

Non-Catalog Model

Frequency Mixer

SBL-173H

Level 17 (LO Power +17 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 : A06

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency	LO (fL to fU)	5		1200	MHz
	RF (fL to fU)	5		1200	MHz
	IF	1		1200	MHz
Conversion Loss	mid band		5.7	7.0	dB
	Total Range			8.5	dB
LO-RF Isolation	Low Range	35	40		dB
	Mid Range	25	35		dB
	Upper Range	20	35		dB
LO-IF Isolation	Low Range	35	40		dB
	Mid Range	20	35		dB
	Upper Range	20	30		dB
IP3 Input		+27.5	+30		dBm
1 dB Comp. Input Power			+10		dBm

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

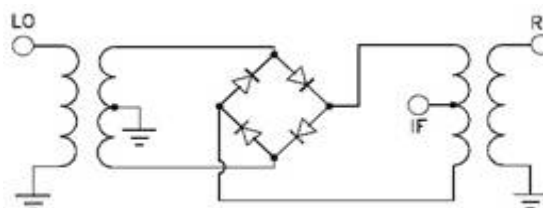
IP3 : RF Power = 0 dBm @ 200 MHz & 202 MHz , LO Power = +17 dBm @ 180 MHz
Non-hermetic

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

^ - pins must be connected together externally

Electrical Schematics



Frequency Mixer

SBL-173H

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB)		
		@LO (dBm)		
		+14	+17	+20
5.0	35.0	5.41	5.20	5.06
7.0	37.0	5.36	5.16	5.00
10.1	40.1	5.30	5.06	4.97
90.4	120.4	5.75	5.59	5.55
170.6	200.6	5.74	5.64	5.61
250.9	280.9	5.77	5.69	5.67
331.2	361.2	5.84	5.77	5.76
411.4	441.4	5.88	5.82	5.79
491.7	521.7	5.98	5.90	5.88
572.0	602.0	6.02	5.94	5.91
732.5	762.5	6.31	6.11	6.02
812.8	842.8	6.56	6.30	6.17
893.1	923.1	6.68	6.39	6.24
973.3	1003.3	6.70	6.43	6.31
1053.6	1083.6	6.89	6.60	6.45
1133.9	1163.9	7.06	6.77	6.63
1214.1	1244.1	7.31	7.04	6.90
1294.4	1324.4	7.71	7.43	7.27
1374.7	1404.7	7.96	7.54	7.31
1454.9	1484.9	8.09	7.60	7.37
1535.2	1565.2	8.34	7.66	7.35
1615.5	1645.5	8.53	7.76	7.36
1695.7	1725.7	8.81	7.99	7.50
1856.3	1886.3	9.06	8.06	7.60
1936.5	1966.5	9.04	7.97	7.57
2016.8	2046.8	8.84	7.92	7.61
2097.1	2127.1	8.63	7.95	7.74
2157.3	2187.3	8.78	8.00	7.81
2237.5	2267.5	9.03	8.13	7.95
2297.8	2327.8	8.99	8.19	7.99
2378.0	2408.0	9.28	8.46	8.22
2438.2	2468.2	9.94	8.84	8.54
2518.5	2548.5	10.34	9.25	8.93
2578.7	2608.7	10.32	9.15	8.82
2659.0	2689.0	10.54	9.16	8.84
2719.2	2749.2	10.69	9.30	9.00
2799.4	2829.4	11.00	9.63	9.27
2859.6	2889.6	11.41	9.94	9.52
2939.9	2969.9	11.84	10.27	9.84
3000.1	3030.1	12.14	10.48	10.09

