



Date **14 Mar 2008**
Call Letters **WNJU** Channel
Location **Linden, NJ**
Customer
Antenna Type **Panel array**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TUD-C5**

Angle	Field	ERP (kW)	ERP (dBk)
0	0.492	157.3	21.97
10	0.603	236.3	23.74
20	0.769	384.4	25.85
30	0.903	530.0	27.24
40	0.913	541.8	27.34
50	0.815	431.7	26.35
60	0.824	441.3	26.45
70	0.962	601.5	27.79
80	0.962	601.5	27.79
90	0.873	495.4	26.95
100	0.928	559.8	27.48
110	1.000	650.0	28.13
120	0.928	559.8	27.48
130	0.873	495.4	26.95
140	0.962	601.5	27.79
150	0.962	601.5	27.79
160	0.824	441.3	26.45
170	0.815	431.7	26.35
180	0.913	541.8	27.34
190	0.903	530.0	27.24
200	0.769	384.4	25.85
210	0.603	236.3	23.74
220	0.492	157.3	21.97
230	0.392	99.9	19.99
240	0.263	45.0	16.53
250	0.184	22.0	13.43
260	0.173	19.5	12.89
270	0.160	16.6	12.21
280	0.173	19.5	12.89
290	0.189	23.2	13.66
300	0.173	19.5	12.89
310	0.160	16.6	12.21
320	0.173	19.5	12.89
330	0.184	22.0	13.43
340	0.263	45.0	16.53
350	0.392	99.9	19.99

Maxima

Angle	Field	ERP (kW)	ERP (dBk)
36	0.927	558.6	27.47
75	0.987	633.2	28.02
110	1.000	650.0	28.13
145	0.987	633.2	28.02
185	0.927	558.6	27.47
290	0.189	23.2	13.66

Minima

Angle	Field	ERP (kW)	ERP (dBk)
55	0.792	407.7	26.10
92	0.870	492.0	26.92
128	0.870	492.0	26.92
166	0.792	407.7	26.10
272	0.159	16.4	12.16
309	0.159	16.4	12.16

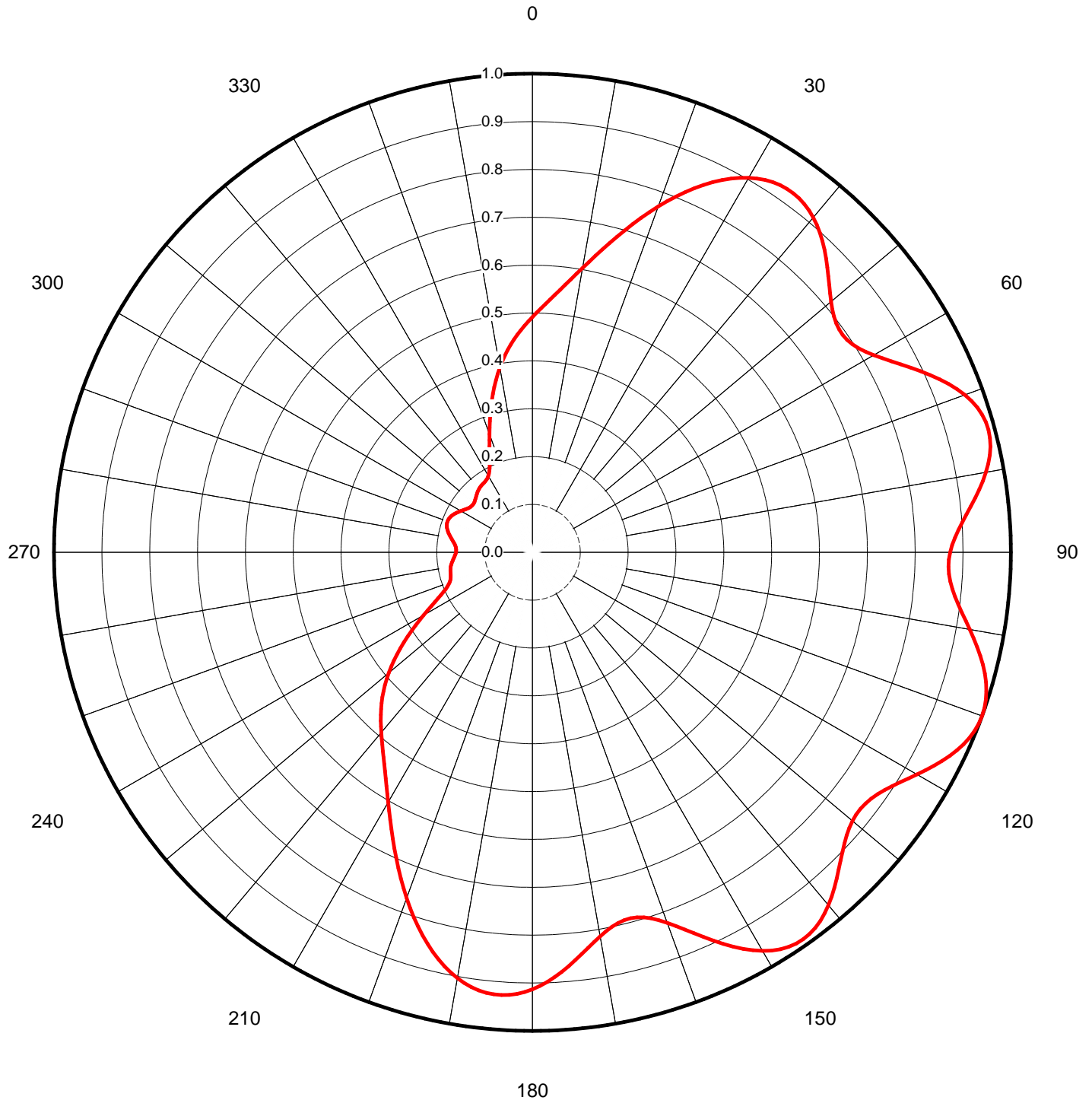
Remarks:

