

Engineering Development Model

Frequency Mixer

LOUE-ED3653A/2

Level 10 (LO Power +10 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 : A01

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (f _L to f _U)	40		2500	MHz
	RF (f _L to f _U)	40		2500	MHz
	IF	10		900	MHz
Conversion Loss	mid band		6.1		dB
	Total Range		6.1		dB
LO-RF Isolation	Low Range		36		dB
	Mid Range		33		dB
	Upper Range		31		dB
LO-IF Isolation	Low Range		43		dB
	Mid Range		33		dB
	Upper Range		28		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	1
IF	3, 4 ^
GROUND	2, 5, 6, 7

^ - pins must be connected together externally

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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)		
		+7	+10	+13		+7	+10	+13	+7	+10	+13
40.0	70.0	6.93	6.33	6.33	70.0	30.4	34.1	36.9	38.0	42.7	47.1
80.0	110.0	6.57	6.17	6.07	110.0	32.1	35.6	38.5	40.5	44.9	47.3
169.4	199.4	6.50	6.00	6.00	199.4	33.7	37.3	39.6	42.5	43.7	41.8
337.7	367.7	6.37	5.97	5.87	367.7	35.5	38.4	39.3	42.6	38.7	37.1
500.0	530.0	6.50	6.10	6.00	530.0	36.3	36.8	36.4	40.8	35.9	34.0
674.5	704.5	6.48	5.98	5.88	704.5	35.5	34.5	33.8	39.2	33.8	31.9
842.8	872.8	6.33	6.03	6.13	872.8	34.0	32.0	31.3	37.1	32.4	30.4
1000.0	1030.0	6.54	6.04	6.04	1030.0	33.1	31.0	30.0	35.6	31.6	30.0
1011.2	1041.2	6.52	6.12	6.12	1041.2	32.9	31.0	30.0	35.6	32.1	30.1
1179.6	1209.6	7.17	6.17	5.77	1209.6	34.0	31.7	30.3	35.0	31.8	29.4
1347.9	1377.9	6.81	6.11	5.81	1377.9	35.1	31.1	28.7	34.6	30.9	28.4
1516.3	1546.3	6.70	6.00	5.90	1546.3	34.3	30.6	28.1	32.6	30.3	27.9
1684.7	1714.7	6.92	6.22	6.02	1714.7	33.5	30.2	27.7	29.3	28.2	26.2
1853.1	1883.1	6.93	6.13	5.93	1883.1	32.8	30.0	27.8	26.8	26.9	25.6
1970.0	2000.0	6.81	6.11	5.91	2000.0	32.8	30.6	28.7	26.2	26.4	25.5
2000.0	2030.0	6.79	6.09	5.89	2030.0	32.7	30.6	29.1	26.2	26.6	25.6
2021.4	2051.4	6.78	6.08	5.88	2051.4	32.4	31.0	29.3	26.3	26.6	25.8
2189.8	2219.8	6.75	6.15	5.95	2219.8	32.2	32.0	30.2	27.5	27.9	27.3
2358.2	2388.2	6.94	6.44	6.34	2388.2	31.1	31.9	30.7	28.5	28.9	28.8
2500.0	2530.0	7.06	6.66	6.66	2530.0	29.7	30.8	30.5	29.7	30.4	30.7

