

COPY

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February 20, 2013

VIA MESSENGER

FILED/ACCEPTED

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

FEB 20 2013

Federal Communications Commission
Office of the Secretary

Re: **West Virginia Educational Broadcasting Authority**
WNPB-TV, Morgantown, West Virginia (Facility ID No. 71676)
Exhibit to FCC File No. BLEDT-20121205ACJ

Dear Ms. Dortch:

On behalf of WNPB-TV, Morgantown, West Virginia (the "Station"), enclosed please find a technical exhibit ("Exhibit") to be appended to the recently-granted application (FCC File No. BLEDT-20121205ACJ, the "Application") for a license to cover the Station's construction permit (FCC File No. BMPEDT-20120209ABV, the "Construction Permit"). Pursuant to a request from the Media Bureau's Video Division,¹ this Exhibit is being filed to reflect the azimuth patterns and other operating parameters of the Station's current antenna, which differs from the antenna specified in the Construction Permit.² We respectfully request that the Station's license authorization be updated to reflect the antenna specified in the Exhibit. Should you have any questions, please contact the undersigned.

Respectfully submitted,



Tom W. Davidson

cc: Kevin Harding

Enclosure

¹ Because the Application was granted on February 7, 2013, the FCC's Consolidated Database System does not allow for the filing of an amendment to the Application to include the Exhibit.

² Replacement of a directional antenna by a television station in this manner without prior FCC approval is permitted under Section 73.1690(c)(3) of the FCC's rules. See 47 C.F.R. § 73.1690(c)(3).

Dielectric

Proposal #: **C-05071-1**
 Call Letters: **WNPB**

Antenna Type: **TFU-22JTH-R S230**
 Location: **Morgantown, WV**

Channel: **33 DTV**

Electrical Specifications		Value		Remarks
		Ratio	dBd	
RMS Gain at Main Lobe over Halfwave Dipole	Hpol			
	Vpol			
RMS Gain at Horizontal over Halfwave Dipole	Hpol			
	Vpol			
Peak Directional Gain over Halfwave Dipole	Hpol	46.4	16.67	
	Vpol			
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	26.5	14.23	
	Vpol			
Circularity	Directional	dB		
Axial Ratio		dB		
Beam Tilt		1.00 deg		
Average Power		15 kW	11.76 dBk	
Antenna Input:	T/L	3-1/8 in	50.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel 1.08 : 1		Notes:
Patterns	Azimuth	TFU-S230-CH33		
	Elevation	22Z200100	22Z200100-90	
Mechanical Specifications		Metric	English	Preliminary
Height with Lightning Protector	H4	13.0 m	42.7 ft	
Height Less Lightning Protector	H2	12.1 m	39.7 ft	TIA/EIA-222-F.
Height of Center of Radiation	H3	6.1 m	19.9 ft	
Basic Wind Speed	V	112.7 km/h	70 mi/h	
Force Coeff. x Projected Area	CaAc	2.9 m ²	31.7 ft ²	Above base flange
Moment Arm	D1	6.8 m	22.4 ft	Above base flange
Force Coeff. x Projected Area	CaAc	m ²	ft ²	
Moment Arm	D3	m	ft	
Pole Bury Length	D2	m	ft	
Weight	W	2.3 t	5,000 lbs	
Radome				
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.				

NOTE:

Prepared By :

Original Date : 26-Jun-12

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Craig

Reason: I am the author of this document

Revision: 1

Date: 2012/07/23

Approved By :

Rev. Date:

23-Jul-12

KLP

CAB

13:58:55 05/00

Proposal #: C-05071-1
Call Letters: WNPB

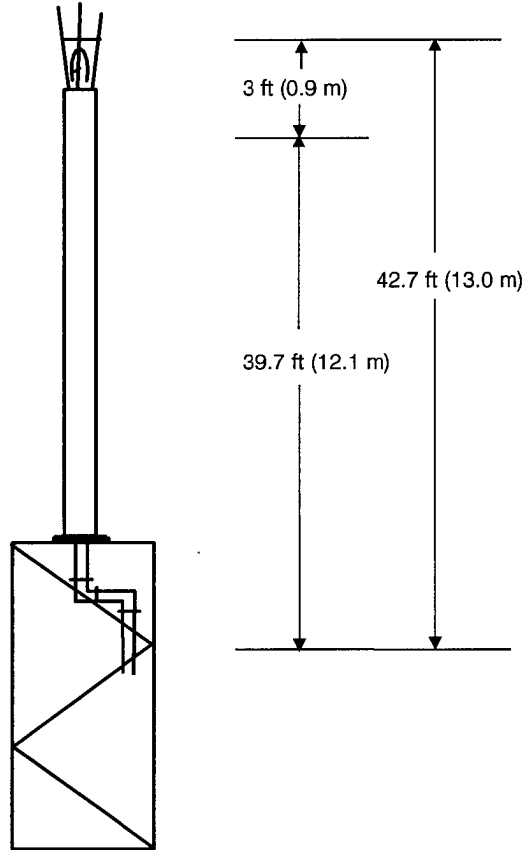
Antenna Type:
Location:

TFU-22JTH-R S230
Morgantown, WV

Channel: 33 DTV

Mechanical Specifications
TIA/EIA-222-F. @ 70 mi/h (112.7 km/h)

CaAc = 31.7 ft²(2.9 m²)
D1 = 24.2 ft (7.4 m)
W = 5000 lbs(2.3 t)



TFU-22JTH-R S230
Channel: D33

cab-62612-0

Not to Scale

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Proposal Number	C-05071	Revision:	1
Date	23-Jul-12		
Call Letters	WNPB	Channel	33
Location	Morgantown, WV		
Customer			
Antenna Type	TFU-22JTH-R S230		

SYSTEM SUMMARY

Antenna:

Type:	TFU-22JTH-R S230	ERP:	168 kW	H Pol	(22.26 dBk)
Channel:	33	Peak Gain*:	46.4		(16.67 dB)
Location:	Morgantown, WV	Input Power:	3.6 kW		(5.60 dBk)

Transmission Line:

Type:	EIA/DCA	Attenuation:		1.32 dB
Size:	3-1/8 in	Efficiency:	73.8%	
Impedance:	50 ohm			
Length:	520 ft		158.5 m	

Transmitter:

Power Required: **4.9 kW (6.92 dBk)**

* Gain is with respect to half wave dipole.

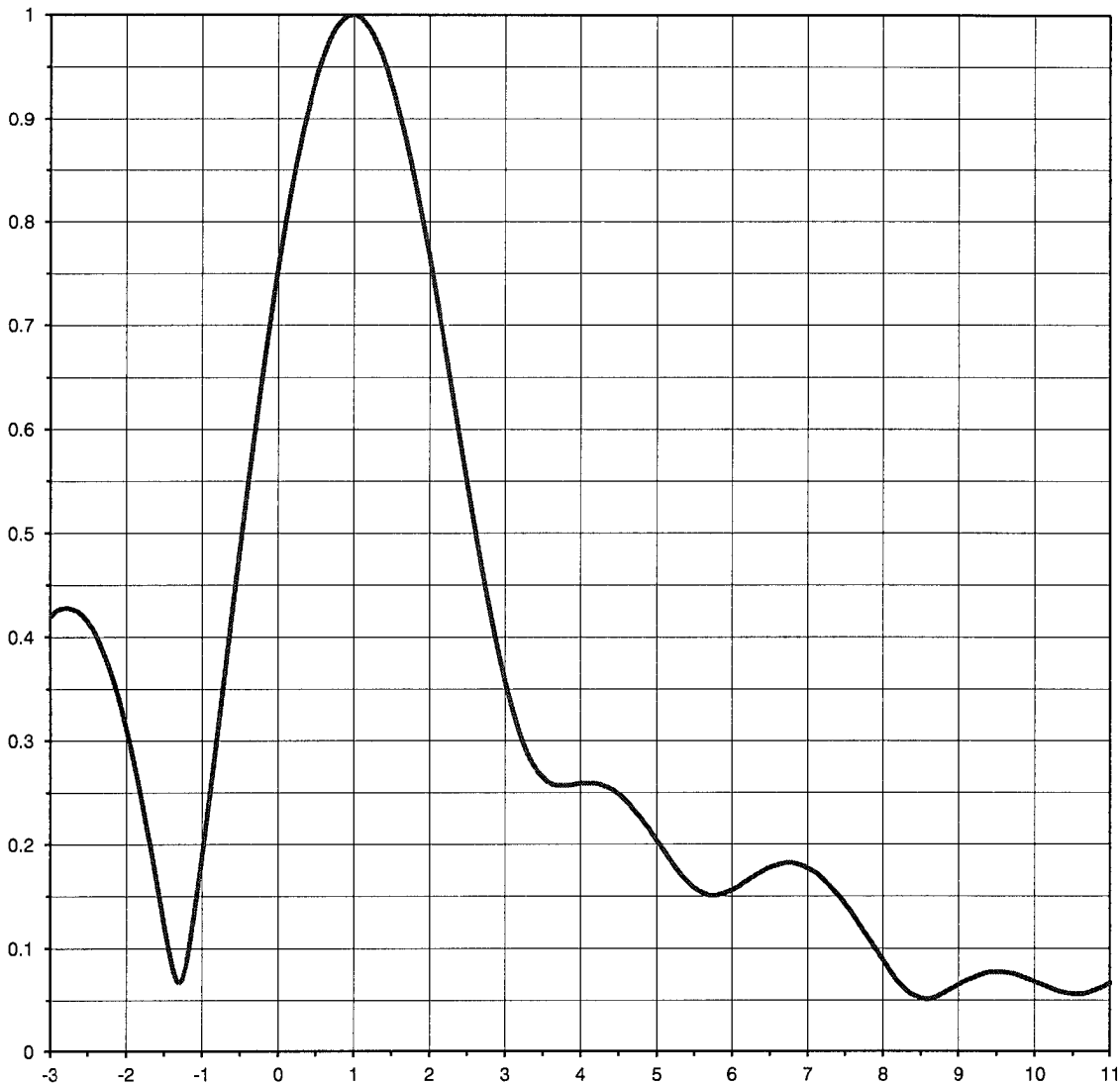
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Proposal Number **C-05071** Revision: **1**
Date **23-Jul-12**
Call Letters **WNPB** Channel **33**
Location **Morgantown, WV**
Customer
Antenna Type **TFU-22JTH-R S230**

