Antenna Model: **TFU-8WB-R C160**

Reference Number: **20191010RCW01**
Date: **10-Oct-19**
Customer: **Alabama Educational Television Commission**
Location: **Mobile, AL**

Electrical Specifications

Polarization: **Horizontal**
Azimuth Pattern: **C160**
Antenna Input: **4-1/16 in 50 Ohm EIA/DCA**
VSWR: Channel **1.15:1** Band **1.15:1**
Bandwidth: **470-698 MHz**
Rated Input Power: **20 kW** **(13.01 dBk)** **Maximum Average Power**

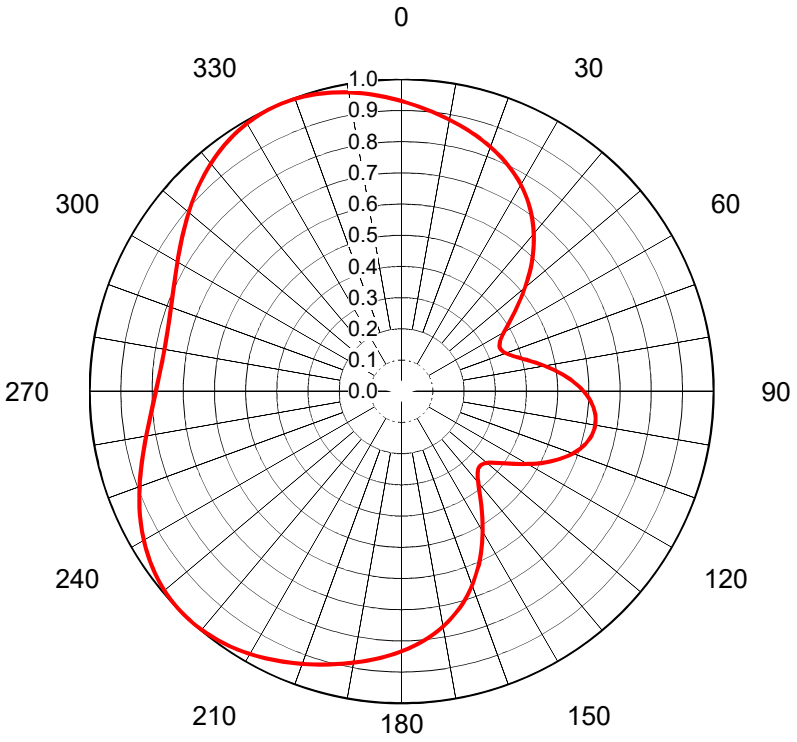
Mechanical Specifications

Mounting: **Side Mounted**
Environmental Protection: **Full Radome**
Height:
Weight: mounts excluded
Effective Projected Area:

Channel Specifications

Call	Ch	Freq	Hpol ERP	TPO	Peak Gain Main Lobe Hpol	Peak Gain at Horizontal Hpol
WEIQ	30	569	250 kW (23.98 dBk)	30.4 kW (14.82 dBk)	13.23 (11.22dB)	12.45 (10.95dB)

