

Non-Catalog Model

Frequency Mixer

Level 7 (LO Power +7 dBm)

SBL-1Z

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 : A06

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (fL to fU)	10		1000	MHz
	RF (fL to fU)	10		1000	MHz
	IF	0		500	MHz
Conversion Loss	mid band		6.3	7.5	dB
	Total Range			9.0	dB
LO-RF Isolation	Low Range	40	50		dB
	Mid Range	25	35		dB
	Upper Range	20	25		dB
LO-IF Isolation	Low Range	25	40		dB
	Mid Range	18	25		dB
	Upper Range	15	19		dB
1 dB Comp. Input Power			+1		dBm

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

Mid Range = [10fL to fU/2]

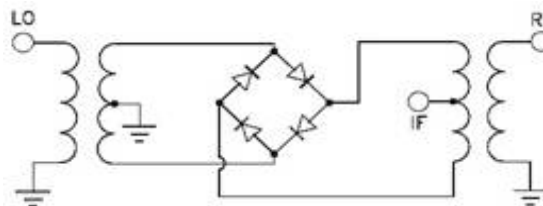
Upper Range = [fU/2 to fU]

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	1
RF	8
IF	3
GROUND	2, 5, 6, 7

Electrical Schematics



Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB)			RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)			RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+1dBm (dB)		
		@LO (dBm)					@LO (dBm)					@LO (dBm)		
+4	+7	+10	+4	+7	+10	+4	+7	+10	+4	+7	+10			
10.1	40.1	6.26	5.84	5.67	10.1	40.1	22.14	17.62	16.69	10.1	40.1	0.84	0.56	0.37
50.4	80.4	6.33	5.98	5.75	50.4	80.4	12.78	14.11	18.24	50.4	80.4	0.80	0.49	0.33
90.8	120.8	6.43	6.04	5.82	90.8	120.8	12.98	18.52	21.49	90.8	120.8	0.84	0.48	0.32
110.9	140.9	6.32	6.03	5.84	110.9	140.9	12.88	19.03	23.30	110.9	140.9	0.70	0.46	0.32
151.3	181.3	6.47	6.10	5.89	151.3	181.3	14.41	17.54	19.82	151.3	181.3	0.77	0.53	0.40
171.5	201.5	6.56	6.19	5.99	171.5	201.5	14.98	17.33	20.73	171.5	201.5	0.78	0.56	0.42
211.8	241.8	6.55	6.20	5.99	211.8	241.8	15.78	18.60	20.88	211.8	241.8	0.94	0.70	0.53
232.0	262.0	6.65	6.28	6.00	232.0	262.0	14.65	16.28	18.58	232.0	262.0	1.01	0.78	0.60
272.3	302.3	6.89	6.45	6.15	272.3	302.3	14.35	18.04	19.02	272.3	302.3	1.11	0.87	0.70
292.5	322.5	6.91	6.46	6.15	292.5	322.5	15.79	15.94	17.91	292.5	322.5	1.12	0.92	0.77
332.8	362.8	6.91	6.41	6.14	332.8	362.8	15.34	21.18	19.53	332.8	362.8	1.24	1.00	0.84
353.0	383.0	6.98	6.45	6.12	353.0	383.0	14.28	17.81	21.54	353.0	383.0	1.24	1.10	0.92
393.3	423.3	7.10	6.55	6.15	393.3	423.3	9.60	11.45	13.04	393.3	423.3	1.00	0.87	0.75
413.5	443.5	7.05	6.56	6.13	413.5	443.5	8.42	10.17	11.74	413.5	443.5	1.01	0.84	0.75
