Engineering Development Model

Frequency Mixer LMX-ED6846/2

Level 7 (LO Power +7 dBm)

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

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** (f_L to f_U)	1		1030	MHz
	RF (f_L to f_U)	1		1030	MHz
	IF	10		795	MHz
Conversion Loss	**mid band**		5.9		dB
	Total Range		6.3		dB
LO-RF Isolation	**Low Range**		-		dB
	Mid Range		46		dB
	Upper Range		36		dB
LO-IF Isolation	**Low Range**		-		dB
	Mid Range		48		dB
	Upper Range		31		dB

Note: Low Range = [f_L to 10f_L] Mid Range = [10f_L to f_U/2] Upper Range = [f_U/2 to f_U]
mid band = [2f_L to f_U/2]

MAXIMUM RATINGS	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

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

Frequency Mixer LMX-ED6846/2

Typical Performance Data

RF (MHz)	LO (MHz)	CONVERSION LOSS (dB) @LO (dBm)		
		+4	+7	+10
1.0	31.0	7.37	6.67	6.37
5.0	35.0	6.51	5.91	5.61
10.0	40.0	6.46	5.86	5.56
79.0	109.0	6.54	5.94	5.64
158.0	188.0	6.49	5.89	5.69
236.9	266.9	6.45	5.85	5.65
315.9	345.9	6.36	5.96	5.76
394.8	424.8	6.49	5.99	5.79
400.0	430.0	6.44	5.94	5.84
473.8	503.8	6.50	6.00	5.90
500.0	530.0	6.55	6.15	5.85
552.7	582.7	6.78	6.38	5.98
631.6	661.6	6.68	6.28	5.98
710.6	740.6	6.86	6.36	6.06
789.5	819.5	6.99	6.39	6.09
868.5	898.5	7.41	6.71	6.21
947.4	977.4	7.75	7.05	6.55
970.0	1000.0	7.71	7.11	6.61
1000.0	1030.0	7.76	7.16	6.66
1026.3	1056.3	7.93	7.33	6.83

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+4	+7	+10	+4	+7	+10
31.0	58.8	58.4	57.8	59.1	56.9	55.4
35.0	57.8	57.4	56.9	58.5	56.6	55.2
40.0	56.5	56.3	56.0	58.1	56.2	54.7
109.0	48.5	48.4	48.4	52.9	50.8	49.5
188.0	44.4	44.6	44.6	49.3	47.9	47.0
266.9	42.1	42.0	41.8	47.1	46.5	45.3
345.9	40.3	40.1	39.8	44.7	44.0	43.3
424.8	38.8	38.8	38.6	40.9	41.1	41.2
430.0	38.7	38.7	38.5	40.6	40.8	41.0
503.8	37.3	37.2	37.3	37.8	37.5	37.9
530.0	36.9	36.8	36.8	36.8	36.8	37.1
582.7	36.2	36.1	36.1	35.2	35.3	36.2
661.6	36.0	35.9	35.7	33.8	33.7	34.2
740.6	36.6	36.1	36.0	32.0	33.2	33.5
819.5	36.7	36.4	36.0	29.8	32.0	33.6
898.5	36.1	36.1	35.8	27.8	29.7	31.7
977.4	36.0	36.1	36.0	26.4	27.8	29.7
1000.0	35.9	36.1	36.0	26.1	27.4	29.4
1030.0	36.1	36.3	36.2	25.8	27.1	29.0
1056.3	36.5	36.8	36.8	25.7	26.9	28.5

