Non-Catalog Model

Frequency Mixer LMX-123MH

Level 13 (LO Power +13 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

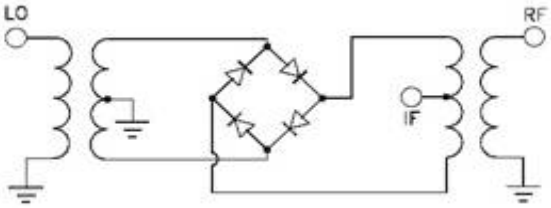
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency	**LO** (fL to fU)	10		2500	MHz
	RF (fL to fU)	10		2500	MHz
	IF	10		500	MHz
Conversion Loss	**mid band**			8.5	dB
	Total Range			9.6	dB
LO-RF Isolation	**Low Range**	22	42		dB
	Mid Range	20	35		dB
	Upper Range	20	28		dB
LO-IF Isolation	**Low Range**	20	33		dB
	Mid Range	20	36		dB
	Upper Range	15	36		dB
1 dB Comp. Input Power			+9		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	200mW
IF Current	40mA

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

Electrical Schematics



Frequency Mixer LMX-123MH

Typical Performance Data

RF (MHz)	LO (MHz)	CONVERSION LOSS (dB) @LO (dBm)		
		+10	+13	+16
10.0	40.0	6.66	5.96	5.69
20.0	50.0	6.61	5.94	5.65
50.0	80.0	6.71	6.02	5.73
100.0	70.0	6.75	6.07	5.84
200.0	170.0	6.86	6.17	5.90
251.0	221.0	6.91	6.21	5.95
491.9	461.9	7.07	6.37	5.96
500.0	470.0	7.10	6.40	5.97
732.9	702.9	7.36	6.57	6.10
973.9	943.9	7.47	6.58	6.13
1000.0	970.0	7.45	6.53	6.10
1214.8	1184.8	8.18	7.15	6.66
1250.0	1220.0	8.32	7.24	6.73
1455.8	1425.8	9.02	7.63	6.92
1696.8	1666.8	9.25	7.81	7.18
1937.7	1907.7	9.44	7.88	7.26
2000.0	1907.7	9.25	7.76	7.15
2178.7	2148.7	8.62	7.48	6.98
2419.7	2389.7	8.10	7.17	6.79
2500.0	2470.0	8.12	7.18	6.81

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+10	+13	+16	+10	+13	+16
10.0	43.3	47.2	50.8	32.6	36.6	40.2
20.0	45.5	49.3	52.3	33.2	37.4	41.5
50.0	47.2	51.0	53.6	33.3	37.5	41.2
100.0	47.4	51.1	52.6	32.4	36.3	39.3
200.0	49.1	49.6	48.2	32.4	35.7	37.1
251.0	49.2	47.5	46.7	32.4	35.2	35.8
491.9	43.8	43.4	42.7	33.4	33.0	31.7
500.0	43.5	43.2	42.5	33.3	32.8	31.5
732.9	40.2	39.2	39.0	32.8	30.5	28.8
973.9	42.7	40.5	39.3	32.8	29.3	27.4
1000.0	43.4	40.7	39.3	32.8	29.0	27.1
1214.8	57.0	45.7	42.8	32.0	28.1	26.0
1250.0	54.9	48.7	44.8	32.3	28.2	25.8
1455.8	44.8	46.7	47.1	30.4	28.0	26.4
1696.8	41.1	41.6	41.7	29.0	27.8	26.9
1937.7	36.1	36.1	36.3	29.1	28.3	27.9
2000.0	35.2	35.3	35.7	29.0	28.3	28.1
2178.7	32.5	32.5	33.5	28.6	28.6	29.2
2419.7	30.4	30.8	32.1	27.4	27.8	29.0
2500.0	32.0	32.2	33.7	29.4	29.5	30.5

Notes
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Frequency Mixer LMX-123MH

Typical Performance Data

RF/LO (MHz)	RF VSWR (:1) @LO (dBm)			LO VSWR (:1) @LO (dBm)		
	+10	+13	+16	+10	+13	+16
10.0	1.74	1.46	1.29	1.16	1.41	2.12
20.0	1.75	1.46	1.29	1.11	1.44	2.15
50.0	1.75	1.46	1.28	1.14	1.40	2.06
100.0	1.72	1.45	1.28	1.21	1.33	1.99
200.0	1.74	1.47	1.31	1.28	1.29	1.90
408.4	1.88	1.62	1.47	1.45	1.25	1.77
500.0	2.02	1.73	1.57	1.55	1.24	1.70
682.3	2.38	2.08	1.90	1.78	1.27	1.56
881.5	2.69	2.37	2.17	2.15	1.35	1.39
1000.0	2.78	2.45	2.24	2.50	1.49	1.30
1155.4	2.76	2.41	2.22	2.74	1.58	1.23
1250.0	2.69	2.36	2.17	2.84	1.62	1.15
1429.3	2.55	2.24	2.05	2.69	1.61	1.09
1628.5	2.54	2.24	2.05	2.72	1.62	1.04
1827.7	2.49	2.23	2.06	2.44	1.55	1.05
2000.0	2.28	2.06	1.92	2.45	1.56	1.10
2101.6	2.15	1.94	1.82	2.57	1.61	1.12
2300.8	1.92	1.75	1.65	2.47	1.61	1.25
2425.3	1.86	1.70	1.59	2.26	1.57	1.42
2500.0	1.83	1.68	1.57	2.16	1.56	1.48