Dielectric®



AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	**20191010RCW01**
Date	**10-Oct-19**
Call Letters	**WEIQ**
Channel	**30**
Frequency	**569 MHz**
Antenna Type	**TFU-8WB-R C160**
Gain	**1.65 (2.18dB)** Calculated
Pattern Number	**WB-C160-30 Hpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.930	36	0.706	72	0.371	108	0.600	144	0.430	180	0.833	216	0.991	252	0.881	288	0.781	324	0.971
1	0.926	37	0.695	73	0.380	109	0.592	145	0.444	181	0.839	217	0.993	253	0.874	289	0.784	325	0.976
2	0.921	38	0.683	74	0.391	110	0.584	146	0.459	182	0.844	218	0.995	254	0.868	290	0.787	326	0.979
3	0.916	39	0.671	75	0.402	111	0.574	147	0.474	183	0.849	219	0.997	255	0.862	291	0.790	327	0.983
4	0.912	40	0.659	76	0.414	112	0.564	148	0.489	184	0.854	220	0.998	256	0.856	292	0.793	328	0.986
5	0.907	41	0.646	77	0.427	113	0.554	149	0.504	185	0.859	221	0.999	257	0.849	293	0.797	329	0.989
6	0.902	42	0.633	78	0.439	114	0.542	150	0.519	186	0.864	222	1.000	258	0.843	294	0.801	330	0.992
7	0.898	43	0.619	79	0.453	115	0.531	151	0.534	187	0.869	223	1.000	259	0.838	295	0.805	331	0.994
8	0.893	44	0.605	80	0.466	116	0.518	152	0.549	188	0.874	224	1.000	260	0.832	296	0.810	332	0.996
9	0.888	45	0.591	81	0.479	117	0.506	153	0.564	189	0.878	225	1.000	261	0.826	297	0.814	333	0.997
10	0.884	46	0.576	82	0.492	118	0.493	154	0.579	190	0.883	226	0.999	262	0.821	298	0.819	334	0.998
11	0.879	47	0.561	83	0.505	119	0.480	155	0.594	191	0.888	227	0.998	263	0.816	299	0.824	335	0.999
12	0.874	48	0.546	84	0.518	120	0.466	156	0.608	192	0.893	228	0.997	264	0.811	300	0.830	336	0.999
13	0.869	49	0.531	85	0.530	121	0.453	157	0.622	193	0.897	229	0.995	265	0.807	301	0.835	337	0.999
14	0.864	50	0.516	86	0.542	122	0.440	158	0.635	194	0.902	230	0.993	266	0.803	302	0.841	338	0.999
15	0.859	51	0.501	87	0.553	123	0.427	159	0.648	195	0.906	231	0.990	267	0.798	303	0.847	339	0.999
16	0.854	52	0.485	88	0.564	124	0.415	160	0.661	196	0.911	232	0.988	268	0.795	304	0.853	340	0.998
17	0.849	53	0.470	89	0.574	125	0.403	161	0.674	197	0.916	233	0.985	269	0.791	305	0.859	341	0.996
18	0.844	54	0.455	90	0.583	126	0.392	162	0.685	198	0.920	234	0.981	270	0.788	306	0.866	342	0.995
19	0.839	55	0.441	91	0.592	127	0.381	163	0.697	199	0.925	235	0.977	271	0.785	307	0.872	343	0.993
20	0.833	56	0.427	92	0.600	128	0.372	164	0.708	200	0.930	236	0.973	272	0.782	308	0.878	344	0.991
21	0.827	57	0.414	93	0.607	129	0.364	165	0.719	201	0.934	237	0.969	273	0.780	309	0.885	345	0.988
22	0.821	58	0.401	94	0.613	130	0.357	166	0.729	202	0.939	238	0.964	274	0.778	310	0.891	346	0.986
23	0.815	59	0.389	95	0.618	131	0.352	167	0.739	203	0.943	239	0.960	275	0.776	311	0.898	347	0.983
24	0.809	60	0.379	96	0.622	132	0.349	168	0.748	204	0.948	240	0.954	276	0.775	312	0.904	348	0.980
25	0.802	61	0.369	97	0.626	133	0.347	169	0.757	205	0.952	241	0.949	277	0.774	313	0.911	349	0.976
26	0.795	62	0.361	98	0.628	134	0.347	170	0.765	206	0.956	242	0.943	278	0.773	314	0.917	350	0.973
27	0.788	63	0.354	99	0.629	135	0.348	171	0.774	207	0.961	243	0.938	279	0.772	315	0.923	351	0.969
28	0.780	64	0.349	100	0.630	136	0.352	172	0.781	208	0.965	244	0.932	280	0.772	316	0.929	352	0.965
29	0.772	65	0.346	101	0.629	137	0.357	173	0.789	209	0.969	245	0.926	281	0.772	317	0.935	353	0.961
30	0.764	66	0.344	102	0.628	138	0.364	174	0.796	210	0.972	246	0.920	282	0.773	318	0.941	354	0.957
31	0.756	67	0.345	103	0.626	139	0.372	175	0.803	211	0.976	247	0.913	283	0.773	319	0.947	355	0.953
32	0.746	68	0.347	104	0.622	140	0.382	176	0.810	212	0.979	248	0.907	284	0.774	320	0.952	356	0.949
33	0.737	69	0.350	105	0.618	141	0.392	177	0.816	213	0.983	249	0.900	285	0.776	321	0.957	357	0.944
34	0.727	70	0.356	106	0.613	142	0.404	178	0.822	214	0.986	250	0.894	286	0.777	322	0.962	358	0.940
35	0.717	71	0.363	107	0.607	143	0.417	179	0.828	215	0.988	251	0.887	287	0.779	323	0.967	359	0.935