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm)		
		@LO (dBm)		
		+14	+17	+20
10.1	40.1	30.99	32.72	29.08
90.4	120.4	26.41	22.83	22.93
170.6	200.6	21.99	20.39	20.45
250.9	280.9	19.72	19.28	19.87
331.2	361.2	18.79	19.84	21.99
411.4	441.4	20.15	21.12	23.07
491.7	521.7	18.32	19.79	22.58
572.0	602.0	19.89	23.11	38.67
652.2	682.2	22.43	23.92	26.42
732.5	762.5	19.26	22.41	36.61
812.8	842.8	17.19	22.14	35.62
893.1	923.1	17.99	24.10	29.63
973.3	1003.3	21.27	27.90	26.36
1053.6	1083.6	29.41	36.37	26.22
1133.9	1163.9	24.66	29.17	30.92
1214.1	1244.1	23.85	27.85	30.89
1294.4	1324.4	23.47	26.27	26.43
1374.7	1404.7	20.50	22.15	25.28
1454.9	1484.9	17.83	19.73	23.25
1535.2	1565.2	21.84	21.30	24.86
1615.5	1645.5	30.27	27.33	30.38
1695.7	1725.7	23.42	26.84	27.88
1776.0	1806.0	20.32	22.85	25.08
1856.3	1886.3	19.57	22.53	23.15
1936.5	1966.5	19.22	21.51	21.70
2016.8	2046.8	19.62	21.80	21.75
2097.1	2127.1	21.68	25.06	24.12
2157.3	2187.3	23.66	29.07	27.78
2237.5	2267.5	24.05	29.09	30.84
2297.8	2327.8	24.34	25.98	27.57
2378.0	2408.0	23.08	26.46	25.10
2438.2	2468.2	20.66	31.14	26.36
2518.5	2548.5	22.81	28.22	27.34
2578.7	2608.7	30.81	27.43	25.19
2659.0	2689.0	21.15	23.11	22.85
2719.2	2749.2	20.46	23.09	23.35
2799.4	2829.4	19.48	21.67	23.08
2859.6	2889.6	19.19	20.72	22.41
2939.9	2969.9	18.33	21.79	23.32
3000.1	3030.1	18.13	23.59	23.77

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+10dBm (dB)		
		@LO (dBm)		
		+14	+17	+20
10.1	40.1	0.47	0.26	0.14
90.4	120.4	0.38	0.20	0.09
170.6	200.6	0.38	0.17	0.07
250.9	280.9	0.33	0.13	0.08
331.2	361.2	0.28	0.13	0.07
411.4	441.4	0.26	0.12	0.08
491.7	521.7	0.29	0.16	0.11
572.0	602.0	0.30	0.18	0.13
652.2	682.2	0.38	0.25	0.24
732.5	762.5	0.43	0.25	0.20
812.8	842.8	0.46	0.30	0.21
893.1	923.1	0.52	0.37	0.26
973.3	1003.3	0.57	0.41	0.30
1053.6	1083.6	0.59	0.40	0.31
1133.9	1163.9	0.68	0.48	0.36
1214.1	1244.1	0.71	0.46	0.33
1294.4	1324.4	0.56	0.28	0.16
1374.7	1404.7	0.51	0.28	0.21
1454.9	1484.9	0.62	0.38	0.22
1535.2	1565.2	0.55	0.41	0.27
1615.5	1645.5	0.45	0.38	0.29
1695.7	1725.7	0.33	0.27	0.22
1776.0	1806.0	0.24	0.27	0.23
1856.3	1886.3	0.24	0.34	0.28
1936.5	1966.5	0.33	0.42	0.34
2016.8	2046.8	0.58	0.49	0.39
2097.1	2127.1	0.66	0.44	0.33
2157.3	2187.3	0.66	0.42	0.31
2237.5	2267.5	0.62	0.37	0.26
2297.8	2327.8	0.62	0.36	0.25
2378.0	2408.0	0.52	0.34	0.24
2438.2	2468.2	0.34	0.29	0.21
2518.5	2548.5	0.11	0.16	0.16
2578.7	2608.7	0.12	0.17	0.19
2659.0	2689.0	0.10	0.22	0.18
2719.2	2749.2	0.10	0.22	0.17
2799.4	2829.4	0.12	0.22	0.17
2859.6	2889.6	0.08	0.25	0.18
2939.9	2969.9	0.06	0.36	0.24
3000.1	3030.1	0.05	0.37	0.24

