

Non-Catalog Model

Frequency Mixer

ZMX-7GMHR

Level 13 (LO Power +13 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.

Please click "Back", and then click "Contact Us" for Applications support.



CASE STYLE : BU413

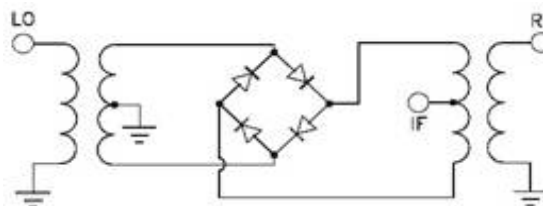
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (fL to fU)	3700		7000	MHz
	RF (fL to fU)	3700		7000	MHz
	IF	0		1000	MHz
Conversion Loss			6.0	8.6	dB
LO-RF Isolation		20	30		dB
LO-IF Isolation		20	35		dB
1 dB Comp. Input Power			+9		dBm

SMA connectorized

MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

PIN CONNECTIONS	
LO	2
RF	1
IF	3

Electrical Schematics



Frequency Mixer

ZMX-7GMHR

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=+9dBm (dB)		
		@LO (dBm)					@LO (dBm)					@LO (dBm)		
+10	+13	+16	+10	+13	+16	+10	+13	+16	+10	+13	+16			
1500.1	1530.1	17.26	12.51	15.48	1500.1	1530.1	15.86	29.74	27.99	1500.1	1530.1	-1.37	0.04	-0.26
1762.6	1792.6	13.13	11.10	10.44	1762.6	1792.6	14.57	22.31	20.01	1762.6	1792.6	-0.59	0.08	0.14
2025.1	2055.1	9.44	8.67	8.49	2025.1	2055.1	15.29	18.12	16.13	2025.1	2055.1	1.16	0.70	0.55
2287.6	2317.6	7.70	7.31	7.23	2287.6	2317.6	16.04	18.20	17.61	2287.6	2317.6	1.75	1.24	0.92
2550.1	2580.1	7.02	6.61	6.58	2550.1	2580.1	12.61	16.24	18.08	2550.1	2580.1	2.05	1.66	1.35
2812.6	2842.6	6.17	5.88	5.79	2812.6	2842.6	13.92	14.65	16.35	2812.6	2842.6	2.10	1.94	1.86
3075.1	3105.1	5.48	5.17	5.08	3075.1	3105.1	12.83	13.42	14.47	3075.1	3105.1	2.00	1.88	1.83
3337.6	3367.6	4.98	4.72	4.70	3337.6	3367.6	11.61	13.74	14.55	3337.6	3367.6	2.12	1.74	1.62
3600.1	3630.1	4.86	4.59	4.56	3600.1	3630.1	11.93	13.66	14.86	3600.1	3630.1	1.87	1.60	1.42
3862.6	3892.6	4.86	4.54	4.50	3862.6	3892.6	12.40	14.38	15.35	3862.6	3892.6	1.69	1.35	1.17
4125.1	4155.1	4.75	4.53	4.57	4125.1	4155.1	13.18	14.99	15.65	4125.1	4155.1	1.72	1.38	1.23
4387.6	4417.6	4.86	4.66	4.74	4387.6	4417.6	14.57	17.04	17.53	4387.6	4417.6	1.60	1.17	1.05
4650.1	4680.1	5.12	4.92	5.03	4650.1	4680.1	18.24	20.08	20.78	4650.1	4680.1	1.45	0.98	0.87
4912.6	4942.6	5.37	5.20	5.33	4912.6	4942.6	19.12	19.97	21.61	4912.6	4942.6	1.22	0.81	0.72
5175.1	5205.1	5.61	5.43	5.52	5175.1	5205.1	19.67	18.77	21.33	5175.1	5205.1	1.08	0.66	0.59
5437.6	5467.6	5.65	5.50	5.59	5437.6	5467.6	20.42	20.21	21.47	5437.6	5467.6	0.86	0.51	0.45
5700.1	5730.1	5.71	5.60	5.74	5700.1	5730.1	19.86	18.80	20.49	5700.1	5730.1	0.92	0.43	0.35
5962.6	5992.6	6.44	5.99	6.00	5962.6	5992.6	19.68	17.72	19.04	5962.6	5992.6	0.96	0.68	0.57
6225.1	6255.1	6.94	6.56	6.42	6225.1	6255.1	24.14	20.24	17.84	6225.1	6255.1	0.52	0.48	0.54
6487.6	6517.6	7.05	6.75	6.67	6487.6	6517.6	23.79	22.24	18.58	6487.6	6517.6	0.56	0.50	0.53
6750.1	6780.1	6.54	6.38	6.42	6750.1	6780.1	20.81	21.49	20.21	6750.1	6780.1	0.76	0.60	0.55
7038.9	7068.9	6.43	6.25	6.27	7038.9	7068.9	19.78	22.48	21.66	7038.9	7068.9	0.73	0.59	0.57
7301.4	7331.4	6.68	6.49	6.48	7301.4	7331.4	21.26	23.11	22.59	7301.4	7331.4	0.61	0.50	0.49
7590.1	7620.1	6.50	6.31	6.29	7590.1	7620.1	21.49	22.63	21.57	7590.1	7620.1	0.73	0.64	0.70
7852.6	7882.6	6.25	6.07	6.04	7852.6	7882.6	20.20	20.34	19.02	7852.6	7882.6	0.83	0.76	0.85
8141.4	8171.4	5.83	5.71	5.73	8141.4	8171.4	17.80	17.96	16.55	8141.4	8171.4	1.10	0.96	1.06
8403.9	8433.9	5.74	5.63	5.67	8403.9	8433.9	15.11	15.65	14.58	8403.9	8433.9	1.40	1.23	1.29
8692.6	8722.6	5.76	5.67	5.74	8692.6	8722.6	14.00	14.61	14.26	8692.6	8722.6	1.48	1.31	1.31
8955.1	8985.1	5.90	5.81	5.89	8955.1	8985.1	13.50	14.16	14.06	8955.1	8985.1	1.33	1.23	1.30
9243.8	9273.8	6.26	6.20	6.33	9243.8	9273.8	14.63	15.47	15.18	9243.8	9273.8	1.04	0.96	1.13
9506.3	9536.3	7.05	6.99	7.13	9506.3	9536.3	15.33	17.30	16.98	9506.3	9536.3	0.71	0.70	0.94
9795.1	9825.1	8.15	8.19	8.42	9795.1	9825.1	17.32	20.18	19.70	9795.1	9825.1	0.34	0.41	0.66
10057.6	10087.6	9.66	9.73	9.99	10057.6	10087.6	20.18	22.48	22.36	10057.6	10087.6	0.19	0.22	0.37
10346.3	10376.3	11.30	11.30	11.51	10346.3	10376.3	23.35	24.16	22.83	10346.3	10376.3	0.13	0.17	0.33
10608.8	10638.8	10.98	10.90	11.06	10608.8	10638.8	22.15	23.15	21.25	10608.8	10638.8	0.10	0.17	0.40
10897.6	10927.6	10.27	10.16	10.33	10897.6	10927.6	22.79	22.80	19.69	10897.6	10927.6	0.15	0.21	0.42
11160.1	11190.1	10.99	10.79	10.94	11160.1	11190.1	23.14	22.09	17.51	11160.1	11190.1	0.11	0.23	0.42
11448.9	11478.9	12.12	11.92	12.37	11448.9	11478.9	21.36	18.87	20.06	11448.9	11478.9	0.12	0.30	0.24
11711.3	11741.3	13.20	12.73	12.89	11711.3	11741.3	15.50	22.57	23.64	11711.3	11741.3	0.40	0.27	0.23
12000.1	12030.1	13.18	12.90	13.98	12000.1	12030.1	20.05	18.55	21.32	12000.1	12030.1	0.96	0.79	0.35

