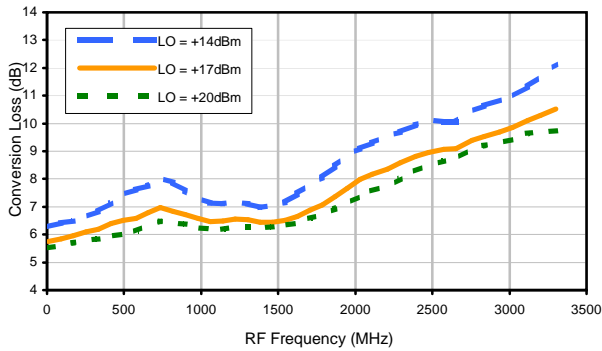


# Frequency Mixer

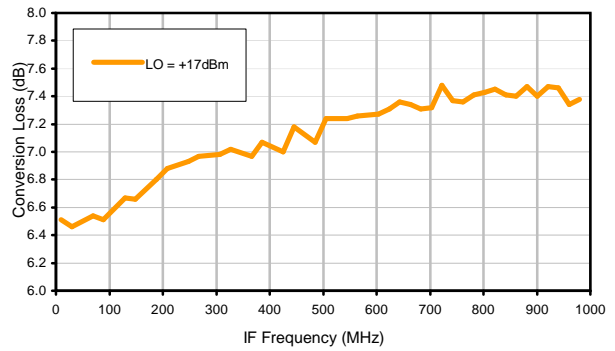
# SYM-20DHW+

## Typical Performance Curves

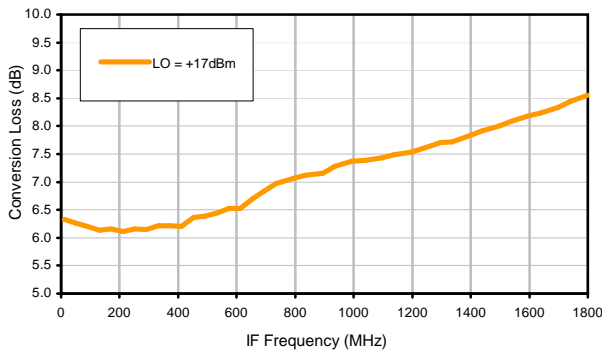
Conversion Loss @ IF=30MHz



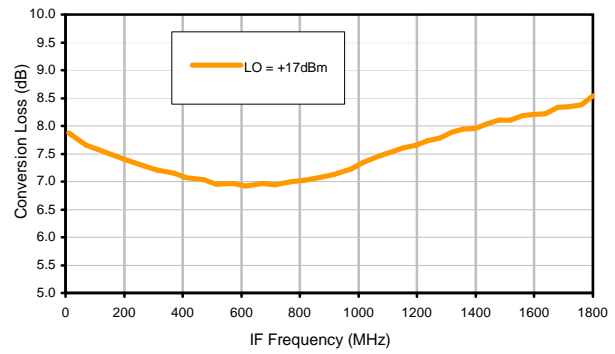
Conversion Loss vs. IF @ RF=1000.1MHz



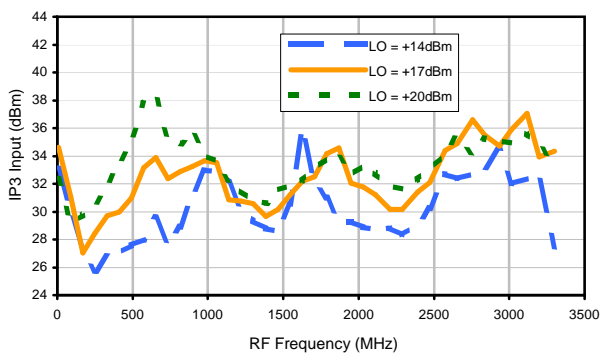
Conversion Loss vs. IF @ RF=10.1MHz



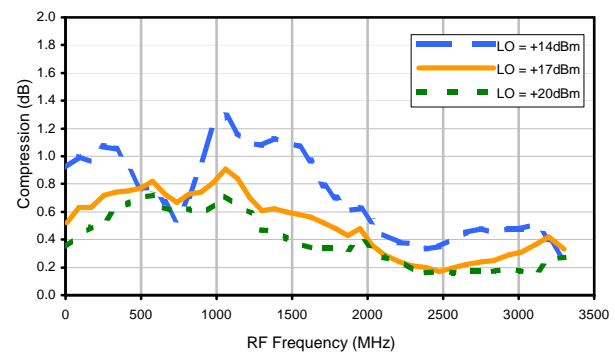
Conversion Loss vs. IF @ RF=2000.1MHz



IP3 Input

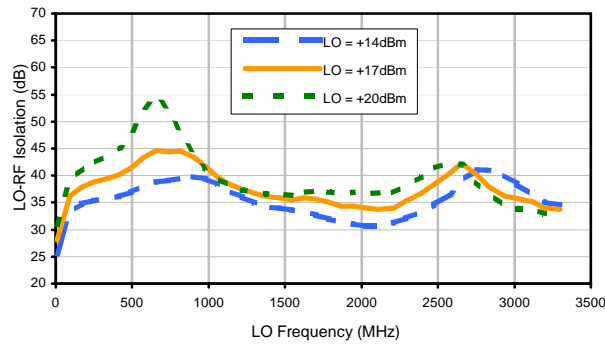


Compression @ RF IN=+14dBm

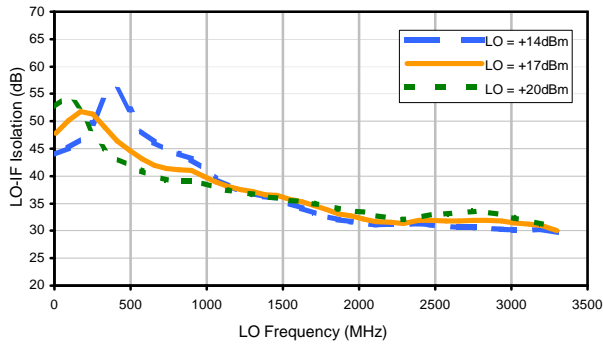


## Typical Performance Curves

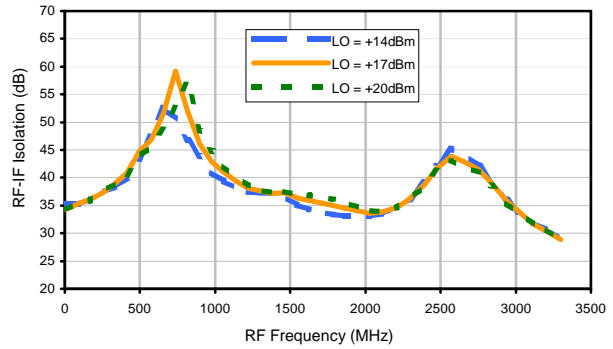
LO-RF Isolation



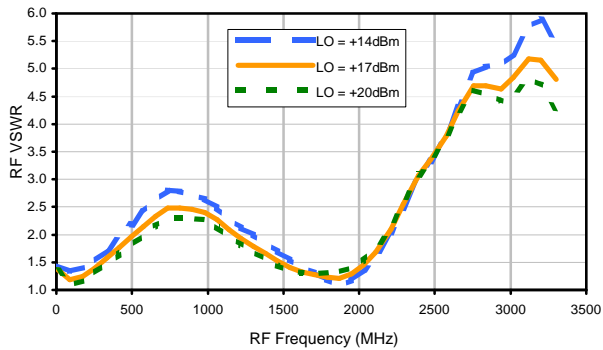
LO-IF Isolation



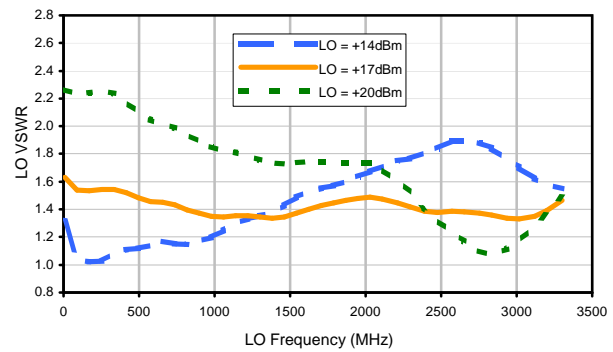
RF-IF Isolation



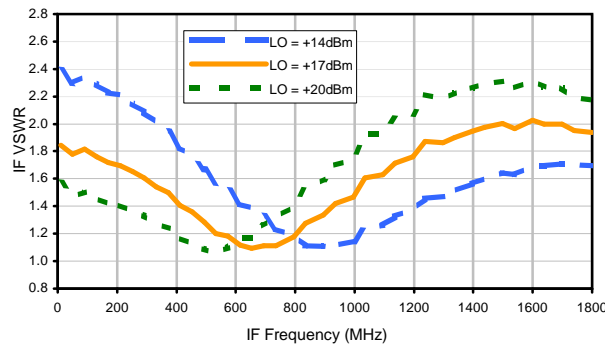
RF VSWR



LO VSWR



IF VSWR



## Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	13	20	21	28	28	32	28	31	33	59
1	-	37	+0	47	19	49	41	60	41	44	38	41
2	86	72	63	62	64	62	61	68	63	62	64	68
3	>100	80	64	82	62	82	66	82	67	81	66	75
4	>100	>92	>92	>92	>92	85	>92	>92	>92	>92	91	90
5	>100	>92	>92	>92	>92	>92	90	>92	>92	>92	>92	>92
