Non-Catalog Model

Frequency Mixer TUF-860

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.

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CASE STYLE : B02

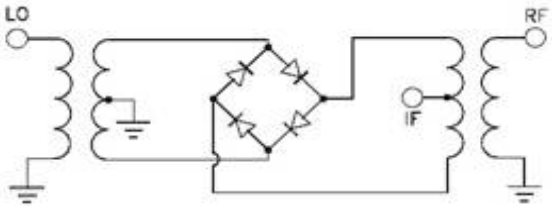
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency	**LO** (fL to fU)	800		1050	MHz
	RF (fL to fU)	800		1050	MHz
	IF	0		250	MHz
Conversion Loss			5.6	7.8	dB
LO-RF Isolation		25	35		dB
LO-IF Isolation		20	27		dB
1 dB Comp. Input Power			+1		dBm

Note: Non-hermetic

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	4
RF	1
IF	2
GROUND	3

Electrical Schematics



Frequency Mixer TUF-860

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) @LO (dBm)		
		+4	+7	+10
100.1	130.1	12.03	10.75	10.34
140.4	170.4	9.48	8.65	8.30
180.6	210.6	7.69	7.28	7.11
220.9	250.9	6.87	6.54	6.33
261.1	291.1	6.26	5.96	5.82
301.4	331.4	5.80	5.61	5.43
341.7	371.7	5.65	5.42	5.24
381.9	411.9	5.46	5.24	5.05
422.2	452.2	5.39	5.17	5.01
462.4	492.4	5.38	5.16	4.98
502.7	532.7	5.27	5.01	4.87
543.0	573.0	5.32	5.07	4.84
583.2	613.2	5.26	5.06	4.91
623.5	653.5	5.27	5.07	4.95
663.7	693.7	5.33	5.12	5.00
704.0	734.0	5.37	5.16	4.99
744.3	774.3	5.45	5.20	5.06
784.5	814.5	5.58	5.26	5.08
824.8	854.8	5.80	5.37	5.13
865.0	895.0	6.07	5.56	5.18
905.3	935.3	6.30	5.74	5.26
945.6	975.6	6.60	6.04	5.53
985.8	1015.8	6.80	6.16	5.63
1026.1	1056.1	7.17	6.53	5.97
1066.3	1096.3	7.46	6.87	6.27
1106.6	1136.6	7.66	7.08	6.57
1146.9	1176.9	7.82	7.25	6.73
1187.1	1217.1	7.86	7.28	6.69
1227.4	1257.4	7.84	7.18	6.60
1267.6	1297.6	7.76	7.13	6.69
1307.9	1337.9	7.79	7.25	6.95
1348.2	1378.2	7.97	7.58	7.37
1388.4	1418.4	8.34	7.97	7.79
1428.7	1458.7	8.73	8.42	8.17
1468.9	1498.9	9.11	8.80	8.57
1509.2	1539.2	9.42	9.09	8.83
1549.5	1579.5	9.75	9.37	9.27
1589.7	1619.7	10.10	9.88	9.71
1630.0	1660.0	10.48	10.29	10.17
1650.1	1680.1	10.81	10.64	10.51

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm) @LO (dBm)		
		+4	+7	+10
100.1	130.1	15.24	15.37	15.23
140.4	170.4	13.50	12.03	13.82
180.6	210.6	10.41	11.91	13.05
220.9	250.9	9.84	11.46	12.88
261.1	291.1	9.87	11.69	13.92
301.4	331.4	10.11	11.24	13.22
341.7	371.7	10.35	12.01	14.82
381.9	411.9	11.20	12.95	14.57
422.2	452.2	13.27	16.76	25.37
462.4	492.4	10.73	12.94	14.16
502.7	532.7	10.16	12.31	14.07
543.0	573.0	12.31	12.40	13.58
583.2	613.2	16.38	16.66	14.75
623.5	653.5	14.19	15.38	17.62
663.7	693.7	11.71	11.17	12.45
704.0	734.0	21.24	15.02	15.30
744.3	774.3	15.31	21.82	24.01
784.5	814.5	16.56	16.56	22.53
824.8	854.8	8.29	18.90	17.72
865.0	895.0	5.24	10.92	18.82
905.3	935.3	3.75	7.13	16.31
945.6	975.6	3.65	6.08	12.01
985.8	1015.8	4.56	6.39	10.65
1026.1	1056.1	5.91	7.00	9.62
1066.3	1096.3	6.86	8.63	10.81
1106.6	1136.6	6.18	7.36	9.47
1146.9	1176.9	5.96	6.42	8.22
1187.1	1217.1	5.83	6.59	8.79
1227.4	1257.4	7.36	10.39	15.61
1267.6	1297.6	9.91	14.06	16.69
1307.9	1337.9	12.34	15.80	18.79
1348.2	1378.2	13.72	15.67	18.22
1388.4	1418.4	12.97	15.01	22.51
1428.7	1458.7	12.60	16.44	18.58
1468.9	1498.9	12.71	16.18	17.57
1509.2	1539.2	12.79	15.08	17.53
1549.5	1579.5	12.63	15.25	15.54
1589.7	1619.7	13.92	13.75	18.74
1630.0	1660.0	16.94	17.94	20.29
1650.1	1680.1	14.33	19.02	19.33