ELEVATION PATTERN

RMS Gain at Main Lobe	20.00 (13.01 dB)	Beam Tilt	1.00 deg
RMS Gain at Horizontal	11.40 (10.57 dB)	Frequency	587.00 MHz
Calculated / Measured	Calculated	Drawing #	22Z200100



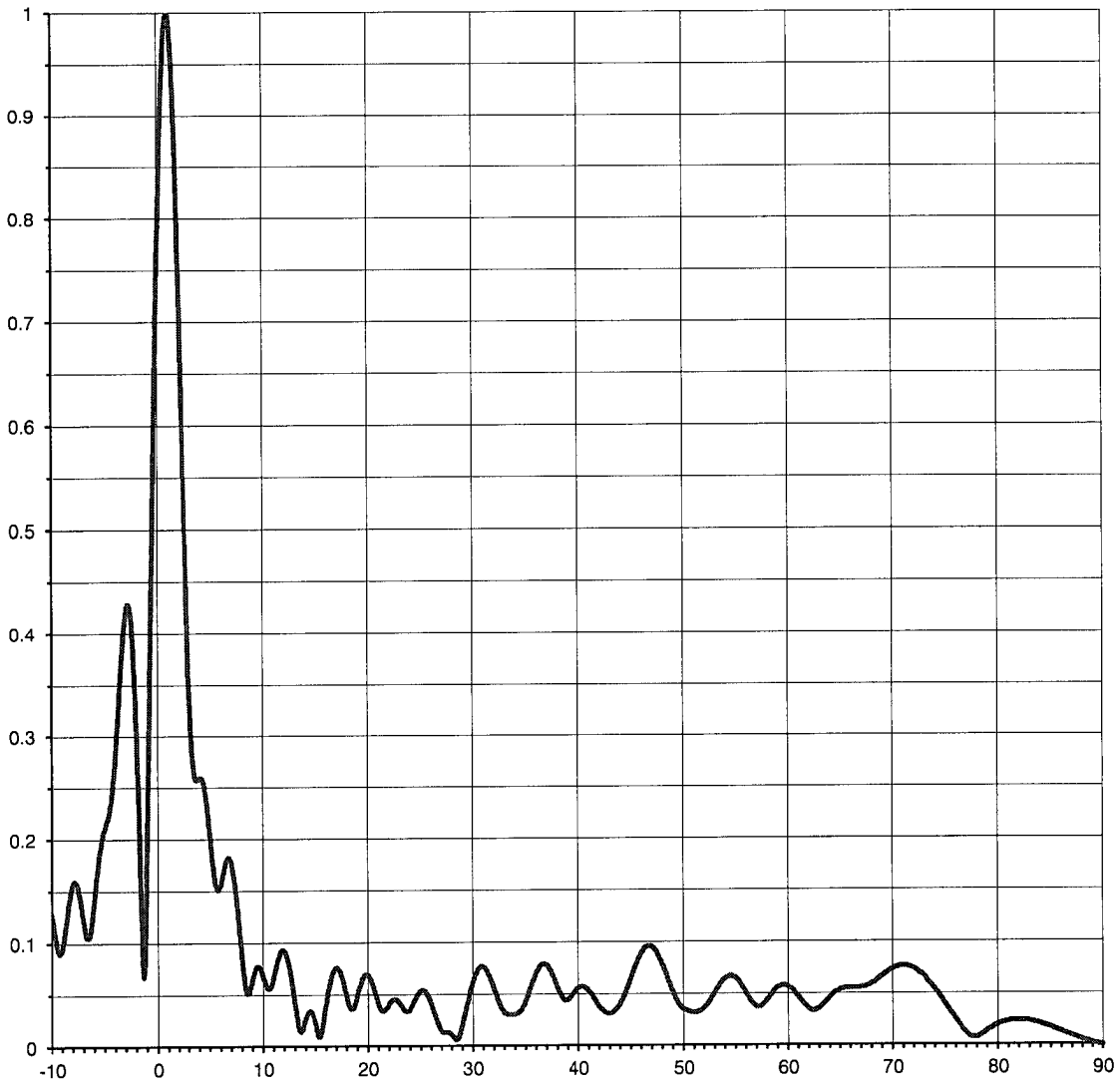
Degrees Below Horizontal



Proposal Number **C-05071** Revision: **1**
Date **23-Jul-12**
Call Letters **WNPB** Channel **33**
Location **Morgantown, WV**
Customer
Antenna Type **TFU-22JTH-R S230**

ELEVATION PATTERN

RMS Gain at Main Lobe	20.00 (13.01 dB)	Beam Tilt	1.00 deg
RMS Gain at Horizontal	11.40 (10.57 dB)	Frequency	587.00 MHz
Calculated / Measured	Calculated	Drawing #	22Z200100-90





