



Antenna Model: **TFU-16WB-R C160**

Reference Number: **240311WTG01**  
Date: **11-Mar-24**  
Customer: **Nexstar**  
Location: **Harlingen, TEXAS**

### Electrical Specifications

Polarization: **Elliptical**  
Azimuth Pattern: **C160**  
Antenna Input: **6-1/8 in 50 Ohm**  
VSWR: Channel **1.15:1** Band **1.15:1**  
Bandwidth: **470-698 MHz**  
Rated Input Power: **60.0 kW ( 17.78 dBk ) Maximum Average Power**

### Mechanical Specifications

Mounting: **Side Mounted**  
Environmental Protection: **Full Radome**  
Height: **00.0 ft**  
Weight: **0 lbs** mounts excluded  
Effective Projected Area: **EPA (ft^2)**

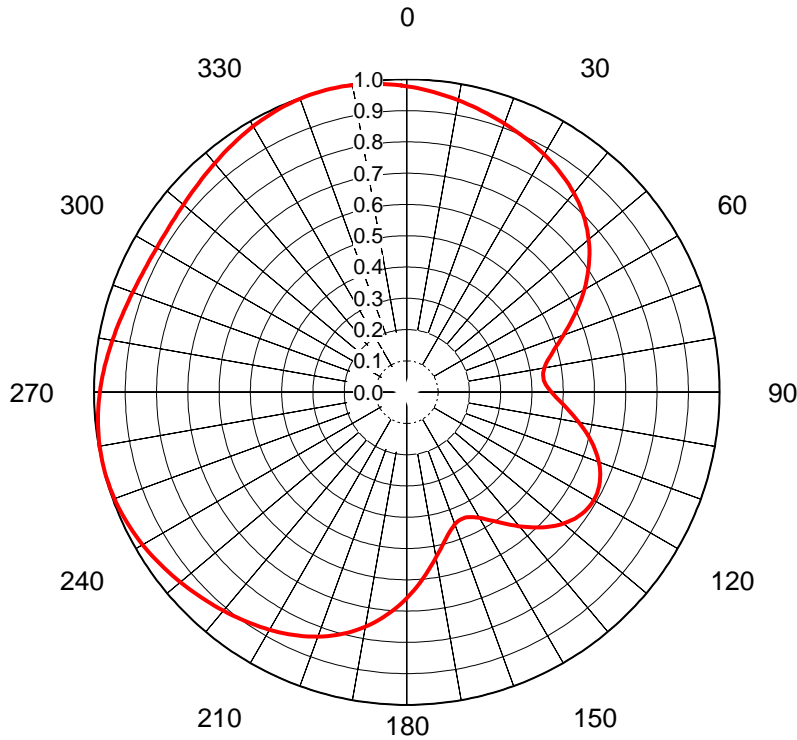
### Channel Specifications

Call	Ch	Freq	Hpol ERP	TPO	Peak Gain Main Lobe Hpol	Peak Gain Main Lobe Vpol	Peak Gain at Horizontal Hpol	Peak Gain at Horizontal Vpol
KGBT-TV	18	497	247 kW (23.93 dBk)	13.0 kW (11.14 dBk)	24.17 (13.83 dBd)		20.14 (13.04 dBd)	

## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **240311WTG01**  
Date **11-Mar-24**  
Call Letters **KGBT-TV**  
Channel **18**  
Frequency **497 MHz**  
Antenna Type **TFU-16WB-R C160**  
Gain **1.5 (1.76dB)**  
Calculated