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+1dBm (dB) @LO (dBm)		
		+4	+7	+10
100.1	130.1	-0.11	0.00	-0.03
140.4	170.4	0.07	0.04	-0.01
180.6	210.6	0.23	0.10	0.02
220.9	250.9	0.41	0.24	0.12
261.1	291.1	0.62	0.37	0.23
301.4	331.4	0.74	0.46	0.33
341.7	371.7	0.84	0.58	0.43
381.9	411.9	0.87	0.62	0.47
422.2	452.2	0.89	0.65	0.48
462.4	492.4	0.89	0.63	0.46
502.7	532.7	0.96	0.72	0.52
543.0	573.0	1.00	0.75	0.57
583.2	613.2	1.10	0.82	0.61
623.5	653.5	1.20	0.90	0.68
663.7	693.7	1.29	0.94	0.71
704.0	734.0	1.39	1.00	0.76
744.3	774.3	1.52	1.07	0.79
784.5	814.5	1.66	1.23	0.91
824.8	854.8	1.78	1.43	1.10
865.0	895.0	1.87	1.56	1.27
905.3	935.3	1.97	1.72	1.47
945.6	975.6	1.89	1.66	1.44
985.8	1015.8	1.76	1.61	1.41
1026.1	1056.1	1.49	1.38	1.23
1066.3	1096.3	1.26	1.15	1.04
1106.6	1136.6	1.15	0.99	0.89
1146.9	1176.9	1.00	0.80	0.72
1187.1	1217.1	0.99	0.78	0.65
1227.4	1257.4	0.95	0.70	0.56
1267.6	1297.6	0.95	0.66	0.45
1307.9	1337.9	0.89	0.55	0.37
1348.2	1378.2	0.67	0.40	0.27
1388.4	1418.4	0.52	0.32	0.22
1428.7	1458.7	0.36	0.24	0.18
1468.9	1498.9	0.32	0.21	0.17
1509.2	1539.2	0.30	0.20	0.16
1549.5	1579.5	0.24	0.16	0.13
1589.7	1619.7	0.24	0.16	0.12
1630.0	1660.0	0.24	0.16	0.12
1650.1	1680.1	0.24	0.15	0.11

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=925.1MHz (dB) @LO (dBm) +7
125.0	800.1	5.50
118.9	806.2	5.47
112.9	812.2	5.47
106.8	818.3	5.45
100.8	824.3	5.47
94.7	830.4	5.50
88.7	836.4	5.49
82.6	842.5	5.49
76.6	848.5	5.50
70.5	854.6	5.52
64.5	860.6	5.57
58.4	866.7	5.57
52.4	872.7	5.57
46.3	878.8	5.56
40.3	884.8	5.58
34.2	890.9	5.65
28.2	896.9	5.68
22.1	903.0	5.72
16.1	909.0	5.67
10.0	915.1	5.64
10.0	935.1	5.79
16.1	941.2	5.78
22.1	947.2	5.81
28.2	953.3	5.85
34.2	959.3	5.91
40.3	965.4	5.92
46.3	971.4	5.88
52.4	977.5	5.83
58.4	983.5	5.84
64.5	989.6	5.91
70.5	995.6	5.95
76.6	1001.7	5.94
82.6	1007.7	5.89
88.7	1013.8	5.88
94.7	1019.8	5.91
100.8	1025.9	5.95
106.8	1031.9	5.98
112.9	1038.0	5.99
118.9	1044.0	5.98
125.0	1050.1	6.00

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=800.1MHz (dB) @LO (dBm) +7
10.0	810.1	5.23
16.2	816.3	5.25
22.3	822.4	5.25
28.5	828.6	5.28
34.6	834.7	5.29
40.8	840.9	5.29
46.9	847.0	5.28
53.1	853.2	5.28
59.2	859.3	5.31
65.4	865.5	5.35
71.5	871.6	5.38
77.7	877.8	5.38
83.8	883.9	5.36
90.0	890.1	5.38
96.2	896.3	5.41
102.3	902.4	5.46
108.5	908.6	5.43
114.6	914.7	5.42
120.8	920.9	5.43
126.9	927.0	5.48
133.1	933.2	5.55
139.2	939.3	5.56
145.4	945.5	5.55
151.5	951.6	5.53
157.7	957.8	5.54
163.8	963.9	5.57
170.0	970.1	5.56
176.2	976.3	5.55
182.3	982.4	5.51
188.5	988.6	5.52
194.6	994.7	5.56
200.8	1000.9	5.58
206.9	1007.0	5.58
213.1	1013.2	5.54
219.2	1019.3	5.55
225.4	1025.5	5.57
231.5	1031.6	5.63
237.7	1037.8	5.67
243.8	1043.9	5.66
250.0	1050.1	5.66

