

Non-Catalog Model

Frequency Mixer

SAM-4

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 : A03

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (fL to fU)	5		1250	MHz
	RF (fL to fU)	5		1250	MHz
	IF	0.5		1000	MHz
Conversion Loss	mid band		6.0	8.5	dB
	Total Range			8.5	dB
LO-RF Isolation	Low Range	40	55		dB
	Mid Range	25	35		dB
	Upper Range	20	30		dB
LO-IF Isolation	Low Range	40	50		dB
	Mid Range	25	35		dB
	Upper Range	20	30		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]

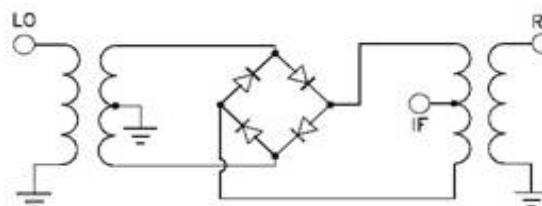
Upper Range = [fU/2 to fU]

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	8
RF	3, 4 ^
IF	1
GROUND	2, 5, 6, 7

^ - pins must be connected together externally

Electrical Schematics



Frequency Mixer

SAM-4

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
5.0	35.0	6.26	5.94	5.69	10.1	40.1	13.79	16.56	17.59	10.1	40.1	0.87	0.52	0.34
10.1	40.1	6.23	5.79	5.57	50.8	80.8	14.97	13.16	12.83	50.8	80.8	0.95	0.59	0.38
50.8	80.8	6.13	5.70	5.49	91.5	121.5	10.77	11.41	18.34	91.5	121.5	0.94	0.57	0.36
91.5	121.5	6.15	5.71	5.51	132.3	162.3	9.61	13.94	20.40	132.3	162.3	1.05	0.63	0.42
132.3	162.3	6.16	5.74	5.54	173.0	203.0	11.09	21.11	16.22	173.0	203.0	0.99	0.60	0.41
173.0	203.0	6.16	5.75	5.55	213.7	243.7	13.14	17.33	15.00	213.7	243.7	1.13	0.74	0.52
213.7	243.7	6.23	5.81	5.60	254.4	284.4	18.56	14.01	13.86	254.4	284.4	1.06	0.71	0.50
254.4	284.4	6.26	5.85	5.64	295.2	325.2	16.57	13.48	14.26	295.2	325.2	1.17	0.80	0.60
295.2	325.2	6.28	5.87	5.66	335.9	365.9	13.83	12.89	13.47	335.9	365.9	1.13	0.80	0.60
335.9	365.9	6.43	5.98	5.75	376.6	406.6	10.71	11.05	12.27	376.6	406.6	1.16	0.85	0.68
376.6	406.6	6.42	5.96	5.72	417.3	447.3	9.57	9.82	10.92	417.3	447.3	1.14	0.84	0.67
417.3	447.3	6.62	6.17	5.92	458.1	488.1	9.81	10.19	11.67	458.1	488.1	1.12	0.86	0.70
458.1	488.1	6.62	6.16	5.93	498.8	528.8	10.34	12.37	13.48	498.8	528.8	1.05	0.78	0.65
498.8	528.8	6.79	6.34	6.08	539.5	569.5	8.39	10.19	11.86	539.5	569.5	1.09	0.77	0.63
539.5	569.5	6.81	6.39	6.13	580.2	610.2	8.17	9.09	10.46	580.2	610.2	1.12	0.81	0.65
580.2	610.2	6.78	6.38	6.15	620.9	650.9	9.40	8.80	10.25	620.9	650.9	1.19	0.90	0.75