REV. X2

SBL-173H

100818

Page 1 of 5



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

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see



Frequency Mixer

SBL-173H

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=600.1MHz (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)=1200.1MHz (dB)
		@LO (dBm)			@LO (dBm)			@LO (dBm)
		+17			+17			+17
590.0	10.1	6.27	10.0	20.1	5.46	1190.0	10.1	6.86
575.1	25.0	6.24	50.0	60.1	5.36	1150.0	50.1	6.87
560.3	39.8	6.25	90.0	100.1	5.36	1110.0	90.1	6.89
545.4	54.7	6.26	110.0	120.1	5.36	1090.0	110.1	6.87
530.5	69.6	6.25	150.0	160.1	5.37	1050.0	150.1	6.89
515.6	84.5	6.25	170.0	180.1	5.37	1030.0	170.1	6.94
500.8	99.3	6.22	210.0	220.1	5.38	990.0	210.1	6.96
485.9	114.2	6.21	230.0	240.1	5.39	970.0	230.1	7.02
471.0	129.1	6.17	270.0	280.1	5.39	930.0	270.1	7.05
456.2	143.9	6.19	290.0	300.1	5.40	910.0	290.1	7.08
441.3	158.8	6.19	330.0	340.1	5.44	870.0	330.1	7.08
426.4	173.7	6.23	350.0	360.1	5.45	850.0	350.1	7.11
411.5	188.6	6.20	390.0	400.1	5.44	810.0	390.1	7.15
396.7	203.4	6.16	410.0	420.1	5.44	790.0	410.1	7.16
381.8	218.3	6.17	450.0	460.1	5.46	750.0	450.1	7.13
366.9	233.2	6.18	470.0	480.1	5.48	730.0	470.1	7.17
352.1	248.0	6.18	510.0	520.1	5.49	690.0	510.1	7.20
337.2	262.9	6.16	530.0	540.1	5.50	670.0	530.1	7.20
322.3	277.8	6.18	570.0	580.1	5.50	630.0	570.1	7.19
307.4	292.7	6.16	590.0	600.1	5.48	610.0	590.1	7.14
292.6	307.5	6.15	630.0	640.1	5.51	570.0	630.1	7.14
277.7	322.4	6.14	650.0	660.1	5.52	550.0	650.1	7.17
262.8	337.3	6.13	690.0	700.1	5.60	510.0	690.1	7.01
247.9	352.2	6.13	710.0	720.1	5.67	490.0	710.1	6.93
233.1	367.0	6.10	750.0	760.1	5.67	450.0	750.1	7.02
218.2	381.9	6.09	770.0	780.1	5.69	430.0	770.1	7.07
203.3	396.8	6.06	810.0	820.1	5.76	390.0	810.1	7.09
188.5	411.6	6.05	830.0	840.1	5.78	370.0	830.1	7.12
173.6	426.5	6.04	870.0	880.1	5.80	330.0	870.1	7.12
158.7	441.4	6.06	890.0	900.1	5.84	310.0	890.1	7.11
143.8	456.3	6.10	930.0	940.1	5.86	270.0	930.1	7.07
129.0	471.1	6.10	950.0	960.1	5.90	250.0	950.1	7.01
114.1	486.0	6.12	990.0	1000.1	5.91	210.0	990.1	6.93
99.2	500.9	6.10	1010.0	1020.1	5.94	190.0	1010.1	6.88
84.4	515.7	6.06	1050.0	1060.1	6.01	150.0	1050.1	6.87
69.5	530.6	6.04	1070.0	1080.1	6.02	130.0	1070.1	6.89
54.6	545.5	6.00	1110.0	1120.1	6.14	90.0	1110.1	6.89
39.7	560.4	5.99	1130.0	1140.1	6.16	70.0	1130.1	6.89
24.9	575.2	5.97	1170.0	1180.1	6.23	30.0	1170.1	6.93
10.0	590.1	6.12	1190.0	1200.1	6.28	10.0	1190.1	7.05

REV. X2
SBL-173H
100818
Page 2 of 5



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



Frequency Mixer

SBL-173H

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)		
	+14	+17	+20	+14	+17	+20
5.0	42.38	45.59	48.68	47.82	50.12	51.86
7.0	43.47	46.64	49.67	49.28	51.61	53.24
10.1	44.36	47.44	50.48	50.57	52.62	54.09
90.4	49.16	48.68	48.09	49.05	50.32	50.82
170.6	48.26	46.21	45.04	48.84	49.94	51.15
250.9	47.21	44.20	42.69	49.88	51.79	53.18
331.2	45.73	42.80	41.10	53.32	56.93	56.66
411.4	43.99	41.44	39.87	57.92	59.81	50.93
491.7	42.93	40.70	39.02	60.58	56.78	46.96
572.0	42.68	40.45	38.88	56.73	58.56	45.22
732.5	41.58	40.07	38.76	53.08	46.79	37.87
812.8	42.68	42.22	40.24	49.92	51.43	38.36
893.1	42.91	44.07	42.31	47.29	53.01	38.92
973.3	42.14	46.39	45.25	45.17	48.74	38.21
1053.6	41.50	46.03	47.02	47.19	41.17	36.60
1133.9	41.03	47.13	51.15	46.47	40.46	36.35
1214.1	41.19	47.24	54.82	43.20	40.67	36.50
1294.4	41.14	45.63	55.46	41.80	37.54	35.47
1374.7	41.60	44.69	48.46	40.71	36.22	34.83
1454.9	42.08	43.77	45.17	41.59	36.78	35.21
1535.2	42.42	43.91	44.81	41.34	38.11	36.09
1615.5	43.56	45.40	46.62	41.12	38.62	36.73
1695.7	46.14	48.49	49.14	39.61	40.09	38.06
1856.3	54.91	48.90	44.70	36.60	38.89	38.45
1936.5	48.00	43.79	40.93	36.78	39.75	39.95
2016.8	43.15	39.61	37.27	37.54	40.46	39.96
2097.1	41.02	37.77	35.52	37.30	38.69	37.76
2157.3	39.24	36.85	34.64	37.08	37.39	36.38
2237.5	36.50	34.43	32.97	36.36	35.99	35.46
2297.8	34.96	33.18	31.88	35.69	35.42	34.89
2378.0	33.33	31.94	30.53	35.04	34.77	33.99
2438.2	31.73	30.86	29.77	34.62	33.86	33.31
2518.5	29.62	29.15	28.47	33.19	32.14	31.87
2578.7	28.77	28.35	28.07	32.48	30.73	30.77
2659.0	28.32	28.30	28.40	32.24	30.09	30.20
2719.2	28.06	28.35	28.70	32.13	30.28	30.31
2799.4	27.71	28.45	29.19	32.23	30.71	30.70
2859.6	27.24	28.35	29.43	32.23	31.03	31.16
2939.9	26.71	28.19	29.57	32.12	31.51	31.70
3000.1	26.56	28.02	29.64	32.54	31.78	32.36