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1050.1MHz (dB) @LO (dBm) +7
250.0	800.1	5.85
243.8	806.3	5.85
237.7	812.4	5.86
231.5	818.6	5.86
225.4	824.7	5.84
219.2	830.9	5.84
213.1	837.0	5.82
206.9	843.2	5.85
200.8	849.3	5.88
194.6	855.5	5.92
188.5	861.6	5.93
182.3	867.8	5.93
176.2	873.9	5.96
170.0	880.1	5.98
163.8	886.3	6.05
157.7	892.4	6.08
151.5	898.6	6.08
145.4	904.7	6.11
139.2	910.9	6.09
133.1	917.0	6.15
126.9	923.2	6.22
120.8	929.3	6.22
114.6	935.5	6.21
108.5	941.6	6.20
102.3	947.8	6.25
96.2	953.9	6.33
90.0	960.1	6.40
83.8	966.3	6.40
77.7	972.4	6.37
71.5	978.6	6.38
65.4	984.7	6.43
59.2	990.9	6.48
53.1	997.0	6.49
46.9	1003.2	6.46
40.8	1009.3	6.45
34.6	1015.5	6.50
28.5	1021.6	6.58
22.3	1027.8	6.62
16.2	1033.9	6.60
10.0	1040.1	6.54

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+4	+7	+10	+4	+7	+10
100.1	52.32	52.79	52.87	53.64	49.78	48.87
140.4	53.05	52.34	50.82	48.60	48.07	49.02
180.6	50.82	49.49	48.61	48.57	49.41	49.97
220.9	47.09	46.67	46.47	51.05	51.57	51.15
261.1	44.07	44.49	44.78	54.69	53.81	52.06
301.4	42.14	42.72	43.22	55.38	53.24	51.33
341.7	40.64	41.47	42.02	53.31	52.20	50.39
381.9	39.66	40.78	41.40	47.52	48.57	48.56
422.2	38.51	39.56	40.36	44.56	45.77	46.57
462.4	36.75	37.82	38.72	41.66	42.64	43.53
502.7	36.02	36.93	37.71	40.20	41.28	42.31
543.0	35.44	36.27	36.97	40.31	41.41	42.54
583.2	35.32	36.26	36.83	40.46	41.54	42.34
623.5	35.85	36.67	37.20	40.10	41.64	42.45
663.7	35.94	36.53	36.82	39.24	41.49	42.71
704.0	35.96	36.20	36.29	37.75	40.34	42.10
744.3	35.47	35.76	35.84	36.07	38.87	41.26
784.5	34.91	35.37	35.50	34.53	37.23	39.73
824.8	33.94	34.62	34.86	33.16	35.61	37.94
865.0	32.98	33.78	34.13	32.24	34.54	36.86
905.3	32.52	33.30	33.70	31.70	33.92	36.27
945.6	31.82	32.65	33.18	31.57	33.45	35.62
985.8	32.06	32.79	33.29	31.48	33.23	35.34
1026.1	32.10	33.08	33.60	31.27	33.13	35.12
1066.3	31.89	32.86	33.58	31.41	33.27	35.08
1106.6	32.19	33.12	33.82	31.35	33.16	34.74
1146.9	31.94	32.67	33.33	31.24	32.77	33.86
1187.1	31.96	32.50	33.11	31.12	32.10	32.30
1227.4	31.48	31.81	32.29	30.64	30.55	29.72
1267.6	31.00	31.06	31.34	29.43	28.10	27.36
1307.9	30.87	30.72	30.70	27.68	26.32	25.79
1348.2	30.84	30.44	30.24	26.53	25.16	24.46
1388.4	30.95	30.29	29.94	26.06	24.45	23.47
1428.7	30.99	30.07	29.43	25.94	23.83	22.41
1468.9	30.75	29.72	28.98	25.40	23.08	21.51
1509.2	30.39	29.17	28.30	24.90	22.31	20.58
1549.5	29.68	28.38	27.47	24.05	21.50	19.74
1589.7	28.79	27.60	26.72	22.94	20.54	18.78
1630.0	27.78	26.58	25.70	21.94	19.79	18.08
1650.1	27.21	26.21	25.45	21.15	19.15	17.55