Proposal Number	DCA-11421	Revision:	3
Date	2-May-06		
Call Letters	WNJU-DT	Channel	36
Location	Linden, NJ		
Customer	Richland		
Antenna Type	TUD-C5SP-10/34U-2-B		

AZIMUTH PATTERN

Gain **2.10** **(3.22 dB)**
Calculated / Measured **Calculated**

Frequency **605.00 MHz**
Drawing # **TUD-C5SPB-6050**



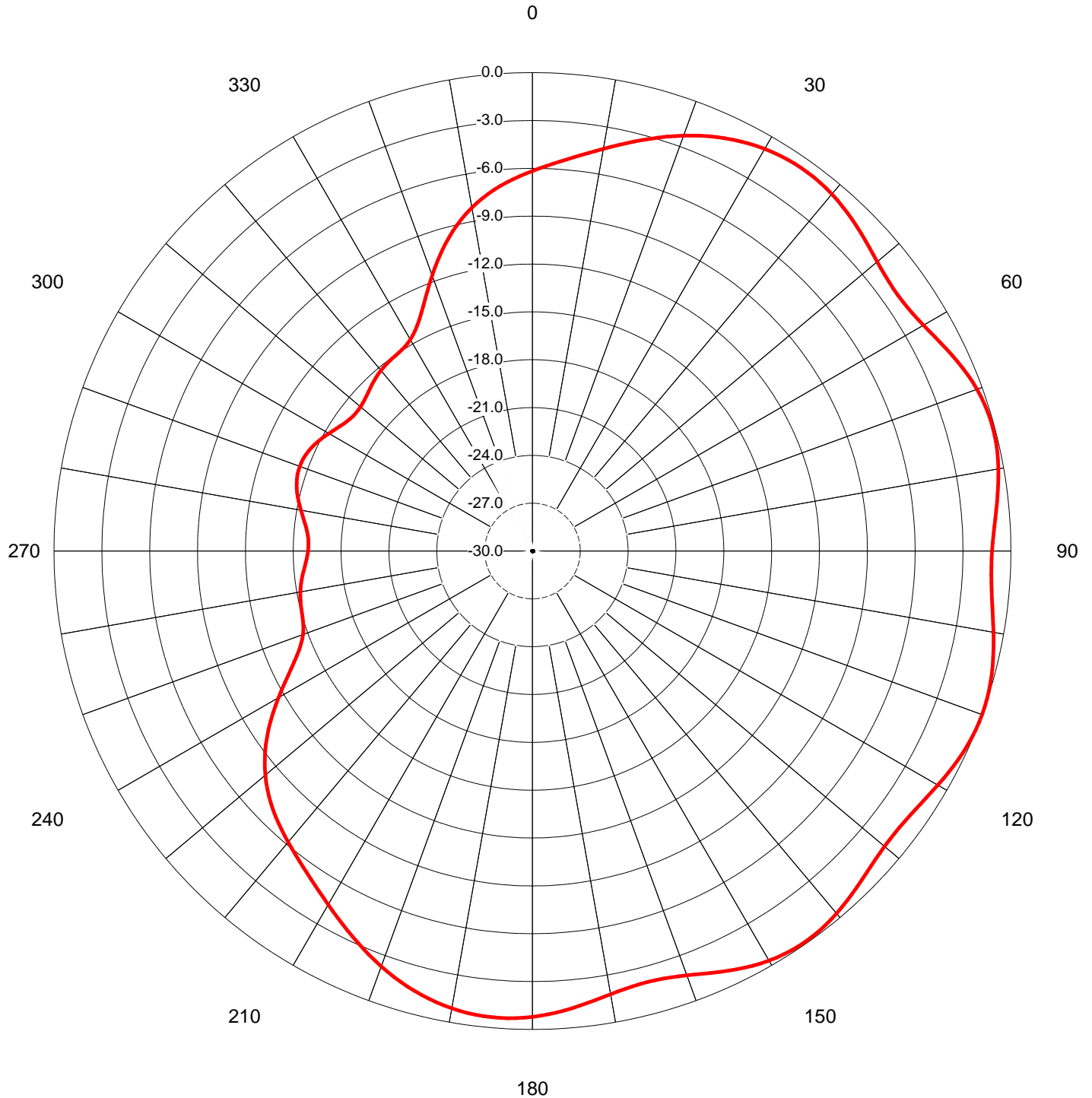


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AZIMUTH PATTERN (dB)

