

1. Testing Information

Equipment GPON Wireless Gateway
Brand Name SAGEMCOM
Model Name F@ST5670V2 Millcom
Applicant SAGEMCOM BROADBAND SAS
SAGEMCOM BROADBAND SAS
250 Route de l'Empereur –
92848 RUEIL MALMAISON
Manufacturer CEDEX - FRANCE
Test date 9/19/2022
Test by Gongjing Technology Co., Ltd.

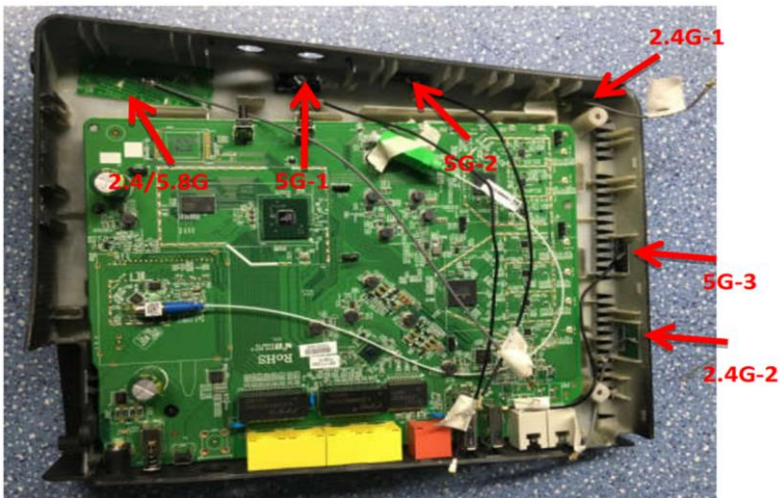
2. Testing Location

Gongjing Technology Co., Ltd.

3. Test Frequency

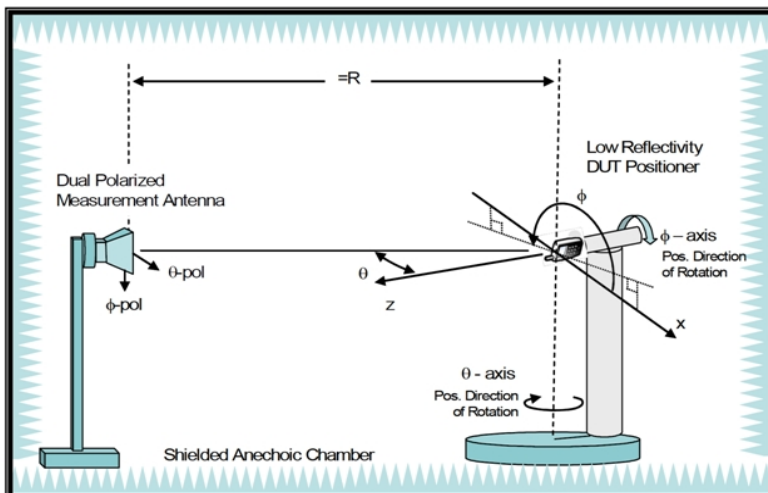
Band(MHz)	Test Frequency[MHz]
2412-2472	2,450
5150-5250	5,150
5250-5350	5350
5470-5725	5470, 5725
5725-5850	5,850

4. Antenna System

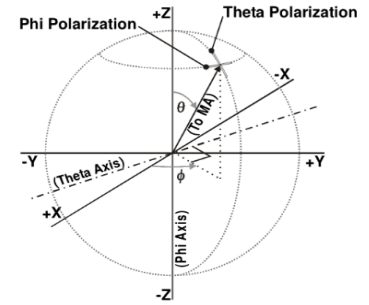
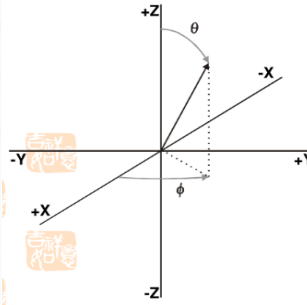
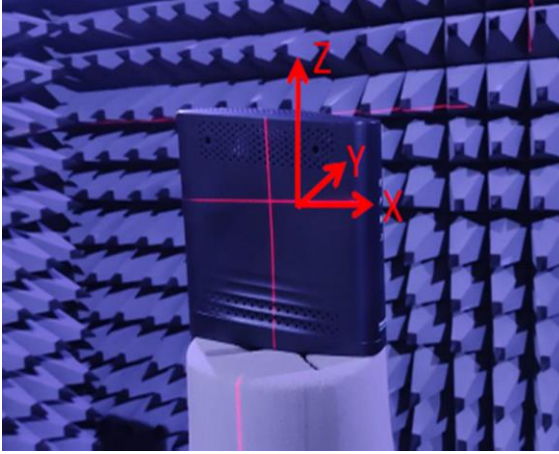


5. Test Configuration

'Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



6. Test Site



7. Test Method

EUT set on multi-axis positioner. Measurement antenna set at phi polarization and 1.5 meter height. Port 1 of Network analyzer connect to antenna 1 of EUT. Record S21 value every 15 degree from 0 to 345 degree on Phi angle and 0 to 180 on theta angle of multi-axis positioner. Then set measurement antenna to theta polarization and repeat process. Repeat process to each antenna of EUT.

7. Summary of Test Result

Calculate directional gain of 4TX antennas by same angle according to FCC KDB662911 D01 Multiple Transmitter Output v02r01
The maximum DG gain was selected and recorded in following table

Spatial Multiplexing DG calculations

If antenna gains are not equal & each transmit antenna is driven by only one spatial stream

$$DG = 10 \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

Band(MHz)	Test Frequency[MHz]	Ant.1	Ant.2	Ant.3		Directional Gain MIMO@same angle
2412-2472	2450	2.66	1.55	1.57		4.08
Band(MHz)	Test Frequency[MHz]	Ant.1	Ant.2	Ant.3	Ant.4	Directional Gain MIMO@same angle
5150-5250	5150	4.54	3.74	3.98	2.59	6.44
	5350	4.27	3.90	3.69	2.78	6.09
	5470	4.25	3.16	4.48	3.55	5.95
5470-5725	5725	2.91	3.20	2.51	2.89	4.50
	5850	3.00	3.28	5.12	3.23	6.66

(i) If transmit signals are correlated, then
 Directional gain = $10 \log[(10G_1 / 20 + 10G_2 / 20 + \dots + 10G_N / 20)^2 / NANT]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

2450MHz		Peak gain	2.656978	1.553396	1.568509	MAX DG gain	4.082344
XY	Phi	Angle	Ant1	Ant2	Ant3		DG gain
		0 Gain (XY)	-11.3441	-3.20634	-9.15238		-2.42008
		5	-12.7768	-1.99542	-11.4872		-2.55327
		10	-15.2509	-0.98361	-14.5068		-2.80584
		15	-19.4003	-0.12222	-17.5311		-3.00103
		20	-27.4513	0.58733	-19.8402		-3.08526
		25	-25.5225	1.101016	-21.5613		-2.68391
		30	-18.1267	1.382525	-23.9241		-2.0988
		35	-14.1279	1.383529	-30.4212		-1.85232
		40	-11.6691	1.054186	-27.5465		-1.6528
		45	-10.186	0.373045	-18.7633		-1.43248
		50	-9.45604	-0.64806	-14.6937		-1.54996
		55	-9.34043	-1.88924	-13.0587		-2.0491
		60	-9.71748	-3.04611	-13.3617		-2.86349
		65	-10.4502	-3.66952	-15.6519		-3.7818
		70	-11.3595	-3.58966	-20.5981		-4.55474
		75	-12.2299	-3.13816	-28.84		-4.96851
		80	-12.8616	-2.73667	-22.4277		-4.49071
		85	-13.1939	-2.61799	-16.0222		-3.81178
		90	-13.336	-2.87241	-11.7571		-3.24487
		95	-13.4982	-3.51705	-9.0608		-2.96771
		100	-13.8889	-4.53128	-7.79675		-3.16483
		105	-14.6478	-5.83412	-7.91751		-3.95961
		110	-15.8218	-7.22064	-9.4574		-5.36551
		115	-17.3765	-8.34296	-12.5919		-7.23996
		120	-19.1873	-8.89399	-18.026		-9.28826
		125	-21.0176	-8.92442	-24.5613		-10.6881
		130	-22.5771	-8.7521	-15.8109		-9.1881
		135	-23.6602	-8.63861	-9.70413		-7.1243
		140	-24.0986	-8.70799	-5.92632		-5.35698
		145	-23.4096	-8.97722	-3.66928		-4.11301
		150	-21.2295	-9.4023	-2.59045		-3.42473
		155	-18.3426	-9.85376	-2.47243		-3.22459
		160	-15.6885	-10.1162	-3.10581		-3.36548
		165	-13.6451	-9.9484	-4.25627		-3.644
		170	-12.2799	-9.27648	-5.7121		-3.90398
		175	-11.5721	-8.25294	-7.38621		-4.12035
		180	-11.4697	-7.12072	-9.27864		-4.33805
		185	-11.9057	-6.05019	-11.3409		-4.57181
		190	-12.7709	-5.11119	-13.7208		-4.84896
		195	-13.9112	-4.29895	-17.0457		-5.20122
		200	-15.1308	-3.57266	-17.7096		-5.05264
		205	-16.301	-2.89292	-12.3345		-3.8529
		210	-17.4817	-2.24886	-8.30001		-2.55863
		215	-19.0238	-1.65829	-6.0546		-1.62726
		220	-21.5496	-1.1526	-5.12156		-1.16918
		225	-26.4133	-0.75388	-5.11686		-1.1373
		230	-32.3913	-0.46099	-5.66505		-1.28877
		235	-23.9516	-0.26036	-6.48029		-1.20235
		240	-18.8335	-0.13466	-7.61841		-1.1631

245	-15.8942	-0.07681	-9.54739	-1.33803
250	-14.1433	-0.10245	-13.0281	-1.8011
255	-13.1394	-0.25377	-19.4269	-2.50348
260	-12.5892	-0.59313	-26.0479	-3.05434
265	-12.2507	-1.19411	-21.0097	-3.15418
270	-11.9823	-2.12646	-19.5439	-3.63356
275	-11.7438	-3.44782	-19.9537	-4.50086
280	-11.6087	-5.1601	-19.817	-5.52417
285	-11.6902	-7.13405	-19.2379	-6.60878
290	-12.104	-8.92247	-19.8785	-7.77541
295	-12.9739	-9.80085	-22.3895	-8.86673
300	-14.4347	-9.56467	-26.2957	-9.64292
305	-16.6209	-8.81991	-30.0855	-10.1054
310	-19.4643	-8.15367	-30.3065	-10.3183
315	-21.7491	-7.87872	-22.0864	-9.7439
320	-21.2821	-8.19097	-16.3789	-8.81962
325	-19.2184	-9.25662	-12.9408	-8.12995
330	-17.062	-11.1397	-10.8627	-7.82075
335	-15.0056	-13.0622	-9.48828	-7.44069
340	-13.1574	-12.3351	-8.40141	-6.26846
345	-11.7326	-9.4318	-7.57828	-4.64565
350	-10.8971	-6.75587	-7.27685	-3.35359
355	-10.7481	-4.73345	-7.7533	-2.6299

Peak DG -1.137304561

Theta	Frequency Angle	Ant1	Ant2	Ant3	
	0 Gain (XY)	-10.9399	-5.48377	1.190764	1.085451
	5	-9.31243	-5.15893	1.187327	1.425234
	10	-7.69526	-4.87289	1.211514	1.8071
	15	-6.30299	-4.72395	1.254091	2.15519
	20	-5.18321	-4.8263	1.327834	2.423527
	25	-4.31653	-5.32733	1.409037	2.561137
	30	-3.66522	-6.36572	1.486632	2.549578
	35	-3.18327	-7.97672	1.545334	2.414347
	40	-2.813	-9.75319	1.568509	2.259334
	45	-2.49308	-10.3988	1.543794	2.260998
	50	-2.15805	-9.33024	1.467183	2.484474
	55	-1.75717	-7.82989	1.339419	2.79515
	60	-1.27031	-6.70274	1.162827	3.080713
	65	-0.71319	-6.04927	0.948078	3.307849
	70	-0.12478	-5.79578	0.710967	3.475121
	75	0.449442	-5.91299	0.471703	3.57871
	80	0.973584	-6.44142	0.252207	3.609475
	85	1.42556	-7.4451	0.059476	3.560271
	90	1.796872	-8.8853	-0.1153	3.448274
	95	2.084695	-10.4177	-0.30255	3.320022
	100	2.300239	-11.2793	-0.54477	3.240693
	105	2.456019	-11.0623	-0.88632	3.220891
	110	2.555528	-10.3172	-1.36739	3.192101
	115	2.609306	-9.6181	-2.00624	3.098918
	120	2.63583	-9.16391	-2.7838	2.93558
	125	2.627231	-9.04535	-3.62334	2.705724
	130	2.594563	-9.38402	-4.3704	2.433852
	135	2.531683	-10.3584	-4.82439	2.138871
	140	2.438685	-12.1947	-4.84437	1.846269
	145	2.308925	-15.2642	-4.45468	1.572436
	150	2.140811	-20.596	-3.80297	1.328512
	155	1.932491	-35.614	-3.03763	1.120903

160	1.687564	-24.9328	-2.25904	1.43035
165	1.414641	-18.242	-1.52878	1.828634
170	1.128834	-14.9249	-0.88585	2.160532
175	0.853366	-13.1046	-0.36287	2.400848
180	0.613263	-12.3658	0.017142	2.523415
185	0.43259	-12.5634	0.239012	2.51747
190	0.32423	-13.6146	0.300476	2.394384
195	0.284097	-15.4357	0.207182	2.1813
200	0.292254	-18.0993	-0.02421	1.901347
205	0.309881	-22.3687	-0.37521	1.548925
210	0.294208	-27.9402	-0.83358	1.175371
215	0.225495	-20.8015	-1.38562	1.118263
220	0.059426	-15.1604	-2.00798	1.140298
225	-0.20893	-11.9238	-2.63595	1.108777
230	-0.59527	-10.1892	-3.15151	0.979816
235	-1.09558	-9.58329	-3.4162	0.74924
240	-1.70349	-9.91716	-3.36869	0.42876
245	-2.40817	-11.0796	-3.07643	0.034157
250	-3.20203	-13.0921	-2.68642	-0.43654
255	-4.08528	-16.4321	-2.33065	-1.01939
260	-5.07534	-23.6672	-2.0932	-1.79364
265	-6.21292	-27.5133	-2.01143	-2.33057
270	-7.56701	-16.1433	-2.07587	-2.08913
275	-9.24804	-11.4106	-2.22564	-1.92588
280	-11.4249	-8.86104	-2.34261	-1.89516
285	-14.3168	-7.6434	-2.28427	-1.99933
290	-17.8258	-7.43697	-1.96439	-2.15937
295	-19.2126	-8.08274	-1.41198	-2.14021
300	-16.4427	-9.4917	-0.74282	-1.82428
305	-13.4564	-11.7215	-0.07858	-1.46764
310	-11.3391	-15.3023	0.491845	-1.2433
315	-9.9643	-22.984	0.931318	-1.23992
320	-9.175	-27.2006	1.221863	-1.00709
325	-8.86604	-15.6258	1.375835	-0.17539
330	-8.98402	-11.0227	1.431039	0.409546
335	-9.48776	-8.49594	1.409471	0.747125
340	-10.3186	-7.09675	1.356328	0.874798
345	-11.3315	-6.38549	1.294775	0.856115
350	-12.1174	-6.03209	1.245866	0.8102
355	-12.0492	-5.77708	1.211607	0.866157

Peak DG 3.609474878

2450MHz

XZ	Phi	Angle	Ant1	Ant2	Ant3	DG gain
		0 Gain (XZ)	-13.605	-12.8341	-20.5181	-10.2659
		5	-14.7804	-11.7948	-18.1802	-9.76284
		10	-16.2621	-10.3728	-17.2056	-9.2857
		15	-17.1451	-8.96701	-17.4287	-8.79092
		20	-16.4713	-8.50729	-18.7155	-8.62622
		25	-15.1072	-9.16714	-20.7993	-8.99505
		30	-14.1562	-10.422	-23.2711	-9.71765
		35	-13.7869	-11.2933	-26.1257	-10.3456
		40	-13.6041	-10.9875	-28.5662	-10.3124
		45	-13.1435	-9.56756	-25.118	-9.09243
		50	-12.2448	-7.94314	-20.2147	-7.35743
		55	-11.0957	-6.88162	-16.675	-5.89934
		60	-10.0529	-6.57442	-14.1456	-4.94995
		65	-9.44228	-6.87611	-12.3015	-4.4899

70	-9.42565	-7.44883	-10.9904	-4.39567
75	-9.91871	-7.80153	-10.1448	-4.45138
80	-10.6213	-7.66496	-9.68969	-4.46494
85	-11.1847	-7.31469	-9.47322	-4.40805
90	-11.4697	-7.12072	-9.27864	-4.33805
95	-11.6595	-7.07746	-8.91349	-4.24616
100	-12.1083	-6.90926	-8.32728	-4.07995
105	-13.1129	-6.43954	-7.60732	-3.83386
110	-14.7962	-5.82385	-6.91368	-3.59776
115	-17.2152	-5.40494	-6.40868	-3.53707
120	-20.3891	-5.41561	-6.21879	-3.78369
125	-20.2212	-5.82556	-6.42336	-4.05314
130	-15.3975	-6.38857	-7.04073	-3.99302
135	-11.8953	-6.91248	-8.04337	-3.93099
140	-10.0866	-7.34323	-9.35384	-4.07769
145	-9.48443	-7.51141	-10.8905	-4.41282
150	-9.59239	-7.30682	-12.655	-4.80999
155	-10.0601	-7.0526	-14.7901	-5.30671
160	-10.7084	-7.10309	-17.1523	-5.96413
165	-11.1486	-7.49112	-18.185	-6.4693
170	-10.7577	-8.19048	-16.8468	-6.46268
175	-9.83534	-9.35188	-15.2289	-6.32491
180	-9.19277	-10.6358	-14.4699	-6.39017
185	-9.0264	-10.2693	-14.6407	-6.22743
190	-9.04079	-8.35962	-15.6487	-5.68498
195	-9.00605	-7.02322	-17.4847	-5.36758
200	-9.00601	-7.0013	-20.3841	-5.71673
205	-9.06676	-8.30047	-24.6182	-6.75919
210	-8.99243	-10.3747	-26.1032	-7.77636
215	-8.65773	-11.5414	-21.8059	-7.68377
220	-8.19936	-11.0213	-18.3116	-6.80024
225	-7.77951	-10.2396	-15.9687	-5.93078
230	-7.44481	-9.63697	-14.2474	-5.23475
235	-7.17842	-8.85671	-12.7966	-4.53563
240	-6.96132	-7.8079	-11.4776	-3.7679
245	-6.85949	-6.73719	-10.2854	-3.04131
250	-7.0171	-5.83649	-9.2966	-2.49623
255	-7.57202	-5.13356	-8.62213	-2.21251
260	-8.55012	-4.52874	-8.36428	-2.17016
265	-9.8547	-3.89246	-8.56259	-2.27123
270	-11.3441	-3.20634	-9.15238	-2.42008
275	-13.0056	-2.5807	-9.94167	-2.59284
280	-15.1529	-2.13525	-10.6342	-2.82787
285	-18.3471	-1.91017	-10.9792	-3.14383
290	-21.1692	-1.87064	-10.9683	-3.35921
295	-17.498	-1.95364	-10.8424	-3.05141
300	-12.9813	-2.14052	-10.9167	-2.55613
305	-9.83357	-2.4965	-11.4097	-2.22007
310	-7.72512	-3.08599	-12.4048	-2.15405
315	-6.46637	-3.85583	-13.8566	-2.36401
320	-6.01102	-4.60295	-15.5859	-2.7954
325	-6.33218	-5.11661	-17.2793	-3.37779
330	-7.34557	-5.41737	-18.6608	-4.08755
335	-8.81776	-5.88099	-19.9168	-5.02325
340	-10.3488	-7.08347	-21.6847	-6.40473
345	-11.533	-9.51394	-24.6008	-8.4018
350	-12.2795	-12.8145	-27.2578	-10.53
355	-12.8518	-13.9422	-24.3488	-10.9816

Peak DG -2.154049201

Theta	Frequency Angle	Ant1	Ant2	Ant3	
	0 Gain (XZ)	-16.1067	-4.80791	-11.7372	-4.8552
	5	-9.59672	-4.44484	-15.8478	-4.00673
	10	-5.79583	-3.33568	-17.4856	-2.30863
	15	-3.89907	-1.31137	-18.3354	-0.58454
	20	-3.21819	-0.4073	-21.3586	-0.00982
	25	-3.09371	-1.16587	-25.5519	-0.54072
	30	-2.77006	-3.19393	-26.3934	-1.44171
	35	-1.83029	-5.29395	-17.7985	-1.35146
	40	-0.50602	-5.82157	-10.2013	0.158661
	45	0.758911	-4.89742	-5.32488	2.085221
	50	1.664449	-4.28838	-2.2605	3.502928
	55	2.116465	-5.27098	-0.44301	4.082344
	60	2.171295	-8.57383	0.502321	3.907998
	65	1.983704	-14.5539	0.860138	3.352307
	70	1.719975	-17.3248	0.880689	3.053724
	75	1.446462	-14.833	0.771412	3.031075
	80	1.183958	-13.0405	0.644333	2.997443
	85	0.912875	-12.2963	0.459851	2.861748
	90	0.613263	-12.3658	0.017142	2.523415
	95	0.273367	-11.2989	-0.88431	2.106719
	100	-0.08258	-9.58558	-2.2794	1.637538
	105	-0.42117	-9.16014	-3.8094	1.011446
	110	-0.76352	-10.1938	-4.70244	0.368131
	115	-1.19811	-11.5806	-4.93805	-0.15644
	120	-1.83213	-11.595	-5.66355	-0.72151
	125	-2.73577	-10.0208	-8.09949	-1.61085
	130	-3.92403	-8.38775	-14.1682	-3.09453
	135	-5.3476	-7.95202	-24.3972	-4.76367
	140	-6.94453	-9.14999	-13.9403	-4.77827
	145	-8.7352	-11.5062	-11.4669	-5.69825
	150	-10.9321	-12.7208	-12.3887	-7.20733
	155	-13.9369	-11.833	-15.8745	-8.95368
	160	-18.1312	-10.7325	-18.567	-10.2433
	165	-21.5793	-10.294	-13.9082	-9.3435
	170	-19.7181	-11.1358	-9.76121	-7.7975
	175	-17.2737	-13.4942	-7.48259	-7.0312
	180	-15.8004	-14.2212	-6.73413	-6.52411
	185	-14.6493	-11.4306	-7.10672	-5.73872
	190	-13.2498	-9.68858	-7.81233	-5.19757
	195	-11.6171	-9.78673	-7.77392	-4.81297
	200	-10.3322	-11.1921	-6.70115	-4.41089
	205	-10.0172	-12.5998	-5.11268	-3.90301
	210	-11.1905	-12.8862	-3.56504	-3.43794
	215	-14.5762	-12.8325	-2.44123	-3.40797
	220	-22.4436	-13.2838	-1.81876	-3.91789
	225	-32.8192	-14.1739	-1.48295	-4.253
	230	-20.2758	-13.6789	-1.11593	-3.30894
	235	-15.0269	-10.85	-0.56363	-1.84124
	240	-10.8878	-8.31268	0.112241	-0.2519
	245	-8.1091	-7.10948	0.765854	0.92373
	250	-6.77017	-7.06673	1.256748	1.496028
	255	-6.7456	-7.57238	1.4813	1.523416
	260	-7.87417	-7.63698	1.466396	1.262093
	265	-9.77672	-6.70368	1.314821	1.029832