Proposal Number **C-05071** Revision: **1**
 Date **23-Jul-12**
 Call Letters **WNPB** Channel **33**
 Location **Morgantown, WV**
 Customer
 Antenna Type **TFU-22JTH-R S230**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **22Z200100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.129	2.4	0.595	10.6	0.056	30.5	0.072	51.0	0.032	71.5	0.076
-9.5	0.098	2.6	0.508	10.8	0.057	31.0	0.077	51.5	0.033	72.0	0.074
-9.0	0.095	2.8	0.427	11.0	0.063	31.5	0.071	52.0	0.035	72.5	0.070
-8.5	0.129	3.0	0.358	11.5	0.084	32.0	0.059	52.5	0.041	73.0	0.066
-8.0	0.157	3.2	0.306	12.0	0.093	32.5	0.044	53.0	0.049	73.5	0.060
-7.5	0.153	3.4	0.274	12.5	0.081	33.0	0.034	53.5	0.057	74.0	0.054
-7.0	0.122	3.6	0.259	13.0	0.051	33.5	0.030	54.0	0.064	74.5	0.047
-6.5	0.105	3.8	0.257	13.5	0.018	34.0	0.030	54.5	0.067	75.0	0.039
-6.0	0.139	4.0	0.259	14.0	0.023	34.5	0.033	55.0	0.066	75.5	0.032
-5.5	0.185	4.2	0.259	14.5	0.034	35.0	0.041	55.5	0.061	76.0	0.025
-5.0	0.210	4.4	0.254	15.0	0.026	35.5	0.055	56.0	0.053	76.5	0.018
-4.5	0.230	4.6	0.242	15.5	0.009	36.0	0.068	56.5	0.044	77.0	0.012
-4.0	0.279	4.8	0.225	16.0	0.034	36.5	0.077	57.0	0.038	77.5	0.007
-3.5	0.358	5.0	0.204	16.5	0.062	37.0	0.078	57.5	0.037	78.0	0.007
-3.0	0.420	5.2	0.183	17.0	0.075	37.5	0.072	58.0	0.042	78.5	0.010
-2.8	0.428	5.4	0.165	17.5	0.071	38.0	0.060	58.5	0.049	79.0	0.013
-2.6	0.423	5.6	0.154	18.0	0.052	38.5	0.048	59.0	0.055	79.5	0.016
-2.4	0.403	5.8	0.151	18.5	0.036	39.0	0.044	59.5	0.058	80.0	0.019
-2.2	0.366	6.0	0.156	19.0	0.046	39.5	0.048	60.0	0.057	80.5	0.021
-2.0	0.313	6.2	0.165	19.5	0.063	40.0	0.055	60.5	0.054	81.0	0.022
-1.8	0.245	6.4	0.174	20.0	0.069	40.5	0.057	61.0	0.048	81.5	0.023
-1.6	0.164	6.6	0.180	20.5	0.061	41.0	0.055	61.5	0.041	82.0	0.023
-1.4	0.084	6.8	0.182	21.0	0.044	41.5	0.048	62.0	0.036	82.5	0.023
-1.2	0.089	7.0	0.177	21.5	0.034	42.0	0.040	62.5	0.033	83.0	0.023
-1.0	0.189	7.2	0.167	22.0	0.039	42.5	0.034	63.0	0.035	83.5	0.021
-0.8	0.306	7.4	0.152	22.5	0.045	43.0	0.031	63.5	0.040	84.0	0.020
-0.6	0.427	7.6	0.133	23.0	0.043	43.5	0.033	64.0	0.045	84.5	0.018
-0.4	0.545	7.8	0.111	23.5	0.036	44.0	0.039	64.5	0.051	85.0	0.017
-0.2	0.656	8.0	0.089	24.0	0.034	44.5	0.049	65.0	0.053	85.5	0.015
0.0	0.756	8.2	0.068	24.5	0.044	45.0	0.063	65.5	0.055	86.0	0.013
0.2	0.842	8.4	0.055	25.0	0.053	45.5	0.076	66.0	0.055	86.5	0.011
0.4	0.911	8.6	0.051	25.5	0.053	46.0	0.088	66.5	0.055	87.0	0.009
0.6	0.961	8.8	0.057	26.0	0.044	46.5	0.095	67.0	0.056	87.5	0.007
0.8	0.991	9.0	0.065	26.5	0.029	47.0	0.096	67.5	0.057	88.0	0.005
1.0	1.000	9.2	0.072	27.0	0.016	47.5	0.091	68.0	0.059	88.5	0.003
1.2	0.988	9.4	0.077	27.5	0.013	48.0	0.081	68.5	0.063	89.0	0.002
1.4	0.957	9.6	0.077	28.0	0.012	48.5	0.068	69.0	0.066	89.5	0.001
1.6	0.907	9.8	0.076	28.5	0.006	49.0	0.054	69.5	0.070	90.0	0.000
1.8	0.843	10.0	0.071	29.0	0.017	49.5	0.043	70.0	0.073		
2.0	0.767	10.2	0.065	29.5	0.038	50.0	0.036	70.5	0.075		
2.2	0.683	10.4	0.059	30.0	0.058	50.5	0.033	71.0	0.076		