Pattern Number **C160-18 Hpol**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.978	36	0.852	72	0.511	108	0.638	144	0.517	180	0.658	216	0.899	252	0.997	288	0.936	324	0.966
1	0.975	37	0.847	73	0.500	109	0.646	145	0.507	181	0.670	217	0.902	253	0.998	289	0.934	325	0.969
2	0.972	38	0.842	74	0.490	110	0.653	146	0.497	182	0.681	218	0.905	254	0.998	290	0.933	326	0.972
3	0.970	39	0.836	75	0.481	111	0.660	147	0.488	183	0.693	219	0.909	255	0.998	291	0.931	327	0.974
4	0.967	40	0.831	76	0.472	112	0.666	148	0.480	184	0.703	220	0.912	256	0.998	292	0.929	328	0.977
5	0.964	41	0.825	77	0.464	113	0.672	149	0.472	185	0.714	221	0.915	257	0.998	293	0.928	329	0.979
6	0.960	42	0.819	78	0.457	114	0.677	150	0.464	186	0.724	222	0.919	258	0.998	294	0.927	330	0.982
7	0.957	43	0.812	79	0.451	115	0.681	151	0.458	187	0.734	223	0.922	259	0.998	295	0.926	331	0.984
8	0.954	44	0.806	80	0.447	116	0.684	152	0.452	188	0.744	224	0.925	260	0.997	296	0.925	332	0.986
9	0.951	45	0.799	81	0.443	117	0.687	153	0.448	189	0.753	225	0.929	261	0.996	297	0.924	333	0.988
10	0.947	46	0.792	82	0.440	118	0.689	154	0.445	190	0.762	226	0.932	262	0.995	298	0.924	334	0.990
11	0.944	47	0.784	83	0.439	119	0.690	155	0.443	191	0.770	227	0.935	263	0.994	299	0.923	335	0.992
12	0.941	48	0.776	84	0.439	120	0.690	156	0.442	192	0.778	228	0.938	264	0.993	300	0.923	336	0.993
13	0.937	49	0.768	85	0.440	121	0.690	157	0.442	193	0.786	229	0.942	265	0.991	301	0.923	337	0.995
14	0.934	50	0.759	86	0.442	122	0.689	158	0.443	194	0.794	230	0.945	266	0.989	302	0.924	338	0.996
15	0.931	51	0.750	87	0.446	123	0.687	159	0.446	195	0.801	231	0.948	267	0.988	303	0.924	339	0.997
16	0.927	52	0.741	88	0.450	124	0.684	160	0.450	196	0.808	232	0.952	268	0.986	304	0.925	340	0.998
17	0.924	53	0.731	89	0.456	125	0.681	161	0.455	197	0.814	233	0.955	269	0.984	305	0.925	341	0.999
18	0.920	54	0.721	90	0.462	126	0.677	162	0.461	198	0.820	234	0.958	270	0.981	306	0.926	342	0.999
19	0.917	55	0.711	91	0.470	127	0.672	163	0.468	199	0.826	235	0.961	271	0.979	307	0.928	343	1.000
20	0.914	56	0.700	92	0.478	128	0.666	164	0.476	200	0.832	236	0.964	272	0.977	308	0.929	344	1.000
21	0.910	57	0.689	93	0.487	129	0.660	165	0.484	201	0.837	237	0.967	273	0.974	309	0.931	345	1.000
22	0.907	58	0.678	94	0.496	130	0.654	166	0.494	202	0.843	238	0.970	274	0.972	310	0.932	346	1.000
23	0.903	59	0.667	95	0.506	131	0.646	167	0.504	203	0.848	239	0.973	275	0.969	311	0.934	347	0.999
24	0.900	60	0.655	96	0.516	132	0.638	168	0.514	204	0.852	240	0.975	276	0.966	312	0.936	348	0.999
25	0.896	61	0.643	97	0.527	133	0.630	169	0.525	205	0.857	241	0.978	277	0.964	313	0.938	349	0.998
26	0.893	62	0.631	98	0.538	134	0.621	170	0.537	206	0.861	242	0.980	278	0.961	314	0.940	350	0.997
27	0.889	63	0.619	99	0.548	135	0.611	171	0.549	207	0.866	243	0.983	279	0.958	315	0.943	351	0.996
28	0.885	64	0.607	100	0.559	136	0.602	172	0.561	208	0.870	244	0.985	280	0.956	316	0.945	352	0.994
29	0.882	65	0.594	101	0.570	137	0.591	173	0.573	209	0.874	245	0.987	281	0.953	317	0.948	353	0.993
30	0.878	66	0.582	102	0.581	138	0.581	174	0.585	210	0.877	246	0.989	282	0.950	318	0.950	354	0.991
31	0.874	67	0.569	103	0.591	139	0.571	175	0.598	211	0.881	247	0.991	283	0.948	319	0.953	355	0.989
32	0.870	68	0.557	104	0.601	140	0.560	176	0.610	212	0.885	248	0.992	284	0.945	320	0.955	356	0.987
33	0.865	69	0.545	105	0.611	141	0.549	177	0.622	213	0.888	249	0.994	285	0.943	321	0.958	357	0.985
34	0.861	70	0.533	106	0.621	142	0.538	178	0.635	214	0.892	250	0.995	286	0.941	322	0.961	358	0.983
35	0.856	71	0.522	107	0.630	143	0.528	179	0.647	215	0.895	251	0.996	287	0.939	323	0.963	359	0.980

