

Frequency Mixer

MBY-EE7756/25

Level 17 (LO Power + 17 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.



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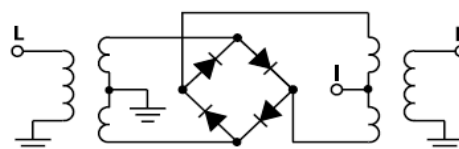
CASE STYLE : SM18

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (f _L to f _U)	1400		2500	MHz
	RF (f _L to f _U)	1400		2500	MHz
	IF	10		700	MHz
Conversion Loss	Total Range		7		dB
LO-RF Isolation			34		dB
LO-IF Isolation			30		dB
Input IP3			+22		dBm
1 dB Compression			+10		dBm

MAXIMUM RATINGS	
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

PIN CONNECTIONS	
LO	5
RF	1
IF	7
GROUND	2,3,4,6,8

Electrical Schematic



Frequency Mixer

MBY-EE7756/25

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=+10dBm (dB)		
		@LO (dBm)					@LO (dBm)					@LO (dBm)		
+14	+17	+20	+14	+17	+20	+14	+17	+20						
1340.1	1370.1	14.09	11.05	8.28	1340.1	1370.1	12.56	12.17	17.21	1340.1	1370.1	-2.57	-1.88	-0.49
1380.1	1410.1	11.51	9.72	7.83	1380.1	1410.1	17.32	13.83	21.14	1380.1	1410.1	-1.17	-1.05	-0.34
1420.1	1450.1	10.20	8.72	7.11	1420.1	1450.1	18.23	14.10	20.05	1420.1	1450.1	-0.66	-0.63	-0.11
1460.1	1490.1	9.37	8.00	6.74	1460.1	1490.1	17.47	15.36	20.79	1460.1	1490.1	-0.39	-0.24	0.05
1500.1	1530.1	8.63	7.21	6.32	1500.1	1530.1	16.40	17.00	21.00	1500.1	1530.1	-0.17	0.06	0.12
1540.1	1570.1	8.22	7.05	6.32	1540.1	1570.1	17.80	17.85	20.75	1540.1	1570.1	0.07	0.09	0.11
1580.1	1610.1	7.65	6.76	6.19	1580.1	1610.1	17.86	18.29	20.36	1580.1	1610.1	0.27	0.17	0.11
1620.1	1650.1	7.51	6.53	6.15	1620.1	1650.1	18.46	21.66	22.19	1620.1	1650.1	0.33	0.27	0.12
1660.1	1690.1	6.99	6.37	6.07	1660.1	1690.1	20.97	22.40	22.73	1660.1	1690.1	0.50	0.20	0.11
1700.1	1730.1	6.82	6.32	6.08	1700.1	1730.1	21.83	22.76	23.10	1700.1	1730.1	0.48	0.18	0.10
1740.1	1770.1	6.76	6.35	6.14	1740.1	1770.1	22.43	23.07	23.44	1740.1	1770.1	0.42	0.18	0.13
1780.1	1810.1	6.70	6.30	6.16	1780.1	1810.1	22.32	22.94	24.45	1780.1	1810.1	0.52	0.20	0.15
1820.1	1850.1	6.90	6.51	6.42	1820.1	1850.1	23.12	24.48	26.80	1820.1	1850.1	0.45	0.11	0.07
1860.1	1890.1	6.91	6.40	6.30	1860.1	1890.1	24.71	23.41	24.33	1860.1	1890.1	0.43	0.11	0.07
1900.1	1930.1	7.17	6.52	6.39	1900.1	1930.1	22.60	22.71	23.61	1900.1	1930.1	0.42	0.11	0.08
1940.1	1970.1	7.34	6.51	6.35	1940.1	1970.1	19.73	24.01	23.47	1940.1	1970.1	0.32	0.11	0.09
1980.1	2010.1	7.57	6.54	6.33	1980.1	2010.1	18.02	29.85	23.96	1980.1	2010.1	0.27	0.13	0.09
2020.1	2050.1	7.86	6.78	6.50	2020.1	2050.1	18.32	27.80	24.03	2020.1	2050.1	0.22	0.09	0.07
2060.1	2090.1	8.06	6.65	6.38	2060.1	2090.1	17.47	23.25	25.13	2060.1	2090.1	0.14	0.17	0.10
2100.1	2130.1	8.28	6.92	6.57	2100.1	2130.1	17.60	21.71	29.34	2100.1	2130.1	0.17	0.19	0.11
2140.1	2170.1	8.58	6.88	6.45	2140.1	2170.1	17.54	20.43	26.96	2140.1	2170.1	0.09	0.24	0.17
2180.1	2210.1	8.87	6.98	6.50	2180.1	2210.1	17.22	24.20	26.66	2180.1	2210.1	-0.06	0.26	0.21
2220.1	2250.1	9.18	7.11	6.63	2220.1	2250.1	16.68	26.70	26.38	2220.1	2250.1	-0.24	0.24	0.17
2260.1	2290.1	9.47	6.93	6.50	2260.1	2290.1	15.00	24.80	27.93	2260.1	2290.1	-0.37	0.31	0.18
2300.1	2330.1	8.88	7.15	6.82	2300.1	2330.1	21.75	25.20	29.20	2300.1	2330.1	0.26	0.20	0.12
2340.1	2370.1	8.84	7.13	6.83	2340.1	2370.1	18.64	25.11	28.84	2340.1	2370.1	0.57	0.21	0.11
2380.1	2410.1	8.48	7.34	7.07	2380.1	2410.1	18.99	25.45	28.94	2380.1	2410.1	0.77	0.18	0.09
2420.1	2450.1	8.46	7.52	7.26	2420.1	2450.1	20.01	25.63	28.27	2420.1	2450.1	0.86	0.17	0.09
2460.1	2490.1	8.40	7.46	7.23	2460.1	2490.1	19.81	25.92	27.21	2460.1	2490.1	1.01	0.20	0.12
2500.1	2530.1	8.69	7.90	7.67	2500.1	2530.1	21.21	26.93	27.10	2500.1	2530.1	0.82	0.13	0.08
2540.1	2570.1	9.03	7.92	7.70	2540.1	2570.1	18.60	26.74	29.66	2540.1	2570.1	0.97	0.21	0.07
2580.1	2610.1	9.63	8.36	8.06	2580.1	2610.1	19.14	25.32	30.02	2580.1	2610.1	0.58	0.25	0.09
2620.1	2650.1	10.45	9.07	8.48	2620.1	2650.1	22.80	27.30	28.79	2620.1	2650.1	0.33	0.14	0.08
2660.1	2690.1	10.67	9.24	8.64	2660.1	2690.1	21.92	28.12	28.38	2660.1	2690.1	0.45	0.13	0.09
2700.1	2730.1	10.91	9.63	9.10	2700.1	2730.1	22.48	27.45	29.11	2700.1	2730.1	0.50	0.09	0.05
2740.1	2770.1	11.23	9.84	9.21	2740.1	2770.1	21.99	30.84	32.89	2740.1	2770.1	0.50	0.05	0.01
2780.1	2810.1	11.63	10.20	9.60	2780.1	2810.1	22.38	30.65	32.70	2780.1	2810.1	0.35	0.02	-0.02
2820.1	2850.1	11.93	10.22	9.53	2820.1	2850.1	21.96	28.97	32.73	2820.1	2850.1	0.26	0.03	-0.02
2860.1	2890.1	12.06	10.22	9.46	2860.1	2890.1	21.54	28.52	32.77	2860.1	2890.1	-0.05	0.01	0.00
2920.1	2950.1	12.10	10.39	9.44	2920.1	2950.1	20.35	31.58	31.85	2920.1	2950.1	-0.33	-0.06	0.02

