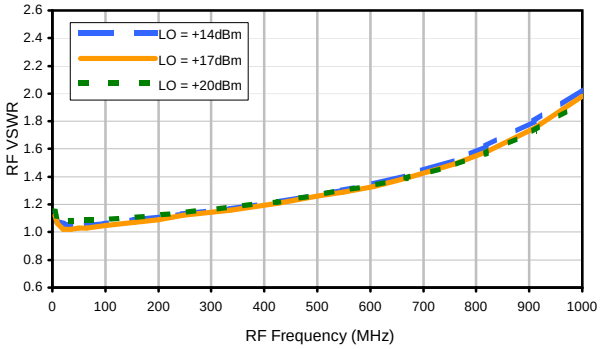
LO-RF Isolation



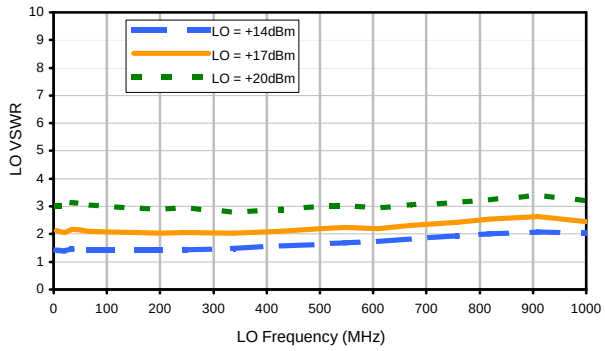
LO-IF Isolation



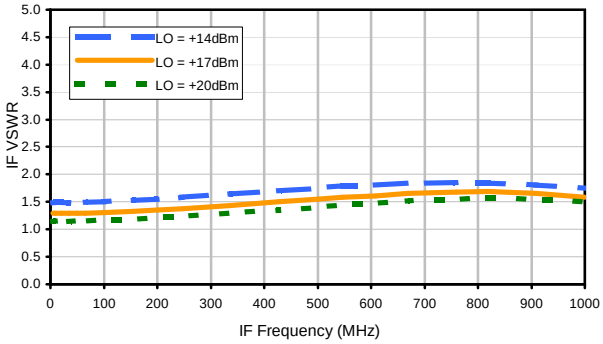
RF VSWR



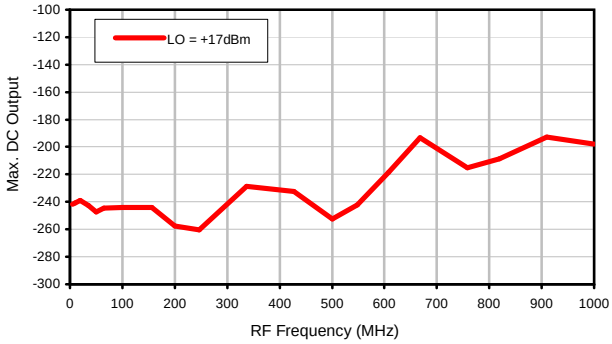
LO VSWR



IF VSWR



Max. DC Output



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