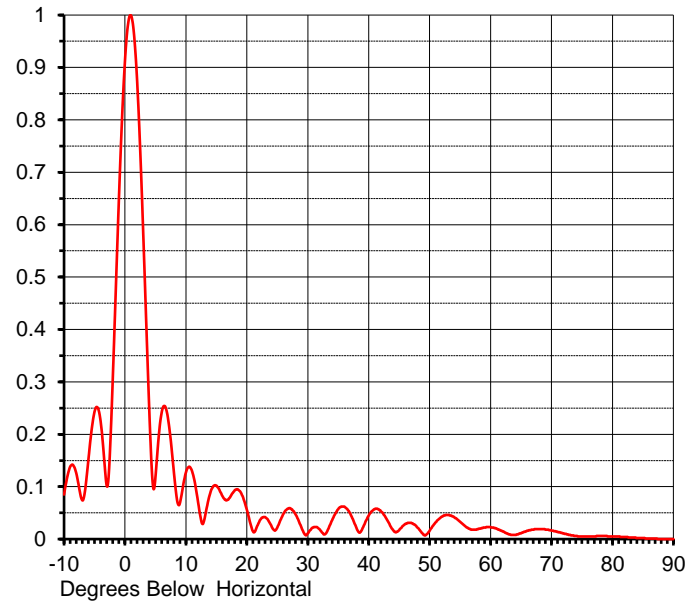
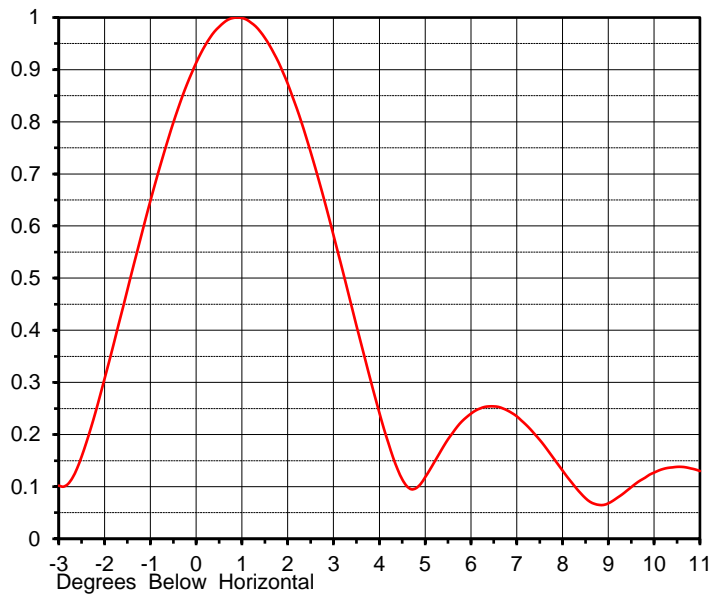
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## ELEVATION PATTERN

Proposal No. **240311WTG01**  
 Date **11-Mar-24**  
 Call Letters **KGBT-TV**  
 Channel **18**  
 Frequency **497 MHz**  
 Antenna Type **TFU-16WB-R C160**

RMS Directivity at Main Lobe **16.1 ( 12.07 dB )**  
 RMS Directivity at Horizontal **13.4 ( 11.27 dB )**  
**Calculated**

Beam Tilt **1.00 deg**  
 Pattern Number **16W161100-18**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.085	10.0	0.127	30.0	0.011	50.0	0.016	70.0	0.016
-9.0	0.138	11.0	0.130	31.0	0.023	51.0	0.032	71.0	0.014
-8.0	0.126	12.0	0.070	32.0	0.018	52.0	0.043	72.0	0.011
-7.0	0.074	13.0	0.036	33.0	0.011	53.0	0.046	73.0	0.008
-6.0	0.152	14.0	0.088	34.0	0.036	54.0	0.042	74.0	0.006
-5.0	0.243	15.0	0.102	35.0	0.057	55.0	0.033	75.0	0.005
-4.0	0.225	16.0	0.082	36.0	0.062	56.0	0.023	76.0	0.005
-3.0	0.102	17.0	0.076	37.0	0.048	57.0	0.018	77.0	0.005
-2.0	0.307	18.0	0.093	38.0	0.021	58.0	0.019	78.0	0.006
-1.0	0.648	19.0	0.089	39.0	0.021	59.0	0.022	79.0	0.006
0.0	0.913	20.0	0.056	40.0	0.045	60.0	0.023	80.0	0.005
1.0	0.999	21.0	0.015	41.0	0.057	61.0	0.020	81.0	0.005
2.0	0.873	22.0	0.032	42.0	0.053	62.0	0.015	82.0	0.004
3.0	0.582	23.0	0.042	43.0	0.037	63.0	0.009	83.0	0.003
4.0	0.242	24.0	0.026	44.0	0.017	64.0	0.008	84.0	0.002
5.0	0.118	25.0	0.022	45.0	0.017	65.0	0.011	85.0	0.002
6.0	0.240	26.0	0.048	46.0	0.029	66.0	0.016	86.0	0.001
7.0	0.235	27.0	0.059	47.0	0.031	67.0	0.018	87.0	0.001
8.0	0.131	28.0	0.047	48.0	0.022	68.0	0.019	88.0	0.000
9.0	0.068	29.0	0.021	49.0	0.008	69.0	0.018	89.0	0.000
								90.0	0.000

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## Summary

Proposal No.	<b>240311WTG01</b>
Date	<b>11-Mar-24</b>
Call Letters	<b>KGBT-TV</b>
Channel	<b>18</b>
Frequency	<b>497 MHz</b>
Antenna Type	<b>TFU-16WB-R C160</b>

## Antenna

		Hpol
ERP:	<b>247 kW</b>	<b>( 23.93 dBk )</b>
Peak Gain*	<b>24.17</b>	<b>(13.83 dBd)</b>

<b>Antenna Input Power</b>	<b>10.2 kW</b>	<b>( 10.09 dBk )</b>
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## Transmission Line

Type:	<b>Flexline Air</b>	Attenuation:	<b>( 1.05 dB )</b>
Size:	<b>5"</b>	Efficiency:	<b>78.6%</b>
Impedance:	<b>50 Ohm</b>		
Length:	<b>550 ft</b>	<b>167.6 m</b>	

## Transmitter Output

<b>13.0 kW</b>	<b>( 11.14 dBk )</b>
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Transmitter filter losses not included

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