620.9	650.9	6.79	6.34	6.09	661.7	691.7	11.24	10.07	10.04	661.7	691.7	1.26	0.98	0.82
661.7	691.7	6.69	6.25	5.99	702.4	732.4	11.90	12.40	11.34	702.4	732.4	1.28	1.02	0.87
702.4	732.4	6.66	6.21	5.95	743.1	773.1	9.99	12.76	13.31	743.1	773.1	1.36	1.13	0.99
743.1	773.1	6.59	6.10	5.83	783.8	813.8	8.58	11.37	13.58	783.8	813.8	1.22	1.03	0.92
783.8	813.8	6.66	6.13	5.83	824.6	854.6	6.50	8.41	9.99	824.6	854.6	1.18	0.91	0.80
824.6	854.6	6.73	6.19	5.88	865.3	895.3	5.29	7.18	8.77	865.3	895.3	1.18	0.81	0.69
865.3	895.3	6.71	6.19	5.87	906.0	936.0	4.99	6.75	8.64	906.0	936.0	1.29	0.85	0.66
906.0	936.0	6.59	6.05	5.77	946.7	976.7	5.29	6.03	7.95	946.7	976.7	1.38	0.88	0.61
946.7	976.7	6.63	6.06	5.76	987.4	1017.4	5.53	5.89	7.43	987.4	1017.4	1.41	0.87	0.59
987.4	1017.4	6.55	6.01	5.71	1028.2	1058.2	5.37	5.83	6.77	1028.2	1058.2	1.54	0.89	0.59
1028.2	1058.2	6.59	6.08	5.75	1068.9	1098.9	5.01	5.59	6.47	1068.9	1098.9	1.63	0.90	0.57
1109.6	1139.6	6.67	6.20	5.90	1109.6	1139.6	4.65	5.44	6.38	1109.6	1139.6	1.64	0.88	0.54
1150.3	1180.3	6.84	6.36	6.05	1150.3	1180.3	4.22	5.20	6.31	1150.3	1180.3	1.77	0.91	0.54
1191.1	1221.1	6.96	6.50	6.21	1191.1	1221.1	3.95	5.10	6.44	1191.1	1221.1	1.73	0.86	0.52
1231.8	1261.8	7.18	6.73	6.43	1231.8	1261.8	3.87	5.16	6.53	1231.8	1261.8	1.72	0.84	0.50
1292.9	1322.9	7.57	7.13	6.85	1292.9	1322.9	3.85	5.67	7.06	1292.9	1322.9	1.60	0.74	0.44
1333.6	1363.6	7.90	7.46	7.19	1333.6	1363.6	4.14	6.26	8.09	1333.6	1363.6	1.58	0.73	0.43
1394.7	1424.7	8.40	7.96	7.70	1394.7	1424.7	5.17	8.15	11.01	1394.7	1424.7	1.41	0.66	0.40
1435.4	1465.4	8.78	8.33	8.08	1435.4	1465.4	6.20	10.86	15.07	1435.4	1465.4	1.35	0.64	0.39
1496.5	1526.5	9.29	8.81	8.56	1496.5	1526.5	8.81	11.71	11.35	1496.5	1526.5	1.23	0.60	0.34
1537.2	1567.2	9.65	9.14	8.91	1537.2	1567.2	10.44	10.26	11.51	1537.2	1567.2	1.23	0.58	0.29
1598.3	1628.3	10.09	9.55	9.34	1598.3	1628.3	12.45	12.08	13.72	1598.3	1628.3	1.21	0.52	0.21
1639.0	1669.0	10.42	9.81	9.59	1639.0	1669.0	14.67	15.30	13.78	1639.0	1669.0	1.24	0.57	0.24
1700.1	1730.1	11.04	10.21	9.91	1700.1	1730.1	9.91	19.07	17.42	1700.1	1730.1	1.23	0.68	0.30

REV. X2

SAM-4

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IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant

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Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=625.1MHz (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)=1250.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+7			+7			+7
615.0	10.1	6.74	10.0	20.1	5.74	1000.0	250.1	6.93
599.5	25.6	6.79	30.2	40.3	5.81	979.8	270.3	6.83
584.0	41.1	6.84	50.4	60.5	5.87	959.6	290.5	6.77
568.5	56.6	6.85	70.6	80.7	5.84	939.4	310.7	6.68
552.9	72.2	6.86	90.8	100.9	5.80	919.2	330.9	6.59
537.4	87.7	6.81	111.0	121.1	5.80	899.0	351.1	6.57
521.9	103.2	6.78	131.2	141.3	5.82	878.8	371.3	6.53
506.4	118.7	6.76	151.4	161.5	5.83	858.6	391.5	6.49
490.9	134.2	6.78	171.6	181.7	5.77	838.4	411.7	6.44
475.4	149.7	6.76	191.8	201.9	5.78	818.2	431.9	6.40
459.9	165.2	6.76	212.0	222.1	5.79	798.0	452.1	6.36
444.4	180.7	6.65	232.2	242.3	5.86	777.8	472.3	6.33
428.8	196.3	6.61	252.4	262.5	5.84	757.6	492.5	6.27
413.3	211.8	6.61	272.7	282.8	5.82	737.3	512.8	6.25
397.8	227.3	6.62	292.9	303.0	5.82	717.1	533.0	6.23
382.3	242.8	6.65	313.1	323.2	5.86	696.9	553.2	6.24
366.8	258.3	6.63	333.3	343.4	5.92	676.7	573.4	6.25
351.3	273.8	6.58	353.5	363.6	5.94	656.5	593.6	6.26
335.8	289.3	6.55	373.7	383.8	5.95	636.3	613.8	6.30
320.3	304.8	6.55	393.9	404.0	5.96	616.1	634.0	6.33
304.7	320.4	6.55	434.3	444.4	6.07	575.7	674.4	6.45
289.2	335.9	6.61	454.5	464.6	6.10	555.5	694.6	6.52
273.7	351.4	6.62	494.9	505.0	6.15	515.1	735.0	6.57
258.2	366.9	6.65	515.1	525.2	6.23	494.9	755.2	6.55
242.7	382.4	6.63	555.5	565.6	6.42	454.5	795.6	6.50
227.2	397.9	6.58	575.7	585.8	6.47	434.3	815.8	6.49
211.7	413.4	6.59	616.1	626.2	6.62	393.9	856.2	6.41
196.2	428.9	6.59	636.3	646.4	6.74	373.7	876.4	6.37
180.6	444.5	6.58	676.7	686.8	6.85	333.3	916.8	6.30
165.1	460.0	6.61	696.9	707.0	6.91	313.1	937.0	6.26
149.6	475.5	6.59	737.3	747.4	7.06	272.7	977.4	6.27
134.1	491.0	6.56	757.6	767.7	7.08	252.4	997.7	6.30
118.6	506.5	6.60	798.0	808.1	7.11	212.0	1038.1	6.32
103.1	522.0	6.62	818.2	828.3	7.15	191.8	1058.3	6.31
87.6	537.5	6.63	858.6	868.7	7.24	151.4	1098.7	6.36
72.1	553.0	6.62	878.8	888.9	7.26	131.2	1118.9	6.37
56.5	568.6	6.54	919.2	929.3	7.31	90.8	1159.3	6.42
41.0	584.1	6.47	939.4	949.5	7.47	70.6	1179.5	6.47
25.5	599.6	6.39	979.8	989.9	7.82	30.2	1219.9	6.53
10.0	615.1	6.32	1000.0	1010.1	7.98	10.0	1240.1	6.58

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+4	+7	+10	+4	+7	+10
5.0	59.83	59.43	57.96	64.00	61.56	59.99
10.1	63.01	69.41	76.39	72.68	73.20	73.34
50.8	63.79	70.84	65.67	60.79	60.42	60.01
91.5	62.57	67.98	61.29	55.73	55.21	54.79
132.3	59.76	66.24	60.57	52.68	52.33	51.75
173.0	57.21	61.80	58.56	50.56	50.11	49.46
213.7	54.13	57.48	55.81	48.78	48.22	47.58
254.4	50.83	53.50	53.27	47.47	46.98	46.36
295.2	48.40	50.61	50.55	46.07	45.53	44.89
335.9	46.06	47.96	48.34	45.03	44.57	44.08
376.6	44.11	45.79	46.29	44.16	43.77	43.35
417.3	42.47	43.84	44.37	43.46	43.14	42.74
458.1	40.73	42.20	42.89	42.84	42.49	42.10
498.8	39.71	41.22	41.96	42.01	41.74	41.34
539.5	38.50	39.84	40.67	41.26	41.28	41.06
580.2	37.60	38.78	39.45	40.39	40.58	40.58
620.9	36.67	37.75	38.34	39.76	40.11	40.30
661.7	35.70	36.75	37.38	39.35	39.80	40.16
702.4	35.04	36.07	36.60	38.97	39.55	39.93
743.1	34.16	35.25	35.90	38.68	39.39	39.83
783.8	33.54	34.61	35.35	38.27	39.01	39.48
824.6	32.83	33.82	34.57	38.12	38.87	39.39
865.3	32.31	33.19	33.91	37.82	38.59	39.09
906.0	31.90	32.76	33.51	37.65	38.45	38.98
946.7	31.61	32.50	33.27	37.42	38.19	38.75
987.4	31.31	32.31	33.08	37.17	37.85	38.45
1028.2	31.17	32.29	33.11	37.03	37.58	38.19
1109.6	30.84	32.11	33.08	36.72	37.11	37.59
1150.3	30.74	32.02	33.01	36.84	37.18	37.50
1191.1	30.64	31.96	33.01	37.07	37.41	37.67
1231.8	30.79	32.09	33.14	37.37	37.66	37.87
1292.9	30.68	31.88	32.90	37.78	38.16	38.31
1333.6	30.75	31.86	32.72	38.04	38.39	38.53
1394.7	30.57	31.53	32.24	38.37	38.71	38.83
1435.4	30.50	31.30	31.88	38.57	38.80	38.87
1496.5	30.39	30.97	31.42	38.79	38.68	38.65
1537.2	30.35	30.82	31.21	38.95	38.66	38.57
1598.3	30.37	30.91	31.33	39.30	38.67	38.55
1639.0	30.29	30.92	31.30	39.75	39.05	38.83
1700.1	29.58	30.55	31.03	40.29	39.50	39.02