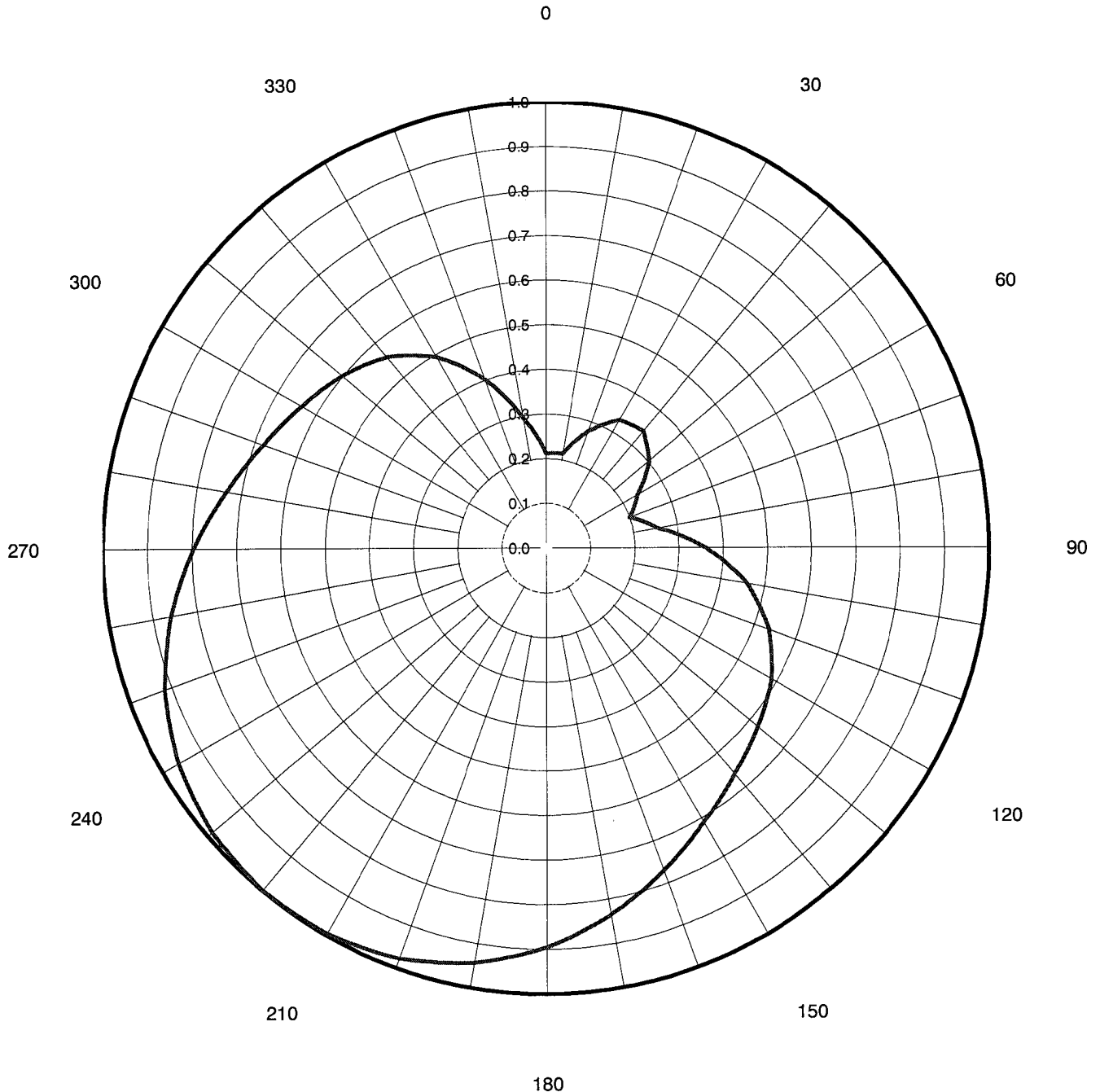
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Proposal Number	C-05071	Revision:	1
Date	23-Jul-12		
Call Letters	WNPB	Channel	33
Location	Morgantown, WV		
Customer			
Antenna Type	TFU-22JTH-R S230		