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Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=5350MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=3690MHz (dB)	IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=7010.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+13			+13			+13
1649.9	3700.1	6.09	10.1	3700.1	4.81	2810.0	4200.1	11.45
1569.9	3780.1	6.24	90.1	3780.1	4.51	2730.0	4280.1	10.44
1489.9	3860.1	6.30	170.1	3860.1	4.48	2650.0	4360.1	9.40
1409.9	3940.1	6.26	250.1	3940.1	4.47	2570.0	4440.1	8.55
1329.9	4020.1	6.37	330.1	4020.1	4.51	2490.0	4520.1	7.99
1249.9	4100.1	6.41	410.1	4100.1	4.53	2410.0	4600.1	7.51
1169.9	4180.1	6.35	490.1	4180.1	4.58	2330.0	4680.1	7.34
1089.9	4260.1	6.24	570.1	4260.1	4.55	2250.0	4760.1	7.49
1009.9	4340.1	6.25	650.1	4340.1	4.64	2170.0	4840.1	7.84
929.9	4420.1	6.32	710.1	4400.1	4.70	2110.0	4900.1	8.03
849.9	4500.1	6.28	790.1	4480.1	4.73	2030.0	4980.1	8.37
770.0	4580.0	6.08	850.1	4540.1	4.91	1970.0	5040.1	8.25
690.0	4660.0	5.95	930.1	4620.1	4.92	1890.0	5120.1	8.46
610.0	4740.0	5.94	990.1	4680.1	5.07	1830.0	5180.1	8.56
530.0	4820.0	5.90	1070.1	4760.1	5.03	1750.0	5260.1	8.59
450.0	4900.0	5.79	1130.1	4820.1	5.35	1690.0	5320.1	8.54
370.0	4980.0	5.67	1210.1	4900.1	5.28	1610.0	5400.1	8.41
290.0	5060.0	5.61	1270.1	4960.1	5.46	1550.0	5460.1	8.50
210.0	5140.0	5.50	1350.1	5040.1	5.52	1470.0	5540.1	8.27
130.0	5220.0	5.45	1410.1	5100.1	5.33	1410.0	5600.1	8.06
50.0	5300.0	5.50	1490.1	5180.1	5.33	1330.0	5680.1	7.90
30.0	5380.0	5.45	1550.1	5240.1	5.33	1270.0	5740.1	7.92
110.0	5460.0	5.42	1630.1	5320.1	5.45	1190.0	5820.1	7.54
210.0	5560.0	5.45	1690.1	5380.1	5.53	1130.0	5880.1	7.51
290.0	5640.0	5.47	1770.1	5460.1	5.61	1050.0	5960.1	7.29
390.0	5740.0	5.29	1830.1	5520.1	5.50	990.0	6020.1	7.28
470.0	5820.0	5.19	1910.1	5600.1	5.73	910.0	6100.1	7.22
570.0	5920.0	5.16	1970.1	5660.1	5.86	850.0	6160.1	7.24
650.0	6000.0	5.12	2050.1	5740.1	6.10	770.0	6240.1	7.13
750.0	6100.0	5.12	2110.1	5800.1	6.28	710.0	6300.1	7.05
830.0	6180.0	5.25	2190.1	5880.1	6.66	630.0	6380.1	6.97
930.1	6280.1	5.29	2250.1	5940.1	6.92	570.0	6440.1	6.76
1010.1	6360.1	5.45	2330.1	6020.1	7.19	490.0	6520.1	6.72
1110.1	6460.1	5.58	2390.1	6080.1	7.53	430.0	6580.1	6.56
1190.1	6540.1	5.77	2470.1	6160.1	7.92	350.0	6660.1	6.56
1290.1	6640.1	5.91	2530.1	6220.1	7.99	290.0	6720.1	6.48
1370.1	6720.1	6.04	2610.1	6300.1	8.35	210.0	6800.1	6.47
1470.1	6820.1	6.26	2670.1	6360.1	8.43	150.0	6860.1	6.46
1550.1	6900.1	6.54	2750.1	6440.1	8.63	70.0	6940.1	6.41
1650.1	7000.1	6.97	2810.1	6500.1	8.59	10.0	7000.1	6.72