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Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1950MHz (dB)
		@LO (dBm)
		+17
610.0	1340.0	10.09
583.9	1366.1	9.61
557.8	1392.2	9.09
531.7	1418.3	8.50
505.7	1444.3	8.26
479.6	1470.4	8.12
453.5	1496.5	7.93
427.4	1522.6	7.60
401.3	1548.7	7.36
375.2	1574.8	7.15
349.1	1600.9	7.09
310.0	1640.0	6.93
283.9	1666.1	6.84
244.8	1705.2	6.70
218.7	1731.3	6.65
179.6	1770.4	6.65
153.5	1796.5	6.60
114.3	1835.7	6.38
88.3	1861.7	6.33
49.1	1900.9	6.36
23.0	1927.0	6.43
37.4	1987.4	6.49
92.2	2042.2	6.47
174.3	2124.3	6.33
229.1	2179.1	6.29
311.3	2261.3	6.24
366.1	2316.1	6.12
448.3	2398.3	6.16
503.0	2453.0	6.02
585.2	2535.2	5.72
640.0	2590.0	5.70
722.2	2672.2	5.94
777.0	2727.0	5.63
859.1	2809.1	6.04
913.9	2863.9	6.33
996.1	2946.1	6.87
1050.9	3000.9	7.32
1133.0	3083.0	8.15
1187.8	3137.8	8.82
1270.0	3220.0	10.25

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1689.9MHz (dB)
		@LO (dBm)
		+17
10.1	1700.0	6.86
50.1	1740.0	6.26
90.1	1780.0	6.20
130.1	1820.0	6.33
170.1	1860.0	6.51
210.1	1900.0	6.58
250.1	1940.0	6.58
290.1	1980.0	6.47
330.1	2020.0	6.30
370.1	2060.0	6.11
410.1	2100.0	5.97
450.1	2140.0	5.94
490.1	2180.0	6.00
530.1	2220.0	6.02
570.1	2260.0	6.07
610.1	2300.0	6.02
650.1	2340.0	5.85
690.1	2380.0	5.87
730.1	2420.0	5.70
770.1	2460.0	5.77
810.1	2500.0	5.78
850.1	2540.0	5.78
890.1	2580.0	5.81
910.1	2600.0	5.87
950.1	2640.0	6.20
970.1	2660.0	6.55
1010.1	2700.0	6.28
1030.1	2720.0	6.27
1070.1	2760.0	6.57
1090.1	2780.0	6.62
1130.1	2820.0	6.88
1150.1	2840.0	7.09
1190.1	2880.0	7.50
1210.1	2900.0	7.72
1250.1	2940.0	8.27
1270.1	2960.0	8.55
1310.1	3000.0	8.93
1330.1	3020.0	9.10
1370.1	3060.0	9.88
1390.1	3080.0	10.17