453.8	483.8	6.96	6.55	6.20	453.8	483.8	7.74	9.02	10.70	453.8	483.8	1.01	0.77	0.63
474.0	504.0	6.76	6.44	6.13	474.0	504.0	7.91	9.37	10.31	474.0	504.0	0.97	0.76	0.61
514.3	544.3	6.68	6.34	6.07	514.3	544.3	8.50	9.86	11.25	514.3	544.3	0.93	0.69	0.57
534.5	564.5	6.58	6.30	6.06	534.5	564.5	9.09	10.36	12.55	534.5	564.5	0.86	0.63	0.52
574.8	604.8	6.49	6.22	6.04	574.8	604.8	10.82	11.96	15.62	574.8	604.8	0.78	0.53	0.42
595.0	625.0	6.51	6.25	6.09	595.0	625.0	12.78	12.51	14.97	595.0	625.0	0.74	0.48	0.38
635.4	665.4	6.50	6.25	6.13	635.4	665.4	14.76	16.44	14.75	635.4	665.4	0.81	0.47	0.30
655.5	685.5	6.54	6.24	6.08	655.5	685.5	12.28	16.04	16.84	655.5	685.5	0.77	0.45	0.31
695.9	725.9	6.45	6.29	6.14	695.9	725.9	10.41	12.49	14.76	695.9	725.9	0.92	0.59	0.44
716.0	746.0	6.46	6.24	6.13	716.0	746.0	9.16	11.13	13.11	716.0	746.0	1.03	0.67	0.50
756.4	786.4	6.60	6.31	6.15	756.4	786.4	7.48	9.50	11.28	756.4	786.4	1.41	1.01	0.79
776.5	806.5	6.84	6.46	6.23	776.5	806.5	7.92	9.72	11.42	776.5	806.5	1.53	1.16	0.92
816.9	846.9	7.40	6.81	6.37	816.9	846.9	10.04	13.43	22.31	816.9	846.9	1.47	1.18	0.97
837.0	867.0	7.68	6.94	6.40	837.0	867.0	11.90	20.91	17.97	837.0	867.0	1.50	1.26	1.06
877.4	907.4	7.91	7.12	6.58	877.4	907.4	17.30	16.52	16.23	877.4	907.4	1.40	1.15	0.97
897.6	927.6	7.80	7.06	6.54	897.6	927.6	16.39	15.04	15.00	897.6	927.6	1.37	1.14	0.95
937.9	967.9	8.14	7.30	6.78	937.9	967.9	13.87	14.31	14.48	937.9	967.9	1.34	1.06	0.90
958.1	988.1	8.25	7.45	6.94	958.1	988.1	12.48	13.84	14.42	958.1	988.1	1.40	1.09	0.91
998.4	1028.4	8.56	7.72	7.20	998.4	1028.4	12.75	14.18	14.12	998.4	1028.4	1.32	1.06	0.91
1018.6	1048.6	8.80	7.88	7.37	1018.6	1048.6	12.08	13.97	15.33	1018.6	1048.6	1.30	1.05	0.92
1058.9	1088.9	9.27	8.32	7.77	1058.9	1088.9	11.93	12.70	13.74	1058.9	1088.9	1.15	1.04	0.91
1079.1	1109.1	9.35	8.47	7.97	1079.1	1109.1	12.20	12.71	15.14	1079.1	1109.1	0.94	0.87	0.80
1119.4	1149.4	9.90	9.00	8.37	1119.4	1149.4	10.80	12.55	12.61	1119.4	1149.4	0.70	0.77	0.74
1139.6	1169.6	10.11	9.27	8.54	1139.6	1169.6	11.31	11.96	11.71	1139.6	1169.6	0.69	0.70	0.79
1179.9	1209.9	10.37	9.71	8.98	1179.9	1209.9	10.75	11.12	10.22	1179.9	1209.9	0.68	0.72	0.98
1200.1	1230.1	10.68	10.09	9.38	1200.1	1230.1	10.28	10.62	9.37	1200.1	1230.1	0.67	0.66	0.93