270	-10.9399	-5.48377	1.190764	1.085451
275	-9.59852	-4.82538	1.14874	1.448371
280	-7.36706	-4.9048	1.157902	1.83439
285	-5.69458	-5.33726	1.064783	2.039522
290	-4.74317	-5.4295	0.73591	2.088469
295	-4.35247	-4.77342	0.148418	2.078439
300	-4.34024	-3.79585	-0.53274	2.050318
305	-4.60439	-3.29517	-0.98098	1.942129
310	-5.16703	-3.64152	-0.95237	1.695172
315	-6.17095	-4.44202	-0.51345	1.394402
320	-7.79414	-4.52642	0.01102	1.261442
325	-10.1503	-3.02483	0.283706	1.463562
330	-13.1809	-0.66311	0.089954	1.90243
335	-16.3305	1.151545	-0.63471	2.170982
340	-17.5377	1.553396	-1.83722	1.828778
345	-16.3681	0.11106	-3.4183	0.522509
350	-16.2717	-3.14127	-5.3974	-1.92764
355	-18.9168	-5.48159	-8.04851	-4.42068

Peak DG 4.082343794

2450MHz

YZ	Phi	Angle	Ant1	Ant2	Ant3	DG gain
		0 Gain (YZ)	-16.1067	-4.80791	-11.7372	-4.8552
		5	-16.1892	-3.7447	-12.0951	-4.32012
		10	-15.5658	-2.39908	-12.1092	-3.38286
		15	-14.1048	-0.84344	-11.9203	-2.11259
		20	-12.3401	0.260776	-11.7066	-1.06694
		25	-10.8566	0.606299	-11.4755	-0.55067
		30	-9.93722	0.450544	-11.2257	-0.44066
		35	-9.6219	0.286408	-11.2195	-0.48162
		40	-9.85125	0.444672	-11.7921	-0.51952
		45	-10.5213	0.840616	-13.0668	-0.57244
		50	-11.5499	1.156088	-14.7302	-0.74136
		55	-12.9785	1.172993	-16.1218	-1.10412
		60	-15.0591	0.938676	-16.894	-1.64184
		65	-18.4281	0.668779	-17.4046	-2.26353
		70	-24.7382	0.486085	-18.347	-2.9275
		75	-27.3287	0.272033	-20.8231	-3.43886
		80	-19.299	-0.20522	-27.465	-3.72969
		85	-14.8467	-1.06795	-28.2358	-3.91147
		90	-11.9823	-2.12646	-19.5439	-3.63356
		95	-9.9779	-2.90275	-15.4082	-3.16869
		100	-8.60914	-3.167	-12.867	-2.53968
		105	-7.78821	-3.32659	-10.9609	-2.01866
		110	-7.44992	-3.97686	-9.34345	-1.86211
		115	-7.48557	-5.49027	-7.97315	-2.14386
		120	-7.79337	-7.57915	-6.9624	-2.66657
		125	-8.33036	-8.96757	-6.45081	-3.07805
		130	-9.14095	-9.62916	-6.4955	-3.53824
		135	-10.2948	-11.0936	-6.97797	-4.49498
		140	-11.8227	-13.3682	-7.56278	-5.78721
		145	-13.6911	-14.8782	-7.80189	-6.77063
		150	-15.8577	-14.7248	-7.49497	-7.07985
		155	-18.2388	-12.7204	-6.85472	-6.62415
		160	-20.2148	-11.3634	-6.25099	-6.13434
		165	-20.0704	-12.9316	-5.94447	-6.39764
		170	-18.1098	-19.6418	-6.01056	-7.51548
		175	-16.4075	-18.4102	-6.34793	-7.23741

180	-15.8004	-14.2212	-6.73413	-6.52411
185	-16.5161	-16.1546	-6.95773	-7.22491
190	-18.8083	-23.8199	-6.97796	-8.82667
195	-22.977	-16.3081	-6.94737	-8.20644
200	-25.9698	-13.1284	-7.0691	-7.69695
205	-22.6585	-13.6423	-7.44666	-7.79706
210	-19.6534	-15.9155	-7.99435	-8.34781
215	-17.6162	-17.4272	-8.29331	-8.58053
220	-15.8474	-14.9875	-8.37691	-7.61751
225	-14.2348	-10.9938	-7.78221	-5.83766
230	-13.0286	-8.36418	-7.03259	-4.3482
235	-12.3766	-7.0817	-6.56219	-3.53607
240	-12.2159	-6.34828	-6.60258	-3.23036
245	-12.322	-5.46207	-7.25007	-3.12081
250	-12.4437	-4.44271	-8.5529	-3.10231
255	-12.4798	-3.64708	-10.4263	-3.21737
260	-12.5448	-3.2439	-12.1832	-3.40596
265	-12.8065	-3.09881	-12.5107	-3.43949
270	-13.336	-2.87241	-11.7571	-3.24487
275	-14.0515	-2.40877	-11.2558	-2.97439
280	-14.7122	-1.91072	-11.4787	-2.81162
285	-14.9742	-1.57907	-12.4592	-2.83037
290	-14.636	-1.41076	-14.2322	-2.97462
295	-13.8195	-1.19753	-16.7847	-3.04597
300	-12.8817	-0.67731	-19.6034	-2.78729
305	-12.1513	0.022819	-21.9783	-2.29997
310	-11.7958	0.475133	-25.21	-2.04771
315	-11.8337	0.431064	-31.7764	-2.27657
320	-12.1717	-0.05476	-28.8208	-2.65278
325	-12.6673	-0.6579	-23.4593	-2.99562
330	-13.1986	-0.72254	-19.7016	-2.88537
335	-13.7295	-0.05012	-16.087	-2.11966
340	-14.2527	0.388138	-13.2528	-1.50229
345	-14.7827	-0.3359	-11.6111	-1.80478
350	-15.288	-2.44166	-11.045	-3.13449
355	-15.7433	-4.7103	-11.2386	-4.60893

Peak DG -0.440658641

Theta	Frequency Angle	Ant1	Ant2	Ant3	
	0 Gain (YZ)	-13.605	-12.8341	-20.5181	-10.2659
	5	-13.1601	-16.6754	-12.0863	-8.99202
	10	-11.0014	-20.1858	-8.17525	-7.04329
	15	-10.2024	-15.6075	-5.82511	-4.89243
	20	-10.8663	-11.7775	-4.25559	-3.50771
	25	-12.6227	-10.395	-3.18546	-2.98038
	30	-14.6799	-10.6623	-2.53048	-3.01003
	35	-15.4403	-11.7803	-2.21344	-3.17522
	40	-14.1061	-12.7468	-2.05873	-3.06844
	45	-11.9932	-12.6742	-1.80692	-2.51913
	50	-10.1527	-11.5232	-1.28913	-1.61513
	55	-8.76442	-9.97672	-0.60047	-0.60857
	60	-7.68212	-8.65291	-0.01002	0.242421
	65	-6.77251	-7.92476	0.250934	0.755353
	70	-6.05567	-8.02548	0.085508	0.825864
	75	-5.63451	-9.1256	-0.45241	0.438295
	80	-5.62497	-11.2355	-1.16133	-0.30416
	85	-6.18616	-13.9423	-1.75701	-1.20157

90	-7.56701	-16.1433	-2.07587	-2.08913
95	-10.0095	-16.5899	-2.26851	-2.9441
100	-12.8677	-15.6744	-2.6814	-3.73853
105	-12.5852	-15.5895	-3.63586	-4.27367
110	-9.87721	-18.2893	-5.32884	-4.91176
115	-7.74501	-25.5397	-7.83363	-5.99461
120	-6.39822	-22.1347	-10.9395	-6.27789
125	-5.6054	-19.1077	-13.2194	-6.14624
130	-5.26278	-18.2828	-12.4161	-5.62021
135	-5.3332	-14.6901	-10.4609	-4.55375
140	-5.72585	-12.0463	-9.35696	-3.88326
145	-6.26474	-12.1937	-9.47628	-4.20246
150	-6.762	-14.1275	-10.8119	-5.27434
155	-7.11505	-12.6137	-13.3058	-5.77378
160	-7.36498	-9.94197	-16.9963	-5.8033
165	-7.66699	-9.59327	-22.0342	-6.45082
170	-8.13286	-11.3715	-23.4679	-7.51448
175	-8.70797	-12.6177	-18.4246	-7.61519
180	-9.19277	-10.6358	-14.4699	-6.39017
185	-9.45743	-8.46788	-11.5592	-4.9635
190	-9.5888	-6.98983	-9.17498	-3.73657
195	-9.79437	-5.89106	-7.15127	-2.69317
200	-10.1377	-5.00476	-5.53538	-1.83617
205	-10.2	-4.25395	-4.408	-1.11259
210	-9.27494	-3.72187	-3.79576	-0.4679
215	-7.57092	-3.66904	-3.63257	-0.0005
220	-5.91564	-4.32666	-3.74305	0.157032
225	-4.67526	-5.76934	-3.82245	0.051876
230	-3.8116	-7.85069	-3.50923	-0.0736
235	-3.13631	-9.83152	-2.68524	0.106482
240	-2.45533	-9.9459	-1.64258	0.802308
245	-1.6546	-8.16446	-0.75713	1.811517
250	-0.76199	-6.43022	-0.21588	2.718
255	0.101862	-5.62981	-0.01091	3.303379
260	0.827621	-5.91747	-0.01932	3.540677
265	1.383809	-7.17172	-0.08862	3.529917
270	1.796872	-8.8853	-0.1153	3.448274
275	2.110071	-9.96031	-0.10497	3.463349
280	2.356108	-9.78027	-0.16162	3.586544
285	2.546076	-9.29218	-0.40886	3.653329
290	2.656978	-9.63826	-0.90725	3.489199
295	2.656321	-11.4512	-1.62052	3.030206
300	2.50062	-14.5075	-2.4358	2.377104
305	2.165858	-15.443	-3.21239	1.849336
310	1.617986	-13.2784	-3.8577	1.518544
315	0.822646	-11.3326	-4.42554	1.124197
320	-0.2273	-9.85198	-5.11172	0.576858
325	-1.45997	-8.40879	-6.08232	-0.05284
330	-2.69351	-6.72854	-7.28751	-0.54679
335	-3.71899	-5.10582	-8.46686	-0.77331
340	-4.56007	-4.22274	-9.58275	-1.03022
345	-5.59119	-4.55963	-11.2212	-1.90043
350	-7.35011	-6.30963	-14.66	-3.96234
355	-10.285	-9.31267	-24.6367	-7.78377

Peak DG 3.653329439

(i) If transmit signals are correlated, then

Directional gain = $10 \log[(10G_1 / 20 + 10G_2 / 20 + \dots + 10G_N / 20)^2 / NANT]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

eg		Theta	0	Gain phi(XY)	4.54324	3.739009	3.975636	2.591034				
5150MHz			Directional gain = $10 \log[(10G_1 / 20 + 10G_2 / 20 + \dots + 10G_N / 20)^2 / NANT]$ dBi									
XY		Angle	Peak gain	4.54324	3.739009	3.975636	2.591034	MAX DG gain	6.437497			
	Phi		Ant1	Ant2	Ant3	Ant4	DG gain					
		0	Gain phi(XY)	-4.40333	-7.49335	-6.77226	-15.5218	-1.66903				
		5		-2.07008	-8.94843	-7.19796	-17.413	-1.32932				
		10		-1.12731	-10.2358	-7.95179	-20.3977	-1.50466				
		15		-1.19536	-11.0782	-9.21013	-22.367	-2.08481				
		20		-1.66309	-11.3986	-10.2338	-18.4864	-2.37341				
		25		-2.1928	-11.3072	-9.60329	-14.1171	-2.06508				
		30		-2.7957	-11.0242	-7.93226	-10.8647	-1.44573				
		35		-3.55975	-10.8261	-6.60776	-8.35478	-0.91133				
		40		-4.43276	-10.9426	-5.95493	-6.29232	-0.57266				
		45		-4.94108	-11.5017	-5.73742	-4.53808	-0.25644				
		50		-4.54595	-12.4901	-5.52061	-3.04955	0.271367				
		55		-3.66342	-13.7036	-4.92379	-1.8169	0.987802				
		60		-2.91362	-14.8199	-3.90207	-0.82939	1.740059				
		65		-2.36398	-15.7447	-2.70334	-0.06818	2.443242				
		70		-1.90863	-16.8476	-1.60468	0.49699	3.035622				
		75		-1.64566	-18.7025	-0.79468	0.901443	3.421191				
		80		-1.79469	-21.5039	-0.35648	1.183623	3.531115				
		85		-2.42699	-23.2131	-0.27942	1.385771	3.424637				
		90		-3.17329	-21.1593	-0.46636	1.552759	3.301725				
		95		-3.31833	-18.8969	-0.75097	1.721763	3.323928				
		100		-2.73063	-17.996	-0.94901	1.925866	3.524487				
		105		-1.76868	-18.5577	-0.94349	2.148988	3.839088				
		110		-0.54873	-20.7464	-0.75772	2.361249	4.24214				
		115		0.630696	-25.218	-0.54443	2.493087	4.613724				

120	1.237169	-34.7523	-0.50385	2.486346	4.726824
125	0.946916	-38.0137	-0.80308	2.315596	4.467186
130	-0.23756	-31.719	-1.55135	1.997225	3.789594
135	-1.77107	-28.4207	-2.80492	1.580237	2.851005
140	-2.5238	-23.223	-4.58266	1.140046	2.100383
145	-2.39618	-18.5297	-6.80634	0.708798	1.652607
150	-2.69002	-15.1474	-8.89995	0.190348	1.17453
155	-4.4184	-12.8304	-9.34667	-0.61492	0.432687
160	-8.25132	-11.3066	-7.99594	-1.91609	-0.63432
165	-13.5056	-10.3781	-6.50462	-3.73382	-1.73718
170	-13.6971	-9.94499	-5.63494	-5.36503	-2.01047
175	-13.1216	-10.0147	-5.43237	-5.30568	-1.86047
180	-12.8881	-10.7254	-5.74545	-3.93929	-1.57074
185	-9.43061	-12.3792	-6.39312	-2.80814	-1.00792
190	-6.42549	-15.5862	-7.23062	-2.44688	-0.75771
195	-5.09769	-21.5391	-8.08424	-2.84304	-1.13539
200	-4.70525	-22.3719	-8.642	-3.82408	-1.55865
205	-4.14071	-16.5031	-8.57325	-5.12969	-1.42657
210	-3.19828	-13.6698	-7.79471	-6.42726	-0.99278
215	-2.62038	-12.9308	-6.28563	-7.18201	-0.50226
220	-2.78371	-14.0175	-4.1504	-6.70607	0.030803
225	-3.30702	-17.4634	-1.85453	-5.12763	0.745169
230	-3.2053	-25.7744	0.131911	-3.37499	1.713594
235	-2.1108	-23.0203	1.59461	-2.02472	3.07166
240	-0.75571	-16.6103	2.514266	-1.20271	4.272518
245	0.317464	-14.0483	2.971486	-0.84537	4.985957
250	0.969259	-13.4682	3.102836	-0.82957	5.269051
255	1.128987	-14.3262	3.060497	-1.02478	5.206434
260	0.722153	-16.1504	2.992515	-1.32169	4.89205
265	-0.28754	-17.2448	2.999195	-1.62879	4.470394
270	-1.73825	-15.6967	3.103305	-1.88396	4.128962
275	-3.33628	-13.3425	3.229318	-2.07358	3.902024
280	-4.80325	-11.5585	3.243892	-2.24921	3.705555
285	-5.86926	-10.3954	3.026334	-2.48701	3.460185

290	-6.43913	-9.65872	2.488624	-2.82307	3.105716
295	-6.94954	-9.14245	1.658466	-3.23293	2.599998
300	-7.74137	-8.69858	0.616538	-3.65861	1.963505
305	-8.55336	-8.24481	-0.46717	-4.05623	1.345514
310	-8.85606	-7.74946	-1.42362	-4.4173	0.909151
315	-7.96773	-7.18379	-2.18202	-4.77329	0.796164
320	-6.35994	-6.53032	-2.76284	-5.19763	0.943852
325	-5.71509	-5.81895	-3.19663	-5.80047	0.963307
330	-6.94049	-5.14011	-3.52009	-6.69899	0.556495
335	-8.85873	-4.6291	-3.80745	-7.96792	-0.034
340	-7.46604	-4.41163	-4.18827	-9.57858	-0.11155
345	-5.78596	-4.57423	-4.76741	-11.3381	-0.20671
350	-6.16894	-5.1609	-5.5268	-12.9352	-0.92311
355	-6.70959	-6.16407	-6.2635	-14.2248	-1.75386

Peak DG 5.269050946

Theta	0 Gain (XY)	-16.5467	-2.88776	-11.8832	-17.8908	-4.09596
	5	-15.8028	-3.08189	-13.5584	-18.959	-4.5382
	10	-15.7254	-3.29751	-15.8228	-20.3774	-5.15184
	15	-16.5569	-3.4818	-18.3797	-22.0085	-5.86347
	20	-15.6046	-3.55623	-19.9439	-22.7416	-5.99041
	25	-13.5171	-3.43954	-19.2528	-21.2468	-5.35568
	30	-12.6722	-3.11039	-17.511	-18.9146	-4.59784
	35	-13.4703	-2.62799	-15.9638	-17.0582	-4.0792
	40	-15.3654	-2.10271	-14.9615	-15.8747	-3.77584
	45	-15.538	-1.62908	-14.5496	-15.2119	-3.36924
	50	-13.283	-1.24778	-14.6789	-14.8931	-2.80862
	55	-11.8966	-0.9346	-15.1698	-14.7783	-2.44684
	60	-12.196	-0.61619	-15.5843	-14.8209	-2.35582
	65	-13.643	-0.21144	-15.261	-14.998	-2.3025
	70	-14.5786	0.307171	-13.922	-15.2827	-1.95926
	75	-14.2085	0.888791	-12.0815	-15.5636	-1.31995
	80	-13.8166	1.441372	-10.3427	-15.7145	-0.66745
	85	-13.8141	1.881618	-9.03168	-15.7136	-0.16198
	90	-13.7926	2.171032	-8.26062	-15.7044	0.166136

95	-13.577	2.312231	-8.03677	-15.7376	0.316674
100	-13.6783	2.346626	-8.31114	-15.5308	0.293018
105	-14.8028	2.341961	-8.99145	-14.6172	0.139553
110	-16.991	2.346014	-9.97363	-13.0972	-0.04328
115	-17.8116	2.390513	-11.1705	-11.543	-0.05844
120	-16.0163	2.465837	-12.3939	-10.3177	0.135306
125	-14.6783	2.533907	-13.1153	-9.46579	0.342686
130	-14.8042	2.520298	-12.7004	-8.86646	0.46737
135	-16.6737	2.34739	-11.4751	-8.35841	0.44777
140	-19.5313	1.916835	-10.2345	-7.82177	0.284688
145	-16.8833	1.124578	-9.34277	-7.2309	0.245948
150	-12.7502	-0.14457	-8.81526	-6.68514	0.169926
155	-10.5088	-2.02175	-8.58489	-6.38832	-0.25547
160	-9.51399	-4.64787	-8.64284	-6.57591	-1.11639
165	-8.93046	-8.06891	-9.05297	-7.49616	-2.34288
170	-8.42205	-11.5333	-9.91532	-9.41423	-3.72908
175	-8.25074	-12.7296	-11.2881	-12.5458	-4.9878
180	-8.6608	-12.0625	-13.1481	-16.1208	-6.0666
185	-9.55005	-11.5286	-15.349	-16.4357	-6.74673
190	-10.4578	-11.0162	-17.496	-14.8208	-6.972
195	-10.8263	-9.6145	-18.8849	-14.3747	-6.71742
200	-10.7054	-7.39013	-18.7932	-15.2968	-5.97394
205	-10.7673	-5.12877	-17.2994	-16.9776	-5.0235
210	-11.5582	-3.22165	-15.0998	-18.3326	-4.07293
215	-13.4231	-1.71834	-12.8888	-19.0046	-3.2695
220	-16.9574	-0.55876	-11.0808	-19.3325	-2.69282
225	-24.6314	0.320725	-9.89683	-18.3806	-2.28832
230	-24.1673	0.976543	-9.41489	-16.1751	-1.54303
235	-15.7755	1.448805	-9.6033	-14.4119	-0.60494
240	-11.9133	1.772466	-10.2808	-13.9016	-0.05206
245	-10.1239	1.968979	-11.0611	-14.8985	0.112056
250	-9.5355	2.042359	-11.4925	-17.6655	-0.01819
255	-9.26212	1.97675	-11.4741	-22.186	-0.24469
260	-8.56942	1.734047	-11.2378	-23.3934	-0.28386

265	-7.70436	1.304484	-10.9269	-20.3409	-0.20074
270	-7.32312	0.67334	-10.5556	-18.508	-0.32589
275	-7.80292	-0.10866	-10.1584	-17.5568	-0.73459
280	-9.41156	-0.96279	-9.7877	-16.575	-1.38173
285	-12.4399	-1.77556	-9.42543	-15.3794	-2.14706
290	-16.9068	-2.46781	-9.03754	-14.4103	-2.85902
295	-22.5538	-3.03826	-8.72296	-13.9926	-3.44377
300	-37.6141	-3.52328	-8.68969	-14.2192	-4.13825
305	-20.2993	-3.918	-9.09356	-15.0874	-4.00895
310	-14.3067	-4.1378	-9.82635	-16.5805	-3.84601
315	-12.3275	-4.08891	-10.379	-18.6502	-3.83602
320	-12.5163	-3.79031	-10.1744	-21.0111	-3.86269
325	-13.1317	-3.37341	-9.43549	-22.4918	-3.66734
330	-13.257	-2.98918	-8.80475	-21.7453	-3.2808
335	-14.5805	-2.72111	-8.59966	-19.8612	-3.1551
340	-18.6429	-2.58855	-8.80571	-18.2218	-3.44772
345	-20.4763	-2.56648	-9.28162	-17.22	-3.60875
350	-17.2358	-2.62242	-9.90891	-16.8947	-3.48234
355	-16.4449	-2.7325	-10.7236	-17.1616	-3.67342

Peak DG 0.467370434

XZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain (XZ)	-24.7672	-10.1753	-17.4691	-15.8431	-9.59193
		5	-18.6933	-14.1822	-18.0279	-17.7022	-10.943
		10	-13.7823	-19.0466	-15.7232	-18.6555	-10.5076
		15	-10.9768	-16.2343	-13.6682	-19.0138	-8.44809
		20	-10.6207	-12.9003	-13.2467	-19.6211	-7.50469
		25	-12.2491	-11.4444	-14.6064	-20.5419	-8.04729
		30	-11.0883	-11.0296	-17.228	-20.9534	-8.10036
		35	-6.85435	-11.03	-19.3468	-17.0615	-6.16801
		40	-4.29333	-10.9581	-18.8953	-12.5349	-4.13149
		45	-3.77711	-10.6111	-16.4093	-9.87721	-3.01146
		50	-5.10288	-10.5281	-13.516	-8.54775	-2.86523
		55	-7.62346	-11.586	-10.9561	-7.39415	-3.16448
		60	-9.27021	-14.9314	-9.13519	-5.88304	-3.21988