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2210.1MHz (dB)
		@LO (dBm)
		+17
870.1	1340.0	11.21
850.1	1360.0	10.90
830.1	1380.0	10.43
810.1	1400.0	9.93
790.1	1420.0	9.58
770.1	1440.0	9.39
750.1	1460.0	9.32
730.1	1480.0	9.03
710.1	1500.0	8.67
690.1	1520.0	8.53
670.1	1540.0	8.45
650.1	1560.0	8.31
630.1	1580.0	8.01
610.1	1600.0	7.89
590.1	1620.0	7.63
570.1	1640.0	7.55
550.1	1660.0	7.45
530.1	1680.0	7.43
510.1	1700.0	7.35
490.1	1720.0	7.32
470.1	1740.0	7.31
450.1	1760.0	7.21
430.1	1780.0	7.16
410.1	1800.0	7.18
390.1	1820.0	7.16
370.1	1840.0	7.14
350.1	1860.0	7.03
330.1	1880.0	6.96
310.1	1900.0	6.93
290.1	1920.0	6.87
270.1	1940.0	6.89
250.1	1960.0	6.90
210.1	2000.0	7.09
190.1	2020.0	7.10
150.1	2060.0	7.15
130.1	2080.0	7.18
90.1	2120.0	7.26
70.1	2140.0	7.28
30.1	2180.0	7.34
10.1	2200.0	7.88



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RF/IF MICROWAVE COMPONENTS

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Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+14	+17	+20	+14	+17	+20
1370.1	36.99	38.05	40.91	22.41	22.02	22.56
1410.1	36.49	38.58	41.87	22.78	22.79	23.58
1450.1	35.76	37.88	40.38	23.57	23.85	24.79
1490.1	35.31	37.76	39.80	24.67	25.14	26.05
1530.1	35.28	37.76	39.76	26.25	26.62	27.56
1570.1	34.93	37.35	39.29	28.03	28.30	29.19
1610.1	35.25	38.08	40.16	30.42	30.67	31.52
1650.1	34.87	37.60	39.80	33.69	33.68	34.61
1690.1	35.11	37.59	39.79	36.50	36.87	38.10
1730.1	35.28	38.04	39.93	37.27	39.03	41.75
1770.1	35.48	38.75	40.64	35.55	38.33	41.68
1810.1	34.43	38.69	40.48	33.32	36.31	38.89
1850.1	32.33	35.03	36.36	32.18	35.28	36.32
1890.1	31.99	33.62	34.39	31.35	33.76	33.74
1930.1	32.07	33.47	33.73	30.62	32.11	31.67
1970.1	32.32	33.55	33.49	29.93	30.93	30.26
2010.1	32.05	33.17	32.94	29.20	29.95	28.94
2050.1	31.92	32.57	32.50	28.85	29.17	27.93
2090.1	30.91	31.56	31.47	28.23	28.65	27.30
2130.1	30.36	30.53	30.56	27.97	28.06	26.81
2170.1	29.87	29.95	30.02	27.64	27.46	26.33
2210.1	30.68	31.56	31.31	27.51	27.03	25.94
2250.1	32.64	34.52	32.90	27.56	26.80	25.53
2290.1	34.33	36.27	33.20	27.69	26.98	25.45
2330.1	35.39	33.78	31.26	27.99	26.88	24.94
2370.1	32.10	31.16	29.87	28.48	26.86	24.81
2410.1	29.83	29.92	29.31	28.44	26.75	24.71
2450.1	30.91	30.64	29.70	28.88	26.80	24.64
2490.1	32.03	31.22	30.01	29.45	26.89	24.61
2530.1	32.55	31.21	29.72	29.45	26.64	24.40
2570.1	33.83	31.45	29.79	30.14	26.74	24.45
2610.1	34.03	31.08	29.75	29.53	26.06	24.41
2650.1	33.70	31.34	29.99	29.48	25.97	24.31
2690.1	33.19	31.45	30.00	29.65	26.28	24.49
2730.1	33.14	31.00	29.67	29.43	25.95	24.25
2770.1	32.73	30.72	29.65	29.30	25.70	24.22
2810.1	31.18	29.82	29.08	28.43	25.39	24.08
2850.1	30.32	29.45	28.91	28.34	25.30	23.99
2890.1	29.35	28.89	28.54	27.87	25.22	23.93
2950.1	28.32	28.47	28.11	27.01	25.04	23.53