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Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=500.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=10.1MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1000.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+7			+7			+7
480.0	20.1	6.66	10.0	20.1	5.89	500.0	500.1	6.78
467.9	32.2	6.71	22.6	32.7	5.77	487.4	512.7	6.83
455.9	44.2	6.74	35.1	45.2	5.78	474.9	525.2	6.80
443.8	56.3	6.74	47.7	57.8	5.82	462.3	537.8	6.70
431.8	68.3	6.69	60.3	70.4	5.77	449.7	550.4	6.65
419.7	80.4	6.69	72.8	82.9	5.79	437.2	562.9	6.67
407.7	92.4	6.68	85.4	95.5	5.78	424.6	575.5	6.70
395.6	104.5	6.65	97.9	108.0	5.79	412.1	588.0	6.73
383.6	116.5	6.59	110.5	120.6	5.79	399.5	600.6	6.77
371.5	128.6	6.57	123.1	133.2	5.76	386.9	613.2	6.94
359.5	140.6	6.53	135.6	145.7	5.78	374.4	625.7	7.00
347.4	152.7	6.56	148.2	158.3	5.82	361.8	638.3	7.09
335.4	164.7	6.56	160.8	170.9	5.83	349.2	650.9	7.24
323.3	176.8	6.49	173.3	183.4	5.83	336.7	663.4	7.41
311.3	188.8	6.44	185.9	196.0	5.86	324.1	676.0	7.47
299.2	200.9	6.53	198.5	208.6	5.81	311.5	688.6	7.58
287.2	212.9	6.51	211.0	221.1	5.82	299.0	701.1	7.70
275.1	225.0	6.48	223.6	233.7	5.84	286.4	713.7	7.77
263.1	237.0	6.54	236.2	246.3	5.84	273.8	726.3	7.87
251.0	249.1	6.42	248.7	258.8	5.93	261.3	738.8	7.82
239.0	261.1	6.45	261.3	271.4	5.89	248.7	751.4	7.99
226.9	273.2	6.42	273.8	283.9	5.90	236.2	763.9	8.07
214.9	285.2	6.34	286.4	296.5	5.94	223.6	776.5	8.09
202.8	297.3	6.34	299.0	309.1	5.93	211.0	789.1	8.10
190.8	309.3	6.32	311.5	321.6	5.95	198.5	801.6	8.13
178.7	321.4	6.26	324.1	334.2	5.96	185.9	814.2	8.10
166.7	333.4	6.29	336.7	346.8	5.92	173.3	826.8	8.05
154.6	345.5	6.32	349.2	359.3	5.96	160.8	839.3	8.01
142.6	357.5	6.33	361.8	371.9	5.96	148.2	851.9	8.03
130.5	369.6	6.39	374.4	384.5	6.01	135.6	864.5	8.00
118.5	381.6	6.45	386.9	397.0	6.04	123.1	877.0	7.81
106.4	393.7	6.43	399.5	409.6	5.98	110.5	889.6	7.86
94.4	405.7	6.41	412.1	422.2	6.02	97.9	902.2	7.82
82.3	417.8	6.34	424.6	434.7	6.08	85.4	914.7	7.74
70.3	429.8	6.35	437.2	447.3	6.11	72.8	927.3	7.69
58.2	441.9	6.38	449.7	459.8	6.17	60.3	939.8	7.76
46.2	453.9	6.29	462.3	472.4	6.22	47.7	952.4	7.73
34.1	466.0	6.35	474.9	485.0	6.24	35.1	965.0	7.71
22.1	478.0	6.40	487.4	497.5	6.28	22.6	977.5	7.69
10.0	490.1	6.45	500.0	510.1	6.32	10.0	990.1	7.85

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Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+4	+7	+10	+4	+7	+10
10.1	56.28	59.07	62.04	49.03	49.75	50.27
50.4	55.56	58.49	61.60	37.88	38.63	39.49
90.8	53.24	56.03	58.81	33.72	34.71	35.31
110.9	52.43	55.16	58.00	32.68	33.72	33.80
151.3	51.07	53.85	56.80	30.55	31.35	31.57
171.5	50.00	52.66	55.12	29.94	30.45	30.69
211.8	48.76	51.22	53.52	28.44	28.98	29.20
232.0	48.28	51.24	54.21	27.80	28.30	28.50
272.3	46.56	49.34	51.72	26.57	27.06	27.34
292.5	45.67	48.09	50.55	25.96	26.53	26.91
332.8	44.72	47.13	49.84	24.88	25.58	26.12
353.0	44.53	46.96	49.63	24.45	25.15	25.58
393.3	43.40	45.26	46.79	23.73	24.51	25.16
413.5	43.82	46.22	48.16	23.37	24.16	24.87
453.8	42.85	45.13	46.78	22.94	23.95	24.83
474.0	42.65	44.66	46.20	22.58	23.58	24.41
514.3	41.71	43.38	44.78	22.29	23.47	24.54
534.5	41.39	42.89	43.75	22.12	23.31	24.38
574.8	41.01	42.44	42.83	21.93	23.22	24.45
595.0	42.16	44.18	44.12	21.74	23.21	24.46
635.4	42.66	44.22	42.72	21.90	23.52	24.97
655.5	42.50	44.44	43.23	22.02	23.78	25.28
695.9	42.62	44.80	43.15	22.27	24.18	25.97
716.0	40.98	42.99	42.01	22.31	24.23	26.13
756.4	39.84	41.97	42.32	22.49	24.49	26.52
776.5	39.68	42.28	43.01	22.72	24.75	26.75
816.9	37.20	39.23	40.22	23.18	25.17	26.91
837.0	35.65	37.20	38.02	23.62	25.56	26.98
877.4	33.48	34.62	35.32	23.74	25.64	27.07
897.6	32.57	33.53	34.04	23.57	25.55	26.98
937.9	31.03	31.67	31.81	23.27	25.12	26.18
958.1	30.48	30.93	31.12	23.07	24.70	25.72
998.4	28.82	29.05	29.00	22.55	23.77	24.35
1018.6	28.05	28.08	27.97	22.47	23.31	23.63
1058.9	26.25	26.01	25.86	21.56	21.90	22.05
1079.1	25.50	25.14	24.93	21.16	21.27	21.35
1119.4	23.83	23.15	22.83	20.57	20.09	19.94
1139.6	23.10	22.26	21.80	20.37	19.61	19.25
1179.9	21.86	20.67	20.00	20.08	18.79	18.13
1200.1	20.99	19.80	19.09	19.72	18.36	17.60