AZIMUTH PATTERN

Gain	2.32	(3.65 dB)
Calculated / Measured	Calculated	

Frequency	587.00 MHz
Drawing #	TFU-S230-CH33





Proposal Number **C-05071** Revision: **1**
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 Call Letters **WNPB** Channel **33**
 Location **Morgantown, WV**
 Customer
 Antenna Type **TFU-22JTH-R S230**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-S230-CH33**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.211	45	0.322	90	0.360	135	0.642	180	0.895	225	0.993	270	0.797	315	0.581
1	0.211	46	0.318	91	0.370	136	0.646	181	0.900	226	0.992	271	0.791	316	0.576
2	0.212	47	0.314	92	0.380	137	0.650	182	0.905	227	0.991	272	0.784	317	0.572
3	0.212	48	0.311	93	0.390	138	0.653	183	0.910	228	0.989	273	0.778	318	0.568
4	0.212	49	0.307	94	0.400	139	0.657	184	0.915	229	0.988	274	0.771	319	0.563
5	0.213	50	0.303	95	0.410	140	0.661	185	0.919	230	0.987	275	0.765	320	0.559
6	0.213	51	0.296	96	0.421	141	0.666	186	0.924	231	0.984	276	0.759	321	0.553
7	0.213	52	0.290	97	0.431	142	0.671	187	0.929	232	0.981	277	0.752	322	0.546
8	0.213	53	0.283	98	0.441	143	0.676	188	0.934	233	0.979	278	0.746	323	0.539
9	0.214	54	0.277	99	0.451	144	0.681	189	0.939	234	0.976	279	0.739	324	0.533
10	0.214	55	0.270	100	0.461	145	0.686	190	0.944	235	0.973	280	0.733	325	0.526
11	0.220	56	0.263	101	0.468	146	0.690	191	0.947	236	0.970	281	0.728	326	0.520
12	0.227	57	0.257	102	0.476	147	0.695	192	0.951	237	0.967	282	0.722	327	0.513
13	0.233	58	0.250	103	0.484	148	0.700	193	0.954	238	0.965	283	0.717	328	0.507
14	0.240	59	0.244	104	0.491	149	0.705	194	0.958	239	0.962	284	0.711	329	0.501
15	0.246	60	0.237	105	0.498	150	0.710	195	0.961	240	0.959	285	0.706	330	0.494
16	0.252	61	0.233	106	0.506	151	0.716	196	0.964	241	0.955	286	0.701	331	0.485
17	0.259	62	0.230	107	0.513	152	0.722	197	0.968	242	0.950	287	0.695	332	0.476
18	0.265	63	0.226	108	0.521	153	0.728	198	0.971	243	0.946	288	0.690	333	0.466
19	0.272	64	0.222	109	0.529	154	0.734	199	0.975	244	0.942	289	0.684	334	0.457