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB)		
		@LO (dBm)		
		+14	+17	+20
10.1	40.1	37.91	39.42	42.53
90.4	120.4	40.75	43.19	46.58
170.6	200.6	43.60	45.73	47.75
250.9	280.9	48.26	50.87	51.91
331.2	361.2	55.72	53.06	47.06
411.4	441.4	57.39	53.44	46.52
491.7	521.7	51.84	48.30	43.63
572.0	602.0	51.66	47.93	43.73
652.2	682.2	51.71	47.71	44.40
732.5	762.5	50.02	45.90	43.19
812.8	842.8	52.68	45.97	43.13
893.1	923.1	58.73	49.64	45.81
973.3	1003.3	51.22	46.31	45.47
1053.6	1083.6	46.26	43.70	41.27
1133.9	1163.9	41.06	39.84	39.45
1214.1	1244.1	40.87	39.83	38.31
1294.4	1324.4	42.70	42.02	36.99
1374.7	1404.7	42.18	43.02	35.97
1454.9	1484.9	43.34	42.43	36.57
1535.2	1565.2	43.61	42.62	37.62
1615.5	1645.5	41.00	40.60	37.05
1695.7	1725.7	39.08	38.26	34.89
1776.0	1806.0	37.43	36.93	35.16
1856.3	1886.3	35.91	36.85	36.03
1936.5	1966.5	35.34	36.97	36.64
2016.8	2046.8	36.40	37.96	37.91
2097.1	2127.1	35.24	36.13	36.00
2157.3	2187.3	33.19	33.25	33.19
2237.5	2267.5	31.17	31.21	31.36
2297.8	2327.8	29.99	30.05	29.86
2378.0	2408.0	28.40	28.37	28.41
2438.2	2468.2	27.07	27.09	27.10
2518.5	2548.5	25.90	26.07	26.54
2578.7	2608.7	26.23	26.25	27.04
2659.0	2689.0	26.83	26.86	27.85
2719.2	2749.2	26.96	27.09	27.86
2799.4	2829.4	26.89	27.20	27.75
2859.6	2889.6	26.68	26.96	27.48
2939.9	2969.9	26.12	26.29	26.82
3000.1	3030.1	25.57	25.81	26.20