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+14	+17	+20
1340.1	1370.1	34.84	28.79	28.31
1380.1	1410.1	31.41	28.68	30.12
1420.1	1450.1	30.06	28.89	32.77
1460.1	1490.1	28.66	29.21	33.94
1500.1	1530.1	28.27	29.58	34.03
1540.1	1570.1	27.50	28.72	31.99
1580.1	1610.1	26.67	28.25	30.67
1620.1	1650.1	26.06	27.96	29.28
1660.1	1690.1	26.46	27.13	27.73
1700.1	1730.1	26.40	26.29	26.55
1740.1	1770.1	26.26	25.96	25.95
1780.1	1810.1	26.19	25.59	25.40
1820.1	1850.1	26.64	25.74	25.66
1860.1	1890.1	28.19	27.11	26.96
1900.1	1930.1	29.89	28.68	28.15
1940.1	1970.1	30.70	30.40	29.24
1980.1	2010.1	29.55	31.72	30.32
2020.1	2050.1	28.86	32.29	31.02
2060.1	2090.1	27.02	32.14	31.46
2100.1	2130.1	27.03	31.37	31.49
2140.1	2170.1	26.06	30.48	31.27
2180.1	2210.1	26.48	30.26	31.34
2220.1	2250.1	27.77	30.89	31.54
2260.1	2290.1	28.31	31.58	31.87
2300.1	2330.1	30.48	32.07	31.96
2340.1	2370.1	30.43	32.03	31.84
2380.1	2410.1	30.66	31.58	31.48
2420.1	2450.1	30.91	31.48	31.41
2460.1	2490.1	31.18	31.59	31.58
2500.1	2530.1	31.52	31.68	31.61
2540.1	2570.1	31.55	31.86	31.84
2580.1	2610.1	31.70	31.85	31.94
2620.1	2650.1	32.17	32.13	32.29
2660.1	2690.1	32.42	32.30	32.39
2700.1	2730.1	32.34	32.31	32.40
2740.1	2770.1	32.22	32.20	32.20
2780.1	2810.1	32.08	31.95	31.92
2820.1	2850.1	32.04	31.79	31.73
2860.1	2890.1	31.85	31.55	31.44
2920.1	2950.1	31.74	31.42	31.27



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RF/IF MICROWAVE COMPONENTS

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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=2200MHz (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+14	+17	+20		+14	+17	+20		+14	+17	+20
1340.1	1370.1	7.56	6.09	4.98	1370.1	11.17	5.77	4.44	10.0	1.28	1.24	1.51
1380.1	1410.1	6.11	5.28	4.61	1410.1	7.87	4.53	3.86	30.0	1.28	1.28	1.53
1420.1	1450.1	5.23	4.55	4.02	1450.1	6.07	3.79	3.36	50.0	1.31	1.27	1.51
1460.1	1490.1	4.68	4.04	3.65	1490.1	4.72	3.31	3.05	70.0	1.32	1.26	1.51
1500.1	1530.1	4.23	3.59	3.36	1530.1	3.91	2.85	2.71	90.0	1.33	1.26	1.51
1540.1	1570.1	3.82	3.34	3.19	1570.1	3.56	2.53	2.44	110.0	1.35	1.25	1.49
1580.1	1610.1	3.57	3.21	3.11	1610.1	3.04	2.26	2.27	130.0	1.37	1.26	1.50
1620.1	1650.1	3.25	2.96	2.92	1650.1	3.01	2.03	2.01	150.0	1.39	1.27	1.51
1660.1	1690.1	3.08	2.92	2.89	1690.1	2.68	1.79	1.85	170.0	1.42	1.26	1.50
1700.1	1730.1	2.92	2.77	2.74	1730.1	2.72	1.66	1.68	190.0	1.47	1.26	1.50
1740.1	1770.1	2.88	2.74	2.71	1770.1	2.62	1.60	1.60	210.0	1.50	1.25	1.48
1780.1	1810.1	2.89	2.69	2.66	1810.1	2.81	1.60	1.52	230.0	1.50	1.26	1.49
1820.1	1850.1	2.87	2.64	2.61	1850.1	2.96	1.63	1.45	250.0	1.54	1.30	1.51
1860.1	1890.1	3.07	2.72	2.64	1890.1	3.16	1.63	1.39	270.0	1.60	1.30	1.48
1900.1	1930.1	3.08	2.66	2.53	1930.1	3.45	1.72	1.37	310.0	1.65	1.34	1.52
1940.1	1970.1	3.34	2.84	2.62	1970.1	3.56	1.77	1.40	330.0	1.71	1.36	1.51
1980.1	2010.1	3.45	2.93	2.63	2010.1	3.98	1.87	1.40	370.0	1.81	1.41	1.54
2020.1	2050.1	3.40	2.99	2.67	2050.1	3.90	1.93	1.47	390.0	1.88	1.45	1.54
2060.1	2090.1	3.62	3.21	2.83	2090.1	4.34	2.03	1.51	430.0	1.94	1.47	1.56
2100.1	2130.1	3.47	3.18	2.85	2130.1	4.18	2.11	1.61	450.0	2.03	1.53	1.58
2140.1	2170.1	3.67	3.47	3.12	2170.1	4.47	2.25	1.73	490.0	2.14	1.59	1.61
2180.1	2210.1	3.82	3.59	3.24	2210.1	4.63	2.48	1.90	510.0	2.20	1.63	1.64
2220.1	2250.1	4.01	3.58	3.17	2250.1	4.68	2.67	2.09	550.0	2.37	1.71	1.66
2260.1	2290.1	4.36	3.76	3.31	2290.1	5.38	2.85	2.11	570.0	2.42	1.75	1.69
2300.1	2330.1	4.09	3.53	3.16	2330.1	5.06	2.68	2.13	610.0	2.59	1.85	1.74
2340.1	2370.1	4.10	3.59	3.25	2370.1	5.34	2.67	2.14	630.0	2.64	1.87	1.74
2380.1	2410.1	3.88	3.48	3.19	2410.1	4.78	2.59	2.18	670.0	2.89	2.04	1.86
2420.1	2450.1	3.92	3.50	3.20	2450.1	4.51	2.50	2.22	690.0	2.89	2.03	1.86
2460.1	2490.1	4.11	3.63	3.33	2490.1	4.35	2.47	2.23	730.0	3.16	2.20	1.97
2500.1	2530.1	4.02	3.60	3.31	2530.1	3.65	2.40	2.34	750.0	3.20	2.21	1.98
2540.1	2570.1	4.40	3.81	3.49	2570.1	3.56	2.32	2.29	790.0	3.33	2.29	2.04
2580.1	2610.1	4.57	4.11	3.84	2610.1	3.04	2.16	2.27	810.0	3.48	2.38	2.10
2620.1	2650.1	4.93	4.66	4.35	2650.1	3.00	2.18	2.34	850.0	3.67	2.50	2.21
2660.1	2690.1	5.41	5.16	4.88	2690.1	3.11	2.31	2.39	870.0	3.74	2.55	2.23
2700.1	2730.1	5.56	5.31	5.12	2730.1	2.74	2.16	2.42	910.0	3.95	2.68	2.33
2740.1	2770.1	6.24	6.03	5.81	2770.1	2.45	1.99	2.31	930.0	4.18	2.82	2.43
2780.1	2810.1	6.09	5.93	5.77	2810.1	2.12	1.93	2.35	970.0	4.31	2.89	2.44
2820.1	2850.1	6.30	6.15	6.01	2850.1	1.92	1.83	2.34	990.0	4.54	3.09	2.59
2860.1	2890.1	6.19	6.09	5.95	2890.1	1.75	1.77	2.29	1030.0	5.02	3.39	2.75
2920.1	2950.1	5.91	5.95	5.87	2950.1	1.52	1.72	2.34	1050.0	5.22	3.57	2.87