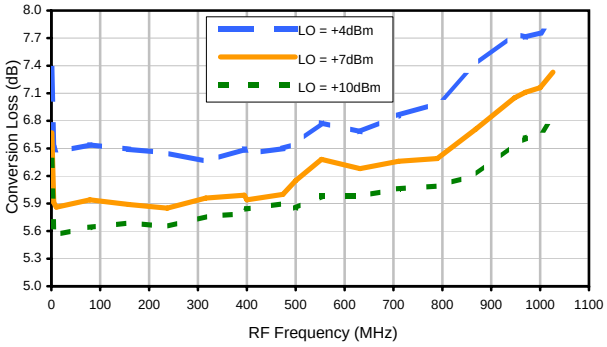
Typical Performance Data

RF/LO (MHz)	RF VSWR (:1) @LO (dBm)			LO VSWR (:1) @LO (dBm)		
	+4	+7	+10	+4	+7	+10
31.0	1.66	1.61	1.60	1.04	1.59	2.37
35.0	1.28	1.16	1.12	1.04	1.57	2.37
40.0	1.24	1.11	1.05	1.02	1.58	2.37
109.0	1.19	1.05	1.04	1.04	1.54	2.32
188.0	1.22	1.08	1.02	1.04	1.54	2.32
266.9	1.18	1.05	1.05	1.04	1.57	2.35
345.9	1.16	1.04	1.06	1.08	1.59	2.40
424.8	1.17	1.07	1.10	1.16	1.64	2.40
430.0	1.16	1.07	1.10	1.16	1.68	2.43
503.8	1.13	1.06	1.12	1.23	1.70	2.49
530.0	1.14	1.05	1.09	1.26	1.71	2.40
582.7	1.18	1.09	1.10	1.28	1.76	2.49
661.6	1.18	1.15	1.17	1.36	1.78	2.43
740.6	1.19	1.16	1.19	1.42	1.82	2.43
819.5	1.22	1.20	1.25	1.48	1.88	2.49
898.5	1.26	1.20	1.24	1.58	2.04	2.68
977.4	1.37	1.32	1.33	1.70	2.18	2.84
1000.0	1.39	1.34	1.35	1.68	2.14	2.88
1030.0	1.40	1.35	1.36	1.73	2.23	2.96
1056.3	1.43	1.38	1.38	1.81	2.27	3.06

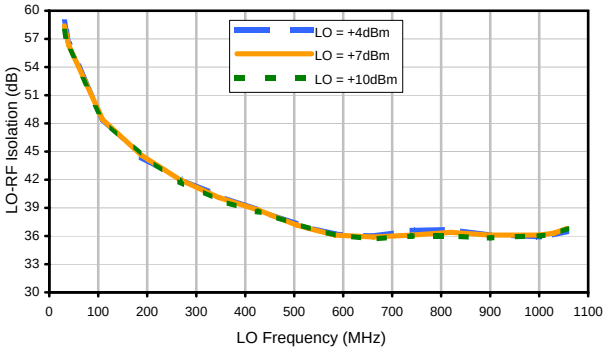
IF (MHz)	IF VSWR (:1) @LO (dBm)		
	+4	+7	+10
10.0	3.21	2.52	1.99
30.0	3.11	2.49	1.96
49.6	3.01	2.43	1.94
99.1	2.92	2.37	1.92
148.6	2.80	2.30	1.88
198.1	2.72	2.27	1.87
247.6	2.68	2.25	1.85
297.1	2.68	2.23	1.84
346.6	2.65	2.18	1.82
396.1	2.68	2.20	1.82
400.0	2.61	2.18	1.80
445.6	2.61	2.16	1.78
495.1	2.65	2.16	1.77
544.5	2.61	2.14	1.76
594.0	2.61	2.12	1.75
600.0	2.58	2.12	1.74
643.5	2.52	2.06	1.70
693.0	2.43	1.99	1.64
742.5	2.35	1.94	1.59
792.0	2.30	1.88	1.55