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB) @LO (dBm)		
		+4	+7	+10
100.1	130.1	36.64	36.21	36.03
140.4	170.4	31.34	31.22	30.99
180.6	210.6	27.95	27.93	27.97
220.9	250.9	25.74	25.79	25.74
261.1	291.1	24.43	24.44	24.51
301.4	331.4	23.72	23.74	23.71
341.7	371.7	23.37	23.63	23.81
381.9	411.9	23.31	23.91	24.30
422.2	452.2	22.96	23.38	23.80
462.4	492.4	23.42	23.44	23.46
502.7	532.7	24.67	24.57	24.49
543.0	573.0	27.32	27.06	26.76
583.2	613.2	29.96	30.64	31.16
623.5	653.5	28.07	28.72	29.32
663.7	693.7	24.69	24.79	24.84
704.0	734.0	22.32	22.19	22.13
744.3	774.3	20.18	19.87	19.84
784.5	814.5	18.74	18.46	18.29
824.8	854.8	17.52	17.25	17.08
865.0	895.0	16.54	16.24	16.26
905.3	935.3	15.97	15.67	15.59
945.6	975.6	15.52	15.31	15.19
985.8	1015.8	15.30	15.21	15.24
1026.1	1056.1	15.42	15.45	15.45
1066.3	1096.3	15.43	15.48	15.58
1106.6	1136.6	15.27	15.48	15.56
1146.9	1176.9	15.23	15.41	15.58
1187.1	1217.1	15.15	15.36	15.47
1227.4	1257.4	15.11	15.39	15.49
1267.6	1297.6	15.22	15.70	15.84
1307.9	1337.9	15.24	15.56	15.59
1348.2	1378.2	14.95	15.06	14.91
1388.4	1418.4	14.32	14.19	13.92
1428.7	1458.7	13.53	13.22	12.80
1468.9	1498.9	12.63	12.21	11.71
1509.2	1539.2	11.73	11.25	10.75
1549.5	1579.5	10.93	10.25	9.70
1589.7	1619.7	10.20	9.42	8.85
1630.0	1660.0	9.30	8.54	8.05
1650.1	1680.1	8.94	8.14	7.66

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1) @LO (dBm)		
		+4	+7	+10
100.1	130.1	15.67	13.60	12.61
140.4	170.4	8.95	7.70	7.22
180.6	210.6	5.54	5.10	4.89
220.9	250.9	4.09	3.84	3.70
261.1	291.1	3.19	3.03	2.95
301.4	331.4	2.61	2.51	2.46
341.7	371.7	2.24	2.15	2.12
381.9	411.9	1.96	1.91	1.88
422.2	452.2	1.77	1.74	1.73
462.4	492.4	1.58	1.56	1.56
502.7	532.7	1.42	1.43	1.46
543.0	573.0	1.32	1.34	1.39
583.2	613.2	1.24	1.28	1.35
623.5	653.5	1.21	1.27	1.34
663.7	693.7	1.20	1.28	1.35
704.0	734.0	1.20	1.30	1.39
744.3	774.3	1.21	1.33	1.41
784.5	814.5	1.14	1.26	1.33
824.8	854.8	1.02	1.14	1.21
865.0	895.0	1.10	1.06	1.12
905.3	935.3	1.27	1.18	1.16
945.6	975.6	1.49	1.39	1.34
985.8	1015.8	1.75	1.64	1.56
1026.1	1056.1	2.08	1.96	1.85
1066.3	1096.3	2.43	2.31	2.21
1106.6	1136.6	2.74	2.63	2.54
1146.9	1176.9	3.02	2.92	2.83
1187.1	1217.1	3.23	3.15	3.05
1227.4	1257.4	3.42	3.33	3.27
1267.6	1297.6	3.59	3.52	3.48
1307.9	1337.9	3.73	3.69	3.66
1348.2	1378.2	3.90	3.89	3.86
1388.4	1418.4	4.13	4.13	4.11
1428.7	1458.7	4.36	4.35	4.34
1468.9	1498.9	4.46	4.44	4.41
1509.2	1539.2	4.42	4.40	4.35
1549.5	1579.5	4.42	4.34	4.29
1589.7	1619.7	4.44	4.32	4.25
1630.0	1660.0	4.45	4.29	4.19
1650.1	1680.1	4.51	4.31	4.17