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+10	+13	+16	+10	+13	+16
1530.1	36.40	35.10	23.99	12.03	12.78	14.98
1792.6	33.87	32.79	33.34	12.78	13.00	13.38
2055.1	28.08	26.01	25.94	13.70	13.54	14.14
2317.6	25.30	24.22	23.89	13.78	14.04	14.43
2580.1	23.33	23.14	23.17	13.83	14.30	14.60
2842.6	25.04	25.07	24.56	16.88	17.31	16.97
3105.1	28.23	27.15	25.94	22.79	22.03	20.87
3367.6	31.63	29.07	27.36	28.36	26.04	24.88
3630.1	33.86	32.09	29.23	30.46	29.47	28.49
3892.6	32.17	30.74	28.14	30.93	31.49	31.30
4155.1	35.25	32.13	28.46	31.66	32.69	33.06
4417.6	34.34	31.23	28.69	31.75	32.87	33.61
4680.1	35.93	30.64	27.89	32.89	33.48	33.69
4942.6	34.74	29.61	27.56	34.15	33.76	33.60
5205.1	32.83	29.40	27.64	34.89	33.95	33.25
5467.6	31.77	28.58	27.49	34.95	33.34	32.66
5730.1	31.69	29.43	28.19	35.13	33.07	31.98
5992.6	30.63	28.06	26.81	34.56	32.38	31.33
6255.1	30.30	28.47	27.48	33.07	31.53	30.61
6517.6	30.33	29.07	27.88	31.63	30.47	29.49
6780.1	28.63	28.00	27.29	29.62	29.08	28.40
7068.9	27.37	26.83	26.58	27.50	27.03	26.95
7331.4	25.83	26.05	26.01	25.57	25.98	26.15
7620.1	26.21	26.07	26.06	25.85	26.42	26.99
7882.6	28.33	28.36	28.33	28.07	29.06	30.10
8171.4	30.63	31.01	30.46	31.26	32.85	34.08
8433.8	31.47	32.04	31.58	34.07	35.91	37.51
8722.6	30.57	31.45	30.99	37.15	39.05	40.51
8985.1	28.79	29.83	29.94	39.91	41.22	41.69
9273.8	26.98	28.19	28.28	42.56	42.20	41.10
9536.4	24.93	26.19	26.90	43.30	41.23	40.13
9825.1	23.98	25.21	26.10	42.06	39.82	38.77
10087.6	22.34	23.52	24.46	39.54	38.29	37.51
10376.3	20.73	21.47	21.98	37.66	36.78	35.96
10638.8	20.39	20.80	20.97	37.42	36.82	36.07
10927.6	22.08	21.53	21.55	41.62	40.94	40.45
11190.1	23.96	23.20	22.70	44.10	49.90	55.14
11478.8	25.37	23.99	24.07	31.26	32.11	32.36
11741.3	26.33	24.00	21.83	23.96	25.32	25.69
12030.1	20.15	17.99	16.65	23.54	24.22	24.66