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+4	+7	+10
10.1	40.1	52.67	53.25	51.86
50.8	80.8	40.15	40.84	41.42
91.5	121.5	36.08	36.74	37.27
132.3	162.3	33.99	34.74	35.25
173.0	203.0	33.16	34.06	34.67
213.7	243.7	32.88	33.90	34.59
254.4	284.4	33.52	34.81	35.74
295.2	325.2	34.00	35.97	37.53
335.9	365.9	34.12	35.60	36.32
376.6	406.6	32.78	33.48	33.83
417.3	447.3	30.74	31.50	32.05
458.1	488.1	28.65	29.26	29.70
498.8	528.8	26.55	26.49	26.42
539.5	569.5	24.54	24.16	23.82
580.2	610.2	22.77	22.22	21.87
620.9	650.9	21.53	20.90	20.40
661.7	691.7	20.62	19.99	19.46
702.4	732.4	20.02	19.48	18.98
743.1	773.1	19.70	19.27	18.89
783.8	813.8	19.47	19.08	18.79
824.6	854.6	19.27	18.87	18.64
865.3	895.3	19.03	18.54	18.23
906.0	936.0	18.75	18.16	17.71
946.7	976.7	18.45	17.76	17.17
987.4	1017.4	17.98	17.23	16.54
1028.2	1058.2	17.37	16.68	15.89
1068.9	1098.9	16.66	15.94	15.13
1109.6	1139.6	15.76	14.99	14.20
1150.3	1180.3	14.86	14.06	13.29
1191.1	1221.1	13.90	13.10	12.32
1231.8	1261.8	13.03	12.25	11.50
1292.9	1322.9	11.81	11.06	10.41
1333.6	1363.6	11.06	10.34	9.77
1394.7	1424.7	10.09	9.38	8.86
1435.4	1465.4	9.57	8.85	8.35
1496.5	1526.5	8.87	8.18	7.74
1537.2	1567.2	8.53	7.88	7.52
1598.3	1628.3	8.21	7.64	7.36
1639.0	1669.0	8.10	7.56	7.32
1700.1	1730.1	7.69	7.32	7.14