LO (MHz)	LO VSWR (:1) @LO (dBm)		
	+4	+7	+10
100.1	15.39	9.79	6.56
140.4	6.01	4.46	4.42
180.6	3.84	3.35	3.71
220.9	2.80	2.97	3.62
261.1	2.27	2.65	3.38
301.4	2.01	2.54	3.31
341.7	1.89	2.51	3.35
381.9	1.74	2.38	3.21
422.2	1.73	2.44	3.30
462.4	1.67	2.37	3.22
502.7	1.66	2.38	3.25
543.0	1.68	2.40	3.26
583.2	1.68	2.39	3.23
623.5	1.73	2.46	3.32
663.7	1.73	2.43	3.27
704.0	1.77	2.46	3.30
744.3	1.80	2.44	3.25
784.5	1.85	2.46	3.26
824.8	1.96	2.57	3.35
865.0	2.02	2.62	3.38
905.3	2.08	2.71	3.48
945.6	2.11	2.73	3.50
985.8	2.15	2.78	3.56
1026.1	2.17	2.79	3.58
1066.3	2.19	2.80	3.60
1106.6	2.20	2.79	3.59
1146.9	2.18	2.75	3.53
1187.1	2.17	2.71	3.48
1227.4	2.12	2.61	3.36
1267.6	2.07	2.56	3.33
1307.9	2.07	2.54	3.31
1348.2	2.15	2.61	3.37
1388.4	2.30	2.71	3.43
1428.7	2.47	2.80	3.47
1468.9	2.65	2.94	3.59
1509.2	2.83	3.03	3.62
1549.5	3.01	3.17	3.74
1589.7	3.17	3.26	3.78
1630.0	3.35	3.36	3.83
1650.1	3.42	3.43	3.90

IF (OUT) (MHz)	IF VSWR @LO=1050.1MHz (:1) @LO (dBm)		
	+4	+7	+10
10.0	2.23	1.93	1.62
16.2	2.32	1.95	1.67
22.3	2.49	2.09	1.82
28.5	2.48	2.10	1.81
34.6	2.47	2.13	1.85
40.8	2.49	2.17	1.88
46.9	2.51	2.19	1.90
53.1	2.49	2.18	1.91
59.2	2.49	2.19	1.92
65.4	2.51	2.20	1.92
71.5	2.50	2.19	1.91
77.7	2.51	2.20	1.92
83.8	2.52	2.19	1.92
90.0	2.53	2.20	1.92
96.2	2.53	2.19	1.92
102.3	2.56	2.21	1.93
108.5	2.56	2.21	1.93
114.6	2.56	2.21	1.93
120.8	2.56	2.22	1.93
126.9	2.56	2.21	1.93
133.1	2.55	2.21	1.93
139.2	2.56	2.22	1.94
145.4	2.57	2.24	1.96
151.5	2.59	2.26	1.98
157.7	2.62	2.28	2.01
163.8	2.65	2.32	2.04
170.0	2.67	2.33	2.06
176.2	2.67	2.34	2.07
182.3	2.67	2.33	2.05
188.5	2.64	2.31	2.03
194.6	2.61	2.28	2.01
200.8	2.59	2.26	1.98
206.9	2.56	2.23	1.96
213.1	2.56	2.23	1.96
219.2	2.57	2.24	1.97
225.4	2.59	2.26	2.00
231.5	2.61	2.29	2.03
237.7	2.65	2.33	2.07
243.8	2.68	2.36	2.10
250.0	2.69	2.37	2.12

Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	9	26	8	32	27	62	57	44	41	50
1	-	11	+0	25	13	50	33	38	56	57	58	50
2	>100	51	40	55	43	58	51	69	62	>80	>80	71
3	>100	74	49	62	48	56	53	69	64	74	>80	>80
4	>100	>80	>80	>80	76	>80	72	79	>80	>80	>80	>80
5	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
6	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
7	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
8	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
9	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
10	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 920.10 MHz; -14.00 dBm.
LO IN: 950.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -19.89 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	17	42	19	43	39	78	68	57	79	60
1	-	11	+0	27	14	54	35	47	64	62	60	56
2	85	45	35	53	39	52	43	66	61	85	79	67
3	>100	51	34	45	38	42	44	56	45	54	74	72
4	>100	72	61	58	56	58	54	63	61	71	69	85
5	>100	61	56	71	49	59	46	54	52	69	60	73
6	>100	>90	75	85	75	72	63	67	63	69	74	88
7	>100	>90	85	72	78	88	74	72	66	67	66	83
8	>100	>90	>90	>90	>90	>90	>90	83	84	83	74	90
9	>100	>90	>90	>90	>90	88	88	>90	83	81	79	78
10	>100	>90	>90	>90	>90	>90	>90	>90	>90	>90	86	86
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

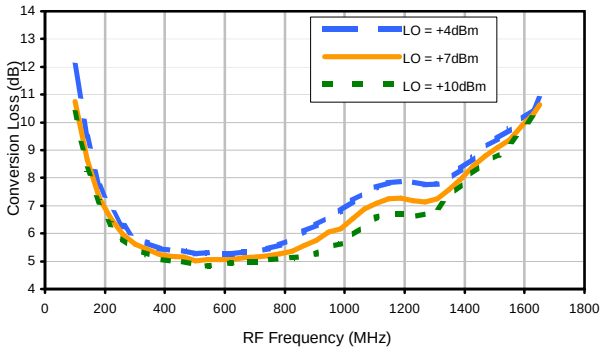
Test conditions: RF IN: 920.10 MHz; -4.00 dBm.
LO IN: 950.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -9.85 dBm

Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

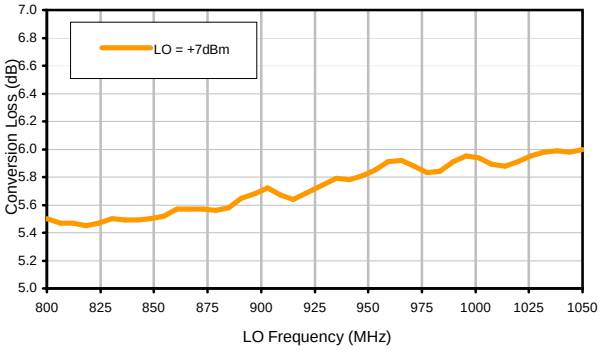
Frequency Mixer TUF-860

Typical Performance Curves

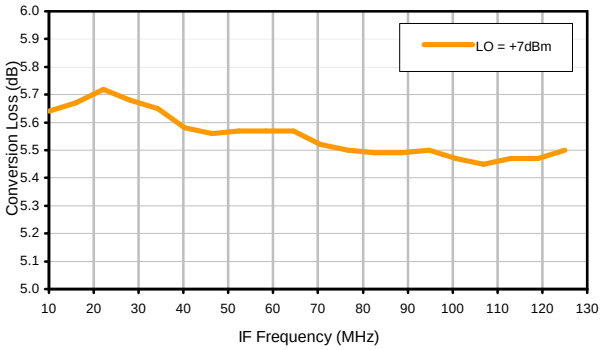
Conversion Loss @ IF=30MHz



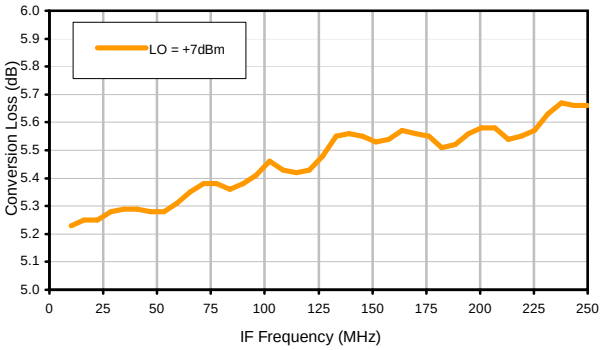
Conversion Loss vs. LO @ RF=925.1MHz



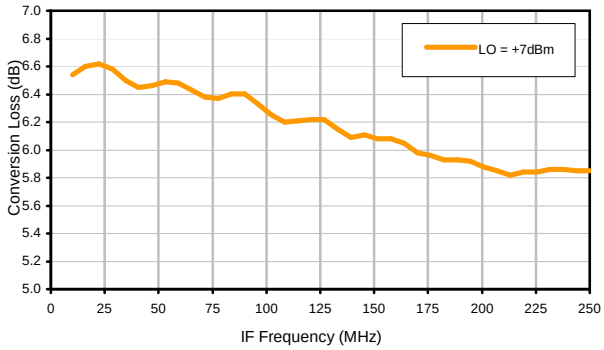
Conversion Loss vs. IF @ RF=925.1MHz



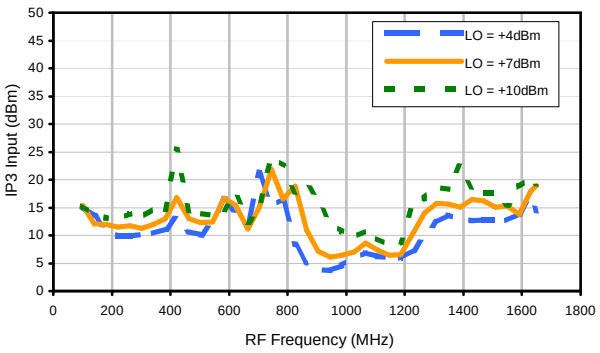
Conversion Loss vs. IF @ RF=800.1MHz



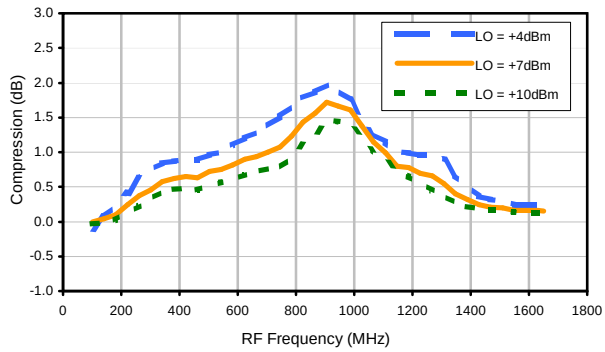
Conversion Loss vs. IF @ RF=1050.1MHz



IP3 Input

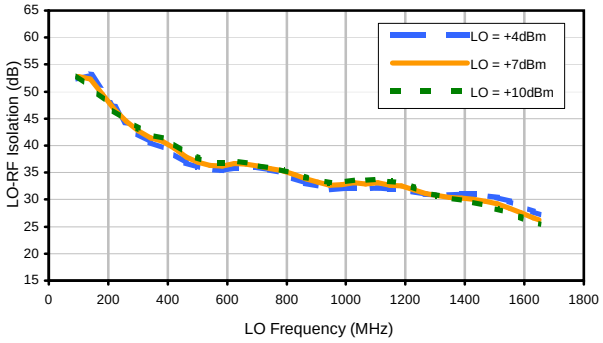


Compression @ RF IN=+1dBm

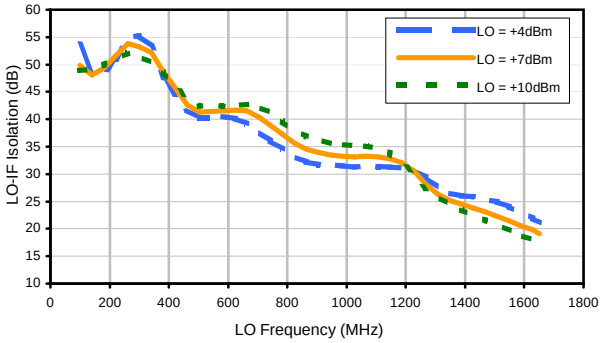


Typical Performance Curves

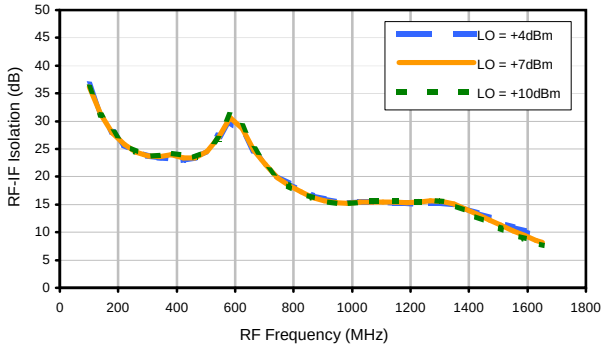
LO-RF Isolation



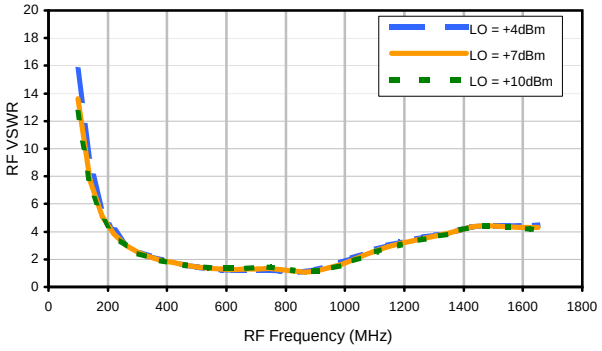
LO-IF Isolation



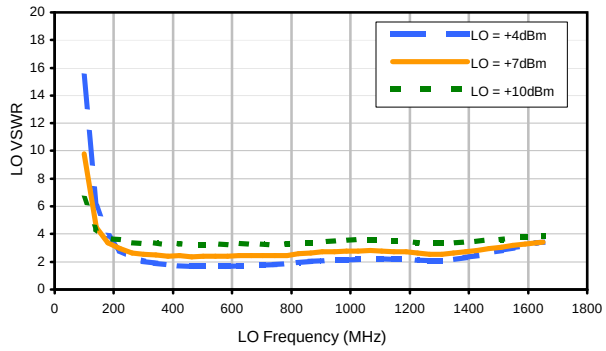
RF-IF Isolation



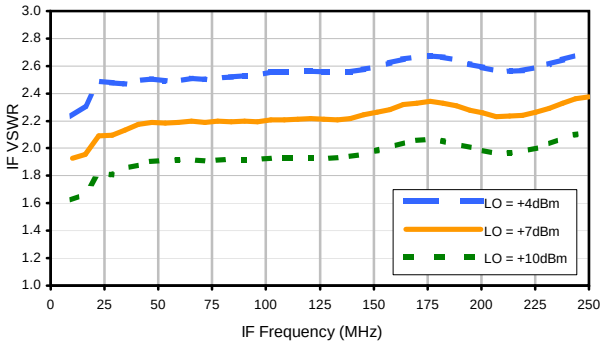
RF VSWR



LO VSWR



IF VSWR



Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	9	26	8	32	27	62	57	44	41	50