IF (MHz)	IF VSWR (:1) @LO (dBm)		
	+10	+13	+16
10.0	1.58	1.16	1.05
20.0	1.57	1.15	1.04
50.0	1.53	1.14	1.05
100.0	1.53	1.14	1.05
200.0	1.51	1.13	1.05
408.4	1.48	1.12	1.05
500.0	1.47	1.15	1.05
682.3	1.47	1.13	1.03
881.5	1.50	1.18	1.06
1000.0	1.54	1.24	1.12
1155.4	1.63	1.35	1.22
1250.0	1.71	1.43	1.30
1429.3	1.86	1.58	1.43
1628.5	1.99	1.68	1.52
1827.7	2.06	1.73	1.56
2000.0	1.97	1.66	1.49
2101.6	1.86	1.57	1.42
2300.8	1.64	1.41	1.29
2425.3	1.55	1.37	1.29
2500.0	1.52	1.37	1.31

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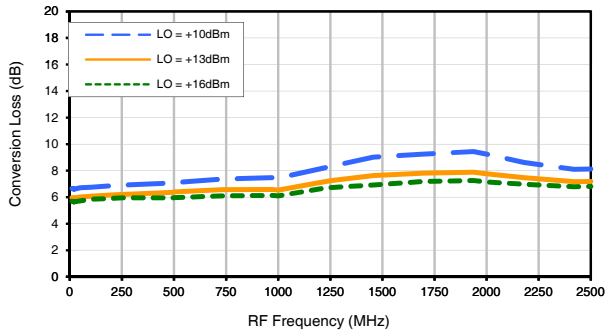
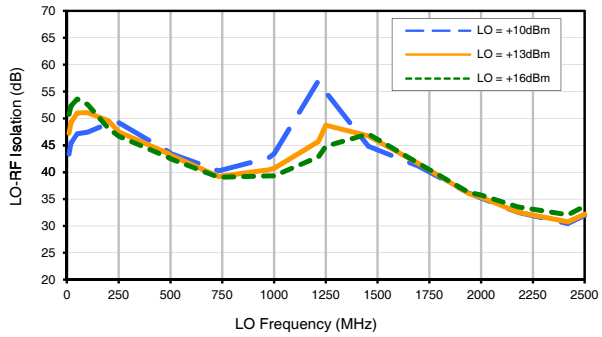
Frequency Mixer LMX-123MH