REV. X2
SBL-173H
100818
Page 3 of 5

Frequency Mixer

SBL-173H

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1)			LO (MHz)	LO VSWR (:1)			IF (OUT) (MHz)	IF VSWR @LO=1200.1MHz (:1)		
		@LO (dBm)				@LO (dBm)				@LO (dBm)		
		+14	+17	+20		+14	+17	+20		+14	+17	+20
5.0	35.0	2.21	1.97	1.78	5.0	1.52	2.34	3.34	5.0	1.19	1.38	1.62
7.0	37.0	2.23	1.99	1.80	7.0	1.52	2.33	3.31	7.0	1.15	1.35	1.59
10.1	40.1	2.24	2.00	1.80	10.1	1.50	2.22	3.34	10.1	1.15	1.35	1.59
90.4	120.4	1.22	1.12	1.09	90.4	1.45	2.05	2.74	50.3	1.03	1.16	1.29
170.6	200.6	1.21	1.15	1.13	170.6	1.42	2.00	2.65	90.7	1.03	1.13	1.25
250.9	280.9	1.24	1.20	1.18	250.9	1.40	1.97	2.58	110.8	1.04	1.10	1.21
331.2	361.2	1.27	1.23	1.22	331.2	1.39	1.94	2.53	151.2	1.04	1.10	1.20
411.4	441.4	1.28	1.25	1.23	411.4	1.42	1.94	2.51	171.4	1.04	1.09	1.19
491.7	521.7	1.33	1.29	1.27	491.7	1.47	1.98	2.53	211.7	1.09	1.04	1.13
572.0	602.0	1.34	1.30	1.28	572.0	1.60	2.10	2.65	231.9	1.09	1.05	1.14
652.2	682.2	1.40	1.34	1.30	652.2	1.72	2.25	2.82	272.2	1.12	1.01	1.10
732.5	762.5	1.56	1.48	1.42	732.5	1.89	2.47	3.08	292.4	1.14	1.01	1.08
812.8	842.8	1.71	1.60	1.52	812.8	2.15	2.77	3.44	332.7	1.17	1.04	1.05
893.1	923.1	1.81	1.70	1.62	893.1	2.48	3.15	3.88	352.9	1.17	1.05	1.05
973.3	1003.3	1.86	1.75	1.67	973.3	2.75	3.49	4.29	393.2	1.22	1.10	1.02
1053.6	1083.6	1.96	1.85	1.77	1053.6	2.95	3.76	4.62	413.4	1.24	1.12	1.03
1133.9	1163.9	2.03	1.92	1.84	1133.9	3.19	4.11	5.07	453.7	1.26	1.13	1.05
1214.1	1244.1	2.09	1.97	1.89	1214.1	3.45	4.46	5.52	473.9	1.29	1.17	1.08
1294.4	1324.4	2.15	2.03	1.93	1294.4	3.71	4.80	5.99	514.2	1.32	1.19	1.10
1374.7	1404.7	2.22	2.07	1.98	1374.7	3.98	5.13	6.37	534.4	1.33	1.20	1.11
1454.9	1484.9	2.30	2.15	2.06	1454.9	4.31	5.49	6.78	574.7	1.37	1.25	1.16
1535.2	1565.2	2.36	2.20	2.10	1535.2	4.70	5.93	7.31	594.9	1.40	1.27	1.18
1615.5	1645.5	2.34	2.17	2.06	1615.5	5.09	6.37	7.83	635.3	1.43	1.29	1.19
1695.7	1725.7	2.31	2.15	2.03	1695.7	5.34	6.51	7.97	655.4	1.44	1.30	1.20
1776.0	1806.0	2.25	2.09	1.98	1776.0	5.61	6.63	8.01	695.8	1.51	1.36	1.26
1856.3	1886.3	2.21	2.02	1.91	1856.3	5.79	6.61	7.80	715.9	1.51	1.36	1.25
1936.5	1966.5	2.12	1.93	1.83	1936.5	5.83	6.44	7.50	756.3	1.57	1.40	1.29
2016.8	2046.8	2.00	1.81	1.72	2016.8	5.91	6.37	7.31	776.4	1.58	1.41	1.30
2097.1	2127.1	1.85	1.69	1.62	2097.1	5.89	6.05	6.78	816.8	1.63	1.45	1.33
2157.3	2187.3	1.81	1.63	1.56	2157.3	5.89	5.74	6.19	836.9	1.64	1.46	1.34
2237.5	2267.5	1.78	1.57	1.49	2237.5	5.93	5.58	5.79	877.3	1.69	1.50	1.38
2297.8	2327.8	1.72	1.51	1.43	2297.8	6.01	5.41	5.39	897.5	1.71	1.52	1.39
2378.0	2408.0	1.67	1.47	1.38	2378.0	6.13	5.14	4.79	937.8	1.73	1.54	1.41
2438.2	2468.2	1.66	1.45	1.37	2438.2	6.03	4.88	4.38	958.0	1.77	1.57	1.44
2518.5	2548.5	1.63	1.46	1.40	2518.5	5.99	4.62	3.92	998.3	1.76	1.57	1.44
2578.7	2608.7	1.61	1.45	1.39	2578.7	6.03	4.51	3.63	1018.5	1.78	1.59	1.46
2659.0	2689.0	1.53	1.39	1.33	2659.0	6.11	4.53	3.54	1058.8	1.82	1.63	1.50
2719.2	2749.2	1.43	1.31	1.27	2719.2	6.07	4.57	3.60	1079.0	1.84	1.65	1.52
2799.4	2829.4	1.30	1.21	1.18	2799.4	6.44	4.98	4.00	1119.3	1.83	1.64	1.51
2859.6	2889.6	1.21	1.15	1.14	2859.6	6.61	5.30	4.38	1139.5	1.85	1.66	1.53
2939.9	2969.9	1.12	1.14	1.17	2939.9	6.97	5.91	5.13	1179.8	1.89	1.71	1.58
3000.1	3030.1	1.11	1.20	1.24	3000.1	7.38	6.53	5.83	1200.0	1.56	1.37	1.24