1	-	11	+0	25	13	50	33	38	56	57	58	50
2	>100	51	40	55	43	58	51	69	62	>80	>80	71
3	>100	74	49	62	48	56	53	69	64	74	>80	>80
4	>100	>80	>80	>80	76	>80	72	79	>80	>80	>80	>80
5	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
6	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
7	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
8	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
9	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
10	>100	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80	>80
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 920.10 MHz; -14.00 dBm.
LO IN: 950.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -19.89 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	17	42	19	43	39	78	68	57	79	60
1	-	11	+0	27	14	54	35	47	64	62	60	56
2	85	45	35	53	39	52	43	66	61	85	79	67
3	>100	51	34	45	38	42	44	56	45	54	74	72
4	>100	72	61	58	56	58	54	63	61	71	69	85
5	>100	61	56	71	49	59	46	54	52	69	60	73
6	>100	>90	75	85	75	72	63	67	63	69	74	88
7	>100	>90	85	72	78	88	74	72	66	67	66	83
8	>100	>90	>90	>90	>90	>90	>90	83	84	83	74	90
9	>100	>90	>90	>90	>90	88	88	>90	83	81	79	78
10	>100	>90	>90	>90	>90	>90	>90	>90	>90	>90	86	86
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

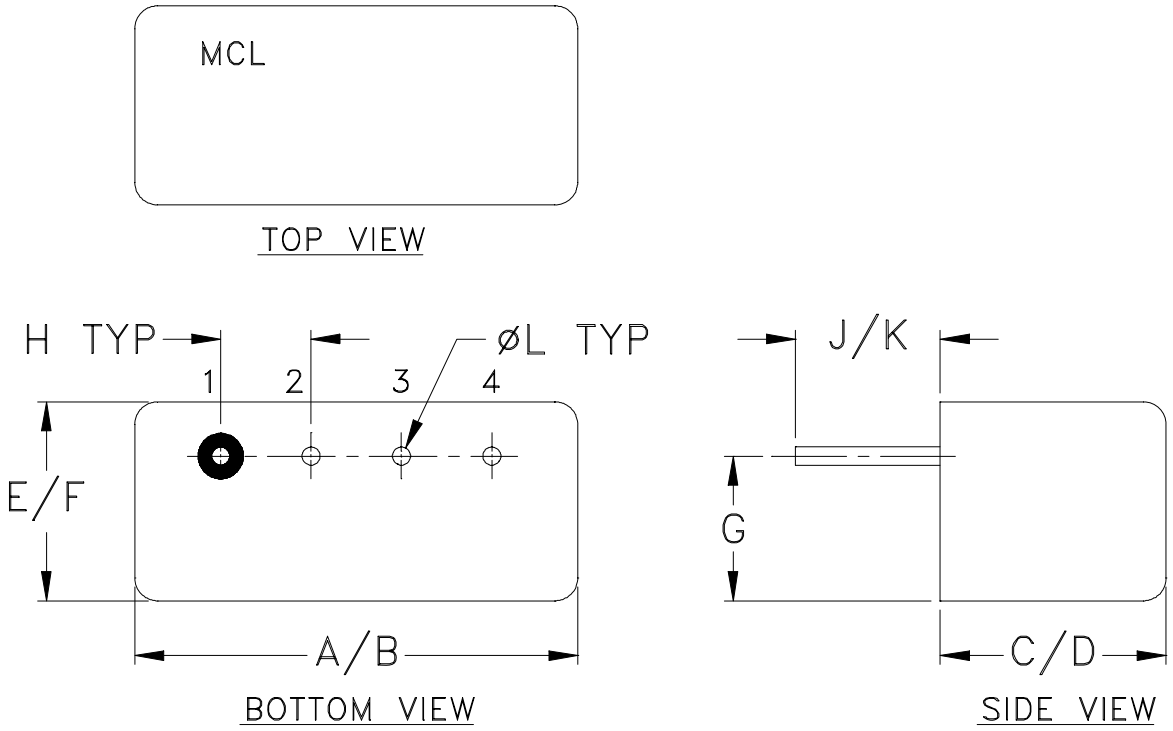
Test conditions: RF IN: 920.10 MHz; -4.00 dBm.
LO IN: 950.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -9.85 dBm

Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

Case Style B

B02
B13

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	WT, GRAM
B02	.480 (12.19)	.500 (12.70)	.240 (6.10)	.255 (6.48)	.210 (5.33)	.230 (5.84)	.16 (4.06)	.100 (2.54)	.14 (3.56)	.20 (5.08)	.020 (.51)	1.9
B13			.390 (9.91)	.405 (10.29)								2.3

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

Notes:

1. Header material: C.R.S.
   Pin material: #52 alloy.
   Cover material: Cupro-Nickel.
2. Pin finish: Electro Tin-Silver.
3. Tolerance on pin diameter +/-.005 inch.
4. Glass meniscus 0.015 inch max.
5. Blue bead indicates Pin 1. Pin numbers do not appear on unit, for reference only.

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