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RF/IF MICROWAVE COMPONENTS



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Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	3	39	17	24	15	39	18	43	23	60
1	-	24	+0	34	30	23	35	23	58	38	42	55
2	68	57	56	55	57	58	51	62	51	>78	60	62
3	>90	61	>78	70	77	74	>78	65	73	75	>78	>78
4	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
5	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
6	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
7	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
8	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
9	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
10	>90	>78	>78	>78	>78	>78	>78	>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: 1950 MHz; -5.00 dBm.
LO IN: 1980 MHz; +17.00 dBm
IF OUT: 30 MHz; -11.56 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	12	42	29	33	26	48	30	52	36	71
1	-	24	+0	35	30	23	36	24	74	39	44	52
2	48	46	48	46	49	50	43	57	43	81	50	55
3	82	41	64	51	53	55	60	46	56	55	65	64
4	>90	79	67	73	71	69	73	76	64	64	62	83
5	>90	84	82	68	86	72	69	77	80	66	78	71
6	>90	>88	86	>88	87	>88	>88	>88	>88	>88	>88	80
7	>90	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88	87
8	>90	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88
9	>90	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88
10	>90	>88	>88	>88	>88	>88	>88	>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: 1950 MHz; 5.00 dBm.
LO IN: 1980 MHz; +17.00 dBm
IF OUT: 30 MHz; -1.54 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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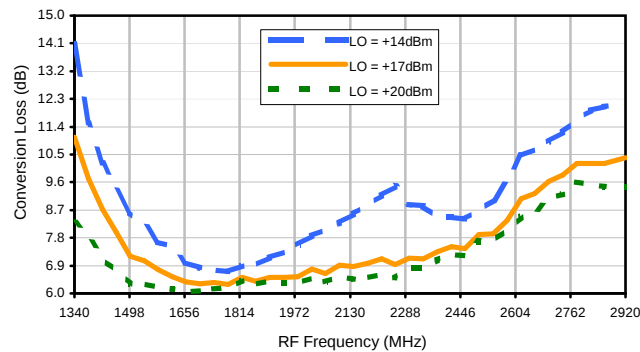
RF/IF MICROWAVE COMPONENTS



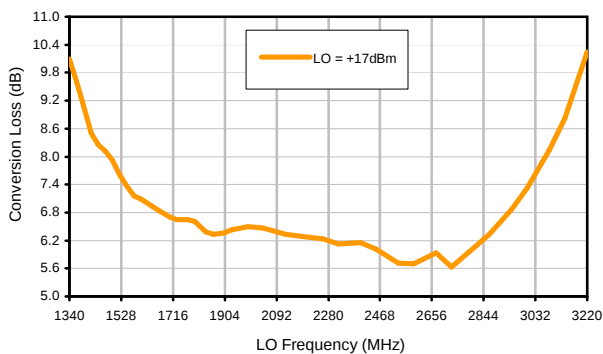
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Typical Performance Curves