65	-9.72045	-25.0142	-8.37211	-4.57037	-3.38194
70	-11.006	-21.7111	-8.61462	-3.83507	-3.23734
75	-12.6554	-13.9652	-9.12769	-3.55677	-2.81192
80	-13.5861	-11.0142	-8.79004	-3.52875	-2.38218
85	-14.6044	-10.0553	-7.44126	-3.66779	-2.04498
90	-12.8881	-10.7254	-5.74545	-3.93929	-1.57074
95	-10.2451	-13.5861	-4.36592	-4.48454	-1.31839
100	-10.4444	-21.1421	-3.76421	-5.82168	-2.22497
105	-14.7966	-23.5278	-4.04805	-8.63375	-4.10861
110	-15.4697	-15.9579	-4.91838	-12.1115	-4.85694
115	-10.0798	-13.8172	-5.68033	-10.8718	-3.58867
120	-8.67804	-13.3664	-5.83708	-8.66761	-2.72064
125	-10.1036	-12.9144	-5.846	-8.66024	-2.989
130	-12.939	-12.4451	-6.59133	-10.6199	-4.24556
135	-15.1612	-12.4538	-8.82655	-12.2105	-5.8477
140	-16.7159	-12.8843	-13.2983	-10.3102	-6.99122
145	-15.9298	-14.3671	-20.3385	-7.6037	-7.29119
150	-13.9541	-19.9358	-23.5341	-5.37674	-6.87448
155	-14.2723	-24.3825	-25.8508	-3.83596	-6.487
160	-18.03	-12.4246	-33.4975	-3.31227	-5.44308
165	-25.687	-8.08732	-20.2775	-4.02892	-4.64355
170	-23.4582	-6.28316	-14.0587	-6.01199	-4.07582
175	-21.2278	-5.87813	-10.8625	-8.97669	-4.17188
180	-21.6568	-6.32499	-10.0143	-11.9911	-4.93932
185	-23.1178	-7.36795	-11.5645	-13.4883	-6.25178
190	-24.0002	-8.90973	-15.6817	-13.1332	-7.88868
195	-22.1252	-10.6225	-20.1547	-12.4163	-8.99149
200	-19.2988	-11.6371	-21.3725	-12.0211	-9.04112
205	-16.4788	-11.1944	-22.4725	-11.4508	-8.30882
210	-14.0698	-9.79634	-17.1738	-10.2676	-6.31433
215	-12.6075	-8.58323	-12.5782	-8.6	-4.34324
220	-11.9953	-8.27624	-9.83271	-6.97123	-3.05156
225	-11.8052	-9.02936	-8.01436	-6.13651	-2.49111
230	-11.9986	-10.5021	-6.93949	-6.69623	-2.72115

235	-12.9158	-12.1384	-6.71443	-9.07229	-3.83067
240	-14.006	-14.2407	-7.20483	-13.696	-5.71032
245	-13.0344	-18.7754	-7.84677	-20.6446	-7.57474
250	-10.4001	-47.7694	-7.85693	-25.4895	-8.35928
255	-8.12632	-17.5905	-7.12701	-21.7742	-5.62952
260	-6.55843	-11.5126	-6.39865	-17.3209	-3.41069
265	-5.38732	-8.62816	-6.24901	-15.3116	-2.12069
270	-4.40333	-7.49335	-6.77226	-15.5218	-1.66903
275	-3.75059	-7.75143	-7.91628	-17.3462	-1.95614
280	-3.62233	-9.46531	-9.756	-18.7611	-2.87829
285	-3.92509	-13.1254	-11.7976	-16.7309	-4.0139
290	-4.32505	-19.9121	-12.0972	-14.1393	-4.77992
295	-4.64687	-22.2184	-11.1175	-12.9973	-4.69313
300	-4.98392	-16.6573	-10.0467	-13.3067	-4.14546
305	-5.3855	-14.0446	-8.06207	-14.2678	-3.57513
310	-5.88829	-13.4714	-5.80546	-14.4016	-2.9579
315	-6.70848	-13.6324	-4.48386	-13.4179	-2.61415
320	-7.99967	-12.3022	-4.38155	-12.5551	-2.6142
325	-9.45447	-10.9727	-5.39432	-12.5407	-3.14244
330	-10.3064	-12.3242	-7.27167	-13.2479	-4.45324
335	-10.4067	-19.7903	-9.2958	-13.5893	-6.40849
340	-10.7968	-17.3829	-10.2434	-12.9829	-6.41621
345	-12.6371	-10.1759	-10.5557	-12.5194	-5.37992
350	-17.0754	-7.9429	-11.7689	-12.8896	-5.80219
355	-25.6152	-8.14486	-14.3935	-14.0663	-7.61178

					Peak	DG	-1.318388713	
Theta	0 Gain(XZ)	-8.23766	-11.9564	-5.3045	-3.56868			-0.69661
	5	-6.733	-10.4879	-4.55273	-1.44942			0.819743
	10	-3.37752	-9.58936	-2.68943	0.131256			2.792277
	15	-1.74933	-8.87813	-1.30331	0.788519			3.898908
	20	-1.33039	-8.02043	-1.19189	0.420245			4.018397
	25	-0.24987	-6.99613	-2.28198	-0.61916			3.85881
	30	1.620434	-6.07064	-3.58584	-1.45865			4.10789
	35	2.860518	-5.47503	-3.56033	-1.5525			4.666247

40	3.100989	-5.25473	-2.3361	-1.30767	5.104382
45	2.645912	-5.46724	-1.26264	-1.3161	5.137016
50	2.022121	-6.43135	-1.25753	-2.08231	4.586191
55	1.748552	-8.87425	-2.8463	-3.99779	3.330655
60	1.729906	-13.5482	-6.39101	-7.01655	1.421133
65	1.251693	-13.2853	-11.9695	-9.88849	-0.24654
70	-0.23546	-9.00879	-18.6346	-11.1198	-1.29636
75	-2.76576	-7.64699	-20.446	-11.3092	-2.44743
80	-5.67113	-8.52476	-14.8868	-11.2345	-3.41531
85	-7.72114	-10.3127	-12.4311	-12.2571	-4.44399
90	-8.6608	-12.0625	-13.1481	-16.1208	-6.0666
95	-9.66428	-13.6074	-16.369	-24.1639	-8.50485
100	-11.2933	-11.5691	-20.3359	-20.8371	-8.83226
105	-11.3397	-9.27056	-22.196	-19.0192	-7.90926
110	-9.51671	-9.79245	-21.5277	-21.0988	-7.6371
115	-8.64483	-11.9551	-20.8912	-22.9333	-8.13759
120	-8.84967	-10.3121	-20.3323	-22.7764	-7.58726
125	-8.67426	-8.65182	-16.8478	-22.5958	-6.41494
130	-7.38864	-10.3592	-14.2467	-18.5422	-5.65684
135	-5.92145	-16.2676	-14.0022	-14.7064	-5.65625
140	-5.03547	-16.6386	-15.4747	-13.1994	-5.23655
145	-5.07892	-14.4125	-17.1735	-14.096	-5.32545
150	-6.15622	-17.6436	-16.4126	-17.4331	-6.84989
155	-8.03653	-16.6922	-12.9093	-20.9111	-7.34023
160	-10.2259	-11.6222	-10.2624	-17.3615	-5.91033
165	-12.523	-10.9259	-9.52503	-11.5064	-5.03128
170	-13.8719	-14.9117	-10.2595	-7.12106	-4.96244
175	-12.2087	-22.5487	-11.4365	-4.74247	-4.67855
180	-10.3464	-14.4058	-12.7662	-4.29437	-3.5162
185	-9.77515	-12.572	-14.547	-5.56428	-3.91709
190	-9.65635	-14.895	-14.8336	-7.72451	-5.18341
195	-9.34731	-16.6155	-14.5958	-8.21945	-5.48971
200	-10.0564	-13.7343	-18.066	-6.03162	-4.85048
205	-13.6112	-10.6759	-30.2157	-3.2756	-4.3084

210	-23.7917	-6.92333	-16.472	-1.15767					-2.26682
215	-19.6775	-4.14556	-12.6455	-0.05841					-0.21656
220	-15.9624	-3.21983	-11.9356	0.020587					0.443869
225	-16.0235	-3.91205	-12.4923	-0.69736					-0.19482
230	-16.6186	-4.95227	-13.3906	-1.84193					-1.22971
235	-18.8808	-4.19021	-13.1266	-3.08291					-1.65569
240	-28.3753	-2.31139	-11.489	-4.41107					-1.55232
245	-24.7416	-1.23891	-10.8296	-6.10835					-1.3739
250	-22.774	-1.65253	-12.117	-8.39535					-2.34024
255	-58.1126	-2.96663	-14.893	-11.1298					-4.65983
260	-19.3182	-2.98145	-16.8806	-13.8754					-4.70718
265	-15.3087	-2.25382	-15.2315	-16.4042					-3.96161
270	-16.5467	-2.88776	-11.8832	-17.8908					-4.09596
275	-21.6877	-4.26533	-9.77589	-15.7337					-4.56655
280	-20.2255	-4.57489	-9.15038	-11.8288					-3.78932
285	-14.8995	-5.1309	-8.757	-9.01855					-2.77669
290	-11.4585	-5.28783	-7.62764	-7.75445					-1.74267
295	-9.62963	-2.85566	-6.26076	-7.48223					-0.18108
300	-7.49967	-1.38302	-4.84019	-6.87474					1.215734
305	-4.16727	-1.91758	-3.51366	-5.39358					2.363796
310	-1.59023	-2.69135	-2.72122	-3.96176					3.319809
315	-0.47386	-2.34384	-2.44931	-3.13882					3.977016
320	-0.51136	-3.2351	-2.35169	-3.06297					3.79965
325	-1.12181	-7.21524	-2.43765	-3.74121					2.67054
330	-1.67434	-10.6902	-2.63115	-4.59602					1.743259
335	-1.63429	-7.48071	-2.18052	-4.58339					2.342379
340	-1.27393	-7.18953	-1.31516	-4.25285					2.838309
345	-1.53569	-10.4603	-1.23679	-4.77619					2.219041
350	-2.95727	-15.7193	-2.39694	-5.83027					0.608168
355	-5.52751	-14.5574	-4.23373	-5.5051					-0.62516
					Peak	DG			5.137016461

YZ	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
Phi	0 Gain(YZ)	-8.23766	-11.9564	-5.3045	-3.56868	-0.69661

5	-0.38592	-9.31112	-1.38443	-2.36589	3.266504
10	3.347897	-7.68051	1.08649	-1.63969	5.676207
15	4.54324	-7.10955	1.92135	-1.71499	6.437497
20	4.035885	-7.68834	1.531925	-2.36704	5.929894
25	2.572554	-8.95666	0.416044	-3.49746	4.657125
30	1.346763	-9.36937	-0.68517	-4.87196	3.529351
35	1.436303	-8.44557	-0.95622	-5.8205	3.42114
40	2.49909	-7.84967	-0.27502	-5.74262	4.146041
45	3.486915	-8.53379	0.724452	-4.98718	4.90659
50	3.803809	-10.6736	1.490067	-4.53239	5.160085
55	3.521318	-14.0372	1.902693	-5.02352	4.871442
60	3.099778	-17.5095	2.080645	-6.46202	4.370595
65	2.755385	-18.2374	2.078034	-7.96779	3.988749
70	2.310373	-15.7553	1.958431	-7.91783	3.869584
75	1.731872	-13.4916	1.906122	-6.06729	4.014061
80	1.046247	-12.7751	2.13123	-3.92923	4.275567
85	-0.01112	-13.6876	2.59471	-2.50054	4.359002
90	-1.73825	-15.6967	3.103305	-1.88396	4.128962
95	-4.12522	-17.5698	3.504932	-1.70123	3.731849
100	-6.7044	-19.2134	3.758707	-1.43032	3.408959
105	-8.75845	-19.4899	3.930059	-0.79671	3.391744
110	-10.5956	-16.0842	3.975636	0.104506	3.65055
115	-14.118	-13.7351	3.715383	1.019738	3.696415
120	-24.2122	-14.0143	3.03566	1.730854	3.226261
125	-22.9489	-17.1186	2.108534	2.065291	2.777824
130	-15.6822	-22.459	1.282948	1.833993	2.391724
135	-11.9029	-24.0168	0.695404	0.899911	1.971154
140	-8.46883	-18.9271	0.017589	-0.66366	1.65141
145	-6.32122	-13.6427	-1.1998	-2.36198	1.303314
150	-5.8739	-10.8689	-2.79159	-3.38239	0.816931
155	-6.65019	-10.5642	-3.487	-3.33008	0.474393
160	-7.06096	-12.3419	-3.38737	-2.73637	0.390147
165	-6.38632	-14.5386	-4.42837	-2.4385	0.098161
170	-6.20257	-14.57	-7.6548	-2.84226	-0.8591

175	-7.52588	-14.1968	-11.7486	-3.73898	-2.35935
180	-10.3464	-14.4058	-12.7662	-4.29437	-3.5162
185	-11.5437	-14.0842	-14.8997	-3.5647	-3.7043
190	-8.55653	-12.791	-14.4462	-2.00339	-2.01303
195	-6.21633	-11.277	-10.2876	-0.88744	-0.12839
200	-5.72027	-10.4653	-9.61532	-0.84538	0.23619
205	-6.80349	-10.9224	-12.8595	-1.79803	-1.00336
210	-8.46342	-12.673	-19.4319	-3.04033	-2.96683
215	-9.19595	-14.8963	-19.4155	-3.73668	-3.84794
220	-9.29118	-16.0435	-21.3981	-3.64285	-4.12847
225	-9.41401	-15.3691	-18.138	-2.62521	-3.27479
230	-8.93856	-13.4362	-12.1219	-1.17072	-1.45346
235	-7.47804	-11.8007	-9.68711	-0.13992	-0.03643
240	-5.88907	-11.3447	-8.88025	0.231854	0.689732
245	-5.153	-12.2296	-7.83994	0.236012	0.946326
250	-5.47943	-14.3691	-5.80234	0.295398	1.102536
255	-5.98927	-17.1977	-3.55606	0.609531	1.498601
260	-5.54202	-18.7657	-1.85205	1.047463	2.210893
265	-4.47909	-18.9812	-0.88872	1.381804	2.875045
270	-3.17329	-21.1593	-0.46636	1.552759	3.301725
275	-1.93796	-32.3606	-0.14533	1.700703	3.590493
280	-1.50749	-23.0802	0.450526	1.980006	4.136741
285	-2.18736	-16.2451	1.263719	2.350971	4.60617
290	-3.34751	-13.7443	1.883675	2.591034	4.799536
295	-3.64524	-12.8822	1.978069	2.535278	4.808215
300	-2.92485	-12.6573	1.595855	2.244028	4.719318
305	-2.07969	-13.6356	1.268243	2.005996	4.639972
310	-1.50096	-17.7624	1.554526	2.050684	4.692791
315	-0.90906	-25.8726	2.197301	2.223506	4.937551
320	0.008146	-17.8001	2.478997	2.172575	5.4467
325	0.612823	-15.0004	1.922214	1.563273	5.333607
330	0.109434	-15.0404	0.49756	0.390587	4.335539
335	-1.29073	-14.8943	-0.89986	-0.50131	3.189608
340	-1.69626	-14.6851	-0.9742	-0.3182	3.121653

	345	-0.97149	-16.8105	-0.84376	-0.19496			3.298301
	350	-1.65988	-20.5146	-2.17874	-1.26982			2.152465
	355	-5.85326	-16.2476	-5.28637	-3.17818			-0.43896
						Peak	DG	6.43749656
Theta	0 Gain(YZ)	-24.7672	-10.1753	-17.4691	-15.8431			-9.59193
	5	-19.8561	-16.2374	-16.4713	-12.1615			-9.72811
	10	-12.2863	-11.1281	-14.7093	-9.42639			-5.65946
	15	-9.41722	-7.52096	-13.4922	-8.22234			-3.3598
	20	-8.7238	-6.75272	-13.2942	-8.22042			-2.9114
	25	-8.9616	-6.759	-14.0541	-8.8208			-3.24738
	30	-8.81462	-5.56535	-14.5915	-9.29834			-2.98342
	35	-7.49137	-3.62898	-13.4809	-9.07966			-1.70258
	40	-5.54406	-1.94803	-12.4983	-8.2398			-0.21214
	45	-4.05252	-0.5071	-13.403	-7.52448			0.846296
	50	-3.56977	0.927387	-16.278	-7.57452			1.390645
	55	-4.12327	2.240761	-17.7906	-8.54066			1.653629
	60	-5.35101	3.126682	-18.6668	-10.0438			1.600209
	65	-6.45395	3.569328	-32.0466	-11.4342			1.126558
	70	-6.51631	3.739009	-16.8263	-12.7974			1.523726
	75	-5.78425	3.67054	-9.986	-15.1855			2.043539
	80	-5.35833	3.14697	-7.75457	-20.4933			1.869316
	85	-5.86363	2.063391	-8.19378	-33.1072			0.783131
	90	-7.32312	0.67334	-10.5556	-18.508			-0.32589
	95	-9.28826	-0.25409	-13.6597	-13.2707			-1.21509
	100	-11.254	-0.03491	-14.3239	-10.9253			-1.17872
	105	-13.525	0.598819	-10.0398	-10.1489			-0.41018
	110	-17.2958	0.549452	-5.88448	-10.0178			0.109195
	115	-25.3385	-0.25655	-3.63922	-9.4101			0.091363
	120	-33.4726	-0.61086	-3.20586	-7.84491			0.214196
	125	-22.4816	0.17699	-4.39591	-6.0498			0.815605
	130	-19.564	0.817749	-7.03603	-4.93351			0.88831
	135	-18.4075	0.338313	-10.8316	-5.05005			0.027347
	140	-17.2095	-1.61417	-15.0014	-6.6293			-1.87193
	145	-15.451	-5.56759	-17.9157	-9.25903			-4.67838

150	-13.9342	-12.6214	-17.7551	-11.2371	-7.54918
155	-13.5148	-16.2755	-14.4324	-12.7137	-8.11503
160	-14.8315	-13.9622	-10.7203	-16.6618	-7.74822
165	-18.6023	-16.9505	-8.26492	-21.2423	-8.72634
170	-23.2891	-17.2225	-7.35934	-16.0185	-8.03633
175	-21.5133	-9.93661	-8.01465	-13.3423	-5.88946
180	-21.6568	-6.32499	-10.0143	-11.9911	-4.93932
185	-28.0985	-4.78908	-12.1089	-10.6207	-4.7464
190	-27.3225	-4.43437	-12.4774	-9.54732	-4.33535
195	-19.8775	-4.65103	-12.6066	-8.81913	-3.85377
200	-16.5404	-4.80188	-14.04	-8.45644	-3.73786
205	-14.58	-4.46721	-16.0067	-9.3237	-3.8442
210	-13.5978	-3.84074	-16.6039	-12.7489	-4.22322
215	-13.4888	-3.24218	-16.7343	-18.031	-4.64807
220	-14.1547	-2.56437	-16.7265	-13.5031	-3.75909
225	-16.0397	-1.62227	-15.4179	-10.2562	-2.71032
230	-20.1724	-0.70646	-14.2543	-9.5637	-2.23525
235	-26.3962	-0.03222	-14.3675	-10.2125	-2.2475
240	-27.7701	0.777624	-15.0258	-10.979	-1.96889
245	-32.8993	1.869739	-14.472	-10.4538	-1.15023
250	-30.2705	2.670532	-12.8227	-9.20913	-0.15125
255	-21.3589	2.902052	-11.2331	-8.96251	0.477141
260	-17.4123	2.900508	-9.98977	-10.4372	0.62195
265	-15.207	2.812981	-9.04264	-13.3942	0.518819
270	-13.7926	2.171032	-8.26062	-15.7044	0.166136
275	-12.2573	0.992003	-7.54676	-14.0788	-0.07853
280	-10.4157	0.780922	-6.94659	-10.2331	0.639535
285	-9.15941	1.885682	-6.56006	-7.41676	1.891078
290	-9.01889	2.615704	-6.44116	-6.54977	2.451728
295	-9.77367	2.45398	-6.57469	-7.76293	2.039317
300	-10.415	1.787308	-6.89184	-11.0164	1.075133
305	-9.91023	1.026919	-7.30757	-15.3662	0.200249
310	-8.85132	-0.01437	-7.79381	-18.6546	-0.52032
315	-8.14278	-1.95631	-8.46229	-20.8272	-1.62714

320	-7.78298	-5.03898	-9.45904	-17.4565				-2.86196
325	-7.4699	-7.28123	-10.5954	-14.0281				-3.41539
330	-7.47333	-7.09581	-11.0494	-13.2909				-3.34014
335	-8.37083	-7.67735	-10.6477	-15.2497				-4.00674
340	-10.3044	-9.05875	-10.5348	-21.3033				-5.67016
345	-12.5155	-8.05949	-11.5176	-38.715				-6.84709
350	-14.066	-6.47875	-13.6749	-21.537				-6.34587
355	-16.479	-6.84984	-16.2544	-18.3682				-7.14042

Peak DG 2.451727548

(i) If transmit signals are correlated, then

Directional gain = $10 \log\left[\frac{10G1}{20} + \frac{10G2}{20} + \dots + \frac{10GN}{20}\right]^2 / NANT$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

eg	Theta	0 Gain phi(XY)	4.272696	3.89536	3.692496	2.782955	
		Directional gain = $10 \log\left[\frac{10G1}{20} + \frac{10G2}{20} + \dots + \frac{10GN}{20}\right]^2 / NANT$ dBi					
5350MHz		Peak gain	4.272696	3.89536	3.692496	2.782955	MAX DG gain
XY	Angle	Ant1	Ant2	Ant3	Ant4		DG gain
	Phi	0 Gain phi(XY)	-2.84436	-8.0425	-7.5606	-11.8278	-0.95436
		5	-0.82979	-9.61714	-7.85266	-13.3189	-0.62994
		10	-0.62986	-11.2528	-8.68789	-16.058	-1.26454
		15	-1.35182	-12.7261	-9.96687	-20.3887	-2.49892
		20	-2.00483	-13.8729	-10.4765	-20.7347	-3.17537
		25	-2.45036	-14.5985	-9.13997	-15.6198	-2.76241
		30	-3.17939	-14.8252	-7.28172	-11.7236	-2.12114
		35	-4.3183	-14.5461	-5.97949	-8.87012	-1.62811
		40	-5.33239	-13.9322	-5.31658	-6.58302	-1.14405
		45	-4.97771	-13.2093	-4.99747	-4.67366	-0.31529
		50	-3.44245	-12.5122	-4.6408	-3.09948	0.810307
		55	-2.24884	-11.9347	-4.03012	-1.84533	1.806404
		60	-1.8543	-11.6099	-3.22336	-0.88462	2.488894
		65	-1.81557	-11.7209	-2.37639	-0.17127	2.959346
		70	-1.57225	-12.4855	-1.61427	0.345817	3.355125
		75	-1.18717	-14.1258	-1.01452	0.713267	3.649019
		80	-1.09599	-16.8147	-0.62472	0.98207	3.739306
		85	-1.42354	-19.7536	-0.44214	1.18318	3.659741
		90	-1.71782	-19.6757	-0.40716	1.357533	3.658943
		95	-1.40077	-17.6594	-0.42186	1.531321	3.883006
		100	-0.75557	-16.6145	-0.40282	1.747717	4.195446
		105	-0.3304	-17.0567	-0.3074	2.009133	4.424343
		110	-0.02092	-19.1417	-0.1395	2.305198	4.598743
		115	0.478475	-23.2906	0.054378	2.568699	4.799715
		120	0.912678	-28.908	0.167913	2.712728	4.941678
		125	0.780192	-28.2134	0.046849	2.67395	4.857609
		130	-0.15164	-26.6924	-0.48303	2.415854	4.337944
		135	-1.78636	-28.323	-1.59397	1.971944	3.34538
		140	-3.62065	-29.0021	-3.45456	1.427537	2.093411
		145	-4.65739	-23.2653	-6.15158	0.861209	1.024515
		150	-4.76026	-18.7768	-8.9786	0.274946	0.345051
		155	-5.15447	-15.9092	-9.28027	-0.46499	0.017381
		160	-6.76917	-13.9949	-7.4094	-1.57051	-0.3588
		165	-9.99934	-12.648	-5.88915	-3.16144	-1.15033
		170	-14.7391	-11.7396	-5.22463	-4.86816	-2.15249
		175	-17.0109	-11.3488	-5.25866	-5.43474	-2.54201
		180	-13.3623	-11.6831	-5.75832	-4.46925	-2.00166
		185	-10.0324	-13.045	-6.52555	-3.35499	-1.46736
		190	-8.11499	-15.9042	-7.4312	-2.91948	-1.44896
		195	-7.00619	-20.3725	-8.30356	-3.28454	-1.87474
		200	-5.66551	-20.1649	-8.81062	-4.31799	-1.99324
		205	-3.89599	-16.1173	-8.70488	-5.76878	-1.53147
		210	-2.5256	-14.0071	-8.03345	-7.28607	-1.03253
		215	-2.08218	-13.8472	-6.73363	-8.26015	-0.73903
		220	-2.5094	-15.7859	-4.70816	-7.7145	-0.425
		225	-3.1164	-21.353	-2.36851	-5.76818	0.257481
		230	-2.86205	-30.1402	-0.27286	-3.68792	1.487221
		235	-1.7528	-18.3103	1.306656	-2.15537	3.171228
		240	-0.55028	-13.9693	2.335289	-1.28118	4.376426
		245	0.453227	-12.3031	2.89399	-0.96941	5.071451
		250	1.224917	-12.3772	3.099675	-1.06254	5.356716
		255	1.604859	-14.0822	3.109553	-1.38886	5.304099
		260	1.352825	-17.3569	3.078953	-1.79249	4.966996