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+4	+7	+10
10.1	40.1	50.63	46.81	56.29
50.4	80.4	49.46	48.15	48.97
90.8	120.8	45.62	44.55	45.31
110.9	140.9	43.71	42.52	42.02
151.3	181.3	41.04	41.15	40.70
171.5	201.5	40.75	39.84	39.58
211.8	241.8	40.45	39.95	39.02
232.0	262.0	39.05	38.83	38.48
272.3	302.3	37.79	36.97	36.87
292.5	322.5	38.72	36.96	36.33
332.8	362.8	40.74	39.25	37.24
353.0	383.0	40.76	40.05	38.95
393.3	423.3	37.67	37.62	37.79
413.5	443.5	36.81	36.75	36.49
453.8	483.8	34.17	33.95	33.72
474.0	504.0	33.24	32.90	32.57
514.3	544.3	31.88	30.85	30.26
534.5	564.5	31.36	29.92	29.20
574.8	604.8	30.75	28.75	27.84
595.0	625.0	31.04	28.95	27.82
635.4	665.4	31.52	29.56	28.09
655.5	685.5	32.39	30.50	28.96
695.9	725.9	32.98	31.81	30.64
716.0	746.0	33.53	32.36	31.21
756.4	786.4	39.95	39.16	38.09
776.5	806.5	40.66	41.38	40.71
816.9	846.9	32.47	33.10	33.85
837.0	867.0	29.45	29.80	30.30
877.4	907.4	27.18	27.31	27.58
897.6	927.6	26.38	26.42	26.49
937.9	967.9	25.50	25.19	25.27
958.1	988.1	25.26	24.88	24.80
998.4	1028.4	24.67	24.16	24.03
1018.6	1048.6	24.83	24.18	23.89
1058.9	1088.9	24.69	23.86	23.41
1079.1	1109.1	24.43	23.55	23.03
1119.4	1149.4	24.50	23.68	22.90
1139.6	1169.6	24.28	23.50	22.78
1179.9	1209.9	23.97	23.32	22.44
1200.1	1230.1	24.07	23.33	22.36

