




# Application Note


## HMJ2 Intermodulation Product Table

		LO Harmonics					
		0	1	2	3	4	5
RF Harmonics	0		0	9	9	8	14
	1	6	0	20	23	29	39
	2	63	71	55	70	69	62
	3	90	90	> 95	90	90	> 95
	4	> 95	> 95	> 95	> 95	> 95	> 95
	5	> 95	> 95	> 95	> 95	> 95	> 95

LO	RF	LO (MHz)	RF (MHz)	IM Products		
				Product	dBm	dBc
0	1	1630	1880	<b>1880</b>	16	6
0	2	1630	1880	<b>3760</b>	73	63
0	3	1630	1880	<b>5640</b>	100	90
0	4	1630	1880	<b>7520</b>		> 95
0	5	1630	1880	<b>9400</b>		> 95
1	0	1630	1880	<b>1630</b>	14	0
-1	1	1630	1880	<b>250</b>	10	0
-1	2	1630	1880	<b>2130</b>	81	71
-1	3	1630	1880	<b>4010</b>	100	90
-1	4	1630	1880	<b>5890</b>		> 95
-1	5	1630	1880	<b>7770</b>		> 95
2	0	1630	1880	<b>3260</b>	23	9
2	1	1630	1880	<b>5140</b>	30	20
-2	2	1630	1880	<b>500</b>	65	55
-2	3	1630	1880	<b>2380</b>		> 95
-2	4	1630	1880	<b>4260</b>		> 95
-2	5	1630	1880	<b>6140</b>		> 95
3	0	1630	1880	<b>4890</b>	23	9
3	-1	1630	1880	<b>3010</b>	33	23
3	-2	1630	1880	<b>1130</b>	80	70
-3	3	1630	1880	<b>750</b>	100	90
-3	4	1630	1880	<b>2630</b>		> 95
-3	5	1630	1880	<b>4510</b>		> 95
4	0	1630	1880	<b>6520</b>	22	8
4	-1	1630	1880	<b>4640</b>	39	29
4	-2	1630	1880	<b>2760</b>	79	69
4	-3	1630	1880	<b>880</b>	100	90
-4	4	1630	1880	<b>1000</b>		> 95
-4	5	1630	1880	<b>2880</b>		> 95
5	0	1630	1880	<b>8150</b>	28	14
5	-1	1630	1880	<b>6270</b>	49	39
5	-2	1630	1880	<b>4390</b>	72	62
5	-3	1630	1880	<b>2510</b>		> 95
5	-4	1630	1880	<b>630</b>		> 95
-5	5	1630	1880	<b>1250</b>		> 95
Noise Floor		105 dBm	95 dBc			

Test Conditions: RF input=0 dBm; LO=+17 dBm  
Bias = 3V @ 35 mA

 RF harmonics and intermodulation products are referenced to a desired signal produced by frequency (IF) = 250 MHz

 LO harmonics are referenced to the +17 dBm LO drive signal