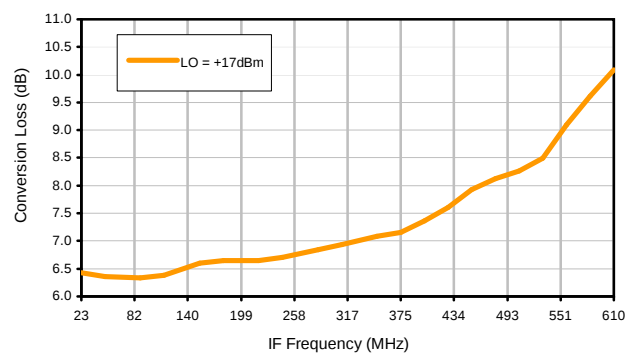
Conversion Loss @ IF=30MHz



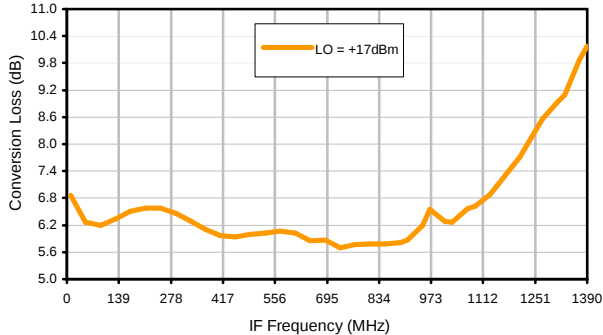
Conversion Loss vs. LO @ RF=1950MHz



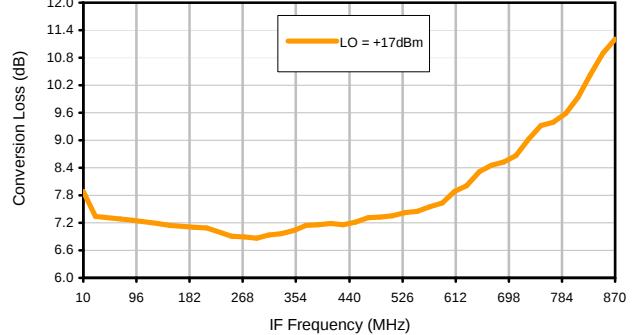
Conversion Loss vs. IF @ RF=1950MHz



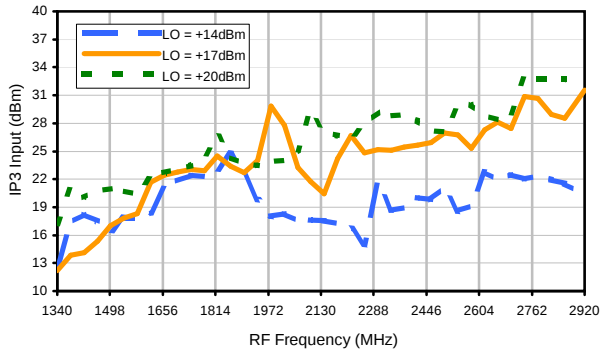
Conversion Loss vs. IF @ RF=1689.9MHz



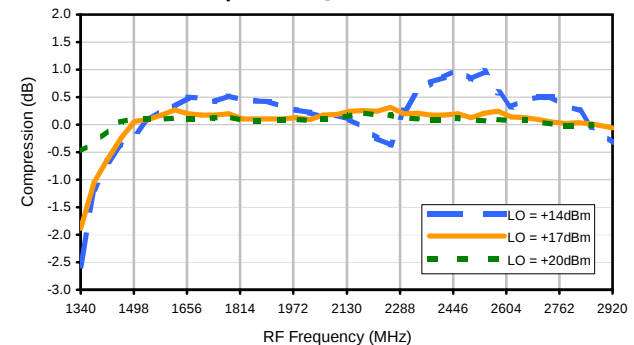
Conversion Loss vs. IF @ RF=2210.1MHz



IP3 Input

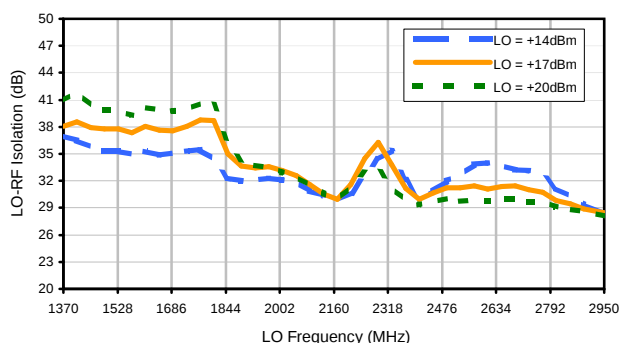


Compression @ RF IN=+10dBm

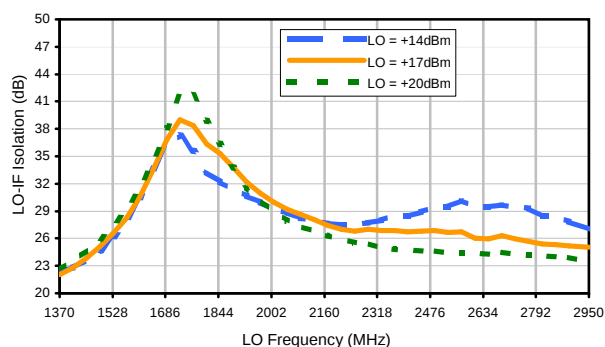


Typical Performance Curves

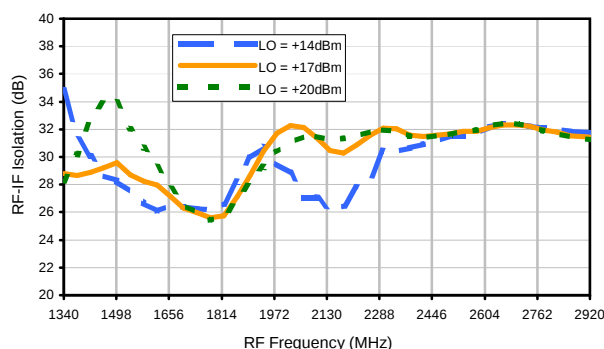
LO-RF Isolation



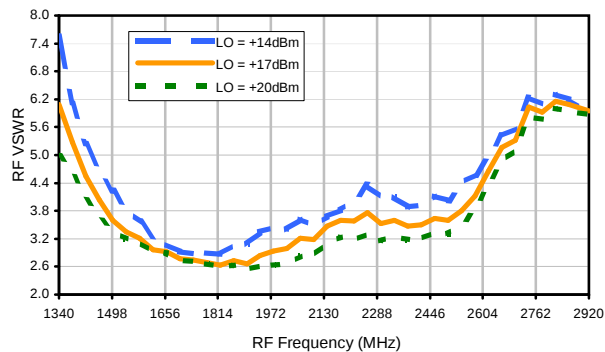
LO-IF Isolation



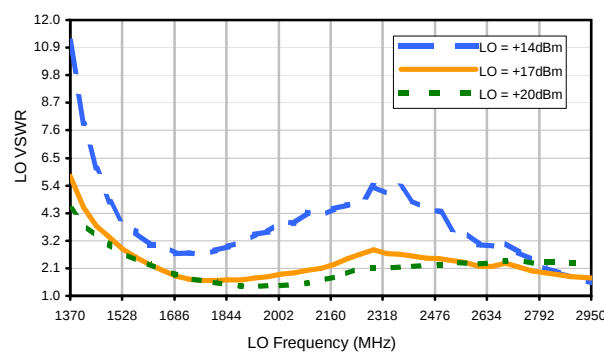
RF-IF Isolation



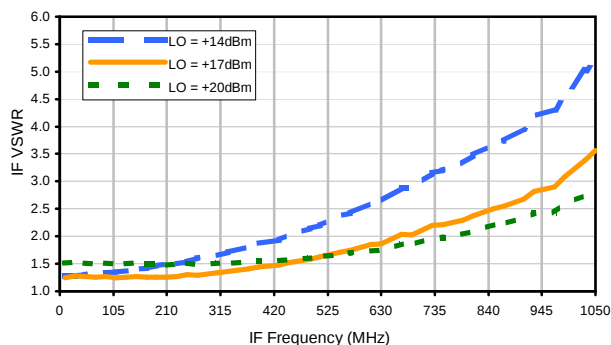
RF VSWR



LO VSWR



IF VSWR



Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	3	39	17	24	15	39	18	43	23	60
1	-	24	+0	34	30	23	35	23	58	38	42	55
2	68	57	56	55	57	58	51	62	51	>78	60	62
3	>90	61	>78	70	77	74	>78	65	73	75	>78	>78
4	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
5	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
6	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
7	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
8	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
9	>90	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78	>78
10	>90	>78	>78	>78	>78	>78	>78	>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: 1950 MHz; -5.00 dBm.
LO IN: 1980 MHz; +17.00 dBm
IF OUT: 30 MHz; -11.56 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	12	42	29	33	26	48	30	52	36	71
1	-	24	+0	35	30	23	36	24	74	39	44	52
2	48	46	48	46	49	50	43	57	43	81	50	55
3	82	41	64	51	53	55	60	46	56	55	65	64
4	>90	79	67	73	71	69	73	76	64	64	62	83
5	>90	84	82	68	86	72	69	77	80	66	78	71
6	>90	>88	86	>88	87	>88	>88	>88	>88	>88	>88	80
7	>90	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88	87
8	>90	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88
9	>90	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88	>88
10	>90	>88	>88	>88	>88	>88	>88	>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: 1950 MHz; 5.00 dBm.
LO IN: 1980 MHz; +17.00 dBm
IF OUT: 30 MHz; -1.54 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.