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)			LO (MHz)	LO VSWR (:1)			IF (OUT) (MHz)	IF VSWR @LO=1000.1MHz (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+4	+7	+10		+4	+7	+10		+4	+7	+10
10.1	40.1	1.11	1.13	1.16	10.1	1.64	2.25	3.28	10.0	1.58	1.23	1.03
50.4	80.4	1.02	1.04	1.09	50.4	1.72	2.47	3.50	22.6	1.68	1.33	1.13
90.8	120.8	1.05	1.05	1.09	90.8	1.62	2.41	3.35	35.1	1.58	1.26	1.06
110.9	140.9	1.06	1.06	1.10	110.9	1.65	2.35	3.29	47.7	1.54	1.26	1.07
151.3	181.3	1.09	1.07	1.09	151.3	1.70	2.41	3.34	60.3	1.57	1.28	1.09
171.5	201.5	1.11	1.08	1.08	171.5	1.66	2.34	3.21	72.8	1.61	1.30	1.11
211.8	241.8	1.16	1.12	1.11	211.8	1.72	2.43	3.34	85.4	1.59	1.29	1.10
232.0	262.0	1.20	1.16	1.14	232.0	1.76	2.54	3.46	97.9	1.57	1.27	1.08
272.3	302.3	1.31	1.26	1.23	272.3	1.80	2.55	3.45	110.5	1.59	1.27	1.09
292.5	322.5	1.36	1.31	1.28	292.5	1.77	2.44	3.32	123.1	1.61	1.29	1.10
332.8	362.8	1.49	1.43	1.41	332.8	1.89	2.59	3.47	135.6	1.60	1.30	1.11
353.0	383.0	1.57	1.51	1.47	353.0	1.90	2.57	3.42	148.2	1.57	1.29	1.10
393.3	423.3	1.75	1.70	1.65	393.3	1.95	2.62	3.46	160.8	1.55	1.26	1.08
413.5	443.5	1.85	1.81	1.77	413.5	2.01	2.74	3.61	173.3	1.52	1.24	1.07
453.8	483.8	1.99	1.97	1.94	453.8	2.07	2.81	3.68	185.9	1.53	1.25	1.10
474.0	504.0	2.03	2.03	2.02	474.0	2.07	2.72	3.53	198.5	1.56	1.26	1.11
514.3	544.3	2.12	2.15	2.18	514.3	2.20	2.86	3.70	211.0	1.55	1.26	1.10
534.5	564.5	2.15	2.21	2.25	534.5	2.25	2.89	3.70	223.6	1.49	1.22	1.07
574.8	604.8	2.21	2.32	2.40	574.8	2.31	2.93	3.72	236.2	1.46	1.20	1.08
595.0	625.0	2.20	2.31	2.42	595.0	2.39	3.03	3.82	248.7	1.45	1.20	1.10
635.4	665.4	2.12	2.21	2.31	635.4	2.49	3.12	3.90	261.3	1.47	1.22	1.11
655.5	685.5	2.08	2.14	2.23	655.5	2.55	3.20	3.95	273.8	1.46	1.21	1.11
695.9	725.9	1.96	2.00	2.06	695.9	2.67	3.33	4.12	286.4	1.42	1.18	1.09
716.0	746.0	1.87	1.90	1.93	716.0	2.69	3.30	4.09	299.0	1.39	1.15	1.10
756.4	786.4	1.79	1.76	1.76	756.4	2.74	3.31	4.08	311.5	1.35	1.13	1.12
776.5	806.5	1.85	1.80	1.77	776.5	2.80	3.36	4.11	324.1	1.32	1.13	1.13
816.9	846.9	2.24	2.14	2.08	816.9	2.89	3.42	4.15	336.7	1.31	1.11	1.13
837.0	867.0	2.49	2.36	2.27	837.0	2.98	3.55	4.27	349.2	1.28	1.08	1.12
877.4	907.4	2.96	2.80	2.69	877.4	3.04	3.54	4.25	361.8	1.24	1.05	1.13
897.6	927.6	3.13	2.96	2.84	897.6	3.07	3.51	4.20	374.4	1.19	1.05	1.16
937.9	967.9	3.54	3.34	3.20	937.9	3.20	3.58	4.21	386.9	1.16	1.06	1.19
958.1	988.1	3.70	3.51	3.37	958.1	3.26	3.61	4.24	399.5	1.14	1.07	1.20
998.4	1028.4	4.01	3.84	3.70	998.4	3.42	3.70	4.29	412.1	1.10	1.08	1.21
1018.6	1048.6	4.14	3.97	3.85	1018.6	3.52	3.85	4.43	424.6	1.06	1.12	1.25
1058.9	1088.9	4.36	4.22	4.13	1058.9	3.66	3.89	4.39	437.2	1.03	1.17	1.31
1079.1	1109.1	4.41	4.32	4.23	1079.1	3.72	3.87	4.31	449.7	1.06	1.22	1.36
1119.4	1149.4	4.48	4.40	4.33	1119.4	3.80	3.92	4.27	462.3	1.09	1.26	1.40
1139.6	1169.6	4.53	4.42	4.34	1139.6	3.83	3.89	4.21	474.9	1.13	1.30	1.45
1179.9	1209.9	4.68	4.51	4.36	1179.9	3.79	3.78	4.02	487.4	1.19	1.38	1.52
1200.1	1230.1	4.78	4.54	4.36	1200.1	3.73	3.73	3.95	500.0	1.27	1.47	1.62

Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	+4	25	30	47	41	35	36	52	54	68
1	-	25	+0	37	19	43	49	53	50	45	60	71
2	>100	63	45	65	45	70	57	>80	66	62	65	76
3	>100	>80	65	68	58	69	69	>80	>80	>80	79	77
4	>100	>80	>80	>80	72	78	73	>80	>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: 500.1 MHz; -14.00 dBm.
LO IN: 530.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -20.5 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	6	35	44	58	50	51	53	80	88	79
1	-	24	+0	45	20	45	51	58	59	55	76	88
2	97	56	40	56	40	62	53	77	67	58	62	77
3	>100	56	45	56	40	54	51	70	70	71	68	66
4	>100	>89	62	72	50	69	51	73	67	87	74	68
5	>100	>89	>89	76	64	69	57	73	65	>89	82	86
6	>100	89	89	>89	73	76	62	74	64	>89	80	>89
7	>100	>89	>89	>89	>89	>89	83	82	77	85	86	>89
8	>100	>89	>89	>89	>89	>89	86	86	74	81	77	>89
9	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89
10	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	88	89
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -4.00 dBm.
LO IN: 530.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -10.54 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.

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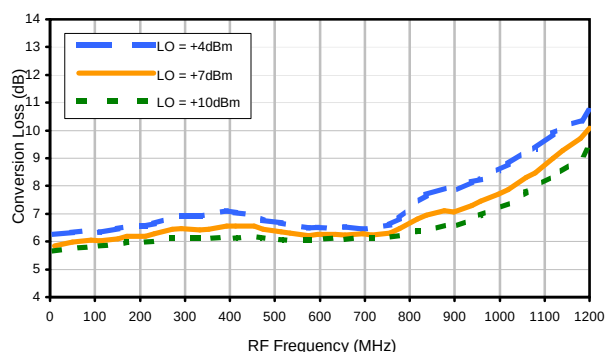
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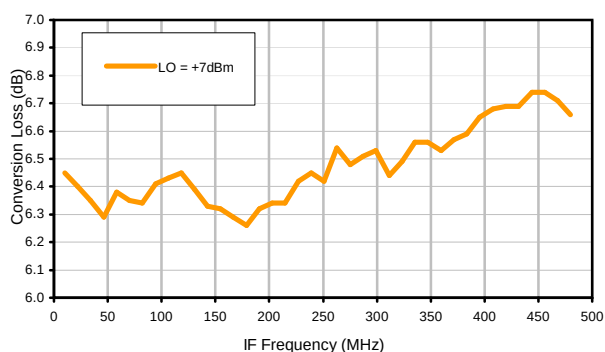