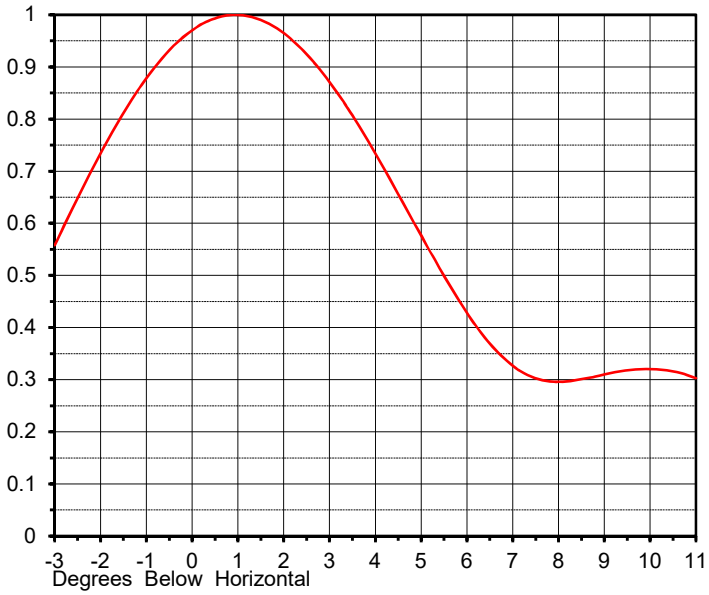
Dielectric®

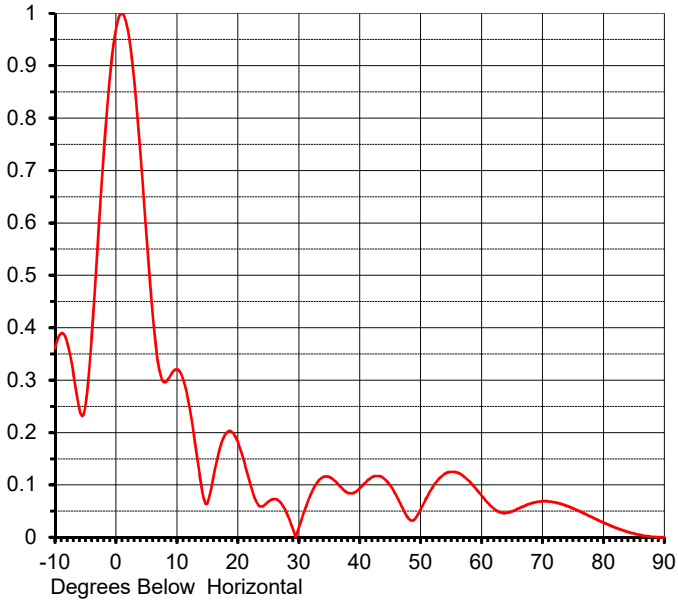
ELEVATION PATTERN

Proposal No.	**20191010RCW01**
Date	**10-Oct-19**
Call Letters	**WEIQ**
Channel	**30**
Frequency	**569 MHz**
Antenna Type	**TFU-8WB-R C160**

RMS Directivity at Main Lobe	**8.0 (9.04 dB)**	Beam Tilt	**1.05 deg**
RMS Directivity at Horizontal	**7.5 (8.75 dB)**	Pattern Number	**08W080105-30**

Calculated





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.361	10.0	0.320	30.0	0.018	50.0	0.053	70.0	0.069
-9.0	0.389	11.0	0.303	31.0	0.053	51.0	0.076	71.0	0.068
-8.0	0.372	12.0	0.253	32.0	0.083	52.0	0.096	72.0	0.067
-7.0	0.314	13.0	0.179	33.0	0.104	53.0	0.112	73.0	0.064
-6.0	0.244	14.0	0.099	34.0	0.115	54.0	0.121	74.0	0.060
-5.0	0.252	15.0	0.065	35.0	0.115	55.0	0.125	75.0	0.055
-4.0	0.380	16.0	0.115	36.0	0.107	56.0	0.124	76.0	0.050
-3.0	0.558	17.0	0.168	37.0	0.095	57.0	0.117	77.0	0.045
-2.0	0.734	18.0	0.197	38.0	0.085	58.0	0.107	78.0	0.039
-1.0	0.878	19.0	0.201	39.0	0.085	59.0	0.094	79.0	0.034
0.0	0.970	20.0	0.182	40.0	0.094	60.0	0.080	80.0	0.028
1.0	1.000	21.0	0.146	41.0	0.105	61.0	0.066	81.0	0.023
2.0	0.965	22.0	0.104	42.0	0.115	62.0	0.055	82.0	0.018
3.0	0.871	23.0	0.069	43.0	0.117	63.0	0.048	83.0	0.014
4.0	0.734	24.0	0.059	44.0	0.112	64.0	0.047	84.0	0.010
5.0	0.577	25.0	0.068	45.0	0.099	65.0	0.050	85.0	0.007
6.0	0.428	26.0	0.073	46.0	0.080	66.0	0.055	86.0	0.005
7.0	0.327	27.0	0.067	47.0	0.057	67.0	0.060	87.0	0.003
8.0	0.296	28.0	0.047	48.0	0.036	68.0	0.064	88.0	0.001
9.0	0.310	29.0	0.017	49.0	0.034	69.0	0.067	89.0	0.000
								90.0	0.000

Dielectric®

Summary

Proposal No.	**20191010RCW01**
Date	**10-Oct-19**
Call Letters	**WEIQ**
Channel	**30**
Frequency	**569 MHz**
Antenna Type	**TFU-8WB-R C160**

Antenna

	Hpol	
ERP:	**250 kW**	**(23.98 dBk)**
Peak Gain	13.23	(11.22 dBd)

Antenna Input Power

18.9 kW **(12.76 dBk)**

Transmission Line

Type:	**Flexline Air**	Attenuation:	**(2.06 dB)**
Size:	**4"**	Efficiency:	**62.2%**
Impedance:	**50 Ohm**		
Length:	**670 ft**	**204.2 m**	

Caution, transmission line may be overpowered

Transmitter Output

30.4 kW **(14.82 dBk)**

Transmitter filter losses not included