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+10	+13	+16
1500.1	1530.1	11.23	15.42	12.49
1762.6	1792.6	9.76	10.87	11.68
2025.1	2055.1	8.55	9.00	9.53
2287.6	2317.6	8.49	8.70	8.98
2550.1	2580.1	8.77	8.62	8.53
2812.6	2842.6	8.75	8.71	8.71
3075.1	3105.1	9.10	9.44	9.71
3337.6	3367.6	10.63	11.12	11.38
3600.1	3630.1	12.73	13.02	13.15
3862.6	3892.6	14.80	14.76	14.65
4125.1	4155.1	16.70	16.22	15.85
4387.6	4417.6	18.09	17.26	16.70
4650.1	4680.1	19.03	17.87	17.32
4912.6	4942.6	19.24	18.27	17.75
5175.1	5205.1	19.30	18.53	18.11
5437.6	5467.6	19.31	18.84	18.52
5700.1	5730.1	19.60	19.17	18.95
5962.6	5992.6	19.95	19.81	19.71
6225.1	6255.1	19.64	19.61	19.62
6487.6	6517.6	19.29	19.24	19.19
6750.1	6780.1	19.40	19.38	19.37
7038.9	7068.9	19.36	19.40	19.40
7301.4	7331.4	20.06	20.07	20.11
7590.1	7620.1	22.79	22.72	22.72
7852.6	7882.6	26.60	26.56	26.53
8141.4	8171.4	28.76	28.87	28.95
8403.9	8433.9	28.94	29.16	29.44
8692.6	8722.6	28.97	29.38	29.80
8955.1	8985.1	29.24	29.70	30.22
9243.8	9273.8	29.74	30.28	30.79
9506.3	9536.3	29.99	30.43	30.83
9795.1	9825.1	29.74	29.98	30.24
10057.6	10087.6	28.49	28.66	28.82
10346.3	10376.3	26.51	26.94	27.19
10608.8	10638.8	26.12	26.61	26.99
10897.6	10927.6	28.74	29.52	30.17
11160.1	11190.1	32.64	33.24	33.72
11448.9	11478.9	36.09	34.75	32.34
11711.3	11741.3	34.14	32.63	31.44
12000.1	12030.1	32.41	31.98	32.28