265	0.344468	-18.5609	3.109505	-2.15392	4.530216
270	-1.33089	-14.6917	3.231634	-2.38888	4.223621
275	-3.20577	-11.4351	3.372977	-2.49361	4.039954
280	-4.55693	-9.52672	3.400582	-2.55865	3.944956
285	-4.98705	-8.62112	3.174873	-2.71924	3.824215
290	-5.05079	-8.45286	2.608988	-3.05819	3.494345
295	-5.61177	-8.78162	1.684251	-3.55762	2.815978
300	-6.89195	-9.28458	0.493753	-4.12844	1.853853
305	-8.17149	-9.50681	-0.71966	-4.66478	0.945422
310	-8.34725	-9.11816	-1.677	-5.11789	0.472076
315	-7.1887	-8.21952	-2.25087	-5.50872	0.536063
320	-5.85501	-7.16226	-2.5837	-5.91571	0.815278
325	-5.92839	-6.20899	-2.90928	-6.45112	0.77164
330	-8.39609	-5.48292	-3.38255	-7.20961	0.111187
335	-10.6185	-5.03787	-4.07599	-8.1995	-0.5888
340	-7.40738	-4.91201	-4.98657	-9.26774	-0.4385
345	-6.01656	-5.13619	-6.019	-10.1348	-0.60574
350	-7.3843	-5.73529	-6.91812	-10.666	-1.47392
355	-6.61266	-6.716	-7.40614	-11.0859	-1.75595

Theta	0 Gain (XY)	Peak	DG	5.356716021
				-2.46372
5				-2.71146
10				-3.50317
15				-4.70366
20				-5.14174
25				-5.19049
30				-5.47677
35				-5.80732
40				-5.60904
45				-4.623
50				-3.57102
55				-2.92375
60				-2.66956
65				-2.49448
70				-2.03669
75				-1.32974
80				-0.64794
85				-0.13582
90				0.170772
95				0.259202
100				0.126979
105				-0.19137
110				-0.56279
115				-0.72918
120				-0.40194
125				0.123055
130				0.524237
135				0.64754
140				0.472592
145				0.351175
150				0.266186
155				-0.18372
160				-1.13468
165				-2.5673
170				-4.23862
175				-5.69928
180				-6.70539
185				-7.04999
190				-6.88975
195				-6.46557
200				-5.71569
205				-4.71754
210				-3.63562

215	-10.6968	-1.51419	-13.8245	-16.8274	-2.61795
220	-11.7181	-0.42741	-11.3312	-16.6657	-1.77925
225	-14.0189	0.378531	-9.66385	-15.2718	-1.18623
230	-19.0074	0.96629	-8.88222	-13.3118	-0.88906
235	-23.5825	1.380816	-8.96599	-11.7528	-0.66238
240	-15.9142	1.653588	-9.80832	-11.0965	-0.12345
245	-11.934	1.80343	-11.1217	-11.5392	0.114988
250	-10.1123	1.825299	-12.331	-13.2012	0.02847
255	-9.19694	1.701598	-12.8725	-16.0876	-0.23172
260	-8.41419	1.395895	-12.7958	-19.1473	-0.47565
265	-7.65878	0.883135	-12.4721	-19.5076	-0.60788
270	-7.2885	0.16054	-12.0802	-18.3923	-0.81937
275	-7.68481	-0.75284	-11.648	-17.9207	-1.31801
280	-9.18196	-1.76263	-11.1385	-17.9178	-2.11223
285	-12.1649	-2.74858	-10.4966	-17.6995	-3.07213
290	-17.1768	-3.57262	-9.7956	-17.2381	-3.9968
295	-24.783	-4.1318	-9.30017	-17.1172	-4.7222
300	-20.2709	-4.37398	-9.28921	-17.8038	-4.63273
305	-13.7157	-4.31215	-9.88136	-19.5707	-4.14871
310	-10.121	-4.02126	-10.8442	-22.76	-3.73516
315	-8.50206	-3.61606	-11.4062	-28.217	-3.459
320	-8.25281	-3.20326	-10.9611	-33.3477	-3.20497
325	-8.91957	-2.83972	-10.0982	-27.3096	-2.88342
330	-10.5151	-2.53165	-9.57748	-22.949	-2.80291
335	-13.8879	-2.25184	-9.59115	-20.1519	-3.07647
340	-20.9906	-1.97862	-9.96177	-18.1483	-3.56388
345	-22.9991	-1.71592	-10.3724	-16.6768	-3.47137
350	-17.6121	-1.50121	-10.6674	-15.6641	-2.91086
355	-15.1382	-1.3778	-11.0097	-15.0708	-2.57878

Peak DG 0.647539732

XZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain (XZ)	-31.1035	-12.4894	-15.465	-14.3455	-10.095
		5	-21.8842	-15.6013	-13.8869	-15.0459	-10.0965
		10	-16.4378	-18.7608	-10.8751	-15.0281	-8.76359
		15	-14.1533	-16.215	-9.28627	-15.0275	-7.21797
		20	-14.8307	-13.1957	-9.84714	-15.3286	-7.00083
		25	-17.1522	-11.8214	-12.8317	-16.4998	-8.25601
		30	-12.5388	-11.1948	-18.3573	-20.3872	-8.77645
		35	-7.30484	-10.6416	-24.3209	-22.1314	-7.28995
		40	-4.58664	-10.1291	-22.794	-14.822	-4.7666
		45	-4.06182	-9.95893	-17.7843	-11.1544	-3.41301
		50	-5.59624	-10.633	-14.7297	-9.25951	-3.43419
		55	-8.43565	-12.9756	-12.7295	-7.39457	-4.00675
		60	-9.37905	-19.0182	-10.6497	-5.39411	-3.8597
		65	-9.11823	-30.9787	-9.02875	-4.01724	-3.3395
		70	-11.0639	-16.6492	-8.41786	-3.46783	-2.63251
		75	-16.3334	-12.3114	-8.47132	-3.47215	-2.83868
		80	-23.7981	-10.4133	-8.31958	-3.73355	-3.09524
		85	-20.5982	-10.1052	-7.33373	-4.10231	-2.73841
		90	-13.3623	-11.6831	-5.75832	-4.46925	-2.00166
		95	-9.81021	-16.6214	-4.41658	-4.99333	-1.75054
		100	-10.0494	-36.4792	-3.89049	-6.33652	-2.79003
		105	-15.813	-17.6262	-4.24745	-9.27343	-4.07948
		110	-17.5302	-13.3871	-5.07791	-12.67	-4.90643
		115	-9.56135	-12.0623	-5.60346	-10.8684	-3.1432
		120	-7.60121	-11.5384	-5.44367	-8.50367	-1.98323
		125	-8.72811	-11.3834	-5.2668	-8.17363	-2.0953
		130	-11.9254	-12.0791	-6.07077	-9.40356	-3.49088
		135	-15.7932	-13.6077	-8.68482	-10.6254	-5.73661
		140	-18.2678	-15.3881	-14.0237	-9.7173	-7.76766
		145	-16.2961	-18.8537	-21.6096	-7.58127	-8.31181
		150	-14.0611	-43.2855	-22.9967	-5.55428	-7.9222
		155	-14.8153	-15.9295	-25.0192	-4.09158	-5.83259

160	-20.0288	-9.73839	-22.4169	-3.53052	-4.67713
165	-33.9788	-7.12814	-19.3171	-4.09938	-4.49432
170	-23.7455	-6.52332	-16.4912	-5.83343	-4.45493
175	-22.9259	-7.31112	-13.2321	-8.45101	-5.20617
180	-25.0979	-8.9706	-11.9689	-11.0926	-6.53442
185	-27.3554	-10.9253	-13.6649	-12.4927	-8.26982
190	-22.9934	-12.8984	-18.4137	-12.3626	-9.65201
195	-16.5624	-14.9711	-19.2186	-11.6769	-9.15475
200	-13.1947	-16.146	-17.5335	-11.0259	-8.08352
205	-11.9827	-14.1239	-18.7359	-10.4163	-7.27542
210	-11.8148	-11.2082	-17.5235	-9.82925	-6.13194
215	-11.4861	-9.63995	-13.5214	-8.99635	-4.71721
220	-10.6574	-9.77798	-10.4556	-7.78	-3.56985
225	-9.92474	-11.5233	-8.32772	-6.95225	-2.99411
230	-9.80333	-14.3647	-7.17236	-7.40045	-3.2277
235	-10.4794	-16.8745	-7.02537	-9.60923	-4.30254
240	-11.6294	-17.5491	-7.55655	-13.5393	-5.8138
245	-11.993	-17.2872	-8.02158	-17.0105	-6.68601
250	-10.6658	-18.1665	-7.71156	-17.199	-6.32107
255	-8.55459	-19.2328	-6.82943	-15.6421	-5.16581
260	-6.39428	-14.9614	-6.23124	-13.4451	-3.36085
265	-4.39922	-10.5783	-6.4586	-12.0254	-1.80706
270	-2.84436	-8.0425	-7.5606	-11.8278	-0.95436
275	-2.02716	-7.00592	-9.30232	-12.6577	-0.84894
280	-2.05015	-7.34707	-11.0797	-14.0269	-1.42638
285	-2.686	-9.37308	-11.305	-14.4489	-2.29565
290	-3.43175	-14.3311	-10.0365	-13.2192	-3.10503
295	-4.01635	-25.6022	-9.24725	-12.2407	-3.93483
300	-4.65907	-15.2149	-9.0852	-12.3864	-3.41428
305	-5.43975	-11.3089	-8.44844	-13.0355	-3.05098
310	-6.16977	-11.1033	-7.35215	-12.9857	-2.95546
315	-6.97224	-12.4898	-6.64241	-12.2049	-3.12091
320	-8.13735	-11.4059	-6.45023	-11.6095	-3.1015
325	-9.35039	-9.56416	-6.64571	-11.7752	-3.12078
330	-9.77073	-10.2954	-7.17949	-12.753	-3.75364
335	-9.58838	-15.2043	-7.6869	-13.5063	-4.9653
340	-10.0379	-19.2459	-7.88632	-12.8347	-5.55188
345	-12.1135	-12.5373	-8.50752	-11.9459	-5.09602
350	-16.7444	-10.3583	-10.3444	-11.9954	-5.98439
355	-25.7424	-10.6946	-13.3087	-13.0043	-8.14126

Theta	0 Gain(XZ)	Peak	DG	-0.848935018
				0.209592
5				1.500272
10				2.952971
15				3.701739
20				3.703046
25				3.59924
30				3.944397
35				4.601806
40				5.083345
45				5.061384
50				4.353224
55				2.853418
60				0.820028
65				-0.47602
70				-1.30128
75				-2.48399
80				-3.70193
85				-5.10035
90				-6.70539
95				-8.02985
100				-7.63744
105				-7.08535

110	-8.49068	-10.092	-21.3019	-21.2295	-7.31028
115	-8.72971	-11.3561	-24.385	-20.4253	-8.04471
120	-9.42163	-8.73786	-19.4791	-21.8634	-7.02735
125	-8.52769	-7.75521	-13.6331	-27.6078	-5.73093
130	-6.77108	-10.4478	-11.9316	-20.9365	-5.17773
135	-5.31207	-17.2298	-13.3888	-14.7667	-5.37787
140	-4.27956	-14.4513	-16.8559	-12.3742	-4.54909
145	-3.94258	-12.346	-19.0647	-12.8801	-4.32997
150	-4.48899	-13.5158	-17.0091	-16.0249	-5.14138
155	-5.61836	-12.5446	-12.0784	-18.2654	-4.95399
160	-6.62658	-10.597	-9.17031	-14.3855	-3.73961
165	-6.89581	-11.7833	-8.99999	-8.94058	-2.96462
170	-6.44338	-19.6733	-11.3695	-4.61143	-2.86392
175	-6.20536	-20.2822	-15.2412	-2.20328	-2.29734
180	-7.07602	-12.577	-18.3792	-1.74294	-1.84888
185	-8.75028	-12.0395	-19.7777	-3.09369	-2.98613
190	-9.35211	-13.7342	-15.8586	-5.61895	-4.21403
195	-9.56183	-11.1909	-13.8677	-6.70809	-3.92513
200	-12.217	-8.64675	-16.4889	-4.78569	-3.47374
205	-21.1489	-7.72145	-31.1012	-2.26027	-3.75894
210	-25.6038	-5.93526	-18.6916	-0.43927	-1.80708
215	-19.5393	-3.79657	-13.9126	0.284765	-0.06001
220	-17.4596	-3.26525	-11.87	-0.1446	0.25292
225	-13.0607	-4.7626	-10.5525	-1.53321	-0.28625
230	-11.6582	-7.52666	-10.4071	-3.49861	-1.66107
235	-14.7756	-7.65606	-11.1927	-5.60705	-3.11851
240	-25.5553	-4.53077	-11.3588	-7.67404	-3.54309
245	-17.4892	-2.45265	-11.325	-9.89539	-2.62088
250	-16.3497	-2.58643	-12.7746	-12.573	-3.35228
255	-23.9041	-4.02993	-15.6905	-15.2946	-5.77465
260	-18.7683	-2.882	-17.4924	-16.7903	-5.10602
265	-13.7046	-1.05356	-15.2836	-16.7129	-3.03426
270	-13.4659	-1.38235	-11.7013	-14.8446	-2.46372
275	-14.9711	-2.91288	-9.69331	-12.4456	-2.73519
280	-14.1232	-3.37154	-9.67079	-10.518	-2.49078
285	-11.0021	-4.91494	-10.6888	-8.95699	-2.50841
290	-8.35689	-8.09873	-10.5704	-7.87922	-2.64183
295	-6.88116	-3.56258	-8.81978	-7.34618	-0.40964
300	-5.69578	-0.70422	-6.60252	-6.60373	1.497458
305	-3.68107	-1.17053	-4.75314	-5.0728	2.492302
310	-1.65012	-2.45996	-3.63112	-3.529	3.241678
315	-0.5169	-1.53408	-2.98322	-2.7078	4.14139
320	-0.27419	-1.63489	-2.55571	-2.77681	4.267242
325	-0.55676	-5.41959	-2.54981	-3.58201	3.171482
330	-1.04116	-13.9562	-2.80336	-4.47319	1.61697
335	-1.5252	-9.04523	-2.44363	-4.6329	2.053208
340	-1.99255	-7.6828	-1.72227	-4.5709	2.341716
345	-2.69779	-11.2844	-1.78557	-5.20622	1.471064
350	-3.87594	-16.7881	-2.85986	-6.06486	0.007361
355	-5.59481	-12.6747	-4.04773	-5.36019	-0.33408

Peak DG 5.083345251

YZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain(YZ)	-7.42971	-9.71195	-4.25876	-3.29385	0.209592
		5	-0.51446	-7.86262	-0.92016	-2.68028	3.466393
		10	3.070381	-6.85012	0.961784	-2.29181	5.491622
		15	4.272696	-6.61731	1.388673	-2.41398	6.091897
		20	3.811195	-7.27637	0.862292	-2.91321	5.581776
		25	2.38583	-8.35646	-0.01771	-3.86753	4.446067
		30	1.178497	-8.43986	-0.54016	-5.15267	3.568065
		35	1.364704	-7.51378	-0.267	-6.11682	3.680708
		40	2.584156	-7.1414	0.561114	-6.14401	4.469021
		45	3.632001	-8.10807	1.37283	-5.52311	5.136842

50	3.826275	-10.6291	1.829479	-5.14091	5.190413
55	3.224365	-14.4845	2.020397	-5.61763	4.669645
60	2.398224	-17.5228	2.135498	-6.93177	4.027707
65	1.858623	-16.6236	2.26102	-8.21969	3.72671
70	1.666924	-13.8112	2.388255	-8.08654	3.879484
75	1.721359	-11.6404	2.568933	-6.40247	4.359221
80	1.606077	-11.1437	2.82123	-4.43554	4.771414
85	0.70184	-12.432	3.063546	-3.06734	4.732117
90	-1.33089	-14.6917	3.231634	-2.38888	4.223621
95	-4.1626	-16.9465	3.32862	-2.04711	3.574982
100	-6.52235	-20.7466	3.456558	-1.64396	3.167353
105	-7.6967	-18.6453	3.637032	-1.01212	3.343893
110	-8.96468	-13.3113	3.692496	-0.17713	3.75557
115	-11.0754	-11.6792	3.341653	0.763549	3.809809
120	-12.5161	-13.1638	2.540984	1.647815	3.536627
125	-12.9076	-17.2568	1.603928	2.252673	3.113702
130	-16.3348	-21.6206	0.984944	2.320277	2.482791
135	-22.8354	-22.2687	0.697676	1.677587	1.748
140	-12.9595	-16.167	0.244289	0.336988	1.757305
145	-10.128	-11.7897	-0.80565	-1.32324	1.360221
150	-11.5841	-10.55	-2.1243	-2.65013	0.342416
155	-12.9624	-12.2416	-2.56882	-3.80438	-0.38076
160	-8.1908	-16.3127	-2.52454	-2.60277	0.134435
165	-5.16569	-15.8612	-3.71985	-1.8595	0.715319
170	-4.49334	-12.9593	-7.25403	-1.49945	0.408467
175	-5.47113	-12.1773	-13.5017	-1.60275	-0.81166
180	-7.07602	-12.577	-18.3792	-1.74294	-1.84888
185	-7.69226	-12.5243	-21.0372	-1.42829	-2.01425
190	-7.17419	-11.3939	-14.9511	-0.7598	-0.90439
195	-6.86077	-10.1825	-10.4637	-0.29327	0.129944
200	-7.43149	-9.7222	-9.90784	-0.36759	0.128058
205	-9.07587	-10.3174	-12.2456	-0.86584	-0.88664
210	-11.7739	-11.9269	-14.6373	-1.38036	-2.21621
215	-14.5404	-14.0639	-14.2322	-1.70278	-3.08689
220	-14.5237	-15.7225	-13.6991	-1.89485	-3.33675
225	-12.8605	-16.142	-12.2893	-1.83308	-2.8768
230	-11.6539	-15.3063	-10.7433	-1.43862	-2.09862
235	-10.3765	-14.0147	-10.3901	-1.01022	-1.43954
240	-8.74256	-13.2632	-10.4249	-0.76616	-0.91816
245	-7.36512	-13.6152	-9.14481	-0.59671	-0.35722
250	-6.0547	-15.2095	-6.64865	-0.29915	0.435772
255	-4.33681	-17.2431	-4.12288	0.175718	1.535882
260	-2.79157	-17.494	-2.23028	0.698392	2.657534
265	-1.99038	-17.2034	-1.07824	1.106406	3.382609
270	-1.71782	-19.6757	-0.40716	1.357533	3.658943
275	-1.54374	-30.5314	0.197865	1.573468	3.774503
280	-1.67318	-20.5003	1.002995	1.864304	4.299537
285	-2.62329	-14.8997	1.913137	2.206018	4.747754
290	-4.41593	-13.0037	2.558752	2.43402	4.838979
295	-5.95042	-12.2635	2.684659	2.436153	4.694567
300	-5.32153	-11.6469	2.360905	2.291364	4.654139
305	-3.27801	-12.0231	2.03141	2.234882	4.843583
310	-1.66282	-14.9809	2.139288	2.41574	5.114886
315	-0.86135	-22.5258	2.573425	2.719797	5.326744
320	-0.53948	-19.4165	2.795392	2.782955	5.584344
325	-0.60136	-14.8661	2.335672	2.239951	5.381889
330	-1.44131	-13.114	1.148304	1.104251	4.467221
335	-2.94193	-12.1428	0.079424	0.214916	3.504511
340	-3.3583	-12.1048	0.052214	0.324449	3.439211
345	-2.57495	-13.7525	-0.04919	0.346854	3.474908
350	-3.13802	-15.3808	-1.65657	-0.7314	2.320829
355	-6.87928	-12.7402	-4.72453	-2.57018	0.034354

Peak DG 6.091897108

Theta	0 Gain(YZ)					
		-31.1035	-12.4894	-15.465	-14.3455	-10.095
5		-20.1019	-20.6858	-14.4022	-11.0858	-9.61908
10		-13.6659	-10.7916	-13.3162	-8.98082	-5.45327
15		-10.8397	-6.96775	-13.0566	-8.07839	-3.39861
20		-9.5863	-6.16912	-13.5914	-8.01614	-2.91581
25		-8.98577	-6.30884	-14.5819	-8.32107	-3.04034
30		-8.41098	-5.43769	-15.7643	-8.54337	-2.78588
35		-7.49426	-3.75846	-16.7733	-8.40399	-1.96142
40		-6.34806	-2.1759	-17.6514	-8.04515	-0.97813
45		-5.5126	-0.65588	-18.9732	-8.04381	-0.14876
50		-5.40114	0.901427	-18.8016	-9.00523	0.488533
55		-6.03422	2.193429	-17.0697	-11.2036	0.835451
60		-7.00327	3.033163	-18.067	-13.7587	0.806225
65		-7.53571	3.578859	-24.8888	-14.3212	0.744897
70		-7.03599	3.89536	-16.9025	-14.0819	1.405384
75		-5.98112	3.638648	-11.2553	-15.2946	1.826876
80		-5.35762	2.542692	-9.49057	-18.8024	1.326011
85		-5.73553	1.083088	-10.0974	-23.669	0.119622
90		-7.2885	0.16054	-12.0802	-18.3923	-0.81937
95		-9.90414	-0.3588	-14.0489	-13.6214	-1.48298
100		-13.1926	-0.516	-14.3193	-11.6096	-1.84992
105		-16.9837	-0.03935	-11.2341	-11.6337	-1.54885
110		-22.4857	0.131597	-7.74113	-12.7679	-1.25734
115		-32.1381	-0.37304	-5.76609	-12.6812	-1.26071
120		-25.7304	-0.29343	-5.34232	-10.0921	-0.57456
125		-21.5673	0.578597	-6.15233	-7.15482	0.355848
130		-19.6664	0.653283	-7.7752	-5.34866	0.550208
135		-18.1299	-0.86306	-9.76244	-5.22681	-0.43511
140		-16.5537	-4.14519	-11.7032	-7.06031	-2.65823
145		-15.3005	-9.02946	-12.9344	-10.2928	-5.54152
150		-14.6473	-13.1789	-12.6683	-11.5694	-6.92566
155		-14.7573	-12.0808	-11.1465	-11.9481	-6.36117
160		-15.7338	-10.4885	-9.41043	-16.3279	-6.435
165		-17.4507	-10.999	-8.30695	-25.0227	-7.36755
170		-19.2964	-13.6561	-8.27332	-14.5738	-7.0468
175		-21.2833	-13.4365	-9.50377	-11.7315	-7.003
180		-25.0979	-8.9706	-11.9689	-11.0926	-6.53442
185		-23.9566	-5.8837	-14.8262	-10.4101	-5.5603
190		-17.2853	-4.23438	-16.0211	-10.0625	-4.27269
195		-13.4252	-3.37646	-15.8068	-10.729	-3.45313
200		-11.475	-2.77379	-15.618	-11.7233	-2.98463
205		-10.7704	-2.31235	-15.4675	-12.9623	-2.79914
210		-10.9601	-2.26615	-15.1034	-16.3931	-3.21867
215		-11.8919	-2.72537	-14.3882	-19.3047	-3.84821
220		-13.6208	-2.93125	-13.4501	-13.5202	-3.4434
225		-16.3494	-1.94877	-12.9027	-10.5016	-2.63802
230		-20.2141	-0.70652	-13.2061	-9.87428	-2.16421
235		-24.6278	-0.10085	-14.2308	-10.5016	-2.27059
240		-27.5147	0.430754	-15.1123	-11.2577	-2.25845
245		-27.0549	1.493352	-14.9904	-10.9298	-1.44166
250		-24.0934	2.342472	-14.2345	-9.85673	-0.50206
255		-20.1744	2.562953	-13.3875	-9.59006	-0.0573
260		-16.4717	2.703476	-12.4464	-10.8996	0.167576
265		-13.6341	2.83997	-11.295	-13.5112	0.333845
270		-11.5473	2.187265	-10.0157	-15.2358	0.170772
275		-9.88039	0.885359	-8.83562	-13.1908	0.03692
280		-8.61373	0.93226	-7.93827	-9.45941	0.913231
285		-7.95962	2.12512	-7.43331	-6.80685	2.140224
290		-7.95814	2.675814	-7.34324	-5.99627	2.579602
295		-8.28405	2.546964	-7.56155	-7.19459	2.217032
300		-8.30468	2.140662	-7.81175	-10.515	1.469659
305		-7.71783	1.300364	-7.7594	-15.8202	0.603264
310		-7.01609	-0.12016	-7.41288	-22.4882	-0.29525