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Typical Performance Data

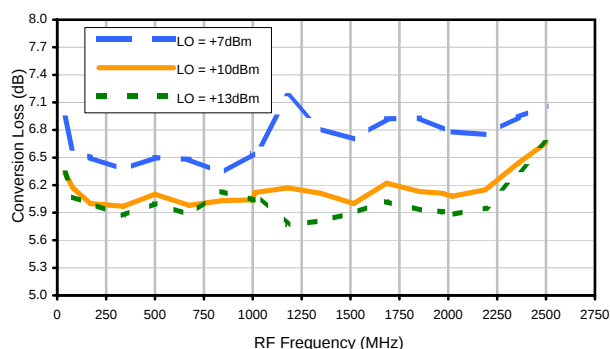
RF/LO (MHz)	RF VSWR (:1)			LO VSWR (:1)			IF (MHz)	IF VSWR (:1)		
	@LO (dBm)			@LO (dBm)				@LO (dBm)		
	+7	+10	+13	+7	+10	+13		+7	+10	+13
70.0	1.30	1.34	1.51	1.36	1.23	1.59	10.0	1.41	1.13	1.24
110.0	1.19	1.25	1.43	1.30	1.19	1.56	40.0	1.43	1.07	1.20
199.4	1.17	1.18	1.35	1.27	1.16	1.54	62.9	1.43	1.08	1.19
367.7	1.15	1.13	1.31	1.24	1.16	1.58	80.0	1.43	1.09	1.17
530.0	1.15	1.07	1.25	1.23	1.18	1.65	100.0	1.44	1.09	1.17
704.5	1.17	1.20	1.38	1.29	1.22	1.60	124.7	1.44	1.11	1.15
872.8	1.10	1.27	1.48	1.39	1.28	1.58	186.6	1.50	1.15	1.13
1030.0	1.16	1.05	1.22	1.52	1.35	1.59	248.4	1.54	1.21	1.11
1041.2	1.17	1.03	1.17	1.55	1.37	1.60	310.3	1.63	1.26	1.12
1209.6	1.80	1.51	1.30	1.73	1.47	1.63	372.1	1.71	1.32	1.14
1377.9	1.97	1.71	1.59	1.85	1.54	1.62	434.0	1.77	1.38	1.16
1546.3	1.89	1.66	1.56	1.97	1.65	1.67	495.9	1.82	1.40	1.19
1714.7	1.78	1.59	1.52	2.12	1.75	1.71	500.0	1.81	1.40	1.19
1883.1	1.64	1.48	1.43	2.20	1.80	1.70	557.7	1.81	1.41	1.21
2000.0	1.51	1.39	1.40	2.23	1.78	1.66	619.6	1.81	1.42	1.25
2030.0	1.48	1.38	1.40	2.27	1.80	1.65	681.4	1.76	1.40	1.26
2051.4	1.44	1.36	1.39	2.30	1.82	1.66	743.3	1.70	1.35	1.24
2219.8	1.25	1.30	1.44	2.30	1.78	1.54	805.1	1.52	1.24	1.25
2388.2	1.15	1.37	1.58	2.20	1.68	1.39	867.0	1.40	1.23	1.33
2530.0	1.25	1.51	1.76	2.10	1.59	1.26	900.0	1.37	1.23	1.37

Frequency Mixer

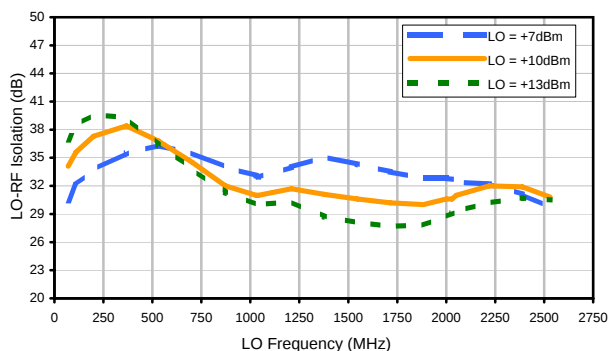
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Typical Performance Curves

