MxrSpur Calculated Mixer Spur Performance vs Mixer Data for various mixers

All Mixer Data are in dBc for a 1x1 Output Level Nov. 26, 1998
(N LO and M RF)

N	M	MxrSpur	Mixer 1	Delta	MxrSpur	Mixer 2	Delta	MxrSpur	Mixer 3	Delta
0	1	25	25	0				25	31	6
0	2	56	69	13				56	64	8
0	3	41	51	10				41	53	12
0	4	70	80	10				70	70	0
0	5	56	72	16						
1	0	20	36	16				20	34	14
1	1	0	0	0	0	0	0	0	0	0
1	2	61	72	11				61	59	-2
1	3	42	49	7				42	42	0
1	4	70	79	9				70	64	-6
1	5	55	70	15						
2	0	30	45	15				30	52	22
2	1	32	39	7	32	28	-4	32	43	11
2	2	56	79	23	56	48	-8	56	67	11
2	3	42	53	11				42	55	13
2	4	70	82	12				70	70	0
2	5	71	60	-11						
3	0	55	52	-3				55	46	-9
3	1	9	13	4				9	15	6
3	2	60	67	7	60	49	-11	60	66	6
3	3	41	51	10	41	45	4	41	42	1
3	4	70	77	7				70	70	0
3	5	46	52	6						
4	0	50	63	13				50	50	0
4	1	38	45	7				38	66	28
4	2	56	75	19	56	58	2	56	58	2
4	3	42	55	13	42	59	17	42	58	16
4	4	70	82	12	70	64	-6	70	70	0
4	5	50	77	27						
5	0	37	45	8						
5	1	12	22	10						
5	2	55	66	11				55	66	11
5	3	38	48	10	38	43	5	38	66	28
5	4	65	76	11	65	74	9	65	68	3
5	5	38	46	8						
6	0	54	60	6						
6	1	38	54	16						
6	2	56	77	21						
6	3	42	54	12				42	66	24
6	4	65	77	12	65	68	3	65	70	5
6	5	56	75	19						

Note: Spurs shown in RED are WORSE than predicted by MxrSpur

Mixer Code	Mixer 1	Mixer 2	Mixer 3
Manufacturer	Watkins/Johnson	Hittite Microwave	MiniCircuits
Model Number	M1	HMC175MS8	SRA-1& -2, ZAD-1 & -2
LO Frequency	50 MHz	1800 MHz	55 MHz
RF Frequency	35 MHz	1700 to 3200 MHz	50 MHz
Output Frequency	DC to 300 MHz	DC to 5000 MHz	DC to 200 MHz
LO Drive in dBm	7 dBm	13 dBm	7 dBm
RF Drive in dBm	0 dBm	5 dBm	0 dBm

Mixer Spurious Performance vs MxrSpur Predictions

Note: Since all data collected on mixers was for a Delta Power of 7dB, the performance of each mixer can be compared against the prediction of "MxrSpur" on a scatter plot. The "X" axis is predicted values and the "Y" axis is measured values on each mixer tested. This presents a "visual" picture of the magnitude of errors to be expected from various mixers.

The plot shows (as expected), the larger "dBc" values have more possiblilty for errors.