6	>100	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92
7	>100	>92	>92	>92	>92	>92	>92	>92	91	>92	>92	>92
8	>100	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92
9	>100	>92	>92	>92	>92	>92	>92	>92	>92	>92	89	>92
10	>100	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

### LO HARMONICS ORDER

Test conditions: RF IN: 1000.1 MHz; -1.00 dBm.  
 LO IN: 1030.01 MHz; +17.00 dBm  
 IF OUT: 29.91 MHz; -7.91 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	23	30	32	39	40	46	42	45	47	58
1	-	37	+0	48	19	50	36	57	44	49	46	47
2	74	65	53	68	55	56	53	59	57	59	60	62
3	>100	61	42	62	40	62	47	63	48	68	51	64
4	>100	68	83	65	83	60	70	67	67	80	72	71
5	>100	91	63	75	62	75	57	74	62	76	65	83
6	>100	85	89	82	>102	79	>102	71	85	75	84	82
7	>100	97	88	97	81	88	77	85	70	83	73	84
8	95	>102	>102	95	100	92	>102	88	>102	80	98	84
9	>100	97	>102	>102	101	>102	97	>102	92	99	84	97
10	>100	>102	>102	>102	>102	>102	>102	>102	>102	100	102	90
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

### LO HARMONICS ORDER

Test conditions: RF IN: 1000.1 MHz; 9.00 dBm.  
 LO IN: 1030.01 MHz; +17.00 dBm  
 IF OUT: 29.91 MHz; 2.11 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.