Gain **2.10** **(3.22 dB)**
Calculated / Measured **Calculated**

Frequency **605.00 MHz**
Drawing # **TUD-C5SPB-6050**





Proposal Number **DCA-11421** Revision: **3**
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Location **Linden, NJ**
Customer **Richland**
Antenna Type **TUD-C5SP-10/34U-2-B**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUD-C5SPB-6050**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.492	45	0.868	90	0.873	135	0.911	180	0.913	225	0.446	270	0.160	315	0.166
1	0.501	46	0.857	91	0.871	136	0.921	181	0.919	226	0.436	271	0.159	316	0.168
2	0.510	47	0.846	92	0.870	137	0.932	182	0.923	227	0.426	272	0.159	317	0.169
3	0.519	48	0.835	93	0.872	138	0.943	183	0.926	228	0.415	273	0.160	318	0.171
4	0.529	49	0.824	94	0.875	139	0.953	184	0.927	229	0.404	274	0.161	319	0.172
5	0.540	50	0.815	95	0.881	140	0.962	185	0.927	230	0.392	275	0.162	320	0.173
6	0.551	51	0.807	96	0.888	141	0.971	186	0.925	231	0.380	276	0.164	321	0.174
7	0.563	52	0.800	97	0.897	142	0.977	187	0.922	232	0.367	277	0.166	322	0.175
8	0.576	53	0.795	98	0.907	143	0.982	188	0.917	233	0.354	278	0.168	323	0.176
9	0.589	54	0.792	99	0.917	144	0.986	189	0.911	234	0.341	279	0.170	324	0.176
10	0.603	55	0.792	100	0.928	145	0.987	190	0.903	235	0.328	280	0.173	325	0.177
11	0.618	56	0.793	101	0.939	146	0.986	191	0.894	236	0.315	281	0.175	326	0.178
12	0.633	57	0.798	102	0.950	147	0.983	192	0.884	237	0.301	282	0.178	327	0.179
13	0.649	58	0.804	103	0.961	148	0.978	193	0.873	238	0.288	283	0.180	328	0.180
14	0.666	59	0.813	104	0.970	149	0.971	194	0.860	239	0.275	284	0.182	329	0.182
15	0.683	60	0.824	105	0.979	150	0.962	195	0.847	240	0.263	285	0.184	330	0.184
16	0.700	61	0.836	106	0.986	151	0.951	196	0.833	241	0.251	286	0.186	331	0.188
17	0.717	62	0.850	107	0.992	152	0.938	197	0.818	242	0.239	287	0.187	332	0.192
18	0.734	63	0.865	108	0.996	153	0.925	198	0.802	243	0.229	288	0.188	333	0.197
19	0.752	64	0.880	109	0.999	154	0.910	199	0.786	244	0.219	289	0.189	334	0.204
20	0.769	65	0.895	110	1.000	155	0.895	200	0.769	245	0.211	290	0.189	335	0.211
21	0.786	66	0.910	111	0.999	156	0.880	201	0.752	246	0.204	291	0.189	336	0.219
22	0.802	67	0.925	112	0.996	157	0.865	202	0.734	247	0.197	292	0.188	337	0.229
23	0.818	68	0.938	113	0.992	158	0.850	203	0.717	248	0.192	293	0.187	338	0.239
24	0.833	69	0.951	114	0.986	159	0.836	204	0.700	249	0.188	294	0.186	339	0.251
25	0.847	70	0.962	115	0.979	160	0.824	205	0.683	250	0.184	295	0.184	340	0.263
26	0.860	71	0.971	116	0.970	161	0.813	206	0.666	251	0.182	296	0.182	341	0.275
27	0.873	72	0.978	117	0.961	162	0.804	207	0.649	252	0.180	297	0.180	342	0.288
28	0.884	73	0.983	118	0.950	163	0.798	208	0.633	253	0.179	298	0.178	343	0.301
29	0.894	74	0.986	119	0.939	164	0.793	209	0.618	254	0.178	299	0.175	344	0.315
30	0.903	75	0.987	120	0.928	165	0.792	210	0.603	255	0.177	300	0.173	345	0.328
31	0.911	76	0.986	121	0.917	166	0.792	211	0.589	256	0.176	301	0.170	346	0.341
32	0.917	77	0.982	122	0.907	167	0.795	212	0.576	257	0.176	302	0.168	347	0.354
33	0.922	78	0.977	123	0.897	168	0.800	213	0.563	258	0.175	303	0.166	348	0.367
34	0.925	79	0.971	124	0.888	169	0.807	214	0.551	259	0.174	304	0.164	349	0.380
35	0.927	80	0.962	125	0.881	170	0.815	215	0.540	260	0.173	305	0.162	350	0.392
36	0.927	81	0.953	126	0.875	171	0.824	216	0.529	261	0.172	306	0.161	351	0.404
37	0.926	82	0.943	127	0.872	172	0.835	217	0.519	262	0.171	307	0.160	352	0.415
38	0.923	83	0.932	128	0.870	173	0.846	218	0.510	263	0.169	308	0.159	353	0.426
39	0.919	84	0.921	129	0.871	174	0.857	219	0.501	264	0.168	309	0.159	354	0.436
40	0.913	85	0.911	130	0.873	175	0.868	220	0.492	265	0.166	310	0.160	355	0.446
41	0.906	86	0.901	131	0.878	176	0.879	221	0.483	266	0.164	311	0.161	356	0.455
42	0.898	87	0.892	132	0.884	177	0.889	222	0.474	267	0.163	312	0.162	357	0.465
43	0.889	88	0.884	133	0.892	178	0.898	223	0.465	268	0.162	313	0.163	358	0.474
44	0.879	89	0.878	134	0.901	179	0.906	224	0.455	269	0.161	314	0.164	359	0.483