315	-6.70992	-1.91677	-7.28486	-24.4804	-1.13109
320	-6.79581	-4.07612	-7.9625	-16.3168	-1.7481
325	-6.95285	-6.43332	-9.66013	-12.6121	-2.56355
330	-7.17621	-7.84137	-11.5618	-12.1319	-3.38344
335	-7.88744	-8.95066	-11.9274	-14.6316	-4.44448
340	-9.38488	-10.5586	-11.6001	-21.5341	-6.17129
345	-11.579	-9.70802	-12.1537	-27.2506	-7.12225
350	-14.3084	-7.96294	-13.6379	-20.3286	-6.96782
355	-18.5987	-8.38007	-15.1652	-17.544	-7.89685

Peak DG 2.579602386

(i) If transmit signals are correlated, then
 Directional gain = $10 \log\left[\frac{10G1}{20} + \frac{10G2}{20} + \dots + \frac{10GN}{20}\right]^2 / NANT$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

eg	Theta	0 Gain phi(XY)	4.253877	3.162162	4.475243	3.549304	
		Directional gain = $10 \log\left[\frac{10G1}{20} + \frac{10G2}{20} + \dots + \frac{10GN}{20}\right]^2 / NANT$ dBi					
5470MHz		Peak gain	4.253877	3.162162	4.475243	3.549304	MAX DG gain
XY	Angle	Ant1	Ant2	Ant3	Ant4		DG gain
	Phi	0 Gain phi(XY)	-1.44121	-8.81927	-7.69606	-8.45951	-0.00321
		5	0.631285	-9.85386	-8.15345	-9.66489	0.49292
		10	0.336068	-11.3169	-8.8935	-11.5703	-0.29009
		15	-0.5573	-13.1163	-10.3586	-14.1927	-1.6324
		20	-0.52393	-14.8855	-12.5637	-17.2104	-2.52819
		25	-1.07687	-16.0492	-13.3499	-18.7615	-3.27764
		30	-3.59601	-16.3942	-10.9038	-16.6529	-4.12107
		35	-7.8602	-16.2502	-8.26873	-12.956	-4.66026
		40	-10.5512	-15.7103	-6.5267	-9.41998	-3.9417
		45	-8.0895	-14.5558	-5.405	-6.44511	-1.97052
		50	-4.9886	-12.9146	-4.46369	-4.10656	0.045856
		55	-3.64086	-11.2894	-3.4436	-2.36769	1.453442
		60	-3.34127	-10.0865	-2.39767	-1.15581	2.371749
		65	-2.56369	-9.50308	-1.49319	-0.36816	3.166699
		70	-1.54989	-9.64223	-0.81844	0.115215	3.777251
		75	-1.12231	-10.5675	-0.35697	0.419	4.039336
		80	-0.91371	-12.245	-0.04864	0.663637	4.131566
		85	-0.10182	-14.2182	0.167463	0.918812	4.386367
		90	1.321693	-15.2031	0.345757	1.202736	4.927991
		95	2.510647	-14.7636	0.521312	1.494091	5.500329
		100	2.817709	-14.3101	0.674257	1.765751	5.760232
		105	2.11919	-14.784	0.773098	1.983848	5.594021
		110	0.768177	-16.4011	0.74556	2.137269	5.135344
		115	-0.44029	-18.6529	0.594271	2.229422	4.687265
		120	-0.55601	-19.6191	0.355421	2.259445	4.561179
		125	0.051378	-18.9714	0.052591	2.241259	4.657282
		130	0.082511	-19.0102	-0.39738	2.168496	4.507428
		135	-1.01179	-21.1053	-1.19688	2.023282	3.839283
		140	-2.71958	-26.5875	-2.58672	1.774942	2.757158
		145	-3.64939	-27.3174	-4.70475	1.392361	1.782773
		150	-3.61581	-21.2282	-7.07668	0.828605	1.172919
		155	-3.98838	-18.5595	-7.79385	0.019677	0.667581
		160	-5.47411	-17.9354	-6.51705	-1.07821	0.063989
		165	-6.94795	-18.0654	-5.28247	-2.41221	-0.55512
		170	-6.77999	-17.2252	-4.83543	-3.66669	-0.79763
		175	-6.9376	-15.3266	-5.09871	-4.25267	-0.96342
		180	-7.54741	-13.8306	-5.82147	-4.00716	-1.08625
		185	-5.88406	-13.4292	-6.74847	-3.54064	-0.69582
		190	-3.9494	-14.3147	-7.63251	-3.45092	-0.37943
		195	-3.50328	-16.4945	-8.1076	-3.99464	-0.71309
		200	-4.10121	-18.9324	-7.8344	-5.21196	-1.45628
		205	-4.77597	-18.5004	-7.04841	-7.01625	-2.01492
		210	-5.05483	-16.6286	-6.20837	-9.059	-2.22548
		215	-4.55582	-15.94	-5.25828	-10.2098	-1.90579
		220	-2.76505	-17.0748	-3.77688	-9.01616	-0.58875
		225	-0.83591	-20.8908	-1.81248	-6.48884	1.153031
		230	-0.07981	-31.0043	0.096201	-4.1754	2.439413
		235	-0.78303	-23.8617	1.569192	-2.53749	3.294714
		240	-1.88629	-18.0045	2.514362	-1.59476	3.802757
		245	-1.25506	-15.662	2.99973	-1.25795	4.37046
		250	0.206482	-15.1554	3.175668	-1.38795	4.841997
		255	0.894734	-15.7138	3.224794	-1.79903	4.946682
		260	0.73581	-15.8365	3.322008	-2.26543	4.826479

265	0.226565	-13.9286	3.522175	-2.5742	4.788936
270	-0.06552	-11.2827	3.763143	-2.61751	4.977541
275	-0.28372	-9.25608	3.868716	-2.46373	5.1692
280	-0.86896	-8.13565	3.678468	-2.29782	5.085128
285	-1.62418	-7.92186	3.080315	-2.29553	4.671526
290	-2.52081	-8.5921	2.113805	-2.55445	3.919957
295	-4.64069	-10.0567	1.062143	-3.07783	2.708913
300	-9.13225	-11.7862	0.404693	-3.78185	1.219999
305	-13.7376	-12.2756	0.30133	-4.52816	0.332415
310	-11.6981	-10.9767	0.317785	-5.18234	0.549403
315	-7.22316	-9.37254	-0.05338	-5.68644	1.171384
320	-3.83507	-8.26348	-1.06281	-6.09893	1.618319
325	-3.25024	-7.70365	-2.72247	-6.53117	1.222084
330	-6.5937	-7.53697	-4.71986	-7.04873	-0.38658
335	-13.974	-7.56782	-6.266	-7.56797	-2.36647
340	-6.45501	-7.64311	-6.76616	-7.87881	-1.14503
345	-3.96833	-7.71785	-6.74139	-7.87782	-0.40702
350	-5.90046	-7.8581	-6.85874	-7.76383	-1.03802
355	-6.16355	-8.18298	-7.24044	-7.8746	-1.30987

Theta	0 Gain (XY)	Peak	DG	5.760231665
				-2.47545
5				-2.63944
10				-3.2258
15				-4.42681
20				-3.9956
25				-3.55715
30				-3.92553
35				-4.88895
40				-5.3941
45				-4.47428
50				-3.31967
55				-2.52634
60				-2.13341
65				-1.73793
70				-1.10307
75				-0.52349
80				-0.14228
85				0.141339
90				0.371557
95				0.469333
100				0.324191
105				-0.05364
110				-0.488
115				-0.6705
120				-0.33912
125				0.164022
130				0.56635
135				0.931207
140				1.137689
145				0.934859
150				0.357155
155				-0.4743
160				-1.45176
165				-2.41261
170				-3.58666
175				-5.25974
180				-7.12938
185				-7.81407
190				-6.78919
195				-5.52816
200				-4.65933
205				-3.73643
210				-2.79995

215	-7.6678	-0.78171	-16.0687	-15.5273	-1.65958
220	-7.82888	0.235955	-12.5883	-14.6654	-0.66254
225	-9.5571	0.956548	-10.211	-12.7526	-0.05154
230	-13.0946	1.432022	-8.81609	-10.6348	0.244212
235	-17.0315	1.718309	-8.31005	-9.01914	0.414162
240	-17.5433	1.827657	-8.59845	-8.22408	0.53251
245	-15.0105	1.776321	-9.56073	-8.37466	0.499823
250	-11.6173	1.563649	-10.9999	-9.54291	0.319352
255	-8.75829	1.187886	-12.6163	-11.719	0.02087
260	-7.21432	0.642324	-14.0475	-14.4569	-0.4442
265	-7.16982	-0.0171	-15.0233	-16.1017	-1.06082
270	-8.39708	-0.71545	-15.4754	-15.9741	-1.78448
275	-10.3014	-1.36176	-15.4052	-15.9201	-2.5568
280	-12.2973	-1.91804	-14.7764	-16.9479	-3.29148
285	-14.1535	-2.40827	-13.7695	-19.1502	-3.95098
290	-15.9854	-2.85951	-12.8833	-22.0539	-4.55293
295	-18.5562	-3.22796	-12.5594	-24.3413	-5.1622
300	-20.0468	-3.39452	-12.9114	-25.3978	-5.5485
305	-14.7442	-3.29455	-13.3234	-25.9067	-4.92962
310	-9.54731	-3.01441	-12.5358	-24.9901	-3.52806
315	-6.58298	-2.71957	-10.7039	-22.4015	-2.11763
320	-5.85002	-2.51941	-9.11622	-19.7595	-1.35539
325	-7.20093	-2.41061	-8.31627	-17.7354	-1.37197
330	-9.70243	-2.31735	-8.30932	-16.3343	-1.77811
335	-11.6309	-2.15268	-8.85523	-15.4409	-2.08943
340	-15.1127	-1.89777	-9.55437	-14.9625	-2.55257
345	-31.7757	-1.60447	-10.0457	-14.8072	-3.39144
350	-18.4436	-1.35002	-10.3771	-14.8856	-2.74157
355	-14.6881	-1.18855	-10.8777	-15.1073	-2.39562

Peak DG 1.137689033

XZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain (XZ)	-16.6872	-12.0629	-17.9659	-14.2726	-8.9277
		5	-17.9374	-16.5212	-14.4467	-13.3514	-9.36297
		10	-17.8414	-21.5792	-11.2554	-11.8695	-8.63302
		15	-17.9711	-17.4756	-9.92861	-11.0306	-7.33342
		20	-18.7643	-15.8583	-10.6958	-11.4746	-7.58563
		25	-17.2384	-16.3577	-13.6213	-13.6526	-9.0493
		30	-13.9627	-16.354	-18.4007	-18.4042	-10.5605
		35	-11.35	-14.3039	-24.2693	-24.3705	-10.6774
		40	-9.85612	-11.6076	-22.6407	-21.5939	-8.62041
		45	-9.70484	-10.1903	-15.2911	-19.159	-6.75745
		50	-10.0185	-11.0502	-11.3679	-13.5869	-5.3911
		55	-7.98604	-15.4154	-9.63491	-8.22122	-3.83464
		60	-5.10496	-30.9211	-9.25489	-5.00668	-2.55402
		65	-3.63135	-18.115	-9.73156	-3.55352	-1.04671
		70	-3.62158	-12.7239	-10.6432	-3.33539	-0.60728
		75	-4.35849	-10.1372	-11.2125	-3.77861	-0.72901
		80	-5.11641	-9.15281	-10.4259	-4.27509	-0.83894
		85	-6.08672	-10.0948	-8.24822	-4.34036	-0.90258
		90	-7.54741	-13.8306	-5.82147	-4.00716	-1.08625
		95	-9.08463	-21.4206	-4.11826	-4.03086	-1.47608
		100	-11.654	-17.9741	-3.44496	-5.32841	-1.9288
		105	-17.8078	-14.2896	-3.65863	-8.431	-3.37044
		110	-12.4322	-13.1817	-4.26182	-10.783	-3.35349
		115	-7.39053	-12.5266	-4.54732	-8.21174	-1.70043
		120	-6.23901	-12.0321	-4.2325	-6.2219	-0.72102
		125	-7.8337	-12.9087	-3.9293	-6.03135	-1.07324
		130	-11.4954	-16.4101	-4.551	-7.07938	-2.78013
		135	-15.0458	-22.5315	-6.81402	-8.46678	-5.31008
		140	-14.6297	-21.9455	-10.9515	-9.09235	-6.93593
		145	-11.826	-22.4329	-13.7886	-8.51338	-6.82508
		150	-10.5232	-16.9761	-13.434	-7.18114	-5.27358
		155	-12.3133	-10.0648	-15.4624	-5.88454	-4.20367

160	-20.0482	-6.39575	-23.537	-5.30626	-4.52632
165	-24.4247	-4.83776	-27.525	-5.78844	-4.51973
170	-15.5326	-4.60595	-18.0844	-7.29158	-3.65991
175	-13.4476	-4.96965	-14.8016	-9.24348	-3.71585
180	-13.0841	-5.425	-14.2062	-10.5602	-4.09265
185	-14.1332	-6.18845	-17.095	-10.7915	-5.07259
190	-16.2868	-7.93556	-23.7748	-10.5215	-6.77353
195	-14.9684	-11.2954	-17.3255	-10.3573	-7.02858
200	-12.2019	-16.6193	-14.1964	-10.4407	-7.046
205	-11.1897	-19.0124	-14.5465	-10.6531	-7.24548
210	-11.2506	-14.8506	-15.5707	-11.255	-6.9847
215	-10.8582	-11.9328	-14.2164	-12.1877	-6.19561
220	-9.34803	-10.7237	-12.0335	-11.8503	-4.9008
225	-7.72949	-10.5549	-9.96047	-10.5573	-3.59858
230	-7.09711	-10.4009	-8.27159	-10.6073	-2.94793
235	-8.04457	-9.56636	-7.39517	-12.9133	-3.21409
240	-10.6781	-8.33408	-7.3242	-15.9279	-3.97402
245	-12.7346	-7.50341	-7.55824	-14.4308	-4.00562
250	-10.4544	-7.96023	-7.48346	-12.3989	-3.33414
255	-7.42765	-10.7088	-7.00721	-11.4147	-2.90366
260	-4.96374	-17.6153	-6.6163	-10.3609	-2.69495
265	-2.93478	-15.0401	-6.78984	-9.18337	-1.43559
270	-1.44121	-8.81927	-7.69606	-8.45951	-0.00321
275	-0.68893	-6.03234	-9.11208	-8.35481	0.650399
280	-0.78729	-5.19844	-10.2939	-8.68211	0.574402
285	-1.64044	-5.86937	-10.1377	-9.15081	-0.0146
290	-2.88366	-8.05286	-8.78007	-9.73107	-0.89939
295	-4.03822	-12.4956	-7.50905	-10.8449	-2.08262
300	-4.85432	-18.822	-6.94096	-12.9702	-3.34504
305	-5.23729	-13.6757	-6.97646	-15.9049	-3.33429
310	-5.32895	-10.653	-7.16474	-17.2066	-3.0301
315	-5.67631	-10.7021	-7.07593	-15.1629	-2.91868
320	-6.66987	-11.4237	-6.67824	-12.8946	-2.95923
325	-8.07594	-11.0074	-6.27655	-11.8629	-2.99377
330	-9.15264	-11.5636	-6.12286	-11.9614	-3.35481
335	-9.50085	-13.9822	-6.33622	-12.1949	-3.99501
340	-9.64729	-13.6074	-7.12322	-11.8003	-4.1837
345	-10.3405	-10.9124	-8.88167	-11.6179	-4.35822
350	-11.972	-9.81386	-12.0287	-12.3645	-5.46301
355	-14.3521	-10.1916	-16.3737	-13.6739	-7.33162

Theta	0 Gain(XZ)	Peak	DG	0.650398667
				-2.02983
5				-0.2605
10				1.638225
15				2.567196
20				2.533472
25				2.138426
30				2.306309
35				3.21609
40				4.235344
45				4.775637
50				4.461305
55				3.250135
60				1.857983
65				1.234456
70				0.835446
75				-0.11973
80				-1.82732
85				-4.25238
90				-7.12938
95				-9.26185
100				-8.77293
105				-6.95058

110	-8.54125	-9.14914	-21.9991	-15.9332	-6.35724
115	-8.35191	-8.99203	-22.7891	-15.1727	-6.15804
120	-8.74065	-7.98426	-17.7809	-16.3112	-5.6265
125	-8.50713	-9.53492	-12.9273	-18.4047	-5.55501
130	-7.40714	-14.7446	-11.4172	-14.6821	-5.4945
135	-6.02132	-13.8328	-12.365	-10.8104	-4.20646
140	-4.89124	-10.4682	-14.2797	-9.73155	-3.17019
145	-4.29302	-10.9078	-15.6729	-11.4376	-3.56034
150	-4.21639	-13.7495	-14.922	-15.9226	-4.73042
155	-4.4401	-14.457	-11.4818	-19.9113	-4.75589
160	-4.68427	-13.7693	-9.66332	-14.7021	-3.7363
165	-4.7965	-16.4693	-11.1415	-7.61257	-2.97866
170	-4.93172	-22.5177	-18.3675	-2.97592	-2.66124
175	-5.56433	-14.7468	-24.3875	-0.6623	-1.42705
180	-7.2665	-10.7304	-16.8542	-0.3103	-0.75991
185	-10.4959	-9.11867	-19.3908	-1.55413	-1.98114
190	-15.0847	-7.12862	-43.5546	-3.31803	-3.70603
195	-19.7916	-4.63706	-23.2926	-3.49211	-2.9372
200	-30.4248	-3.36518	-25.7772	-2.24938	-2.31441
205	-22.6097	-3.6967	-22.0647	-1.00146	-1.42506
210	-15.939	-4.29551	-14.6655	-0.12932	-0.26686
215	-15.2944	-3.50684	-12.1079	0.186498	0.463034
220	-18.3491	-2.87865	-10.9671	-0.19224	0.423206
225	-16.6571	-3.67655	-9.6747	-1.22763	-0.00725
230	-13.0854	-5.84953	-8.83951	-2.71921	-0.79885
235	-12.8682	-8.49407	-8.92052	-4.42787	-2.14647
240	-14.6505	-6.26013	-9.59144	-6.25025	-2.55723
245	-14.2521	-2.51061	-10.8773	-8.31953	-1.87128
250	-13.1735	-1.6831	-13.3101	-10.8623	-2.23838
255	-15.0764	-3.91255	-16.3945	-13.9202	-4.6834
260	-22.8807	-4.49701	-16.8929	-16.608	-6.38947
265	-21.0649	-1.53196	-14.2635	-16.6026	-3.95686
270	-13.9949	-1.13759	-11.8033	-15.3806	-2.47545
275	-10.6688	-2.3716	-11.2799	-14.7811	-2.44611
280	-8.54492	-1.54489	-13.0424	-12.5132	-1.56359
285	-6.96737	-1.4849	-14.4459	-8.97644	-0.74058
290	-5.74034	-6.5112	-12.1465	-6.65707	-1.40857
295	-4.72705	-11.4151	-9.52531	-5.71905	-1.40838
300	-3.7032	-2.82621	-6.73161	-5.35949	1.494086
305	-2.57532	-1.66549	-4.05928	-4.83621	2.824754
310	-1.61168	-2.72439	-2.19959	-4.40083	3.346942
315	-1.10298	-1.10927	-1.14129	-4.6165	4.151214
320	-1.06105	0.115026	-0.77305	-5.59709	4.449563
325	-1.29899	-1.7716	-1.21746	-7.03093	3.495428
330	-1.67775	-7.92511	-2.35702	-8.1718	1.505673
335	-2.3508	-12.1848	-3.14025	-8.3966	0.364568
340	-3.80544	-9.8125	-3.03491	-8.39733	0.230523
345	-6.71798	-13.7191	-3.36775	-8.84387	-1.37412
350	-11.6442	-18.5367	-4.78522	-8.54055	-3.53999
355	-17.0935	-11.2511	-6.16987	-6.37878	-3.19267

Peak DG 4.775637293

YZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain(YZ)	-23.8785	-8.59134	-5.82525	-3.93157	-2.02983
		5	-4.08958	-7.28672	-2.93599	-3.74698	1.653742
		10	1.064501	-6.67206	-1.00963	-3.94993	3.860044
		15	3.02006	-6.55161	-0.38354	-4.30119	4.741845
		20	3.119358	-6.90893	-0.56686	-4.64741	4.624126
		25	2.129577	-7.4485	-0.99562	-5.23689	3.920658
		30	1.050624	-7.51183	-1.12807	-5.89727	3.331728
		35	1.053228	-7.15234	-0.68718	-5.95172	3.509506
		40	2.252689	-7.1821	0.127018	-5.19166	4.345214
		45	3.59364	-8.05617	0.883402	-4.29633	5.165192