REV. X2
SBL-173H
100818
Page 4 of 5



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see



Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	26	25	27	56	30	49	33	53	40	50
1	-	41	+0	42	12	53	23	46	34	48	40	53
2	80	55	35	49	36	56	37	71	46	61	58	65
3	>100	63	56	62	52	65	65	63	69	66	61	71
4	>100	77	53	76	53	79	53	62	54	73	62	69
5	>100	98	74	82	76	76	69	78	70	79	78	82
6	>100	88	72	90	66	82	64	81	62	75	62	86
7	>100	90	83	90	78	85	79	85	96	86	88	89
8	>100	94	81	92	79	91	75	86	74	85	74	83
9	>100	97	87	94	88	>99	82	93	81	97	78	>99
10	>100	>99	97	>99	95	>99	93	97	>99	>99	91	>99
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 600.1 MHz; 5.00 dBm.
LO IN: 630.01 MHz; +17.00 dBm
IF OUT: 29.91 MHz; -.97 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	23	15	14	42	19	35	23	43	29	39
1	-	42	+0	42	12	50	24	44	35	47	38	46
2	98	63	43	58	43	67	46	72	56	67	64	70
3	>100	75	73	86	82	>89	69	>89	68	86	68	83
4	>100	>89	79	>89	85	>89	82	>89	84	>89	83	>89
5	>100	>89	>89	>89	>89	88	89	>89	89	>89	>89	>89
6	>100	>89	>89	>89	>89	>89	>89	87	>89	>89	>89	>89
7	>100	>89	>89	>89	>89	>89	>89	>89	87	>89	>89	>89
8	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89	>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	>89	>89
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 600.1 MHz; -5.00 dBm.
LO IN: 630.01 MHz; +17.00 dBm
IF OUT: 29.91 MHz; -10.93 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. X2
SBL-173H
100818
Page 5 of 5



Mini-Circuits®

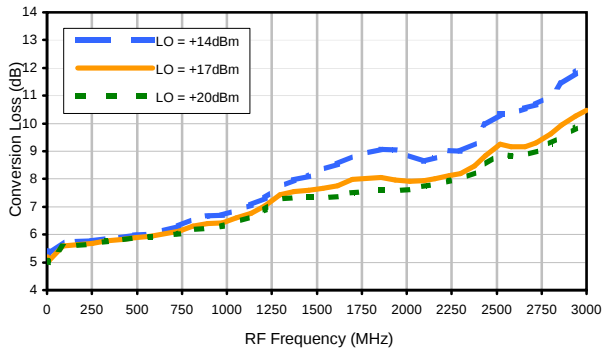
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see