Proposal Number **DCA-11421** Revision: **3**
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Location **Linden, NJ**
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Antenna Type **TUD-C5SP-10/34U-2-B**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **10U207050-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.043	2.4	0.229	10.6	0.087	30.5	0.021	51.0	0.040	71.5	0.011
-9.5	0.039	2.6	0.162	10.8	0.104	31.0	0.015	51.5	0.065	72.0	0.013
-9.0	0.093	2.8	0.144	11.0	0.118	31.5	0.015	52.0	0.089	72.5	0.015
-8.5	0.139	3.0	0.173	11.5	0.132	32.0	0.024	52.5	0.107	73.0	0.016
-8.0	0.151	3.2	0.213	12.0	0.113	32.5	0.033	53.0	0.117	73.5	0.017
-7.5	0.124	3.4	0.247	12.5	0.071	33.0	0.036	53.5	0.119	74.0	0.018
-7.0	0.071	3.6	0.268	13.0	0.028	33.5	0.031	54.0	0.110	74.5	0.018
-6.5	0.042	3.8	0.275	13.5	0.039	34.0	0.022	54.5	0.091	75.0	0.018
-6.0	0.061	4.0	0.267	14.0	0.056	34.5	0.011	55.0	0.064	75.5	0.018
-5.5	0.046	4.2	0.246	14.5	0.048	35.0	0.010	55.5	0.034	76.0	0.017
-5.0	0.033	4.4	0.215	15.0	0.024	35.5	0.015	56.0	0.027	76.5	0.016
-4.5	0.160	4.6	0.178	15.5	0.038	36.0	0.016	56.5	0.060	77.0	0.015
-4.0	0.306	4.8	0.140	16.0	0.071	36.5	0.012	57.0	0.098	77.5	0.013
-3.5	0.421	5.0	0.110	16.5	0.089	37.0	0.011	57.5	0.133	78.0	0.012
-3.0	0.458	5.2	0.100	17.0	0.085	37.5	0.023	58.0	0.162	78.5	0.011
-2.8	0.442	5.4	0.114	17.5	0.061	38.0	0.036	58.5	0.183	79.0	0.010
-2.6	0.407	5.6	0.139	18.0	0.031	38.5	0.045	59.0	0.196	79.5	0.008
-2.4	0.354	5.8	0.166	18.5	0.020	39.0	0.047	59.5	0.200	80.0	0.007
-2.2	0.283	6.0	0.187	19.0	0.027	39.5	0.041	60.0	0.197	80.5	0.006
-2.0	0.199	6.2	0.201	19.5	0.018	40.0	0.030	60.5	0.186	81.0	0.005
-1.8	0.117	6.4	0.205	20.0	0.011	40.5	0.016	61.0	0.169	81.5	0.005
-1.6	0.109	6.6	0.200	20.5	0.050	41.0	0.011	61.5	0.148	82.0	0.004
-1.4	0.203	6.8	0.188	21.0	0.089	41.5	0.019	62.0	0.125	82.5	0.003
-1.2	0.324	7.0	0.168	21.5	0.115	42.0	0.025	62.5	0.100	83.0	0.003
-1.0	0.451	7.2	0.142	22.0	0.119	42.5	0.024	63.0	0.076	83.5	0.002
-0.8	0.575	7.4	0.114	22.5	0.099	43.0	0.017	63.5	0.054	84.0	0.002
-0.6	0.689	7.6	0.084	23.0	0.061	43.5	0.011	64.0	0.036	84.5	0.002
-0.4	0.791	7.8	0.057	23.5	0.020	44.0	0.020	64.5	0.023	85.0	0.002
-0.2	0.875	8.0	0.038	24.0	0.043	44.5	0.034	65.0	0.024	85.5	0.002
0.0	0.940	8.2	0.036	24.5	0.079	45.0	0.045	65.5	0.030	86.0	0.002
0.2	0.982	8.4	0.046	25.0	0.099	45.5	0.051	66.0	0.035	86.5	0.002
0.4	1.000	8.6	0.057	25.5	0.101	46.0	0.050	66.5	0.037	87.0	0.002
0.6	0.994	8.8	0.063	26.0	0.086	46.5	0.043	67.0	0.038	87.5	0.002
0.8	0.965	9.0	0.063	26.5	0.064	47.0	0.031	67.5	0.037	88.0	0.002
1.0	0.913	9.2	0.058	27.0	0.040	47.5	0.018	68.0	0.034	88.5	0.002
1.2	0.841	9.4	0.049	27.5	0.026	48.0	0.013	68.5	0.030	89.0	0.002
1.4	0.753	9.6	0.039	28.0	0.014	48.5	0.017	69.0	0.025	89.5	0.002
1.6	0.652	9.8	0.035	28.5	0.008	49.0	0.019	69.5	0.020	90.0	0.002
1.8	0.544	10.0	0.036	29.0	0.014	49.5	0.015	70.0	0.016		
2.0	0.433	10.2	0.049	29.5	0.022	50.0	0.004	70.5	0.013		
2.2	0.325	10.4	0.068	30.0	0.024	50.5	0.017	71.0	0.011		