50	4.253877	-9.72805	1.350575	-4.08428	5.462995
55	4.023923	-11.735	1.584499	-4.99706	5.131676
60	3.154996	-13.0566	1.731906	-6.89912	4.435981
65	2.175614	-12.833	1.880642	-8.62864	3.876157
70	1.57672	-11.4099	2.075583	-8.48069	3.847158
75	1.464121	-9.90241	2.433009	-6.69591	4.321413
80	1.497281	-9.3362	2.919858	-4.68525	4.890811
85	1.116408	-9.97379	3.40705	-3.30868	5.148479
90	-0.06552	-11.2827	3.763143	-2.61751	4.977541
95	-1.95687	-12.9892	3.975932	-2.1562	4.565727
100	-3.7536	-16.3476	4.145443	-1.49272	4.230796
105	-4.62685	-17.3414	4.35028	-0.60794	4.363753
110	-5.17693	-12.4359	4.475243	0.315552	4.863044
115	-6.42328	-10.2466	4.302787	1.108313	5.013131
120	-8.86925	-10.6977	3.77098	1.687807	4.634857
125	-12.6948	-12.8748	3.037023	2.067413	3.93542
130	-18.3776	-15.2506	2.362223	2.19026	3.205315
135	-25.9135	-15.4471	1.825899	1.859468	2.581514
140	-16.8325	-12.7139	1.220601	0.862201	2.380532
145	-11.9664	-10.4583	0.363552	-0.78801	1.966479
150	-10.1715	-10.5859	-0.58858	-2.69352	1.113298
155	-9.7344	-14.3138	-1.38249	-3.95429	0.024438
160	-8.9862	-20.2051	-2.33306	-3.66177	-0.56752
165	-7.90097	-12.8209	-4.24983	-2.28664	0.055485
170	-7.55148	-9.45645	-7.79786	-1.01617	0.226873
175	-7.79033	-9.10732	-12.9356	-0.37245	-0.25627
180	-7.2665	-10.7304	-16.8542	-0.3103	-0.75991
185	-5.9507	-13.425	-15.8709	-0.56853	-0.84438
190	-5.16627	-15.1745	-12.6897	-0.90417	-0.63445
195	-5.50277	-14.4463	-11.0977	-1.21416	-0.59083
200	-6.99986	-13.2893	-12.095	-1.44735	-1.11925
205	-9.426	-12.9988	-15.0857	-1.49702	-2.05022
210	-11.7493	-13.2738	-15.1239	-1.3537	-2.46142
215	-11.9522	-13.5829	-12.6996	-1.235	-2.15183
220	-10.6014	-14.3945	-11.326	-1.37758	-1.8812
225	-9.50997	-16.4089	-10.5428	-1.7697	-1.94622
230	-9.08107	-18.6402	-10.0353	-2.13616	-2.1282
235	-8.93656	-17.6514	-9.67198	-2.18499	-1.96838
240	-8.19914	-15.3591	-8.71012	-1.85466	-1.23814
245	-6.22828	-14.169	-6.6769	-1.23483	0.064722
250	-3.55267	-14.293	-4.23242	-0.45895	1.655859
255	-1.12746	-15.1629	-2.15305	0.273048	3.122443
260	0.534352	-15.2517	-0.76263	0.790037	4.21002
265	1.312405	-14.5109	-0.01897	1.055418	4.806629
270	1.321693	-15.2031	0.345757	1.202736	4.927991
275	0.885772	-19.9285	0.709876	1.390022	4.778213
280	0.458115	-38.3021	1.289768	1.670379	4.706639
285	0.379015	-19.1939	1.960416	1.92314	5.238008
290	0.574693	-15.5432	2.389442	2.01321	5.604614
295	0.637639	-12.9378	2.34351	1.949915	5.718011
300	0.23052	-10.1172	1.960447	1.969317	5.680891
305	-0.54395	-8.87021	1.710102	2.35489	5.639928
310	-0.98141	-10.0123	1.992861	3.023524	5.7632
315	-0.68068	-14.2014	2.553117	3.549304	5.946526
320	-0.42251	-23.3393	2.759488	3.472568	5.76964
325	-1.06931	-21.3367	2.131828	2.53809	5.075151
330	-3.07272	-15.5891	0.617618	0.856975	3.652858
335	-6.3971	-13.0338	-0.88554	-0.57996	2.077022
340	-7.9808	-12.872	-1.11972	-0.88075	1.615442
345	-5.88998	-14.5894	-1.15413	-1.14167	1.750021
350	-5.21981	-14.3133	-2.55753	-2.28965	1.03835
355	-8.78901	-11.022	-5.4227	-3.65335	-0.73869

Peak DG 5.946526308

Theta	0 Gain(YZ)					
		-16.6872	-12.0629	-17.9659	-14.2726	-8.9277
5		-14.0743	-23.3153	-13.2089	-11.3618	-8.46178
10		-13.0238	-12.264	-11.9159	-9.58613	-5.57844
15		-12.5775	-7.56781	-13.8756	-8.7452	-4.28467
20		-12.0128	-6.45665	-20.815	-8.44447	-4.46867
25		-10.8977	-6.83602	-22.3163	-8.30397	-4.42697
30		-9.19893	-6.48556	-16.2013	-8.09998	-3.29172
35		-7.39279	-4.79744	-14.739	-7.77804	-1.9697
40		-6.15465	-2.93553	-14.8583	-7.55224	-0.88873
45		-5.9412	-1.09207	-14.5565	-7.84349	-0.09197
50		-6.95299	0.743835	-13.1575	-9.08043	0.464681
55		-9.02829	2.14849	-11.783	-11.673	0.638909
60		-11.0482	2.866785	-11.7572	-16.2657	0.354612
65		-10.9986	3.143121	-14.1418	-23.1543	-0.07093
70		-9.02536	3.162162	-19.739	-22.2169	-0.11603
75		-6.93936	2.582095	-19.0222	-19.3263	0.06912
80		-5.91716	1.113712	-15.4773	-18.7195	-0.32297
85		-6.44493	-0.40161	-14.9337	-17.9225	-1.22367
90		-8.39708	-0.71545	-15.4754	-15.9741	-1.78448
95		-10.0223	-0.47977	-16.3584	-14.8235	-1.96408
100		-9.91419	0.048918	-19.6457	-15.5362	-1.95798
105		-10.8437	0.782741	-19.0168	-17.8924	-1.82653
110		-15.4797	0.730401	-11.8708	-18.0277	-1.74258
115		-23.026	-0.2639	-8.07842	-14.0054	-1.75243
120		-14.8585	-0.86714	-6.55619	-9.88326	-0.55435
125		-12.3171	-0.74119	-6.61292	-6.88605	0.340726
130		-12.9509	-1.51765	-7.86143	-5.5133	-0.00257
135		-15.2328	-3.77118	-9.8891	-6.13572	-1.75219
140		-17.0653	-5.84633	-11.8262	-9.0889	-4.0284
145		-16.4959	-5.70175	-12.3584	-12.5576	-4.84453
150		-14.8487	-5.1287	-11.321	-11.2624	-3.87581
155		-14.2842	-5.15147	-9.80055	-10.8937	-3.38435
160		-15.5751	-6.2051	-8.68814	-14.4042	-4.33506
165		-16.2904	-9.61748	-8.50128	-22.8847	-6.63912
170		-13.5729	-18.6214	-9.53241	-19.3388	-8.30873
175		-11.95	-11.249	-11.8481	-14.8691	-6.35115
180		-13.0841	-5.425	-14.2062	-10.5602	-4.09265
185		-16.6476	-2.83588	-13.8568	-7.64909	-2.58071
190		-14.9303	-1.85105	-12.8033	-7.00808	-1.60486
195		-10.7897	-1.66597	-13.2462	-8.61351	-1.39738
200		-8.90218	-1.44869	-15.2742	-12.187	-1.81235
205		-8.72708	-0.7938	-17.3324	-17.6238	-2.23519
210		-9.70789	-0.2144	-17.1633	-40.4349	-2.78847
215		-11.2584	-0.36617	-16.313	-16.5038	-2.29993
220		-12.6506	-1.33855	-16.109	-10.3508	-2.21135
225		-13.6452	-2.05721	-16.6279	-8.00884	-2.25836
230		-14.7008	-1.54889	-17.7871	-7.59982	-2.12128
235		-16.0605	-0.90882	-18.9068	-8.18822	-2.15237
240		-17.4223	-0.09575	-18.6934	-9.12218	-1.99442
245		-18.2344	1.541523	-17.3214	-9.86104	-1.0406
250		-17.9408	2.824135	-15.5339	-10.1558	-0.04874
255		-15.9213	3.040308	-13.6321	-10.7756	0.325669
260		-13.1112	2.861404	-11.9811	-12.566	0.416673
265		-10.7972	2.758184	-10.8662	-14.7731	0.551063
270		-8.98589	1.884541	-10.362	-14.5911	0.371557
275		-7.33476	0.268898	-10.3147	-11.8489	0.094214
280		-6.06261	0.485978	-10.3839	-8.3847	0.978721
285		-5.63597	1.829218	-10.3232	-5.90889	2.171982
290		-6.18968	2.22601	-10.3412	-5.13637	2.411812
295		-7.35736	2.347187	-10.9772	-6.26288	1.965147
300		-8.14099	2.60753	-12.7925	-9.45599	1.24329
305		-7.69988	1.993876	-15.8122	-14.7548	0.06496
310		-6.78358	0.007226	-16.6371	-18.4054	-1.27869

315	-6.58908	-2.37705	-14.3791	-15.3509	-1.98883
320	-7.66225	-3.92468	-13.5785	-12.3743	-2.49653
325	-9.7545	-5.37003	-15.1408	-11.1317	-3.63054
330	-11.3484	-6.48062	-18.7872	-11.8452	-5.07
335	-11.7188	-6.93617	-21.196	-14.8139	-6.21162
340	-12.6901	-7.81036	-20.2178	-20.9772	-7.68329
345	-15.5959	-8.23352	-19.9716	-29.1181	-9.2573
350	-21.2877	-7.7301	-22.1015	-22.8401	-9.79564
355	-21.8867	-8.34866	-25.5386	-18.1267	-9.89915

Peak DG 2.411811992

(i) If transmit signals are correlated, then

Directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

eg	Theta	0 Gain phi(XY)	2.914317	3.204458	2.50879	2.893682	
		Directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ dBi					
5725MHz		Peak gain	2.914317	3.204458	2.50879	2.893682	MAX DG gain
XY	Angle		Ant1	Ant2	Ant3	Ant4	DG gain
	Phi	0 Gain phi(XY)	-5.01467	-13.313	-11.9064	-5.75711	-2.23275
		5	-3.06775	-12.4956	-11.132	-4.51108	-0.85651
		10	-2.39889	-11.516	-10.3341	-3.83324	-0.12361
		15	-2.99449	-10.8544	-9.92271	-4.03887	-0.25475
		20	-4.60143	-10.4327	-9.13393	-5.2283	-0.97934
		25	-6.45768	-10.013	-7.35324	-7.41138	-1.69136
		30	-7.18616	-9.34002	-5.35058	-10.6864	-1.88031
		35	-6.68939	-8.40089	-3.88429	-15.037	-1.6206
		40	-6.11518	-7.47184	-3.05109	-17.016	-1.09832
		45	-5.91765	-6.86138	-2.58319	-14.5087	-0.48791
		50	-5.95772	-6.7108	-2.12029	-12.8822	-0.10587
		55	-5.91559	-6.96727	-1.48556	-12.8167	0.111729
		60	-5.45183	-7.36928	-0.77442	-13.5169	0.372205
		65	-4.37855	-7.5948	-0.1784	-13.7886	0.848675
		70	-2.86982	-7.58247	0.187017	-13.5008	1.472324
		75	-1.34343	-7.6187	0.332468	-13.5357	2.014893
		80	-0.14485	-8.03979	0.390142	-13.9973	2.362905
		85	0.57124	-9.06544	0.53794	-14.0418	2.550474
		90	0.778088	-10.8178	0.868538	-13.5359	2.597565
		95	0.56409	-13.4218	1.252434	-13.6823	2.419447
		100	0.060611	-17.1594	1.419425	-15.5277	1.905343
		105	-0.55127	-22.8693	1.130375	-19.2115	1.057199
		110	-1.13385	-27.9786	0.262534	-19.5352	0.2302
		115	-1.65403	-21.1839	-1.11525	-16.6601	-0.26341

120	-2.14496	-16.2914	-2.74703	-15.8966	-0.80155
125	-2.62583	-13.2014	-4.21118	-16.8473	-1.32312
130	-3.12083	-11.2826	-5.20988	-16.2953	-1.55022
135	-3.77481	-10.3362	-5.82251	-13.554	-1.54901
140	-4.87856	-10.3293	-6.50564	-11.7139	-1.89937
145	-6.79359	-11.2803	-7.87924	-11.4856	-3.09489
150	-9.82845	-13.0232	-10.6224	-12.5126	-5.37657
155	-13.3552	-14.4645	-15.9328	-13.2102	-8.15337
160	-13.3951	-14.0433	-30.3049	-11.911	-9.15893
165	-10.7236	-12.9466	-19.4506	-10.3319	-6.67802
170	-8.36561	-12.8368	-13.2124	-9.86216	-4.80992
175	-6.25666	-14.2641	-9.68517	-10.4968	-3.69712
180	-4.20503	-16.677	-7.13399	-10.9594	-2.58112
185	-2.44275	-16.1275	-5.24232	-9.59829	-0.96791
190	-1.24338	-13.1316	-4.07781	-7.67616	0.529404
195	-0.71076	-11.3571	-3.69139	-6.72229	1.239936
200	-0.7548	-11.2901	-3.83107	-7.20121	1.096677
205	-1.06811	-13.0353	-3.80259	-9.40854	0.387415
210	-1.2453	-17.1963	-3.0818	-13.9982	-0.42084
215	-1.17921	-26.4401	-1.9962	-22.729	-0.97128
220	-1.14242	-28.4529	-0.9468	-26.5071	-0.63712
225	-1.31223	-22.9938	-0.011	-24.5201	-0.04882
230	-1.50008	-23.6253	0.72037	-24.4342	0.230375
235	-1.35623	-29.812	1.070531	-17.6801	0.626288
240	-0.86627	-31.1332	0.977061	-12.5168	1.170691
245	-0.34515	-22.8546	0.62378	-9.21829	1.775109
250	-0.03679	-19.4313	0.338339	-7.12882	2.219767
255	0.021798	-18.1971	0.318249	-5.9731	2.495435
260	-0.074	-18.9071	0.443402	-5.54315	2.560073
265	-0.18606	-22.8181	0.431928	-5.53589	2.381088
270	-0.26951	-27.3786	0.026071	-5.55449	2.085583
275	-0.48922	-17.5105	-0.9303	-5.30236	2.007266
280	-1.15523	-12.4276	-2.33907	-4.77992	1.781401
285	-2.56655	-9.99767	-3.40914	-4.28714	1.387053

290	-4.94724	-9.461	-2.881	-4.25686	0.955322
295	-8.42051	-10.7872	-1.24406	-5.04367	0.399762
300	-12.8669	-14.3012	0.155939	-6.82165	-0.47244
305	-17.3362	-16.677	0.757348	-9.4285	-1.35389
310	-19.0414	-11.9827	0.458182	-11.9928	-1.57189
315	-17.7194	-8.32525	-0.65091	-13.1236	-1.60792
320	-15.6187	-6.35827	-2.34556	-12.7264	-1.71886
325	-12.3609	-5.49675	-4.21616	-12.2977	-1.77565
330	-8.72966	-5.39295	-5.86943	-13.5492	-1.81728
335	-6.11944	-5.87707	-7.16109	-19.1351	-2.2049
340	-4.982	-6.9129	-8.13883	-25.283	-2.72808
345	-5.37429	-8.54157	-9.04853	-13.464	-2.6287
350	-6.87323	-10.697	-10.2261	-9.31504	-3.1268
355	-7.18372	-12.733	-11.5183	-7.24174	-3.29804

Peak DG 2.597565352

Theta	0 Gain (XY)	-13.6162	-0.43298	-17.5367	-5.07903	-0.6774
	5	-13.8416	0.161104	-14.969	-3.69419	0.231199
	10	-14.9969	0.32996	-13.9057	-2.01947	0.870641
	15	-17.6016	0.08186	-13.6741	-0.59416	1.146887
	20	-20.2863	-0.46038	-13.963	0.315507	1.147635
	25	-20.081	-1.08537	-14.9187	0.746565	1.026372
	30	-19.63	-1.54667	-17.0398	0.897066	0.790843
	35	-20.4956	-1.70572	-20.9716	1.017368	0.546322
	40	-20.5388	-1.63239	-24.0566	1.24761	0.586875
	45	-18.8837	-1.56012	-20.4299	1.598694	1.00976
	50	-18.0979	-1.74549	-17.8388	2.02059	1.336182
	55	-19.0153	-2.37763	-17.4879	2.421321	1.317468
	60	-20.1393	-3.4774	-18.9698	2.740912	1.031203
	65	-18.2594	-4.63394	-21.5624	2.893682	0.778861
	70	-15.543	-4.84217	-22.9023	2.830018	0.813879
	75	-14.0144	-3.75007	-20.9011	2.53373	1.128291
	80	-13.8006	-2.31945	-17.4556	2.047235	1.473015
	85	-14.8755	-1.22885	-14.424	1.445182	1.653973
	90	-17.1808	-0.58841	-12.4119	0.846885	1.637066

95	-19.4586	-0.27739	-11.4284	0.362396	1.532373
100	-18.3564	-0.14302	-11.2848	0.019181	1.508966
105	-15.813	-0.09648	-11.7629	-0.23023	1.521426
110	-14.0651	-0.12411	-12.7365	-0.41983	1.464946
115	-13.103	-0.18436	-14.2338	-0.47837	1.366955
120	-12.5898	-0.10597	-16.3831	-0.30685	1.361904
125	-12.3562	0.346247	-18.9186	0.086525	1.601828
130	-12.4898	1.1854	-19.6325	0.638997	2.158788
135	-13.3176	2.131203	-17.3431	1.323684	2.904933
140	-15.3533	2.865594	-14.8045	2.003172	3.53007
145	-19.0128	3.204458	-12.8143	2.474911	3.853029
150	-19.5486	3.065262	-11.1437	2.568509	3.94512
155	-15.0295	2.432867	-9.77185	2.293154	3.882689
160	-12.1852	1.300582	-8.92202	1.813555	3.514931
165	-11.3621	-0.3168	-8.71062	1.363101	2.83296
170	-12.4882	-2.35693	-9.05552	1.075834	1.883189
175	-16.1953	-4.61668	-9.81347	0.902109	0.729445
180	-25.8783	-6.65038	-11.0187	0.769418	-0.49269
185	-21.5412	-7.97799	-12.8789	0.679469	-0.95752
190	-15.0164	-8.55551	-15.3435	0.741242	-0.86245
195	-12.1112	-8.59909	-17.4748	1.055562	-0.52578
200	-10.5357	-8.11393	-17.4902	1.543346	0.078607
205	-9.49272	-7.08772	-14.6857	1.99631	0.907293
210	-8.66749	-5.72969	-11.1385	2.220313	1.778078
215	-8.04335	-4.30421	-8.44648	2.122175	2.477965
220	-7.69416	-2.95293	-6.83458	1.715471	2.915714
225	-7.65135	-1.71558	-6.04518	1.112221	3.138181
230	-7.9022	-0.59297	-5.70541	0.434102	3.246359
235	-8.48979	0.385289	-5.5627	-0.2964	3.272626
240	-9.60532	1.132474	-5.68205	-1.22091	3.10348
245	-11.5505	1.526851	-6.31246	-2.49506	2.576093
250	-14.6557	1.461129	-7.69421	-4.11232	1.596052
255	-18.9831	0.908873	-9.99669	-5.69	0.250309
260	-22.91	0.119408	-13.0299	-6.26631	-0.94158

265	-23.1359	-0.27018	-14.8537	-5.3299	-1.10393
270	-21.2857	0.209266	-13.7217	-3.8625	-0.18579
275	-19.59	1.052271	-12.2694	-2.76245	0.846455
280	-18.8395	1.506635	-11.6964	-2.26752	1.341663
285	-17.8624	1.197062	-11.7403	-2.2923	1.22348
290	-15.0147	0.014277	-11.8752	-2.62653	0.720771
295	-12.1712	-1.83268	-11.8797	-3.03222	0.069561
300	-10.838	-3.42178	-11.8804	-3.38992	-0.47726
305	-11.358	-3.53637	-11.8845	-3.85492	-0.76139
310	-13.4961	-2.81295	-11.6107	-4.7947	-1.04499
315	-13.7306	-2.40682	-10.9082	-6.60763	-1.33049
320	-10.342	-2.53762	-10.0611	-9.6097	-1.43493
325	-7.76094	-2.87982	-9.45866	-13.9466	-1.59573
330	-6.68049	-3.02046	-9.33687	-18.5889	-1.784
335	-6.789	-2.89543	-9.8605	-17.6639	-1.79608
340	-7.78666	-2.71788	-11.2542	-12.9933	-1.73921
345	-9.42139	-2.51525	-13.9325	-9.41732	-1.79903
350	-11.3961	-2.06661	-18.3797	-7.24605	-1.87195
355	-13.037	-1.2851	-21.0955	-6.04387	-1.55481

Peak DG 3.945119743

XZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain (XZ)	-31.8216	-11.3118	-17.0439	-14.2077	-9.99397
		5	-34.4371	-16.9107	-16.1275	-10.741	-10.3391
		10	-23.772	-14.6219	-16.2383	-9.82326	-8.78463
		15	-20.5034	-11.1416	-21.0066	-10.6253	-8.46201
		20	-21.9632	-12.0146	-29.563	-11.6956	-10.1178
		25	-17.725	-19.6996	-16.5023	-11.5691	-9.80239
		30	-11.8209	-16.6005	-13.4492	-11.2168	-7.01523
		35	-9.18684	-10.0895	-11.9359	-11.1543	-4.50839
		40	-8.76999	-9.19022	-9.85187	-10.3296	-3.49419
		45	-9.32595	-13.3452	-8.52036	-9.14578	-3.87124
		50	-9.61261	-19.6189	-7.78325	-8.97623	-4.44357
		55	-9.39207	-8.63593	-6.33453	-10.2432	-2.50514
		60	-8.21161	-5.07476	-5.28193	-12.4237	-1.26139

65	-6.26247	-4.52427	-6.10358	-13.7894	-1.0125
70	-4.83872	-4.85322	-8.77195	-12.8033	-1.21932
75	-4.15225	-4.44151	-9.88721	-10.5734	-0.74282
80	-3.70331	-4.95243	-8.33564	-9.04439	-0.20063
85	-3.5303	-9.06548	-7.41144	-9.10828	-0.94124
90	-4.20503	-16.677	-7.13399	-10.9594	-2.58112
95	-5.96233	-8.66576	-7.45752	-14.2321	-2.55613
100	-8.40189	-6.34234	-8.33302	-17.021	-3.18552
105	-10.1105	-6.91719	-8.3222	-16.5498	-3.77138
110	-9.2402	-7.46059	-7.52197	-13.9412	-3.15866
115	-7.48559	-8.06092	-7.75608	-11.9051	-2.60882
120	-6.87565	-11.2022	-9.3741	-11.1791	-3.4499
125	-7.65393	-14.6066	-11.1845	-11.3047	-4.81878
130	-9.31521	-11.7028	-11.0615	-11.5949	-4.8435
135	-9.9898	-11.8755	-9.03373	-11.9006	-4.59083
140	-7.46995	-18.4794	-7.21997	-12.5802	-4.34509
145	-4.79641	-12.8173	-6.77302	-14.5972	-2.7987
150	-3.90904	-5.56821	-7.9305	-20.9135	-1.64121
155	-4.97324	-2.16293	-10.653	-23.871	-1.40647
160	-7.2902	-0.75832	-15.357	-14.0127	-1.31859
165	-8.33203	-0.62408	-24.9919	-10.502	-1.57354
170	-7.38514	-1.19484	-16.4881	-9.15543	-0.92896
175	-6.40452	-2.09903	-10.5575	-8.6798	-0.31661
180	-5.63711	-3.5809	-8.2317	-8.14979	-0.15933
185	-4.88176	-6.55726	-8.30756	-6.96414	-0.5704
190	-4.41208	-9.91038	-10.8503	-5.96906	-1.35588
195	-4.77911	-6.60537	-17.0749	-6.46936	-1.62296
200	-6.25372	-4.10911	-21.3223	-8.88077	-2.18356
205	-8.12144	-4.96991	-15.7536	-10.5949	-3.00415
210	-9.20958	-9.88216	-14.2319	-9.97454	-4.59529
215	-10.5189	-20.9929	-14.1769	-12.305	-7.69034
220	-12.3634	-16.3003	-13.3175	-15.9176	-8.29264
225	-11.6248	-12.4604	-11.8683	-8.32944	-4.89153
230	-10.3344	-9.81884	-10.5635	-5.06029	-2.60368