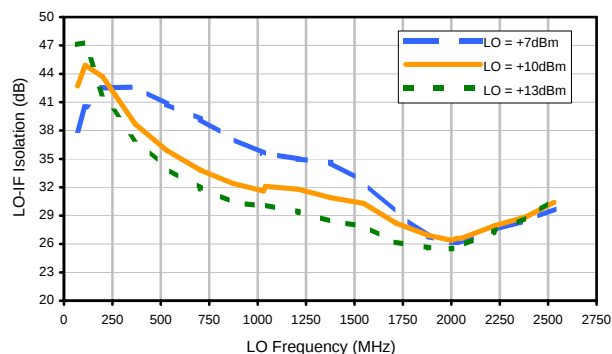
Conversion Loss



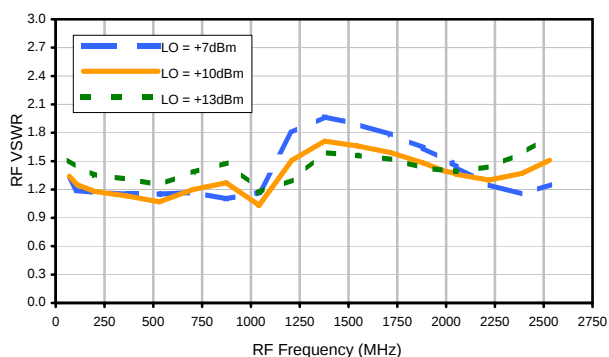
LO-RF Isolation



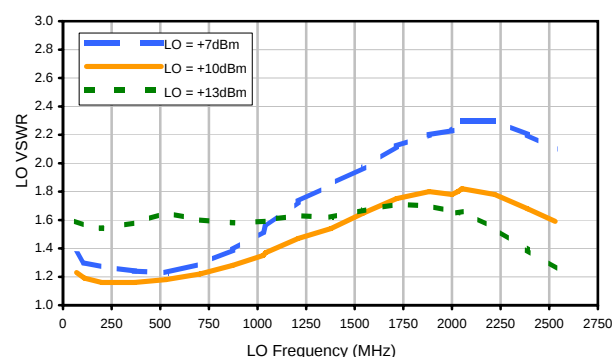
LO-IF Isolation



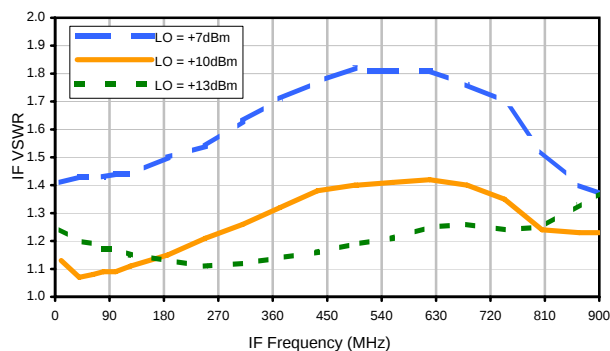
RF VSWR



LO VSWR

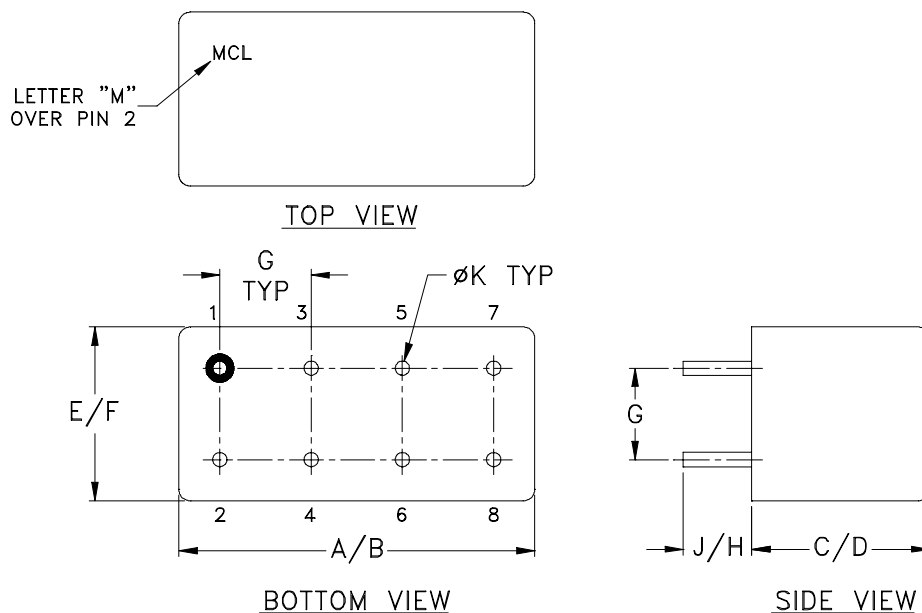


IF VSWR



A01
A04
A05
A06

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	WT, GRAM
A01	.770 (19.56)	.800 (20.32)	.385 (9.78)	.400 (10.16)	.370 (9.40)	.400 (10.16)	.200 (5.08)	.20 (5.08)	.14 (3.56)	.031 (.79)	5.2
A04			.200 (5.08)	.210 (5.33)							3.7
A05			.240 (6.10)	.250 (6.35)							3.7
A06			.285 (7.24)	.310 (7.87)							5.2

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Header material: C.R.S.
Pin material: #52 alloy.
Cover material: Cupro-Nickel.
- Pin finish: Electro Tin-Silver.
- Insulated spacer available. Request P/N B14-045-01.
- Tolerance on pin diameter $\pm .005$ inch.
- Glass meniscus 0.015 inch max.
- Blue bead indicates Pin 1. Pin numbers do not appear on unit, for reference only.

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