Frequency Mixer

SAM-4

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)			LO (MHz)	LO VSWR (:1)			IF (OUT) (MHz)	IF VSWR @LO=1250.1MHz (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+4	+7	+10		+4	+7	+10		+4	+7	+10
5.0	35.0	1.73	1.47	1.27	5.0	2.04	3.00	4.04	5.0	1.20	1.28	1.38
10.1	40.1	1.73	1.47	1.27	10.1	1.95	2.89	3.94	10.0	1.12	1.22	1.32
50.8	80.8	1.43	1.20	1.07	50.8	1.61	2.32	3.27	30.2	1.29	1.22	1.17
91.5	121.5	1.40	1.19	1.09	91.5	1.65	2.42	3.43	50.4	1.28	1.22	1.17
132.3	162.3	1.42	1.24	1.16	132.3	1.61	2.31	3.22	70.6	1.29	1.22	1.17
173.0	203.0	1.49	1.33	1.24	173.0	1.61	2.32	3.22	90.8	1.30	1.23	1.17
213.7	243.7	1.55	1.39	1.30	213.7	1.65	2.37	3.28	111.0	1.31	1.23	1.17
254.4	284.4	1.69	1.52	1.42	254.4	1.62	2.28	3.10	131.2	1.31	1.23	1.17
295.2	325.2	1.73	1.56	1.45	295.2	1.71	2.43	3.29	151.4	1.32	1.24	1.16
335.9	365.9	1.94	1.74	1.62	335.9	1.69	2.34	3.12	171.6	1.33	1.25	1.17
376.6	406.6	1.99	1.78	1.65	376.6	1.75	2.40	3.18	191.8	1.35	1.26	1.18
417.3	447.3	2.16	1.94	1.80	417.3	1.81	2.45	3.19	212.0	1.36	1.27	1.18
458.1	488.1	2.24	1.99	1.82	458.1	1.81	2.41	3.11	232.2	1.36	1.27	1.18
498.8	528.8	2.34	2.10	1.93	498.8	1.91	2.53	3.23	252.4	1.36	1.26	1.17
539.5	569.5	2.47	2.24	2.09	539.5	1.90	2.48	3.12	272.7	1.37	1.27	1.17
580.2	610.2	2.42	2.20	2.07	580.2	1.96	2.53	3.16	292.9	1.38	1.27	1.17
620.9	650.9	2.59	2.31	2.13	620.9	2.03	2.57	3.18	313.1	1.38	1.28	1.17
661.7	691.7	2.51	2.22	2.03	661.7	2.04	2.55	3.11	333.3	1.37	1.27	1.16
702.4	732.4	2.61	2.32	2.11	702.4	2.13	2.65	3.21	353.5	1.36	1.25	1.15
743.1	773.1	2.52	2.24	2.03	743.1	2.15	2.63	3.17	373.7	1.35	1.24	1.13
783.8	813.8	2.53	2.26	2.06	783.8	2.20	2.67	3.19	393.9	1.34	1.23	1.13
824.6	854.6	2.47	2.22	2.05	824.6	2.27	2.72	3.21	434.3	1.33	1.23	1.13
865.3	895.3	2.34	2.09	1.94	865.3	2.31	2.71	3.17	454.5	1.32	1.22	1.13
906.0	936.0	2.26	1.98	1.82	906.0	2.39	2.79	3.24	494.9	1.33	1.23	1.15
946.7	976.7	2.15	1.83	1.65	946.7	2.46	2.84	3.25	515.1	1.33	1.24	1.17
987.4	1017.4	2.13	1.79	1.58	987.4	2.52	2.89	3.30	555.5	1.33	1.25	1.19
1028.2	1058.2	2.00	1.68	1.45	1028.2	2.60	2.98	3.38	575.7	1.34	1.27	1.22
1068.9	1098.9	1.92	1.62	1.38	1068.9	2.64	3.00	3.39	616.1	1.39	1.33	1.29
1109.6	1139.6	1.78	1.48	1.26	1109.6	2.71	3.06	3.45	636.3	1.41	1.36	1.32
1150.3	1180.3	1.68	1.40	1.19	1150.3	2.79	3.12	3.49	676.7	1.46	1.42	1.40
1191.1	1221.1	1.58	1.34	1.18	1191.1	2.83	3.13	3.50	696.9	1.50	1.47	1.45
1231.8	1261.8	1.47	1.28	1.20	1231.8	2.93	3.21	3.57	737.3	1.55	1.54	1.53
1292.9	1322.9	1.44	1.35	1.38	1292.9	3.01	3.24	3.58	757.6	1.58	1.58	1.57
1333.6	1363.6	1.41	1.39	1.48	1333.6	3.11	3.32	3.65	798.0	1.68	1.69	1.69
1394.7	1424.7	1.53	1.61	1.75	1394.7	3.22	3.35	3.65	818.2	1.72	1.73	1.74
1435.4	1465.4	1.58	1.73	1.92	1435.4	3.32	3.42	3.69	858.6	1.78	1.81	1.83
1496.5	1526.5	1.80	2.07	2.32	1496.5	3.45	3.43	3.66	878.8	1.84	1.87	1.90
1537.2	1567.2	1.85	2.18	2.42	1537.2	3.55	3.50	3.73	919.2	1.94	1.97	2.01
1598.3	1628.3	1.97	2.33	2.54	1598.3	3.82	3.62	3.79	939.4	1.97	2.00	2.04
1639.0	1669.0	1.84	2.17	2.35	1639.0	4.01	3.77	3.90	979.8	2.06	2.10	2.15
1700.1	1730.1	1.70	2.03	2.22	1700.1	4.43	4.01	4.03	1000.0	2.13	2.17	2.22