20	0.278	65	0.219	110	0.536	155	0.740	200	0.978	245	0.938	290	0.679	335	0.448
21	0.283	66	0.215	111	0.541	156	0.747	201	0.980	246	0.933	291	0.675	336	0.439
22	0.289	67	0.211	112	0.546	157	0.753	202	0.982	247	0.929	292	0.671	337	0.430
23	0.294	68	0.207	113	0.551	158	0.759	203	0.983	248	0.925	293	0.666	338	0.420
24	0.299	69	0.204	114	0.556	159	0.765	204	0.985	249	0.920	294	0.662	339	0.411
25	0.305	70	0.200	115	0.562	160	0.771	205	0.987	250	0.916	295	0.658	340	0.402
26	0.310	71	0.206	116	0.567	161	0.777	206	0.989	251	0.910	296	0.654	341	0.391
27	0.315	72	0.211	117	0.572	162	0.784	207	0.991	252	0.905	297	0.650	342	0.381
28	0.320	73	0.216	118	0.577	163	0.790	208	0.992	253	0.899	298	0.645	343	0.370
29	0.326	74	0.222	119	0.582	164	0.797	209	0.994	254	0.894	299	0.641	344	0.359
30	0.331	75	0.228	120	0.587	165	0.803	210	0.996	255	0.888	300	0.637	345	0.349
31	0.332	76	0.233	121	0.591	166	0.809	211	0.996	256	0.882	301	0.633	346	0.338
32	0.333	77	0.238	122	0.594	167	0.816	212	0.997	257	0.877	302	0.630	347	0.327
33	0.334	78	0.244	123	0.598	168	0.822	213	0.997	258	0.871	303	0.627	348	0.316
34	0.335	79	0.250	124	0.601	169	0.829	214	0.997	259	0.866	304	0.623	349	0.306
35	0.336	80	0.255	125	0.605	170	0.835	215	0.998	260	0.860	305	0.619	350	0.295
36	0.337	81	0.266	126	0.609	171	0.841	216	0.998	261	0.854	306	0.616	351	0.287
37	0.338	82	0.276	127	0.612	172	0.847	217	0.998	262	0.847	307	0.613	352	0.278
38	0.339	83	0.287	128	0.616	173	0.853	218	0.998	263	0.841	308	0.609	353	0.270
39	0.340	84	0.297	129	0.619	174	0.859	219	0.999	264	0.835	309	0.605	354	0.261
40	0.341	85	0.308	130	0.623	175	0.865	220	0.999	265	0.828	310	0.602	355	0.253
41	0.337	86	0.318	131	0.627	176	0.871	221	0.998	266	0.822	311	0.598	356	0.245
42	0.333	87	0.329	132	0.631	177	0.877	222	0.997	267	0.816	312	0.593	357	0.236
43	0.330	88	0.339	133	0.634	178	0.883	223	0.995	268	0.810	313	0.589	358	0.228
44	0.326	89	0.350	134	0.638	179	0.889	224	0.994	269	0.803	314	0.585	359	0.219

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