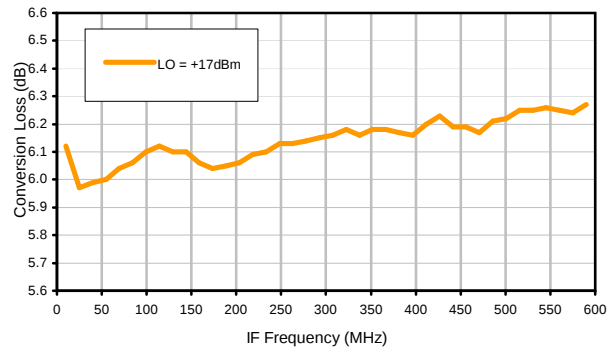


Typical Performance Curves

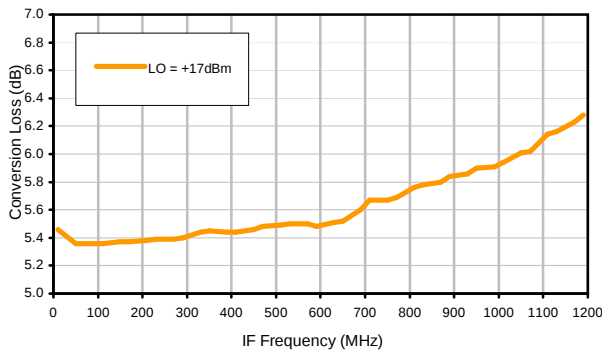
Conversion Loss @ IF=30MHz



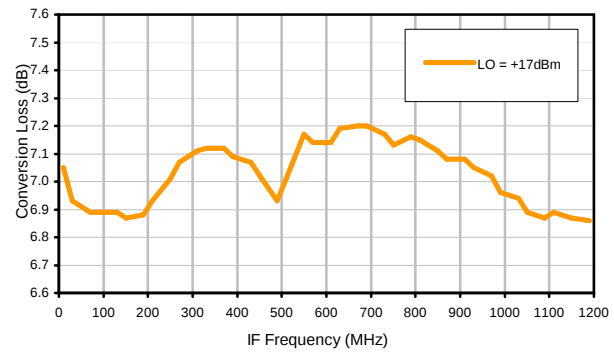
Conversion Loss vs. IF @ RF=600.1MHz



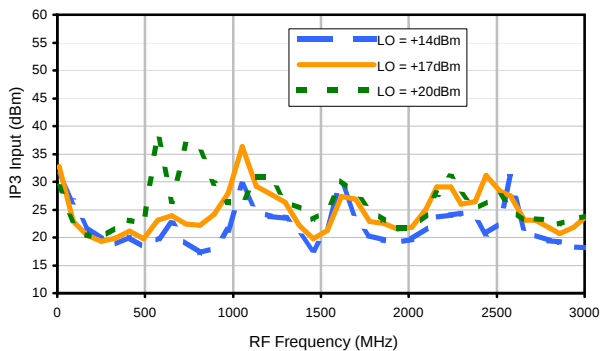
Conversion Loss vs. IF @ RF=10.1MHz



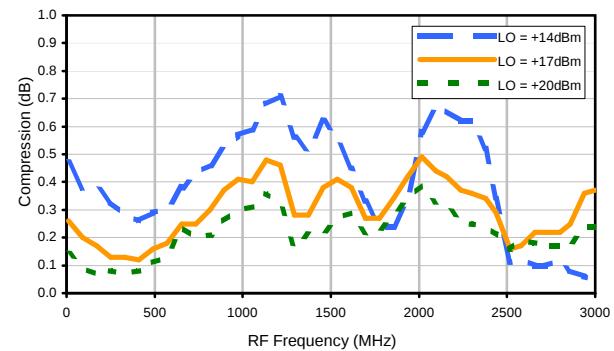
Conversion Loss vs. IF @ RF=1200.1MHz



IP3 Input

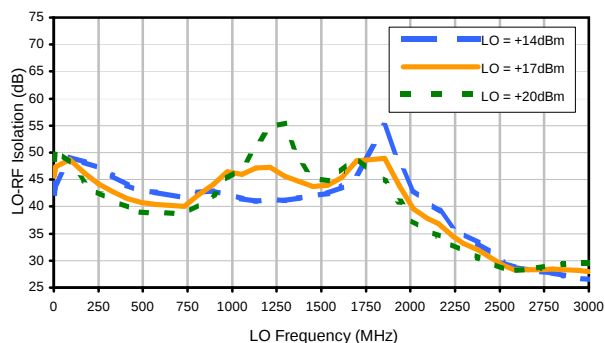


Compression @ RF IN=+10dBm

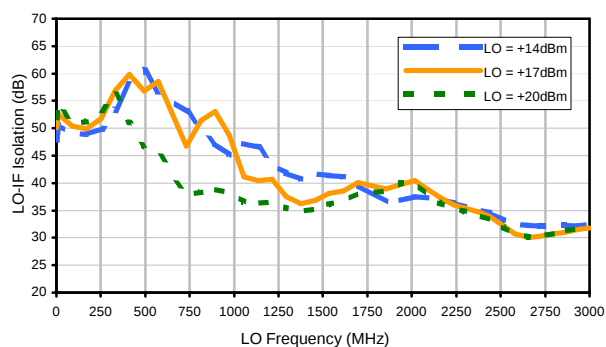


Typical Performance Curves

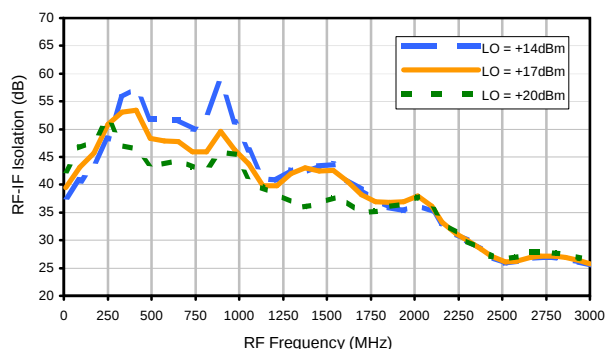
LO-RF Isolation



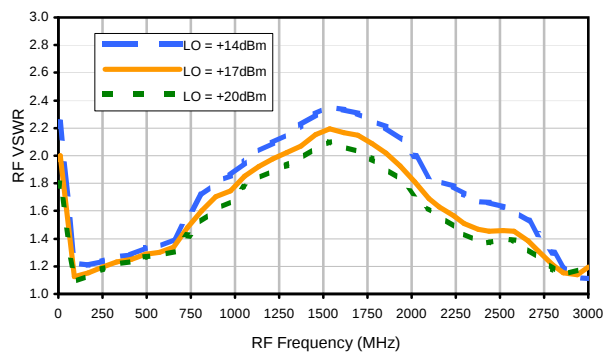
LO-IF Isolation



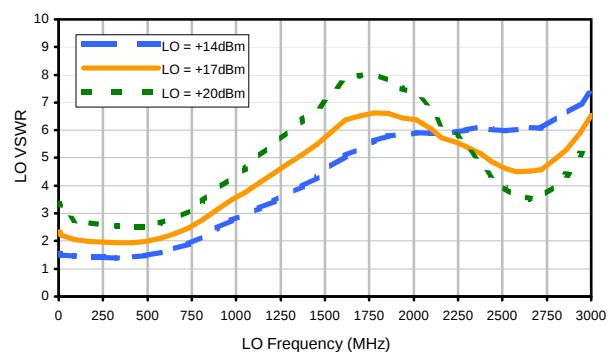
RF-IF Isolation



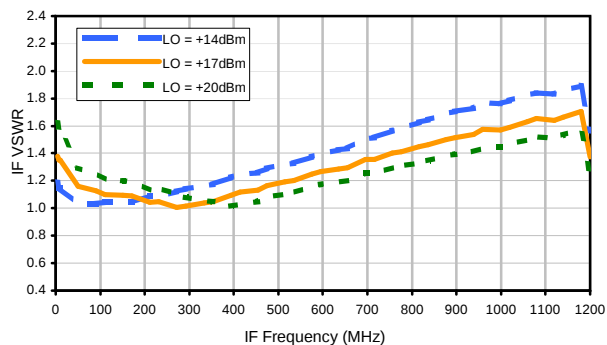
RF VSWR



LO VSWR



IF VSWR



Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	26	25	27	56	30	49	33	53	40	50
1	-	41	+0	42	12	53	23	46	34	48	40	53
2	80	55	35	49	36	56	37	71	46	61	58	65
3	>100	63	56	62	52	65	65	63	69	66	61	71
4	>100	77	53	76	53	79	53	62	54	73	62	69
5	>100	98	74	82	76	76	69	78	70	79	78	82
6	>100	88	72	90	66	82	64	81	62	75	62	86