Frequency Mixer

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Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)			LO (MHz)	LO VSWR (:1)				IF (OUT) (MHz)	IF VSWR @LO=7000MHz (:1)			
		@LO (dBm)				@LO (dBm)					@LO (dBm)			
		+10	+13	+16		+10	+13	+16	+10		+13	+16		
1500.1	1530.1	13.70	14.03	9.63	1530.1	3.81	1.94	1.68	10.0	1.28	1.45	1.63		
1762.6	1792.6	8.47	7.87	7.66	1792.6	3.50	1.91	1.54	90.0	1.28	1.47	1.65		
2025.1	2055.1	5.09	4.82	4.66	2055.1	3.02	1.69	1.40	170.0	1.26	1.44	1.60		
2287.6	2317.6	3.89	3.66	3.43	2317.6	2.83	1.56	1.26	250.0	1.25	1.42	1.58		
2550.1	2580.1	2.78	2.52	2.42	2580.1	2.76	1.50	1.21	330.0	1.25	1.41	1.57		
2812.6	2842.6	1.97	1.80	1.70	2842.6	2.55	1.45	1.20	410.0	1.25	1.39	1.54		
3075.1	3105.1	1.91	1.63	1.44	3105.1	2.69	1.45	1.19	490.0	1.28	1.42	1.56		
3337.6	3367.6	1.77	1.43	1.29	3367.6	2.75	1.48	1.22	570.0	1.28	1.42	1.56		
3600.1	3630.1	1.44	1.18	1.03	3630.1	2.68	1.47	1.23	650.0	1.25	1.38	1.52		
3862.6	3892.6	1.31	1.10	1.14	3892.6	2.87	1.51	1.28	730.0	1.18	1.28	1.41		
4125.1	4155.1	1.32	1.27	1.35	4155.1	2.67	1.51	1.34	810.0	1.22	1.27	1.38		
4387.6	4417.6	1.54	1.58	1.70	4417.6	2.60	1.50	1.38	890.0	1.23	1.29	1.39		
4650.1	4680.1	1.84	1.88	1.99	4680.1	2.51	1.47	1.46	970.0	1.20	1.25	1.35		
4912.6	4942.6	2.09	2.06	2.14	4942.6	2.33	1.47	1.52	1050.0	1.15	1.16	1.25		
5175.1	5205.1	2.52	2.40	2.40	5205.1	2.12	1.43	1.63	1130.0	1.23	1.13	1.14		
5437.6	5467.6	2.69	2.59	2.57	5467.6	2.04	1.52	1.74	1210.0	1.29	1.16	1.11		
5700.1	5730.1	2.42	2.19	2.14	5730.1	1.78	1.43	1.80	1290.0	1.32	1.19	1.11		
5962.6	5992.6	3.29	2.69	2.46	5992.6	1.56	1.41	1.89	1370.0	1.39	1.24	1.12		
6225.1	6255.1	3.62	3.19	2.83	6255.1	1.45	1.43	1.91	1450.0	1.59	1.42	1.27		
6487.6	6517.6	3.73	3.43	3.07	6517.6	1.41	1.56	2.10	1530.0	1.75	1.57	1.41		
6750.1	6780.1	3.38	3.08	2.75	6780.1	1.32	1.56	2.09	1610.0	1.87	1.70	1.53		
7038.9	7068.9	3.18	2.87	2.62	7068.9	1.25	1.62	2.17	1690.0	1.99	1.81	1.64		
7301.4	7331.4	2.64	2.40	2.15	7331.4	1.24	1.69	2.28	1770.0	2.27	2.07	1.88		
7590.1	7620.1	2.60	2.36	2.13	7620.1	1.19	1.72	2.34	1850.0	2.54	2.33	2.11		
7852.6	7882.6	2.35	2.13	1.93	7882.6	1.20	1.76	2.40	1930.0	2.83	2.60	2.36		
8141.4	8171.4	2.07	1.89	1.72	8171.4	1.33	1.92	2.64	2010.0	3.06	2.83	2.57		
8403.9	8433.9	1.96	1.80	1.66	8433.8	1.46	2.04	2.78	2090.0	3.44	3.19	2.91		
8692.6	8722.6	1.46	1.41	1.41	8722.6	1.62	2.15	2.86	2170.0	3.69	3.42	3.13		
8955.1	8985.1	1.33	1.42	1.52	8985.1	1.80	2.32	3.00	2250.0	3.82	3.56	3.26		
9243.8	9273.8	1.64	1.84	2.01	9273.8	1.99	2.46	3.11	2310.0	3.90	3.65	3.35		
9506.3	9536.3	2.26	2.51	2.73	9536.4	2.17	2.57	3.17	2390.0	4.21	3.93	3.63		
9795.1	9825.1	3.33	3.61	4.01	9825.1	2.43	2.70	3.27	2450.0	4.25	3.99	3.69		
10057.6	10087.6	4.16	4.45	4.78	10087.6	2.72	2.90	3.48	2530.0	4.13	3.89	3.62		
10346.3	10376.3	3.40	3.58	3.65	10376.3	2.94	2.89	3.35	2590.0	4.29	4.04	3.79		
10608.8	10638.8	3.08	3.26	3.37	10638.8	3.10	2.88	3.26	2670.0	4.27	4.03	3.82		
10897.6	10927.6	3.74	3.89	4.12	10927.6	3.11	2.66	2.83	2730.0	4.06	3.89	3.76		
11160.1	11190.1	7.00	6.94	7.56	11190.1	2.88	2.34	2.38	2810.0	3.97	3.87	3.83		
11448.9	11478.9	10.13	9.90	9.38	11478.8	2.25	1.79	1.83	2870.0	3.71	3.67	3.73		
11711.3	11741.3	7.08	6.68	6.01	11741.3	1.78	1.54	1.65	2950.0	3.65	3.76	3.94		
12000.1	12030.1	10.43	9.74	7.97	12030.1	1.76	1.39	1.33	3010.0	4.01	4.23	4.53		

Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	9	22	13	31	---	---	---	---	---	---
1	-	13	+0	46	34	42	41	---	---	---	---	---
2	76	76	71	52	68	64	54	69	---	---	---	---
3	>90	>78	>78	>78	59	>78	>78	>78	72	---	---	---
4	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	---	---
5	---	---	>78	>78	>78	>78	>78	>78	>78	>78	>78	---
6	---	---	---	>78	>78	>78	>78	>78	>78	>78	>78	>78
7	---	---	---	---	>78	>78	>78	>78	>78	>78	>78	>78
8	---	---	---	---	---	>78	>78	>78	>78	>78	>78	>78
9	---	---	---	---	---	---	>78	>78	>78	>78	>78	>78
10	---	---	---	---	---	---	---	>78	>78	>78	>78	>78
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 5350 MHz; -6.00 dBm.
LO IN: 5380 MHz; +13.00 dBm
IF OUT: 30 MHz; -11.51 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	19	33	24	45	---	---	---	---	---	---
1	-	13	+0	43	35	44	45	---	---	---	---	---
2	56	61	63	42	59	55	46	59	---	---	---	---
3	77	60	60	61	40	64	64	62	58	---	---	---
4	>90	84	88	>88	82	63	86	72	66	79	---	---
5	---	---	83	86	86	86	60	81	86	83	72	---
6	---	---	---	>88	>88	>88	>88	78	>88	>88	86	>88
7	---	---	---	---	>88	>88	>88	>88	73	>88	>88	>88
8	---	---	---	---	---	>88	>88	>88	>88	>88	>88	>88
9	---	---	---	---	---	---	>88	>88	>88	>88	84	>88
10	---	---	---	---	---	---	---	>88	>88	>88	>88	>88
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 5350 MHz; 4.00 dBm.
LO IN: 5380 MHz; +13.00 dBm
IF OUT: 30 MHz; -1.74 dBm