235	-11.0748	-9.49921	-9.18845	-5.0905	-2.39444	
240	-13.5481	-8.91311	-7.5756	-7.42264	-3.02346	
245	-15.8546	-5.77638	-6.09837	-10.804	-2.7381	
250	-15.6124	-4.65275	-5.34731	-12.8367	-2.38704	
255	-12.1057	-7.20737	-5.73035	-10.0773	-2.414	
260	-8.48017	-15.8678	-7.29854	-6.39811	-2.80557	
265	-6.14326	-17.7254	-9.62388	-4.89681	-2.37111	
270	-5.01467	-13.313	-11.9064	-5.75711	-2.23275	
275	-5.01858	-10.8258	-12.628	-8.9145	-2.84926	
280	-6.28339	-8.4657	-10.6919	-13.6514	-3.33619	
285	-8.88774	-9.10936	-8.79636	-14.3145	-3.97561	
290	-12.2682	-14.5731	-8.31418	-10.9289	-5.20496	
295	-14.5161	-29.5434	-8.86134	-9.04976	-6.60757	
300	-14.9519	-15.3981	-9.36396	-9.83255	-5.92289	
305	-15.6906	-10.4868	-9.08106	-14.692	-6.02934	
310	-20.2579	-7.55346	-8.44199	-20.7319	-6.13902	
315	-26.5315	-6.56542	-8.24082	-12.7684	-4.92919	
320	-14.2969	-7.23003	-8.68594	-10.2607	-3.72448	
325	-11.0917	-8.98533	-8.73994	-10.7681	-3.81317	
330	-12.0608	-11.3903	-7.64265	-13.4432	-4.83347	
335	-17.5372	-10.7899	-6.7486	-17.8443	-5.93855	
340	-20.2079	-7.33627	-7.1205	-19.9319	-5.44371	
345	-15.9048	-5.61645	-9.0194	-18.6545	-4.77027	
350	-16.5165	-5.92675	-12.2883	-20.1119	-6.05122	
355	-21.5533	-7.81433	-15.7893	-20.3318	-8.53135	
				Peak	DG	-0.159334849
Theta	0 Gain(XZ)	-6.72668	-3.36579	-5.43998	-15.3364	-0.69901
	5	-4.60499	-8.03617	-2.79765	-22.6345	-0.99549
	10	-2.48713	-10.6634	-0.58988	-22.6009	0.224833
	15	-1.69769	-9.17523	0.246128	-14.2174	1.560157
	20	-2.59265	-11.5055	-0.47718	-9.889	1.117814
	25	-4.25738	-14.8999	-2.41407	-6.87341	0.013091
	30	-4.145	-9.03736	-4.27054	-4.46336	0.76282
	35	-2.72654	-6.28169	-4.91885	-2.49348	2.055055

40	-1.93436	-6.58312	-5.11447	-0.9952	2.657106
45	-2.27169	-6.68483	-5.59195	-0.04227	2.777085
50	-4.07039	-4.29428	-6.94014	0.384657	2.705376
55	-7.2302	-3.62106	-10.053	0.469015	1.811792
60	-8.71577	-6.11774	-16.2115	0.467872	0.303316
65	-7.90442	-6.77947	-28.996	0.589294	-0.14726
70	-8.62017	-3.7796	-26.3248	0.82036	0.689268
75	-11.198	-4.52573	-20.9953	1.01164	0.349365
80	-14.0381	-10.7007	-16.937	1.025566	-1.12032
85	-17.721	-9.11139	-13.5438	0.888134	-0.92365
90	-25.8783	-6.65038	-11.0187	0.769418	-0.49269
95	-19.1203	-10.3815	-9.66486	0.820466	-0.71938
100	-15.9381	-8.38637	-9.48676	1.023033	0.003837
105	-15.2557	-5.31809	-9.90836	1.212111	0.764956
110	-13.0342	-8.90601	-9.63549	1.216708	0.264379
115	-10.8945	-11.1364	-8.39212	1.040374	0.30095
120	-10.3901	-3.92811	-7.48964	0.748793	1.765468
125	-10.8371	-3.33711	-7.73033	0.412476	1.682456
130	-10.5651	-7.81369	-9.11662	-0.0267	0.214726
135	-9.04987	-9.30934	-10.9008	-0.7157	-0.44022
140	-7.33166	-6.6777	-11.5462	-1.80659	-0.12954
145	-6.22941	-11.0301	-10.3854	-3.39931	-1.17163
150	-6.00047	-17.81	-8.57647	-5.49237	-2.30562
155	-6.1737	-6.74334	-7.34359	-8.09825	-1.0399
160	-5.68683	-5.99817	-7.21226	-11.2296	-1.25333
165	-4.58689	-11.8161	-8.28482	-13.5296	-2.84015
170	-3.97004	-10.7749	-10.3672	-12.5611	-2.72767
175	-4.55037	-4.78306	-12.7667	-10.8651	-1.48862
180	-6.83626	-4.18899	-14.316	-10.2982	-2.09977
185	-10.9552	-8.56917	-14.2438	-10.8135	-4.89691
190	-11.6537	-16.2091	-12.3796	-11.7161	-6.78169
195	-9.19899	-5.60795	-10.0609	-12.0213	-2.87935
200	-9.73674	-2.79218	-8.75526	-11.4665	-1.4984
205	-14.7266	-4.11874	-8.98827	-11.1091	-2.85626

210	-18.4444	-10.0098	-10.8297	-12.4433	-6.36075	
215	-13.9156	-23.0369	-14.0392	-17.0498	-10.2992	
220	-15.5343	-19.1909	-17.6936	-18.1914	-11.5262	
225	-25.6656	-7.43382	-18.5516	-12.7082	-7.67389	
230	-17.8036	-2.71062	-16.097	-10.8204	-3.70735	
235	-16.1988	-3.43104	-14.7764	-11.2506	-3.84348	
240	-19.8461	-8.88258	-15.514	-12.3634	-7.23085	
245	-14.7159	-1.0194	-17.4526	-12.2158	-2.78061	
250	-11.08	2.392671	-18.4922	-9.98353	0.138662	
255	-11.2868	0.793465	-17.1676	-7.15113	-0.23833	
260	-14.8952	-4.79555	-15.4387	-5.24139	-2.66411	
265	-18.9674	-1.30139	-15.7584	-4.60226	-1.28416	
270	-13.6162	-0.43298	-17.5367	-5.07903	-0.6774	
275	-10.539	-8.27328	-14.9228	-6.34092	-3.45075	
280	-11.1767	-4.17459	-12.2681	-7.94635	-2.27758	
285	-17.0964	0.855483	-12.3881	-9.4235	-0.81278	
290	-23.3906	-1.2263	-14.7002	-10.6835	-3.02155	
295	-15.6271	-17.1061	-17.9234	-12.2987	-9.43859	
300	-14.0869	-6.54844	-16.9801	-14.9444	-6.12012	
305	-11.0136	-5.82205	-10.7532	-17.0503	-4.26951	
310	-8.37968	-7.00926	-6.71043	-14.4512	-2.62394	
315	-8.5058	-0.15063	-4.94344	-11.7214	0.763594	
320	-11.4456	1.306466	-4.74906	-10.7053	1.215647	
325	-15.9803	-2.50635	-5.36192	-10.3673	-1.15626	
330	-15.8414	-8.75213	-5.64038	-9.20617	-3.12689	
335	-10.4718	-2.876	-4.72669	-7.79966	0.023197	
340	-6.80552	-3.22268	-3.65658	-7.37045	0.95041	
345	-5.63195	-10.8263	-3.67718	-8.17313	-0.65133	
350	-6.2968	-6.35794	-4.96028	-9.86802	-0.6711	
355	-7.27789	-2.38338	-6.32722	-12.0531	-0.33215	
				Peak	DG	2.777084983

YZ	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
Phi	0 Gain(YZ)	-6.72668	-3.36579	-5.43998	-15.3364	-0.69901

5	-2.48031	-5.39256	-4.15469	-12.6322	0.597669
10	0.03894	-7.44321	-1.6254	-10.8195	2.096726
15	0.574236	-5.79978	0.097159	-9.82149	3.272955
20	0.053497	-3.69256	0.437565	-9.20019	3.688901
25	-0.38415	-3.25147	-0.19926	-8.44025	3.5225
30	0.121873	-4.36033	-0.76898	-7.33784	3.418034
35	1.241066	-6.31243	-0.54933	-6.13775	3.719594
40	2.052514	-7.80594	0.242907	-5.25078	4.212682
45	2.125115	-8.21062	1.062537	-5.01108	4.499749
50	1.72643	-8.27924	1.303061	-5.57379	4.332966
55	1.466195	-8.48687	0.634082	-6.97309	3.76195
60	1.526461	-8.86033	-0.78569	-9.23709	2.958061
65	1.731688	-9.60602	-2.21521	-12.2989	2.175069
70	2.009012	-11.2678	-2.65145	-14.3557	1.805039
75	2.118966	-14.6346	-1.92658	-12.6494	1.924014
80	1.714741	-19.9361	-0.90299	-9.94137	2.071357
85	0.779745	-22.3834	-0.25092	-7.5705	2.143316
90	-0.26951	-27.3786	0.026071	-5.55449	2.085583
95	-0.8721	-19.7624	0.312499	-4.0789	2.506792
100	-1.01999	-12.161	0.938177	-3.28866	3.330511
105	-1.4064	-9.9014	1.804992	-3.12608	3.804024
110	-2.76965	-11.0223	2.460378	-3.34509	3.567773
115	-5.50623	-13.2455	2.50879	-3.5773	2.751609
120	-9.21599	-13.8643	1.874721	-3.56037	1.774694
125	-11.2869	-18.4228	0.833401	-3.41382	0.701802
130	-10.8693	-21.3389	-0.04674	-3.46301	0.162012
135	-10.7397	-12.449	-0.36176	-3.88293	0.537487
140	-11.8206	-12.1923	-0.27234	-4.56588	0.26691
145	-13.6395	-20.0729	-0.44749	-5.19681	-0.883
150	-14.8146	-17.3348	-1.571	-5.54717	-1.51374
155	-14.7835	-14.3751	-4.06231	-5.7106	-2.39503
160	-13.3428	-25.8159	-8.02858	-5.98782	-4.6934
165	-11.5488	-11.481	-13.2681	-6.6906	-4.35637
170	-10.4538	-5.43313	-18.4109	-7.95566	-3.37964

175	-9.01763	-3.6875	-16.5198	-9.41826	-2.5244
180	-6.83626	-4.18899	-14.316	-10.2982	-2.09977
185	-5.26542	-5.95404	-14.8979	-10.7613	-2.3901
190	-4.70609	-8.27328	-15.5359	-11.7627	-3.1428
195	-4.48569	-10.2374	-14.8749	-13.332	-3.74019
200	-4.03194	-10.7541	-15.3421	-13.4967	-3.73531
205	-3.86572	-10.6153	-12.2145	-11.3162	-2.77998
210	-4.71156	-10.1506	-7.65324	-9.17481	-1.64891
215	-6.62664	-9.0986	-5.37831	-8.24889	-1.19791
220	-8.19086	-8.49489	-5.03851	-8.65837	-1.44021
225	-7.50008	-9.11474	-5.7409	-9.90721	-1.89576
230	-6.1118	-11.1405	-6.10391	-10.6809	-2.15976
235	-5.37334	-14.888	-5.03229	-10.1857	-2.00025
240	-5.19069	-20.907	-3.06738	-9.04774	-1.43434
245	-4.84241	-21.5123	-1.34796	-8.03405	-0.40239
250	-3.64172	-18.2532	-0.36861	-7.89236	0.593047
255	-1.94746	-17.2169	-0.0247	-9.14885	1.149001
260	-0.49686	-14.3021	0.097978	-11.6704	1.617416
265	0.402413	-11.1367	0.385551	-13.5518	2.21292
270	0.778088	-10.8178	0.868538	-13.5359	2.597565
275	0.794291	-14.7906	1.223067	-13.8581	2.384932
280	0.671989	-24.8589	1.107082	-15.3489	1.742687
285	0.626968	-18.3139	0.484128	-17.5271	1.534746
290	0.697505	-15.8389	-0.22303	-18.9761	1.33484
295	0.740315	-10.4251	-0.3456	-18.2428	1.845665
300	0.696553	-6.66155	0.321214	-17.2476	2.679992
305	0.82693	-6.27955	1.180166	-17.683	3.11068
310	1.499085	-9.39444	1.535749	-19.6242	3.000581
315	2.423886	-16.8826	1.079123	-21.9685	2.532596
320	2.914317	-33.6899	-0.04315	-22.7209	1.894661
325	2.503593	-17.2035	-1.31527	-21.4837	1.640747
330	1.050919	-9.21873	-1.98863	-19.5652	1.493065
335	-1.03744	-6.28904	-1.54658	-18.095	1.34
340	-2.09712	-6.42005	-0.81031	-17.5335	1.23956

	345	-1.77563	-6.94377	-0.97351	-17.9422			1.158662
	350	-2.40662	-4.88948	-2.38	-18.76			0.840532
	355	-5.34699	-3.18057	-4.38983	-18.0596			-0.16663
						Peak	DG	4.499749467
Theta	0 Gain(YZ)	-31.8216	-11.3118	-17.0439	-14.2077			-9.99397
	5	-19.7954	-18.2543	-11.8147	-11.5448			-8.56636
	10	-12.3639	-16.0234	-8.09185	-10.3094			-5.20835
	15	-8.42739	-7.99848	-7.18614	-10.3959			-2.40364
	20	-6.45627	-6.51443	-7.8784	-11.1409			-1.78256
	25	-5.44162	-6.89407	-8.79542	-11.7072			-1.88571
	30	-4.58464	-6.44999	-8.47174	-11.5733			-1.37762
	35	-3.71261	-4.31559	-7.0965	-10.5861			-0.00883
	40	-3.16309	-0.74294	-5.602	-9.49861			1.842143
	45	-3.14013	1.776381	-4.52068	-9.1751			3.123476
	50	-3.5072	2.575272	-4.1263	-9.64212			3.417834
	55	-3.95613	2.483464	-4.49811	-10.2801			3.128318
	60	-4.25311	2.598671	-5.53778	-10.3982			2.898423
	65	-4.33158	2.59746	-7.04027	-9.65927			2.700712
	70	-4.31417	1.352407	-8.83911	-8.35137			2.010139
	75	-4.68865	-1.77188	-10.8356	-7.07718			0.539995
	80	-6.25145	-3.30473	-12.7612	-6.00351			-0.43857
	85	-10.2508	-0.40706	-13.8932	-4.95794			0.122947
	90	-21.2857	0.209266	-13.7217	-3.8625			-0.18579
	95	-17.4792	-2.09307	-12.747	-2.87614			-0.59243
	100	-12.3952	-1.95279	-11.6255	-2.2793			0.29932
	105	-12.5372	0.225015	-10.4794	-2.2355			1.344008
	110	-14.828	-0.97174	-9.18427	-2.6273			0.676065
	115	-14.4677	-3.88471	-7.76454	-3.03534			-0.25306
	120	-12.5717	-1.08409	-6.54877	-2.99037			1.202946
	125	-11.5777	-0.18936	-5.99252	-2.491			1.918817
	130	-10.5188	-4.62424	-6.44277	-2.161			0.592192
	135	-9.56779	-24.1139	-8.00597	-2.63298			-2.32127
	140	-9.86487	-6.13899	-10.3778	-3.93956			-1.1472
	145	-11.9325	-5.29029	-12.4876	-5.17416			-2.01639

150	-15.3841	-7.8639	-12.9082	-5.64053	-3.58844
155	-17.3233	-6.44089	-12.1006	-6.13454	-3.38659
160	-15.0432	-5.72502	-11.9814	-6.72035	-3.05298
165	-11.234	-7.66014	-13.6892	-6.59261	-3.32898
170	-8.10225	-6.5791	-14.8736	-6.36749	-2.36564
175	-6.23939	-4.07721	-11.219	-6.92262	-0.73162
180	-5.63711	-3.5809	-8.2317	-8.14979	-0.15933
185	-6.25897	-3.64786	-7.2146	-9.82267	-0.43611
190	-8.28495	-2.81193	-7.77258	-12.3379	-1.11542
195	-12.2855	-2.09735	-9.51682	-13.7281	-2.10963
200	-18.0849	-1.88452	-12.1491	-10.269	-2.59704
205	-16.6459	-1.23225	-15.4772	-6.80609	-1.72396
210	-13.8198	0.281118	-18.4083	-4.62392	-0.24695
215	-13.1502	1.658605	-17.9364	-3.35234	0.972951
220	-13.4279	1.753108	-16.0082	-2.67451	1.326795
225	-14.0716	0.345248	-14.9263	-2.34359	0.753708
230	-14.7325	-0.83379	-14.5586	-2.09384	0.276758
235	-14.0035	-0.95563	-14.5462	-1.63848	0.467991
240	-12.8418	-2.64667	-15.0648	-0.8395	0.213223
245	-13.474	-2.86547	-16.3181	0.110912	0.409799
250	-16.5404	0.157017	-17.6936	0.861971	1.590546
255	-18.7568	0.349476	-17.6936	1.209268	1.713785
260	-18.1546	-1.85077	-15.8505	1.184065	0.980695
265	-19.7032	-1.01753	-13.622	0.980142	1.292108
270	-17.1808	-0.58841	-12.4119	0.846885	1.637066
275	-13.052	-5.19424	-12.9131	0.91455	0.463392
280	-12.1438	-5.16503	-15.751	1.104466	0.413495
285	-14.3783	-0.89692	-21.6722	1.255463	1.329911
290	-19.6651	-2.43834	-20.4877	1.266899	0.46809
295	-27.5514	-4.71326	-15.1947	1.13642	-0.2789
300	-30.7941	-0.73624	-12.0541	0.904247	1.240119
305	-19.6792	-0.67426	-9.99564	0.539698	1.618175
310	-16.0713	-5.9529	-8.75792	-0.07813	0.073485
315	-15.9156	-7.38448	-8.23211	-1.10484	-0.65116

320	-15.0578	-4.2778	-8.03228	-2.68269				-0.36063
325	-11.6815	-6.7683	-7.74977	-4.94531				-1.43739
330	-9.40454	-10.7246	-7.43694	-8.04058				-2.78962
335	-8.83009	-8.5601	-7.17884	-12.0572				-2.96146
340	-9.76631	-8.61157	-6.79864	-16.3333				-3.70457
345	-12.403	-8.94144	-6.63223	-18.519				-4.57113
350	-17.4713	-9.01045	-7.68008	-18.5568				-5.85457
355	-25.6481	-10.0442	-11.2414	-17.2201				-8.19382

Peak	DG	3.417833692
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(i) If transmit signals are correlated, then
 Directional gain = $10 \log\left[\frac{(10G_1/20 + 10G_2/20 + \dots + 10G_N/20)^2}{NANT}\right]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

eg	Theta	0 Gain phi(XY)	3.000839	3.275415	5.119347	3.233765		
		Directional gain = $10 \log\left[\frac{(10G_1/20 + 10G_2/20 + \dots + 10G_N/20)^2}{NANT}\right]$ dBi						
5850MHz		Peak gain	3.000839	3.275415	5.119347	3.233765	MAX DG gain	6.659615
XY	Angle		Ant1	Ant2	Ant3	Ant4		DG gain
	Phi	0 Gain phi(XY)	-1.50635	-10.2819	-8.49348	-6.97698		-0.12732
		5	-0.21282	-10.1545	-9.30066	-7.9589		0.125839
		10	-1.28621	-9.65515	-10.5625	-9.11954		-0.73482
		15	-2.0218	-9.2777	-11.4154	-10.4634		-1.38884
		20	-1.56071	-9.15245	-10.8149	-11.363		-1.19771
		25	-2.70309	-9.22197	-9.24726	-10.7857		-1.34973
		30	-6.34862	-9.40447	-7.61659	-9.2491		-2.04198
		35	-7.93948	-9.66534	-6.24151	-7.83221		-1.815
		40	-6.58157	-10.0014	-5.1641	-6.78849		-0.94213
		45	-7.63653	-10.389	-4.34248	-5.91977		-0.77205
		50	-10.7027	-10.6544	-3.67506	-4.97657		-0.89683
		55	-12.7737	-10.5465	-3.02404	-3.85592		-0.56416
		60	-10.6291	-10.0285	-2.29182	-2.63846		0.487432
		65	-7.20347	-9.46292	-1.49915	-1.48946		1.786209
		70	-5.34028	-9.29159	-0.76572	-0.5369		2.732865
		75	-4.56324	-9.84502	-0.20908	0.175485		3.25692
		80	-3.53301	-11.4	0.138939	0.687964		3.618312
		85	-1.95923	-14.376	0.345465	1.090073		3.982556
		90	-0.25072	-19.6263	0.541499	1.467227		4.413394
		95	1.251971	-25.4621	0.824428	1.857524		4.975091
		100	2.21756	-20.7954	1.178165	2.233672		5.6221
		105	2.55351	-17.4532	1.481251	2.535334		6.022189
		110	2.404855	-15.8105	1.592296	2.718524		6.1278
		115	1.948371	-14.5996	1.422585	2.781804		6.005679
		120	1.376896	-13.3373	0.977786	2.747938		5.752473
		125	0.756469	-12.4649	0.33677	2.640446		5.399332
		130	-0.18666	-12.6726	-0.45883	2.450697		4.825275
		135	-1.87276	-14.7544	-1.49049	2.145232		3.838647
		140	-4.27079	-19.9543	-2.91077	1.727112		2.435664
		145	-5.11478	-19.0857	-4.63821	1.268663		1.618244
		150	-3.61266	-12.6645	-5.9694	0.868794		1.940189
		155	-3.38929	-9.44887	-6.16733	0.554207		2.182689
		160	-5.28343	-8.34931	-5.78474	0.172729		1.800046
		165	-5.09389	-8.96379	-5.56443	-0.52767		1.51317
		170	-2.40456	-11.1709	-5.56665	-1.63785		1.54554
		175	-1.62935	-13.8075	-5.64088	-2.81703		1.131677
		180	-2.34847	-13.0994	-5.85045	-3.35374		0.7246
		185	-2.52991	-10.9899	-6.3604	-3.26951		0.814486
		190	-2.46072	-10.2825	-7.07534	-3.46964		0.720242
		195	-3.70533	-11.2919	-7.53256	-4.61395		-0.29474
		200	-5.21365	-13.7476	-7.26342	-6.93432		-1.73697
		205	-4.14509	-15.2143	-6.30511	-10.3592		-2.04029
		210	-2.51223	-13.1535	-5.08732	-14.176		-1.30484
		215	-2.2757	-11.0353	-4.01369	-14.1587		-0.55555
		220	-3.53186	-10.1685	-3.22481	-9.28806		0.039623