7	>100	90	83	90	78	85	79	85	96	86	88	89
8	>100	94	81	92	79	91	75	86	74	85	74	83
9	>100	97	87	94	88	>99	82	93	81	97	78	>99
10	>100	>99	97	>99	95	>99	93	97	>99	>99	91	>99
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 600.1 MHz; 5.00 dBm.
LO IN: 630.01 MHz; +17.00 dBm
IF OUT: 29.91 MHz; -.97 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	23	15	14	42	19	35	23	43	29	39
1	-	42	+0	42	12	50	24	44	35	47	38	46
2	98	63	43	58	43	67	46	72	56	67	64	70
3	>100	75	73	86	82	>89	69	>89	68	86	68	83
4	>100	>89	79	>89	85	>89	82	>89	84	>89	83	>89
5	>100	>89	>89	>89	>89	88	89	>89	89	>89	>89	>89
6	>100	>89	>89	>89	>89	>89	>89	87	>89	>89	>89	>89
7	>100	>89	>89	>89	>89	>89	>89	>89	87	>89	>89	>89
8	>100	>89	>89	>89	>89	>89	>89	>89	>89	>89	>89	>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	>89	>89
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 600.1 MHz; -5.00 dBm.
LO IN: 630.01 MHz; +17.00 dBm
IF OUT: 29.91 MHz; -10.93 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. X2
SBL-173H
100818
Page 3 of 3



Mini-Circuits®

RF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see