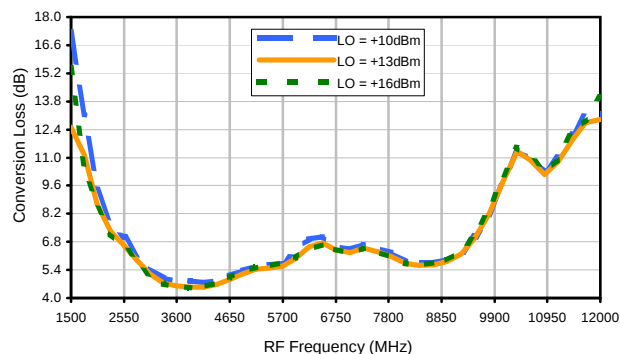
- Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

Frequency Mixer

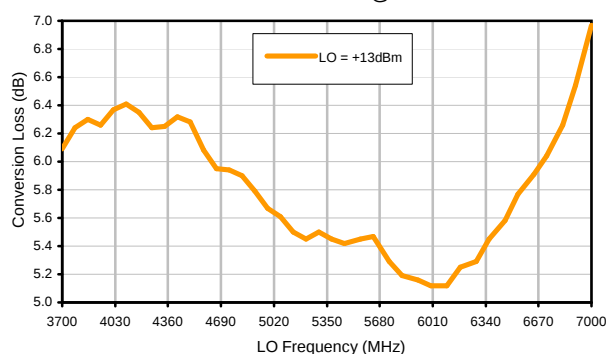
ZMX-7GMHR

Typical Performance Curves

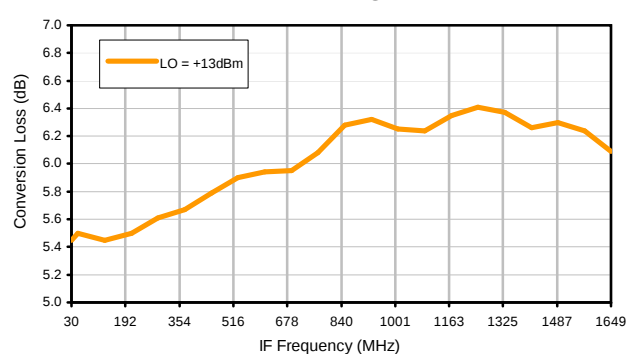
Conversion Loss @ IF=30MHz



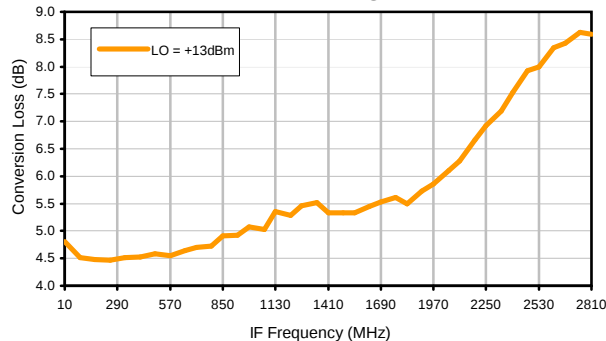
Conversion Loss vs. LO @ RF=5350MHz



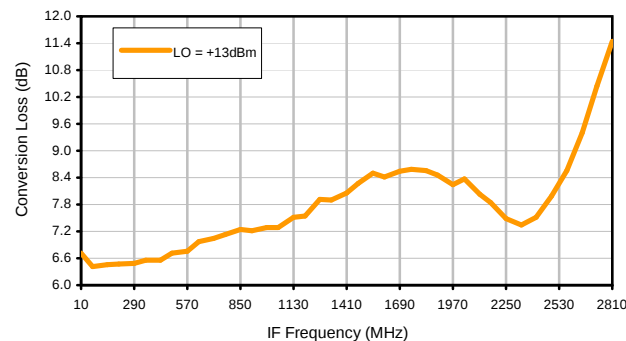
Conversion Loss vs. IF @ RF=5350MHz



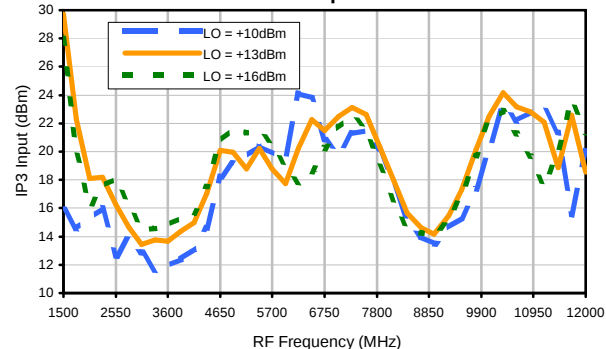
Conversion Loss vs. IF @ RF=3690MHz



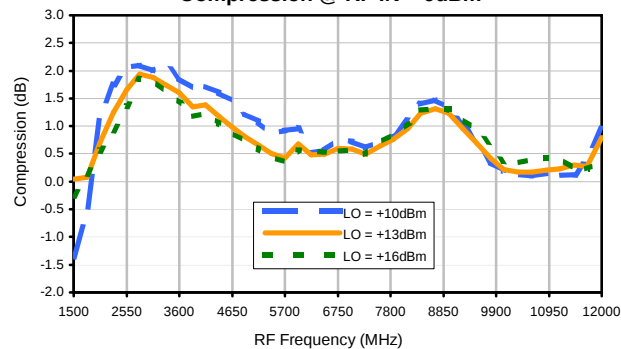
Conversion Loss vs. IF @ RF=7010.1MHz



IP3 Input



Compression @ RF IN=+9dBm

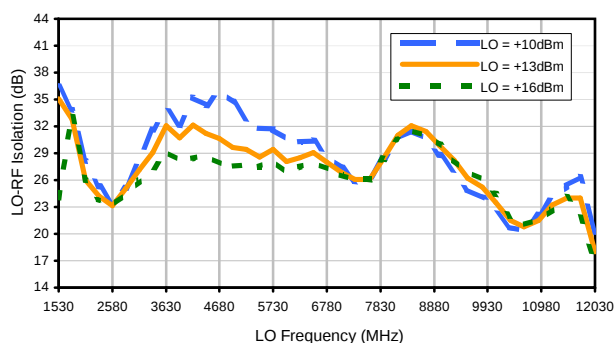


Frequency Mixer

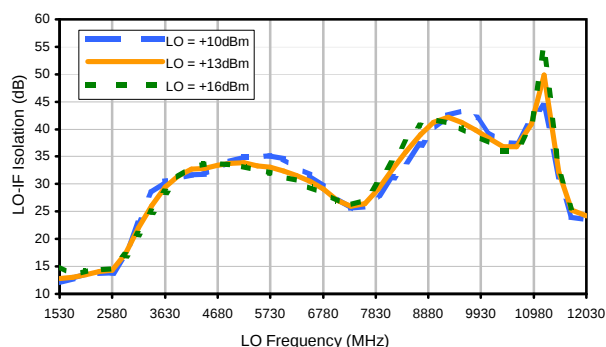
ZMX-7GMHR

Typical Performance Curves

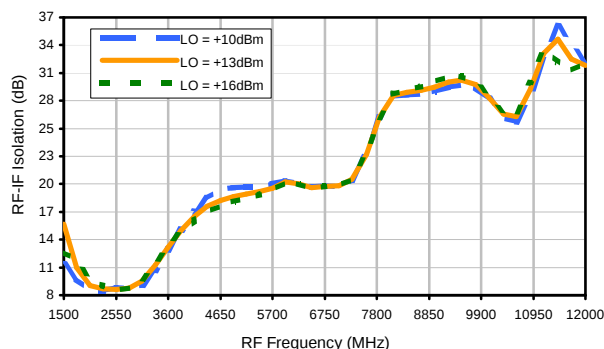
LO-RF Isolation



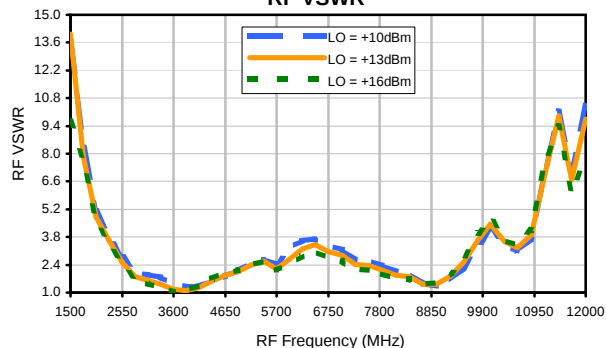
LO-IF Isolation



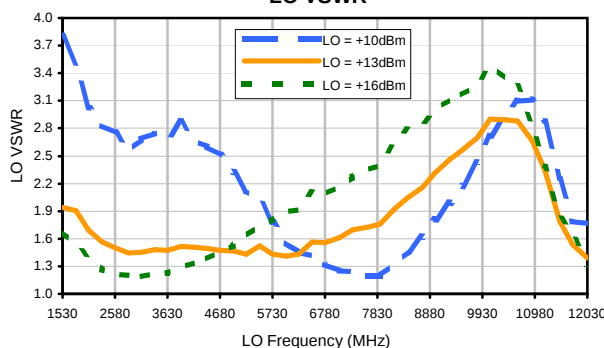
RF-IF Isolation



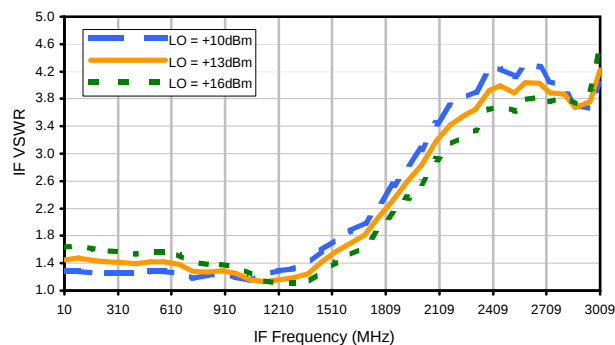
RF VSWR



LO VSWR



IF VSWR