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Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	10	25	41	39	26	39	29	65	45	67
1	-	14	+0	29	11	32	44	32	50	51	64	65
2	>100	74	60	75	56	64	67	>79	62	75	69	>79
3	>100	66	60	62	58	60	56	79	73	70	75	>79
4	>100	>79	>79	>79	>79	77	>79	>79	>79	>79	>79	>79
5	>100	>79	>79	>79	>79	>79	76	>79	>79	>79	>79	>79
6	>100	>79	>79	>79	>79	>79	>79	78	>79	>79	>79	>79
7	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
8	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
9	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
10	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 620.1 MHz; -14.00 dBm.
LO IN: 650.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -20.74 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	20	36	62	50	37	52	42	67	56	68
1	-	14	+0	31	12	34	43	37	59	55	67	65
2	90	58	54	60	48	59	62	80	55	68	60	82
3	>100	47	46	46	42	45	41	56	53	51	67	70
4	>100	89	82	80	70	88	66	72	77	80	74	83
5	>100	73	70	72	59	61	55	58	53	72	77	74
6	>100	>89	>89	>89	>89	89	79	86	77	81	>89	>89
7	>100	>89	>89	>89	>89	>89	86	79	84	74	78	>89
8	>100	>89	>89	>89	>89	>89	>89	>89	89	87	>89	>89
9	>100	>89	>89	>89	>89	>89	>89	>89	>89	86	88	85
10	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 620.1 MHz; -4.00 dBm.
LO IN: 650.01 MHz; +7.00 dBm
IF OUT: 29.91 MHz; -10.81 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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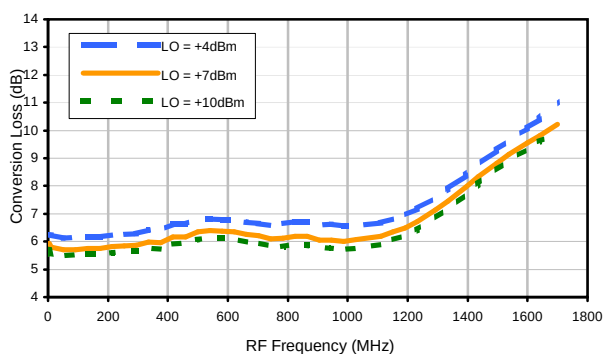


Frequency Mixer

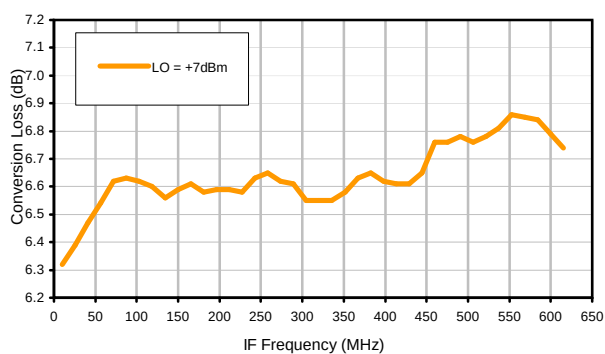
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Typical Performance Curves

