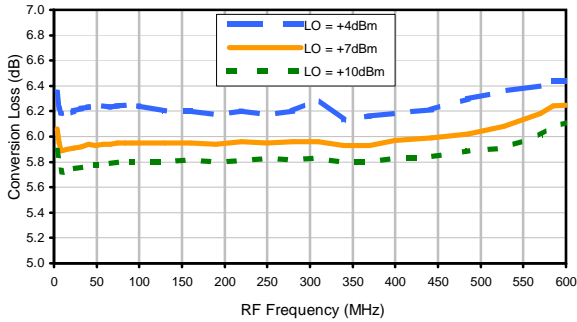


# Frequency Mixer

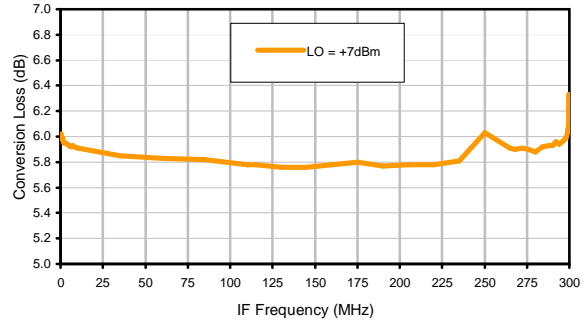
# TUF-R1SM+

## Typical Performance Curves

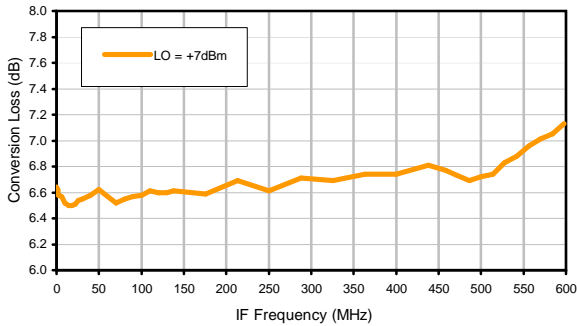
Conversion Loss @ IF=30 MHz



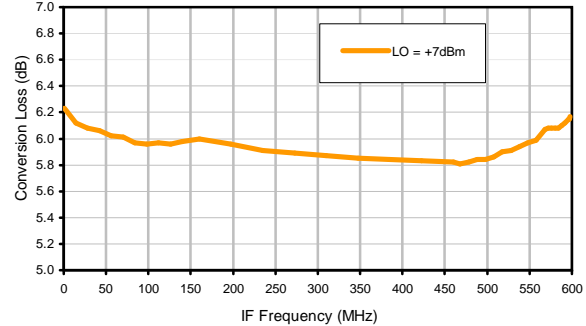
Conversion Loss vs. IF @ RF=300 MHz



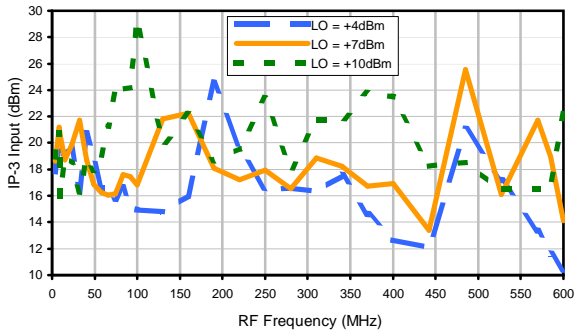
Conversion Loss vs. IF @ RF=2 MHz



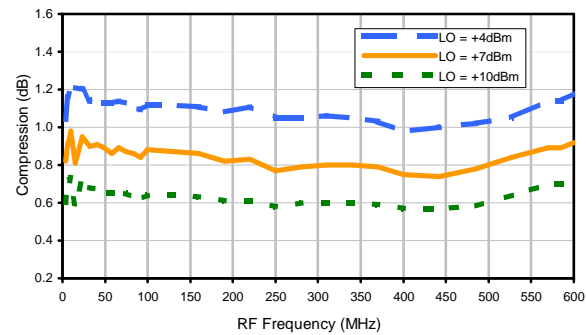
Conversion Loss @ vs. IF RF=600 MHz



IP3 Input

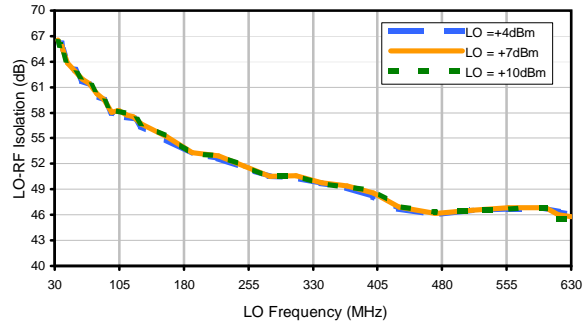


Compression @ RF IN = +1 dBm

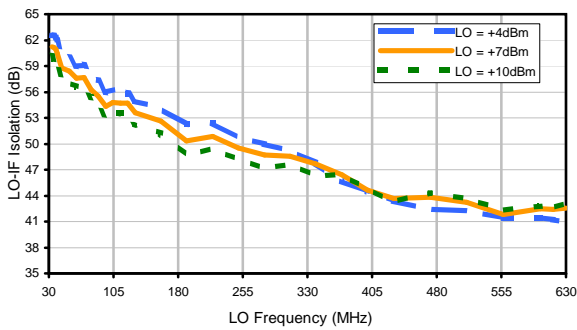


## Typical Performance Curves

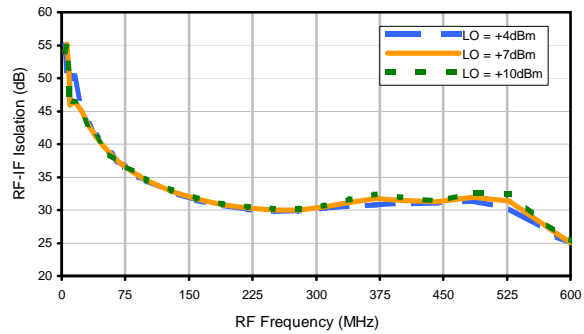
LO-RF Isolation



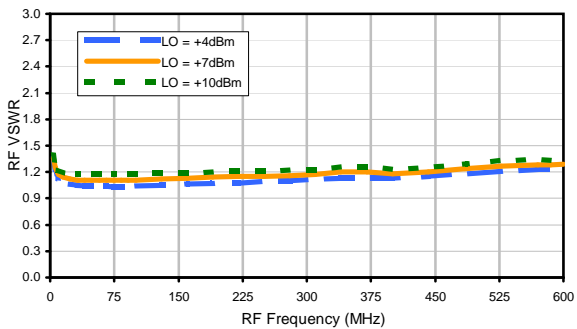
LO-IF Isolation



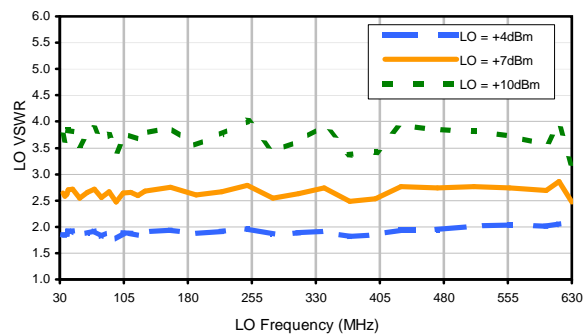
RF-IF Isolation



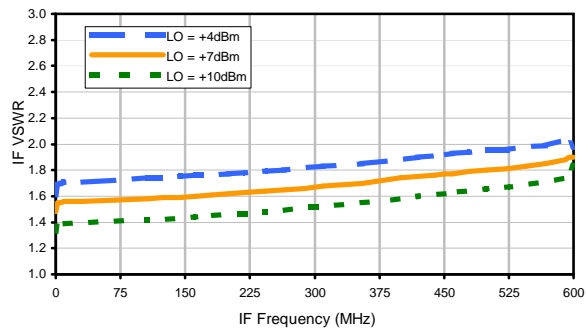
RF VSWR



LO VSWR



IF VSWR



## Harmonics Tables

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	21	32	26	47	24	39	27	47	33	46
1	-	24	+0	31	11	32	17	34	27	42	44	41
2	> 90	> 70	62	> 70	63	> 70	62	> 70	62	70	69	> 70
3	> 90	> 70	> 70	> 70	> 70	> 70	62	> 70	65	> 70	> 70	> 70
4	> 90	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70
5	> 90	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70