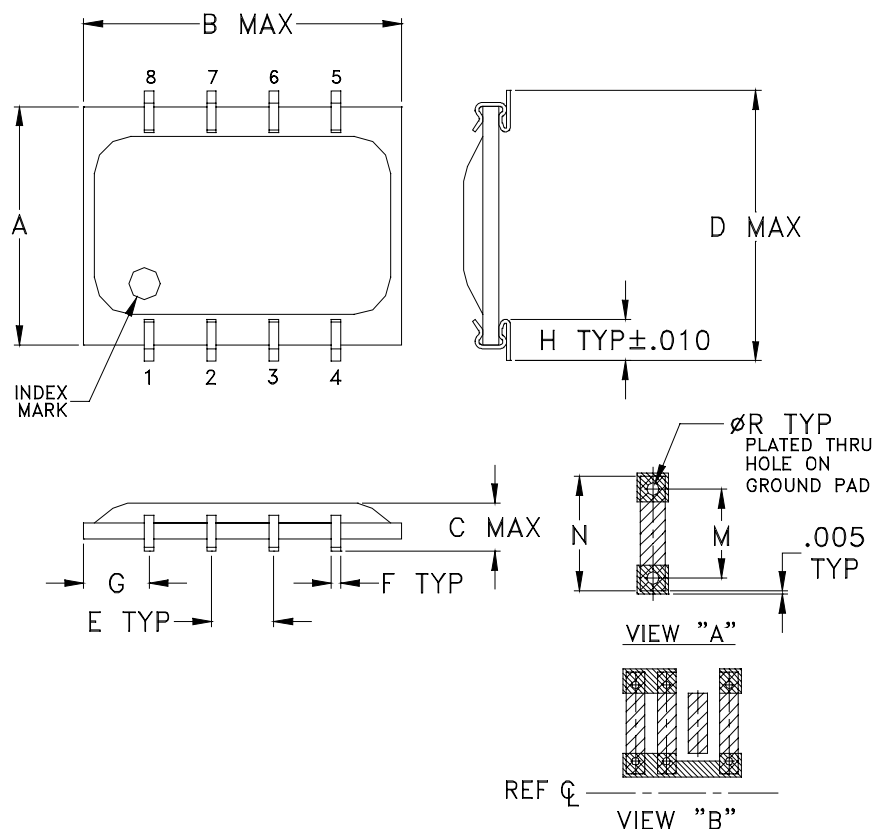


Case Style

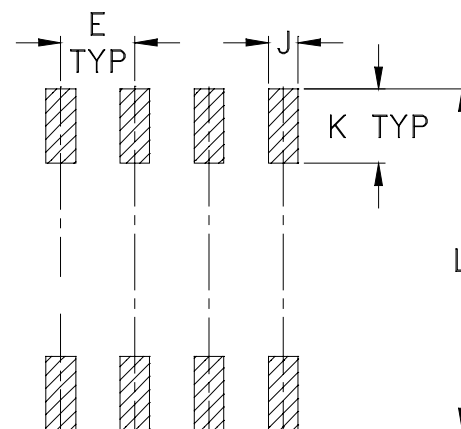
SM18

SM18

Outline Dimensions



PCB Land Pattern



Suggested Layout,

Tolerance to be within $\pm .002$

Each ground pin shall have footprint
Per view "A". All ground pads shall be
connected to each other per view "B"

CASE #.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	WT, GRAM
SM18	.375 (9.53)	.510 (12.95)	.095 (2.41)	.425 (10.80)	.100 (2.54)	.015 (.38)	.100 (2.54)	.060 (1.52)	.040 (1.02)	.100 (2.54)	.460 (11.68)	.140 (3.56)	.180 (4.57)	-- --	-- --	.020 (.51)	.4

Dimensions are in inches (mm). Tolerances: $\pm .005$

Notes:

- Case material: Plastic encapsulation on Ceramic base.
- Termination finish:
For RoHS Case Styles: Tin plate over Nickel plate.
For RoHS-5 Case Styles: Tin-Lead plate.



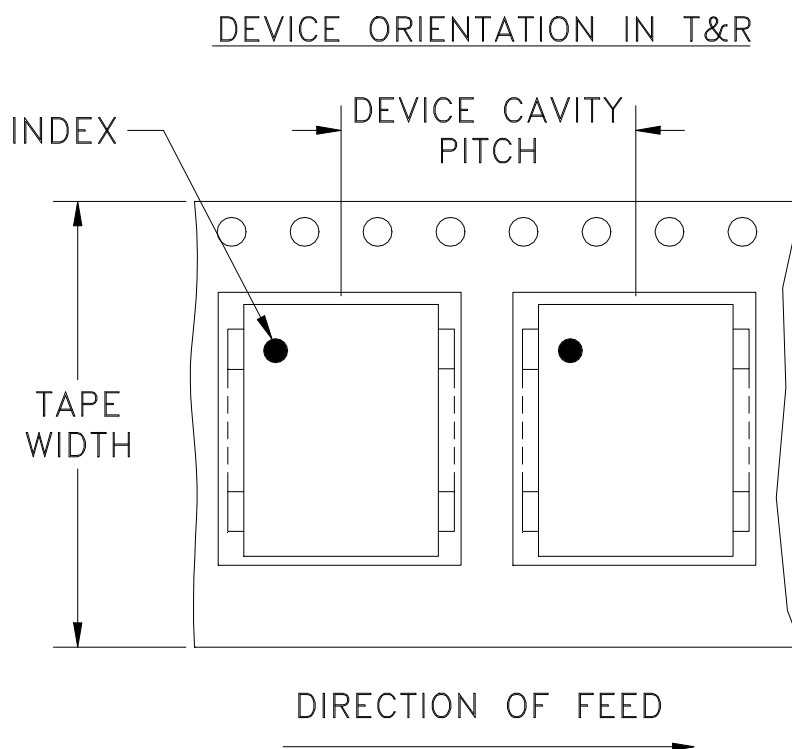
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24	12	13	1000

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