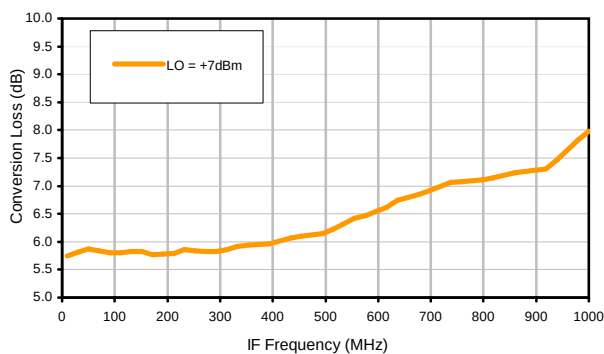
Conversion Loss @ IF=30MHz



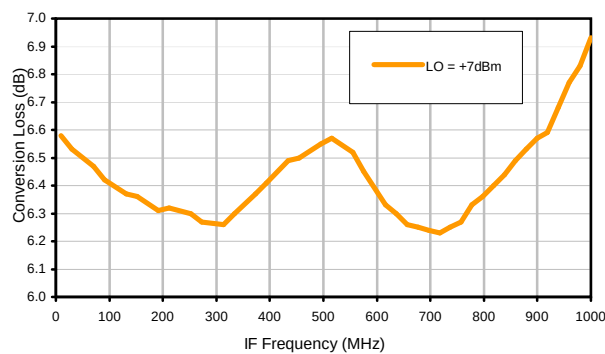
Conversion Loss vs. IF @ RF=625.1MHz



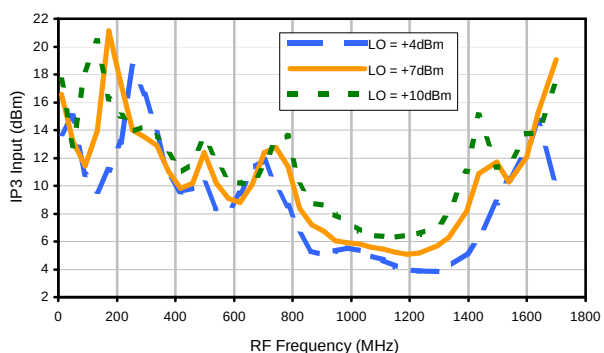
Conversion Loss vs. IF @ RF=10.1MHz



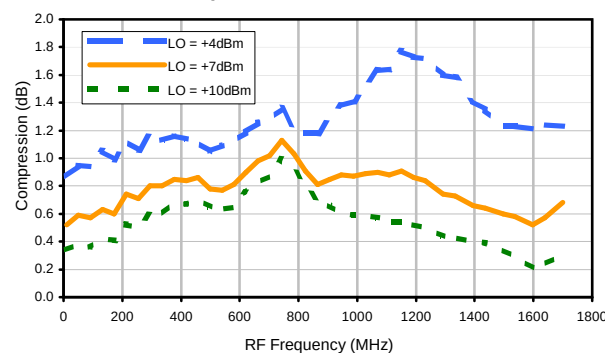
Conversion Loss vs. IF @ RF=1250.1MHz



IP3 Input



Compression @ RF IN=+1dBm



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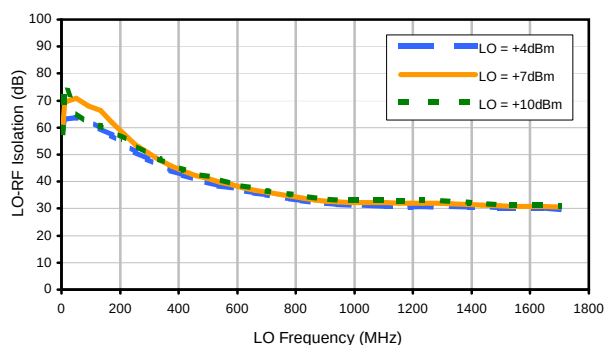


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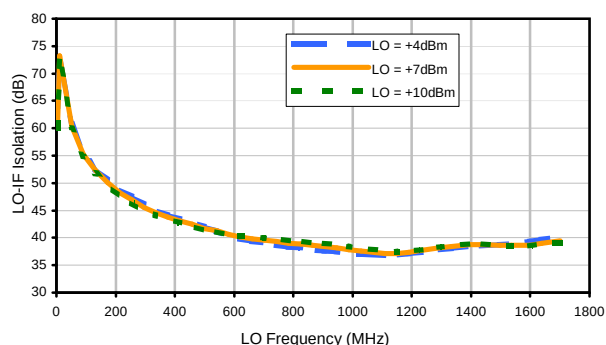