6	> 90	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70
7	> 90	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70	> 70
8	> 90	> 70	> 70	> 70	65	> 70	63	> 70	> 70	> 70	> 70	> 70
9	> 90	> 70	69	> 70	63	> 70	62	> 70	63	> 70	63	> 70
10	> 90	41	44	42	27	34	16	32	11	30	+0	23
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

### LO HARMONICS ORDER

Test conditions: RF IN: 300.00 MHz; -14.00 dBm.  
 LO IN: 330.00 MHz; +7.00 dBm  
 IF OUT: 30.00 MHz; -20.13 dBm

RF HARMONICS ORDER

	(-dBm)	(-dBc)										
0	-	-	31	42	38	53	36	55	40	58	50	62
1	-	24	+0	30	12	35	18	38	30	48	48	50
2	72	75	56	69	56	69	57	70	55	66	61	73
3	> 90	51	44	59	44	62	45	54	40	54	49	58
4	> 90	> 80	68	73	68	73	69	72	65	> 80	71	80
5	> 90	72	62	62	56	67	55	67	55	77	58	72
6	> 90	72	58	77	55	67	55	68	56	62	61	72
7	> 90	79	72	> 80	65	73	68	72	68	71	68	79
8	> 90	58	49	54	40	54	45	62	45	59	44	52
9	> 90	73	61	66	55	70	57	69	57	69	56	74
10	> 90	49	48	48	30	38	18	35	12	30	+0	24
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

### LO HARMONICS ORDER

Test conditions: RF IN: 300.00 MHz; -4.00 dBm.  
 LO IN: 330.00 MHz; +7.00 dBm  
 IF OUT: 30.00 MHz; -10.04 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.