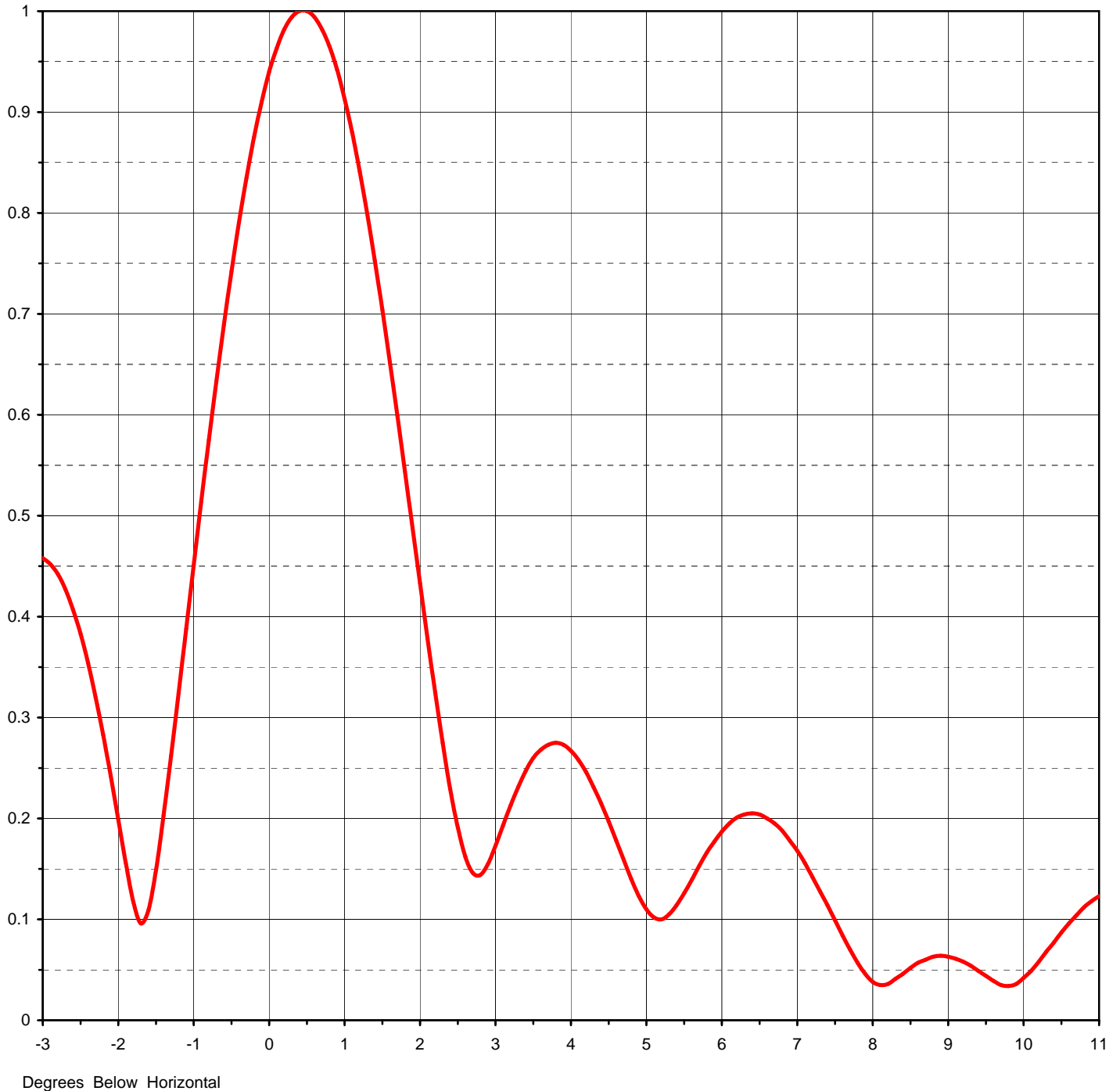


Proposal Number	DCA-11421	Revision:	3
Date	2-May-06		
Call Letters	WNJU-DT	Channel	36
Location	Linden, NJ		
Customer	Richland		
Antenna Type	TUD-C5SP-10/34U-2-B		

ELEVATION PATTERN

RMS Gain at Main Lobe	18.80 (12.74 dB)
RMS Gain at Horizontal	16.60 (12.20 dB)
Calculated / Measured	Calculated

Beam Tilt	0.50 deg
Frequency	605.00 MHz
Drawing #	10U207050





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ELEVATION PATTERN

RMS Gain at Main Lobe	18.80 (12.74 dB)
RMS Gain at Horizontal	16.60 (12.20 dB)
Calculated / Measured	Calculated

Beam Tilt	0.50 deg
Frequency	605.00 MHz
Drawing #	10U207050-90