Typical Performance Curves

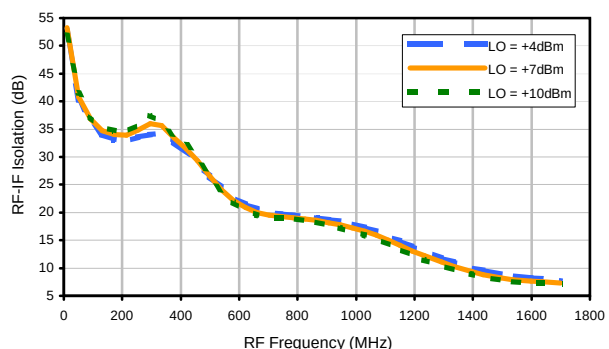
LO-RF Isolation



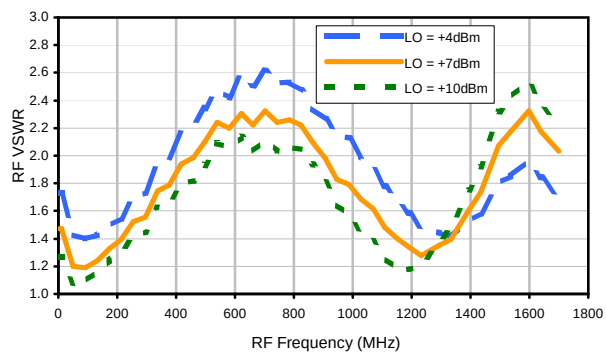
LO-IF Isolation



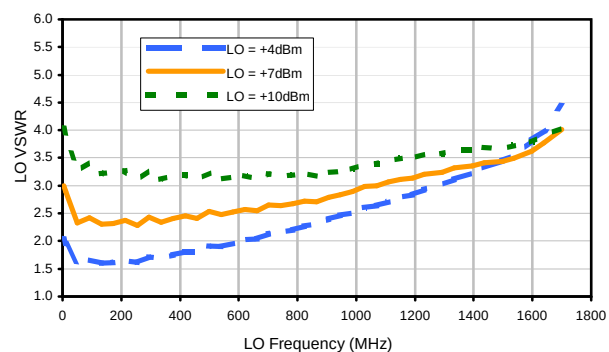
RF-IF Isolation



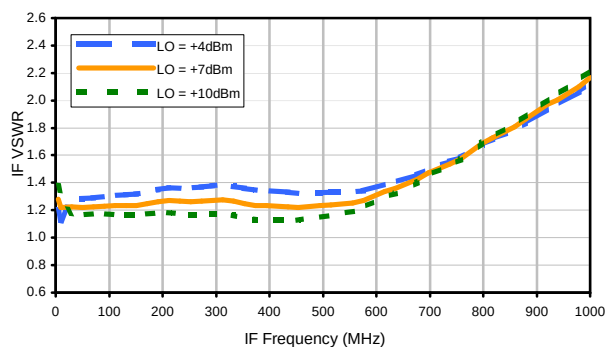
RF VSWR



LO VSWR



IF VSWR



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Harmonics Tables

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	(-dBm)	(-dBc)										
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3	>100	66	60	62	58	60	56	79	73	70	75	>79
4	>100	>79	>79	>79	>79	77	>79	>79	>79	>79	>79	>79
5	>100	>79	>79	>79	>79	>79	76	>79	>79	>79	>79	>79
6	>100	>79	>79	>79	>79	>79	>79	78	>79	>79	>79	>79
7	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
8	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
9	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
10	>100	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79	>79
RF CAL	0	1	2	3	4	5	6	7	8	9	10	

LO HARMONICS ORDER

Test conditions: RF IN: 620.1 MHz; -14.00 dBm.
LO IN: 650.01 MHz; +7.00 dBm
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2	90	58	54	60	48	59	62	80	55	68	60	82
3	>100	47	46	46	42	45	41	56	53	51	67	70
4	>100	89	82	80	70	88	66	72	77	80	74	83
5	>100	73	70	72	59	61	55	58	53	72	77	74
6	>100	>89	>89	>89	>89	89	79	86	77	81	>89	>89
7	>100	>89	>89	>89	>89	>89	86	79	84	74	78	>89
8	>100	>89	>89	>89	>89	>89	>89	>89	89	87	>89	>89
9	>100	>89	>89	>89	>89	>89	>89	>89	>89	86	88	85
10	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89
RF CAL	0	1	2	3	4	5	6	7	8	9	10	

LO HARMONICS ORDER

Test conditions: RF IN: 620.1 MHz; -4.00 dBm.
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