Frequency Mixer

ZMX-7GMHR

Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	9	22	13	31	---	---	---	---	---	---
1	-	13	+0	46	34	42	41	---	---	---	---	---
2	76	76	71	52	68	64	54	69	---	---	---	---
3	>90	>78	>78	>78	59	>78	>78	>78	72	---	---	---
4	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	---	---
5	---	---	>78	>78	>78	>78	>78	>78	>78	>78	>78	---
6	---	---	---	>78	>78	>78	>78	>78	>78	>78	>78	>78
7	---	---	---	---	>78	>78	>78	>78	>78	>78	>78	>78
8	---	---	---	---	---	>78	>78	>78	>78	>78	>78	>78
9	---	---	---	---	---	---	>78	>78	>78	>78	>78	>78
10	---	---	---	---	---	---	---	>78	>78	>78	>78	>78
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 5350 MHz; -6.00 dBm.
LO IN: 5380 MHz; +13.00 dBm
IF OUT: 30 MHz; -11.51 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	19	33	24	45	---	---	---	---	---	---
1	-	13	+0	43	35	44	45	---	---	---	---	---
2	56	61	63	42	59	55	46	59	---	---	---	---
3	77	60	60	61	40	64	64	62	58	---	---	---
4	>90	84	88	>88	82	63	86	72	66	79	---	---
5	---	---	83	86	86	86	60	81	86	83	72	---