Typical Performance Curves

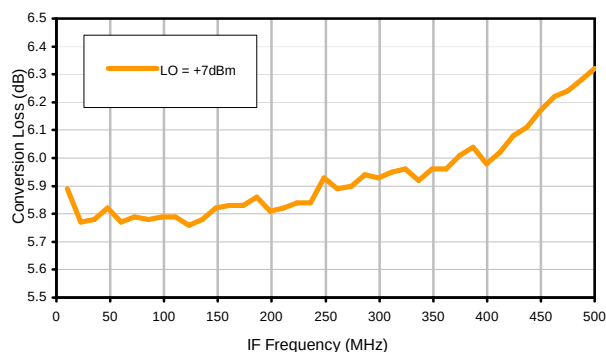
Conversion Loss @ IF=30MHz



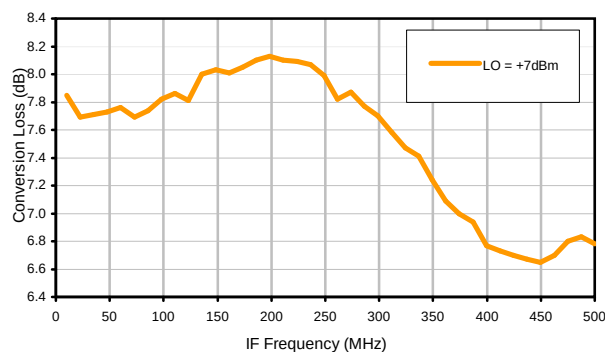
Conversion Loss vs. IF @ RF=500.1MHz



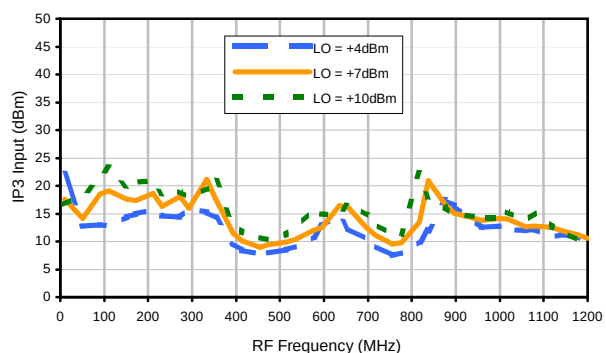
Conversion Loss vs. IF @ RF=10.1MHz



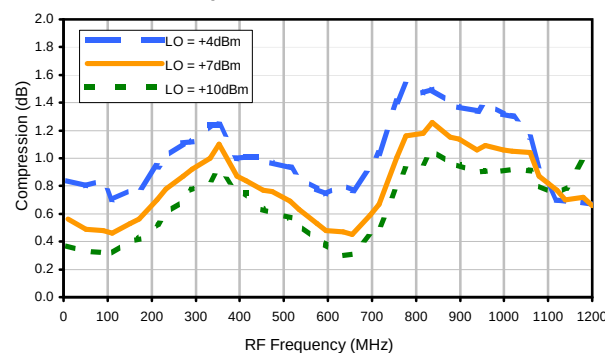
Conversion Loss vs. IF @ RF=1000.1MHz



IP3 Input

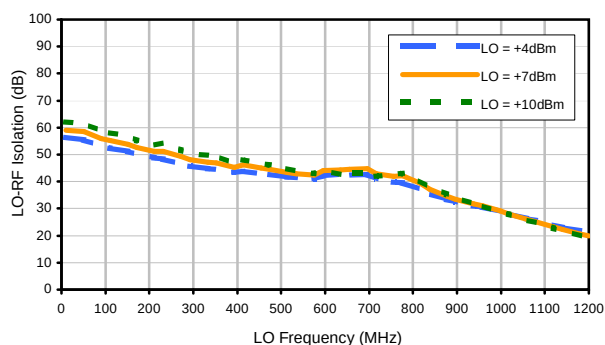


Compression @ RF IN=+1dBm

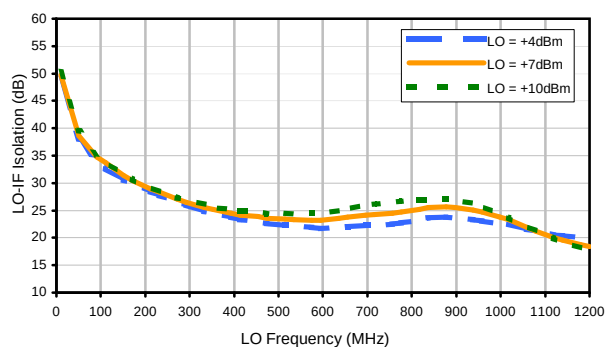


Typical Performance Curves

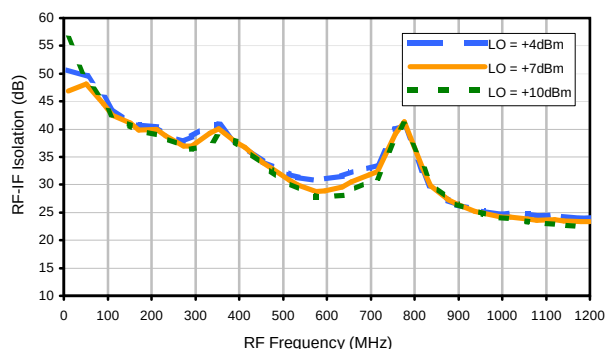
LO-RF Isolation



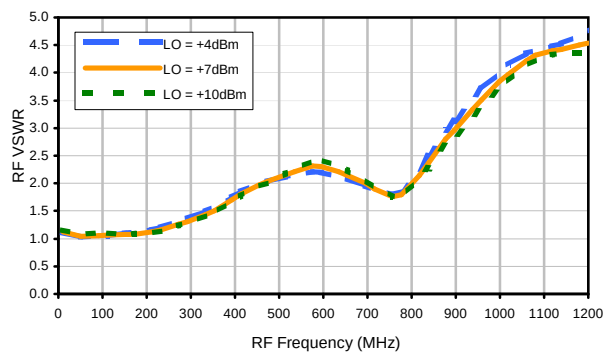
LO-IF Isolation



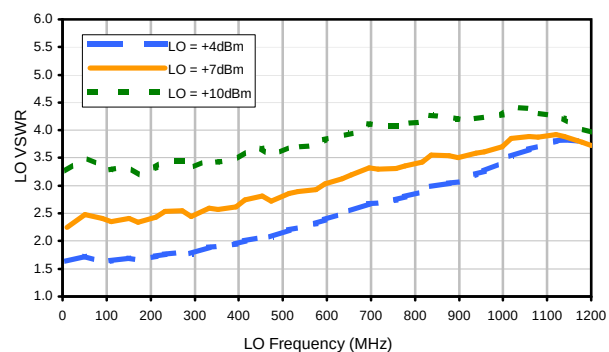
RF-IF Isolation



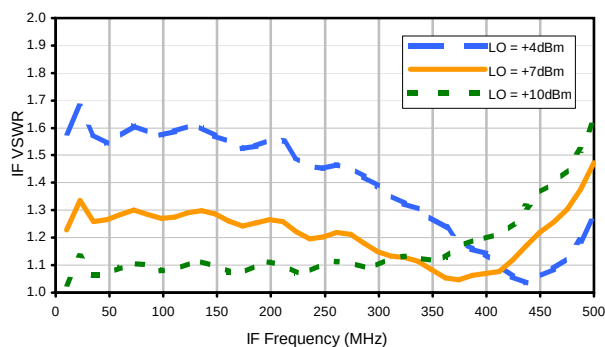
RF VSWR



LO VSWR



IF VSWR



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Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	+4	25	30	47	41	35	36	52	54	68
1	-	25	+0	37	19	43	49	53	50	45	60	71
2	>100	63	45	65	45	70	57	>80	66	62	65	76
3	>100	>80	65	68	58	69	69	>80	>80	>80	79	77