Typical Performance Curves

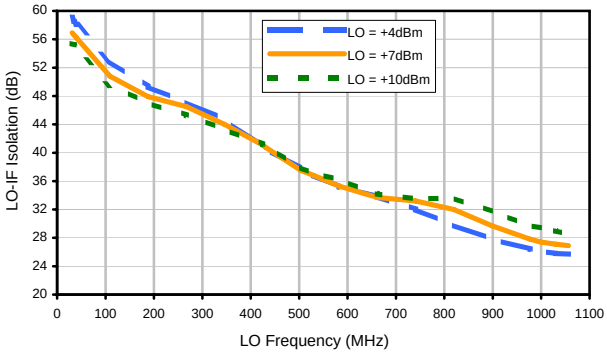
Conversion Loss



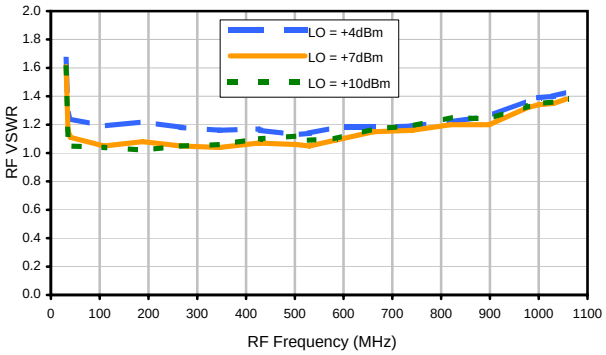
LO-RF Isolation



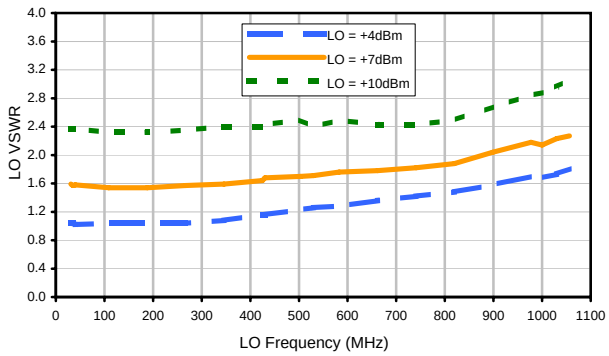
LO-IF Isolation



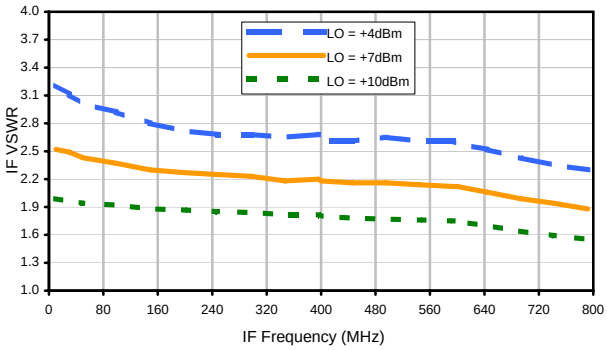
RF VSWR



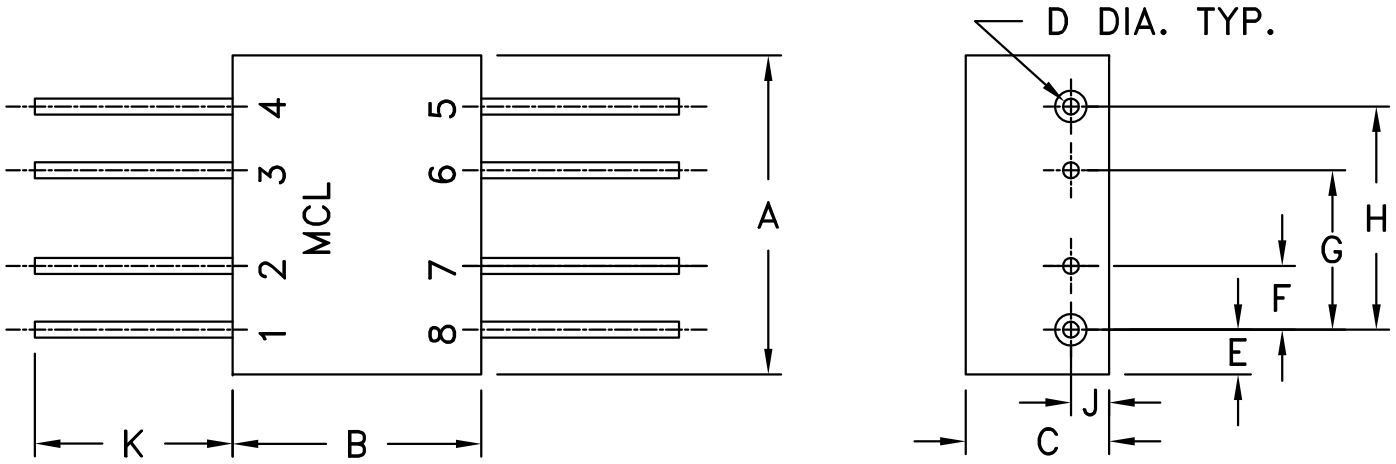
LO VSWR



IF VSWR



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		INITIALS	DATE
DIMENSIONS ARE IN INCHES TOLERANCES ON:	DRAWN	PM	10.16.95
2 PL DECIMALS ± .03	CHECKED		
3 PL DECIMALS ± .015	APPROVED		
ANGLES ±			
FRACTIONS ±			

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

Mini-Circuits

Mini-Circuit Laboratory
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Brooklyn NY 11235

CATALOG OUTLINE "BB"

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

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