6	---	---	---	>88	>88	>88	>88	78	>88	>88	86	>88
7	---	---	---	---	>88	>88	>88	>88	73	>88	>88	>88
8	---	---	---	---	---	>88	>88	>88	>88	>88	>88	>88
9	---	---	---	---	---	---	>88	>88	>88	>88	84	>88
10	---	---	---	---	---	---	---	>88	>88	>88	>88	>88
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 5350 MHz; 4.00 dBm.
LO IN: 5380 MHz; +13.00 dBm
IF OUT: 30 MHz; -1.74 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.

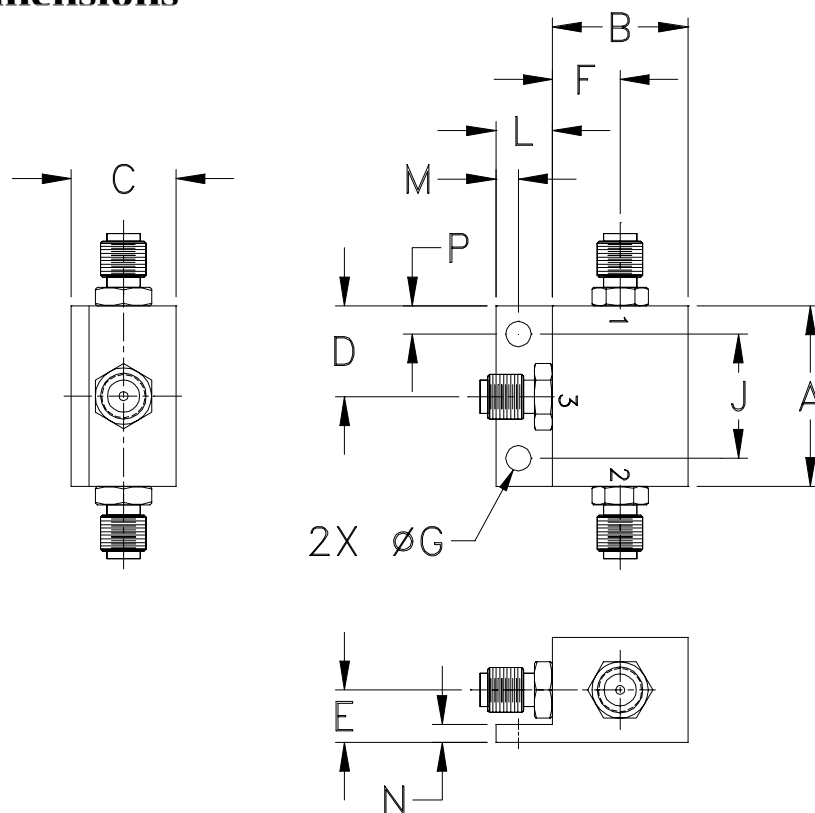
REV. X3
ZMX-7GMHR
101011
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Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
BU413	1.00 (25.40)	.75 (19.05)	.58 (14.73)	.50 (12.70)	.29 (7.37)	.38 (9.65)	.140 (3.56)	--	.687 (17.45)	--	.32 (8.13)	.13 (3.30)	.10 (2.54)

CASE#	P	WT. GRAMS
BU413	.16 (4.06)	25

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

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.



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Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I