225	-4.16026	-10.3935	-2.53278	-5.11659	0.920368
230	-2.20367	-11.3398	-1.56339	-2.41286	2.410417
235	-0.80329	-12.4501	-0.20206	-0.90582	3.602925
240	-1.10059	-13.1991	1.258831	-0.29648	4.142417
245	-1.987	-13.8147	2.505727	-0.28389	4.353871
250	-1.3449	-15.1822	3.370536	-0.55214	4.718646
255	0.023825	-17.9775	3.841719	-0.81084	5.096066
260	0.516484	-18.9322	3.927622	-0.87947	5.224763
265	0.075938	-14.4574	3.6939	-0.76571	5.210262
270	-0.4109	-10.9178	3.191353	-0.64487	5.131372
275	-0.20941	-9.23054	2.539937	-0.73216	5.058341
280	0.331329	-9.21485	1.917665	-1.15655	4.879122
285	0.591638	-10.9564	1.561932	-1.90415	4.490389
290	-0.09811	-14.4479	1.57185	-2.82875	3.802946
295	-2.54574	-15.159	1.704013	-3.72504	2.886992
300	-7.35218	-11.1765	1.597128	-4.41655	1.967281
305	-12.3756	-8.40426	1.009437	-4.80168	1.285901
310	-12.6469	-7.10983	-0.10763	-4.87662	0.954466
315	-7.39259	-6.73886	-1.5485	-4.73923	1.226978
320	-3.38774	-6.68651	-2.90497	-4.51985	1.763334
325	-3.11338	-6.42999	-3.86104	-4.33079	1.670977
330	-8.3362	-5.9472	-4.5684	-4.23807	0.391148
335	-17.5155	-5.63461	-5.37545	-4.28001	-0.88948
340	-5.07705	-5.8289	-6.40332	-4.47045	0.606617
345	-3.78137	-6.65224	-7.417	-4.82365	0.471598
350	-7.67533	-8.00957	-8.02158	-5.3667	-1.17398
355	-6.6401	-9.47196	-8.21	-6.10047	-1.48525

Peak DG 6.127800088

Theta	0 Gain (XY)					
		-9.64937	0.136079	-13.4129	-15.1845	-1.24656
5		-8.96282	-0.03477	-12.3515	-13.7149	-0.91635
10		-10.0555	-0.34249	-11.6337	-12.907	-1.09141
15		-14.3482	-0.68761	-11.3634	-12.6438	-1.83508
20		-22.6532	-1.02765	-11.5368	-12.5509	-2.71693
25		-20.1807	-1.40371	-12.1962	-12.1714	-2.84989
30		-21.1404	-1.91807	-13.4586	-11.3296	-3.26558
35		-36.9318	-2.71588	-15.4657	-10.29	-4.29261
40		-18.5368	-3.99079	-18.1994	-9.40851	-4.35398
45		-13.5425	-6.01181	-21.2171	-8.85561	-4.74261
50		-12.0569	-9.0886	-23.327	-8.55981	-5.66158
55		-12.4052	-12.1177	-23.1303	-8.28255	-6.53356
60		-12.7405	-9.89985	-21.2186	-7.76253	-5.62492
65		-11.2291	-5.8495	-19.43	-6.93663	-3.47081
70		-9.42609	-2.87976	-18.4456	-6.01197	-1.53649
75		-8.52393	-0.85218	-17.9188	-5.28437	-0.20809
80		-8.38261	0.526959	-17.1214	-4.98258	0.613049
85		-8.49382	1.482835	-16.0681	-5.22419	1.090441
90		-8.39564	2.188236	-15.4222	-6.01355	1.351397
95		-8.22593	2.732993	-15.6047	-7.25298	1.428033
100		-8.83463	3.120109	-16.5557	-8.79724	1.235453
105		-11.198	3.275415	-17.5862	-10.5201	0.682194
110		-16.5419	3.15309	-17.4344	-12.1482	-0.14071
115		-28.3058	2.792294	-15.6743	-12.845	-0.86684
120		-35.6028	2.412371	-13.2612	-12.1427	-0.91003
125		-24.3593	2.307996	-11.0703	-10.9187	-0.31413
130		-15.7609	2.534235	-9.47457	-9.80381	0.672893

135	-11.9767	2.824207	-8.56131	-8.71771	1.495697
140	-11.6581	2.836513	-8.25513	-7.50813	1.781693
145	-15.3887	2.356376	-8.40348	-6.30994	1.383569
150	-35.7257	1.302187	-8.85219	-5.38092	0.329024
155	-17.4657	-0.33108	-9.54997	-4.91736	-0.01199
160	-13.1846	-2.41374	-10.5559	-5.03148	-0.75512
165	-11.8793	-4.6096	-11.9117	-5.80433	-1.88809
170	-10.2603	-6.36451	-13.4576	-7.29862	-2.90506
175	-8.44995	-7.36344	-14.756	-9.56576	-3.59781
180	-7.72838	-7.85689	-15.5161	-12.5964	-4.31075
185	-8.32133	-8.12865	-15.9929	-15.9692	-5.24364
190	-9.74262	-8.12654	-16.6268	-17.4399	-6.02216
195	-10.6646	-7.54732	-17.6604	-15.9231	-5.99327
200	-9.9942	-6.21321	-18.9844	-14.3068	-5.1104
205	-8.854	-4.34661	-19.5161	-13.728	-3.88518
210	-8.45302	-2.36998	-17.9838	-14.0818	-2.71653
215	-9.0214	-0.61601	-15.5696	-14.7258	-1.74733
220	-10.0711	0.737337	-13.5949	-14.5703	-0.92411
225	-10.7201	1.625429	-12.31	-13.0205	-0.16404
230	-10.985	2.030124	-11.6231	-10.6805	0.425243
235	-11.9175	1.975061	-11.4415	-8.47436	0.643195
240	-14.3182	1.56255	-11.7511	-6.95092	0.41197
245	-16.8145	1.010363	-12.5919	-6.33567	-0.06762
250	-13.963	0.624653	-13.9546	-6.67833	-0.26882
255	-10.306	0.596783	-15.4672	-7.92482	-0.23557
260	-8.25578	0.789389	-15.8899	-9.8478	-0.15766
265	-7.59726	0.887129	-14.3886	-12.0009	-0.14675
270	-8.1204	0.673566	-12.2913	-13.9896	-0.37301
275	-9.76575	0.100699	-10.7482	-15.9107	-0.97914
280	-12.6833	-0.76206	-10.0909	-17.8049	-1.99334
285	-17.4553	-1.80185	-10.3076	-19.0428	-3.32704
290	-23.974	-2.96128	-11.0532	-19.3458	-4.71399
295	-23.6699	-4.2089	-11.399	-19.3723	-5.52939
300	-23.4391	-5.20756	-10.667	-19.3811	-5.87756
305	-20.519	-5.14854	-9.53219	-19.2241	-5.27145
310	-14.2068	-3.92909	-8.74623	-18.9891	-3.68422
315	-10.8714	-2.52162	-8.47372	-18.8328	-2.35274
320	-10.0003	-1.57347	-8.60622	-18.859	-1.74582
325	-10.6852	-1.207	-9.05774	-19.066	-1.79649
330	-11.9007	-1.26223	-9.84863	-19.3086	-2.22016
335	-13.3494	-1.39931	-11.0227	-19.2224	-2.75308
340	-14.5231	-1.26417	-12.5102	-18.8524	-3.07696
345	-13.1765	-0.80617	-13.957	-18.575	-2.79876
350	-11.3959	-0.2778	-14.7356	-18.1809	-2.24527
355	-10.5603	0.06713	-14.4349	-16.9628	-1.7456

Peak DG 1.781693105

XZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain (XZ)	-26.6746	-13.5102	-18.2521	-12.535	-10.2297
		5	-16.4988	-12.3101	-19.6603	-11.1468	-8.25558
		10	-13.405	-8.58264	-16.6785	-9.71089	-5.51889
		15	-14.2446	-6.79733	-15.6402	-9.4814	-4.79087
		20	-16.5971	-6.9971	-17.4404	-10.0156	-5.64058
		25	-15.5084	-8.98326	-21.0591	-9.448	-6.47791
		30	-12.2793	-11.9912	-21.9834	-8.34407	-6.40316
		35	-9.20593	-13.8729	-18.7129	-8.59764	-5.70857

40	-7.24837	-13.1854	-15.4826	-10.7545	-5.1034
45	-6.72155	-11.9496	-13.4872	-14.0845	-5.01193
50	-6.51886	-12.6659	-10.9304	-12.9436	-4.33473
55	-5.01804	-17.6051	-7.87785	-8.18352	-2.57758
60	-3.16755	-21.078	-6.18476	-4.84074	-0.69533
65	-2.08055	-13.5776	-6.38745	-3.26373	0.67877
70	-1.64372	-10.7189	-8.117	-3.1727	0.849482
75	-1.38262	-9.32711	-9.95011	-4.00868	0.599512
80	-1.1228	-8.60321	-10.2766	-4.66045	0.592594
85	-1.23264	-9.58233	-8.5914	-4.24659	0.767244
90	-2.34847	-13.0994	-5.85045	-3.35374	0.7246
95	-5.20009	-13.7339	-3.9457	-3.04353	0.40138
100	-10.8395	-9.99691	-3.41183	-4.25684	-0.48599
105	-16.3403	-8.4181	-3.93415	-7.95776	-2.11586
110	-12.0624	-8.04331	-4.86459	-9.92418	-2.2945
115	-10.0495	-7.71208	-5.55341	-5.11293	-0.87346
120	-10.2006	-8.36403	-5.50016	-2.73919	-0.21468
125	-11.6891	-12.2365	-4.90011	-2.86805	-0.95184
130	-13.4914	-33.9694	-4.85119	-4.76486	-3.21413
135	-15.2943	-14.2135	-6.12268	-7.10346	-3.72745
140	-19.6669	-10.6146	-8.12179	-7.3505	-4.29258
145	-32.4532	-11.618	-8.31424	-5.19195	-4.29102
150	-22.576	-10.4237	-7.56433	-2.92645	-2.45222
155	-23.0638	-5.69627	-8.51276	-1.75256	-1.00309
160	-27.7296	-3.04053	-12.4065	-1.87844	-0.95895
165	-17.6011	-2.36399	-22.0575	-3.13383	-1.56852
170	-14.6947	-2.74818	-20.076	-5.05996	-2.0995
175	-15.8476	-3.03587	-15.8401	-7.0197	-2.65402
180	-18.185	-3.15552	-16.2595	-8.72428	-3.48691
185	-15.6174	-4.25759	-18.7232	-10.3469	-4.4527
190	-13.1076	-6.92098	-18.5969	-11.6775	-5.59597
195	-12.4665	-9.00454	-17.0223	-11.9776	-6.14825
200	-13.0554	-8.11079	-17.2153	-11.2575	-5.78993
205	-14.1416	-7.90296	-18.7122	-10.4255	-5.88297
210	-14.4473	-9.22987	-19.5844	-10.2373	-6.4875
215	-12.68	-10.3118	-18.339	-10.9981	-6.55503
220	-10.0258	-10.2867	-15.7065	-12.5186	-5.83313
225	-8.13438	-10.2837	-13.2964	-13.6346	-5.01669
230	-7.59201	-9.69128	-11.6326	-12.6352	-4.14908
235	-8.56589	-7.65347	-10.4285	-10.0282	-3.07626
240	-11.1143	-5.64992	-9.28598	-7.4394	-2.11409
245	-14.9894	-5.15152	-8.05967	-5.73625	-1.70953
250	-16.9564	-6.86444	-6.92874	-5.23807	-1.97533
255	-12.7412	-10.7924	-6.26255	-5.86661	-2.41518
260	-7.73442	-12.6361	-6.33921	-6.90908	-2.06236
265	-3.92408	-11.57	-7.17733	-7.23168	-1.04634
270	-1.50635	-10.2819	-8.49348	-6.97698	-0.12732
275	-0.49374	-7.01981	-9.74168	-7.14272	0.650705
280	-0.84474	-4.635	-10.4441	-8.07951	0.783304
285	-2.38374	-4.30401	-10.6162	-8.92652	0.093536
290	-4.55549	-6.13791	-10.6078	-7.94114	-1.00814
295	-6.16685	-11.1253	-10.4894	-6.34024	-2.21235
300	-6.18667	-32.0133	-9.83349	-5.9737	-3.47418
305	-5.32369	-14.3345	-8.41028	-7.23768	-2.22448
310	-5.0851	-11.122	-6.74229	-9.7526	-1.82888

315	-6.36244	-13.2244	-5.5734	-11.8882	-2.61696
320	-9.44528	-15.7834	-5.51826	-11.7636	-3.8259
325	-13.6426	-12.5467	-7.09107	-10.9356	-4.65885
330	-15.6661	-11.778	-10.2617	-11.2666	-5.99844
335	-13.7865	-10.4746	-11.1151	-12.8903	-5.94491
340	-11.1308	-6.80881	-8.9155	-13.5854	-3.72962
345	-9.96687	-4.95211	-8.39358	-12.4855	-2.49362
350	-11.0939	-5.60963	-10.0964	-12.0314	-3.31125
355	-15.7422	-8.76712	-13.6533	-12.5093	-6.26501

Peak DG 0.849481979

Theta	0 Gain(XZ)	-8.04748	-9.63952	-8.58971	-12.8864	-3.58047
	5	-5.41576	-8.25105	-5.30751	-7.58516	-0.52273
	10	-3.21849	-6.42982	-2.29422	-4.57901	2.026314
	15	-3.04129	-5.898	-0.89437	-3.14393	2.954031
	20	-4.80155	-6.68272	-1.41442	-2.77812	2.327599
	25	-5.27555	-8.09375	-3.36909	-2.84817	1.354573
	30	-3.21677	-9.19663	-4.71124	-2.80763	1.37306
	35	-2.23912	-9.36072	-4.09596	-2.58968	1.866177
	40	-2.52597	-8.82233	-2.90712	-2.40042	2.22491
	45	-3.02045	-8.1778	-2.15223	-2.41215	2.392927
	50	-2.89869	-7.64797	-2.62612	-2.81634	2.255396
	55	-1.67243	-7.17905	-4.68766	-3.76229	1.916707
	60	-0.15575	-6.49852	-7.48258	-5.19083	1.684818
	65	0.363731	-5.39817	-9.3434	-6.76633	1.510331
	70	-0.56344	-4.80208	-11.1751	-8.07521	0.761996
	75	-2.69962	-6.21379	-12.4689	-8.92767	-0.83051
	80	-5.2053	-11.2806	-11.9184	-9.57051	-3.04915
	85	-6.87578	-12.8093	-12.6177	-10.6578	-4.37159
	90	-7.72838	-7.85689	-15.5161	-12.5964	-4.31075
	95	-9.44012	-7.02374	-18.5465	-14.5078	-5.27878
	100	-13.829	-8.40997	-17.788	-14.6404	-6.95901
	105	-16.5395	-9.04108	-14.6429	-13.0435	-6.83853
	110	-12.2656	-9.19822	-13.2778	-10.5712	-5.16628
	115	-10.6281	-10.2557	-15.0261	-8.80595	-4.87225
	120	-9.92031	-10.424	-18.2863	-8.70507	-5.12054
	125	-8.24959	-10.8319	-16.3102	-10.1426	-4.89635
	130	-6.54192	-13.3756	-15.1115	-11.3488	-4.94694
	135	-5.55711	-11.7427	-16.5601	-11.1117	-4.34356
	140	-5.27548	-8.74905	-18.0134	-11.7447	-3.77935
	145	-5.65715	-9.69886	-16.9945	-14.3048	-4.56283
	150	-6.60779	-17.4766	-13.7488	-14.5432	-6.07427
	155	-7.72294	-17.8201	-10.6017	-10.0697	-4.81946
	160	-7.89292	-12.0744	-9.54469	-6.26099	-2.66427
	165	-6.05478	-12.712	-11.3763	-3.71418	-1.6635
	170	-3.63971	-9.07894	-17.3176	-2.31541	-0.39326
	175	-2.2561	-4.06861	-18.6201	-1.9388	1.26819
	180	-2.50891	-1.92369	-14.4167	-2.27447	1.973778
	185	-4.82296	-2.10056	-15.1036	-2.63098	1.11329
	190	-9.97013	-3.79857	-21.0368	-2.1807	-0.77253
	195	-17.2984	-5.18589	-32.3001	-0.95198	-1.89825
	200	-17.7195	-5.53254	-30.4751	0.295562	-1.29249
	205	-24.5062	-6.89461	-23.9787	0.98887	-1.43468
	210	-20.4831	-9.3286	-14.5102	0.903692	-1.23952
	215	-12.9973	-9.92521	-10.7649	0.06233	-0.72577
	220	-12.4012	-9.01932	-10.0327	-1.21959	-1.02239

225	-16.7833	-5.71707	-10.9936	-2.37115	-1.38228
230	-25.5782	-3.02191	-11.826	-2.89539	-1.2518
235	-23.963	-3.63316	-11.4381	-2.89929	-1.38245
240	-22.2362	-5.40071	-10.0004	-3.00586	-1.73447
245	-14.2017	-0.52025	-8.2358	-3.84304	0.695442
250	-11.226	2.454511	-7.52338	-5.76555	2.064503
255	-12.8469	2.126447	-8.4793	-8.66924	1.025209
260	-21.8625	0.093742	-10.7156	-11.4094	-1.66233
265	-15.6161	0.257082	-12.6768	-12.9199	-1.6499
270	-9.64937	0.136079	-13.4129	-15.1845	-1.24656
275	-7.38882	-3.62267	-13.959	-20.0993	-3.18888
280	-6.73212	-3.55621	-16.172	-15.8646	-2.84691
285	-6.60354	0.197912	-21.2062	-10.2996	-0.52298
290	-5.93725	-0.4713	-16.0057	-7.55073	0.127751
295	-4.69026	-5.70956	-11.7822	-6.42237	-0.74338
300	-3.42285	-6.95593	-9.84543	-6.26161	-0.30277
305	-2.45401	-4.71462	-7.51454	-6.8076	0.877769
310	-2.31166	-4.8327	-5.01902	-7.9701	1.214719
315	-3.5113	-2.2786	-3.2238	-9.37782	1.820591
320	-5.99872	-0.76949	-2.09495	-10.4545	1.946113
325	-8.25417	-2.34339	-1.794	-11.4013	0.955885
330	-7.67475	-5.16406	-2.40694	-12.347	-0.15582
335	-5.10331	-4.73447	-2.78156	-12.3585	0.434109
340	-3.22627	-5.51184	-2.11642	-12.0847	1.032334
345	-3.15682	-11.5851	-2.19863	-13.369	-0.22129
350	-4.9674	-19.3768	-4.29993	-17.7506	-3.03009
355	-7.66332	-11.0541	-7.98538	-21.5704	-4.6112

Peak DG 2.954030712

YZ	Phi	Angle	Ant1	Ant2	Ant3	Ant4	DG gain
		0 Gain(YZ)	-8.04748	-9.63952	-8.58971	-12.8864	-3.58047
		5	-4.49953	-8.72905	-3.9937	-9.96589	-0.39703
		10	0.240625	-7.28016	-1.58406	-7.06526	2.725619
		15	2.117164	-5.9013	-0.67152	-4.98536	4.275211
		20	2.17143	-5.6182	-0.65603	-4.34884	4.457191
		25	1.223092	-6.94128	-1.0445	-5.01447	3.662621
		30	0.247264	-9.73234	-1.25835	-6.07252	2.661681
		35	0.150421	-12.7029	-0.96336	-6.07604	2.414662
		40	1.050213	-14.6825	-0.43007	-4.63117	3.080556
		45	2.234867	-15.1663	-0.10226	-2.95477	3.994626
		50	2.964039	-13.6266	-0.12956	-2.0993	4.57182
		55	2.94169	-12.8171	-0.26994	-2.2497	4.539575
		60	2.274244	-13.5385	-0.15088	-2.89406	4.107161
		65	1.388557	-14.5282	0.200363	-3.32956	3.710927
		70	0.816761	-14.0126	0.50147	-3.38745	3.620643
		75	0.770513	-12.2777	0.763172	-3.07135	3.890399
		80	0.902922	-10.8117	1.252387	-2.40423	4.378242
		85	0.625036	-10.3027	2.131558	-1.5994	4.835836
		90	-0.4109	-10.9178	3.191353	-0.64487	5.131372
		95	-1.94885	-12.952	4.109839	0.352254	5.2741
		100	-3.01553	-15.3761	4.69984	0.948825	5.367527
		105	-3.38748	-13.3086	5.003717	0.899008	5.532003
		110	-4.21808	-10.8174	5.119347	0.491972	5.493078
		115	-6.44355	-10.5881	5.012	0.331812	5.084775
		120	-10.6897	-12.3293	4.573614	0.880806	4.438065

125		-17.2444	-15.3885	3.801463	1.806774				3.772074
130		-20.5432	-18.064	2.9053	2.283352				3.277526
135		-21.8135	-17.8182	2.179063	1.755608				2.667126
140		-22.5558	-19.1586	1.750684	0.20636				1.698766
145		-16.3761	-37.5314	1.448174	-1.65952				0.718898
150		-13.6072	-17.327	0.986086	-2.9242				0.745206
155		-12.3665	-11.4681	0.172859	-3.68826				0.75641
160		-9.15974	-8.84514	-1.15854	-3.75418				0.960068
165		-5.57049	-6.17009	-3.24994	-2.88277				1.668231
170		-3.30932	-3.48602	-6.36413	-2.18635				2.314464
175		-2.35872	-1.97455	-10.481	-2.18591				2.396823
180		-2.50891	-1.92369	-14.4167	-2.27447				1.973778
185		-3.67166	-3.18342	-15.6108	-1.76167				1.328742
190		-5.67647	-5.47297	-14.3568	-0.96032				0.585951
195		-7.65105	-8.51297	-13.5248	-0.4126				-0.20186
200		-8.34796	-12.3261	-14.5325	-0.24803				-0.9931
205		-8.27373	-17.7597	-16.8182	-0.37381				-1.84479
210		-8.07039	-27.4855	-16.8791	-0.72514				-2.49719
215		-7.21485	-23.678	-15.7779	-1.33907				-2.37818
220		-5.82268	-18.7466	-16.1532	-2.19661				-2.16192
225		-4.86579	-17.0097	-16.2093	-3.02341				-2.0863
230		-4.78772	-16.8124	-13.7178	-3.41932				-1.93121
235		-5.11337	-17.6116	-10.8329	-3.31728				-1.63643
240		-4.71214	-19.3143	-8.46254	-2.97558				-1.02732
245		-3.35929	-21.7005	-6.41288	-2.58684				-0.07925
250		-1.80847	-24.1065	-4.53	-2.09977				1.035512
255		-0.52975	-26.8631	-2.81995	-1.30951				2.174807
260		0.208173	-23.9536	-1.36852	-0.23338				3.273387
265		0.262779	-19.5753	-0.245	0.785513				4.089359
270		-0.25072	-19.6263	0.541499	1.467227				4.413394
275		-0.87967	-27.487	1.026706	1.814073				4.359291
280		-0.93165	-26.8357	1.271614	2.043519				4.523542
285		-0.07061	-21.4319	1.358857	2.380233				5.011598
290		1.195488	-19.758	1.366779	2.81767				5.584189
295		2.169345	-13.0467	1.348015	3.158208				6.262089
300		2.5442	-9.31936	1.366258	3.233765				6.656323
305		2.40035	-8.7398	1.521453	3.106833				6.659615
310		2.135553	-9.93957	1.861694	2.980024				6.537963
315		2.215051	-10.6337	2.245481	2.865893				6.588714
320		2.669297	-11.9512	2.36316	2.433586				6.543935
325		3.000839	-19.1773	1.91896	1.284741				5.8656
330		2.713699	-19.9245	0.867404	-0.71558				4.844735
335		1.677985	-12.1271	-0.35219	-2.98694				3.890072
340		0.414406	-11.6131	-1.17006	-4.42835				2.879219
345		-0.16723	-14.3112	-2.13029	-5.73771				1.842096
350		-0.70389	-13.7249	-4.56745	-8.5948				0.386143
355		-3.04442	-10.94	-9.25819	-12.8441				-2.15547
						Peak	DG	6.659615208	
Theta	0 Gain(YZ)	-26.6746	-13.5102	-18.2521	-12.535				-10.2297
	5	-27.4078	-19.1962	-13.6219	-13.7986				-10.9808
	10	-17.9078	-19.1217	-11.1732	-13.4768				-8.80108
	15	-13.9758	-10.7365	-11.8495	-11.3267				-5.86893
	20	-12.5979	-8.91851	-14.9961	-9.87436				-5.26106
	25	-12.7335	-9.2007	-19.7812	-10.1527				-6.10065
	30	-13.2056	-8.28758	-22.9767	-12.0212				-6.69457