4	>100	>80	>80	>80	72	78	73	>80	>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: 500.1 MHz; -14.00 dBm.
LO IN: 530.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -20.5 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	6	35	44	58	50	51	53	80	88	79
1	-	24	+0	45	20	45	51	58	59	55	76	88
2	97	56	40	56	40	62	53	77	67	58	62	77
3	>100	56	45	56	40	54	51	70	70	71	68	66
4	>100	>89	62	72	50	69	51	73	67	87	74	68
5	>100	>89	>89	76	64	69	57	73	65	>89	82	86
6	>100	89	89	>89	73	76	62	74	64	>89	80	>89
7	>100	>89	>89	>89	>89	>89	83	82	77	85	86	>89
8	>100	>89	>89	>89	>89	>89	86	86	74	81	77	>89
9	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89
10	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	88	89
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -4.00 dBm.
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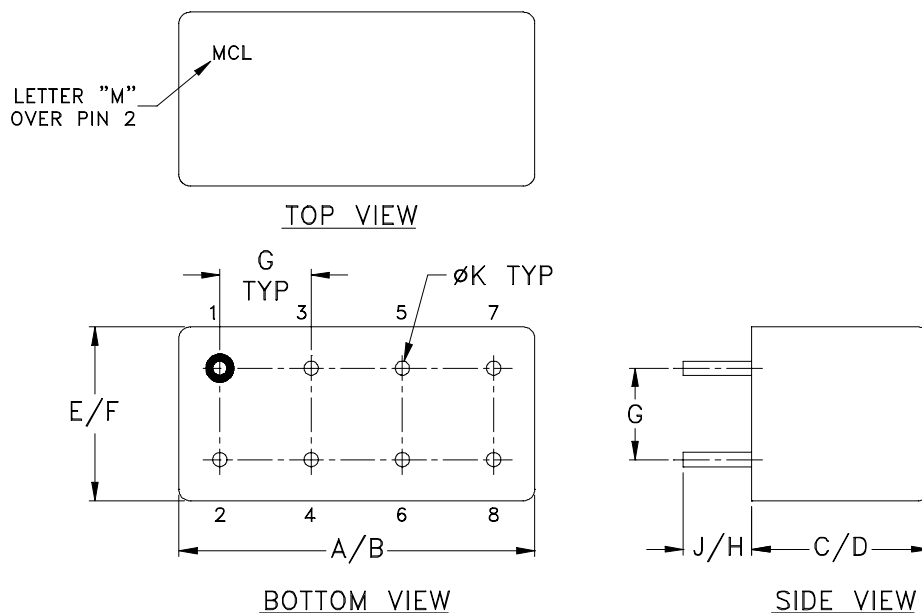
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A01
A04
A05
A06

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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