Typical Performance Curves

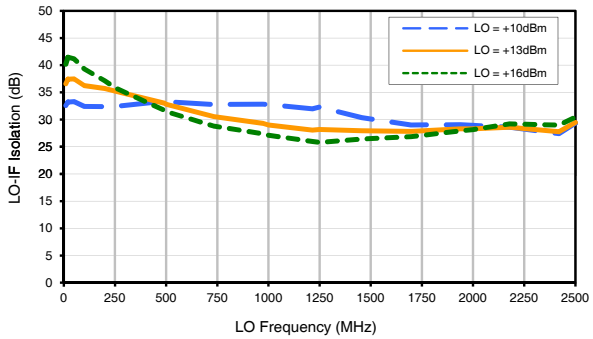
Conversion Loss



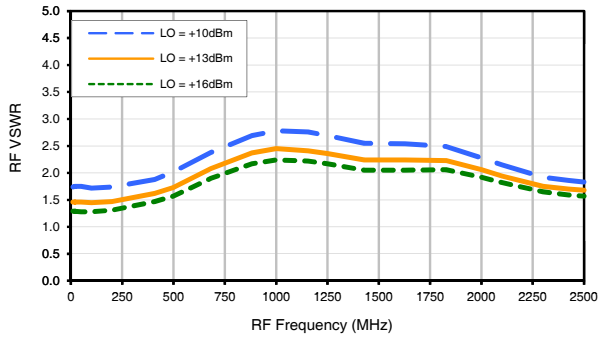
LO-RF Isolation



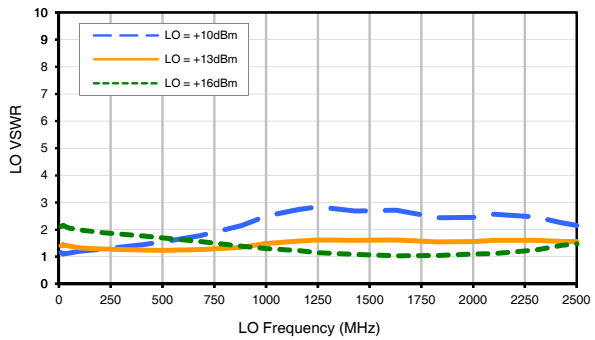
LO-IF Isolation



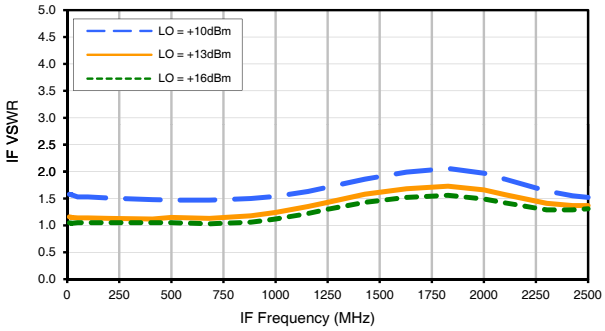
RF VSWR



LO VSWR



IF VSWR



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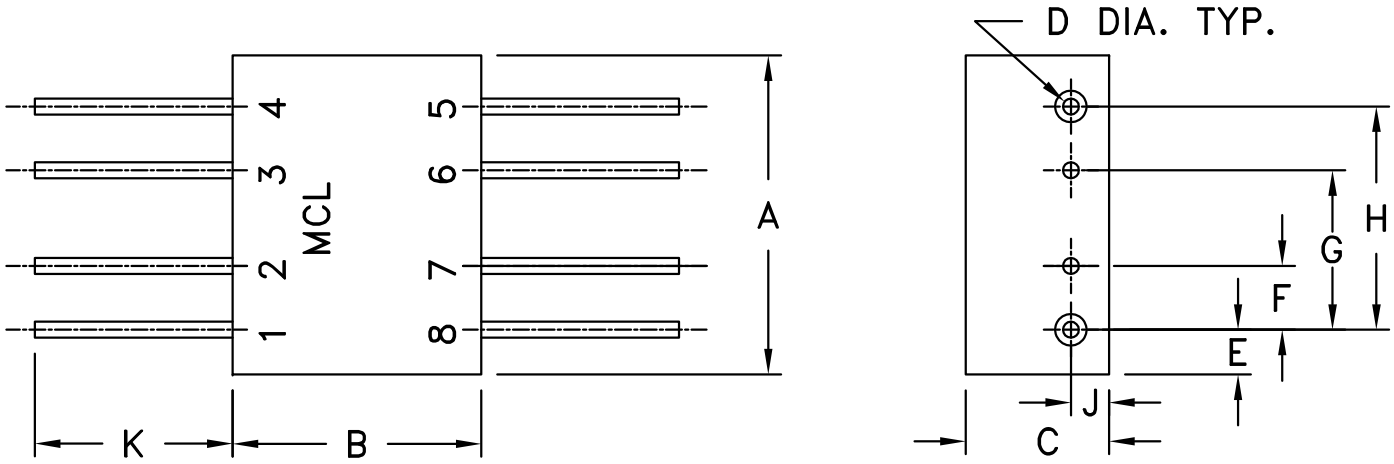
NOTE: PIN NUMBERS DO NOT APPEAR ON UNIT. FOR REFERENCE ONLY.



CASE NO.	A	B	C	D	E	F	G	H	J	K	NOTES	WT. GRAMS
BB48	.50 (12.70)	.39 (9.91)	.225 (5.72)	.025 (0.63)	.07 (1.78)	.100 (2.54)	.250 (6.35)	.350 (8.89)	.06 (1.52)	.31 (7.87)	A1,E1	3.0

REFER TO GN-219 FOR TEXT OF NOTES.

THIRD ANGLE PROJECTION

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M42441	CHANGED PART NO.		PM	

REVISIONS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PL DECIMALS ± .03
3 PL DECIMALS ± .015
ANGLES ±
FRACTIONS ±

	INITIALS	DATE
DRAWN	PM	10.16.95
CHECKED		
APPROVED		

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BSHEETA1.DWG REV:A DATE:01/12/94

Mini-Circuits

Mini-Circuit Laboratory
13 Neptune Avenue
Brooklyn NY 11235

CATALOG OUTLINE "BB"

SIZE	CODE IDENT	DRAWING NO:	REV:
B	15542	98-BB	OR

FILE: 98-BB SCALE: NONE SHEET: 1 OF 1