



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR A  
MINOR MODIFICATION OF ITS  
AUXILIARY FACILITY CONSTRUCTION PERMIT  
FILE NUMBER 0000184912  
KVCW - LAS VEGAS, NEVADA  
DTV - CH. 29 - 57.14 kW - 369.5 m HAAT**

Prepared for: KUPN Licensee, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, No. 7418, and in New York State, No. 63418.

**GENERAL**

This office has been authorized KUPN Licensee, LLC, licensee of KVCW, channel 29, licensed to Las Vegas, Nevada, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for a minor modification of its construction permit, file number 0000184912, for its auxiliary facility.

**DIRECTIONAL ANTENNA**

The applicant will use a Dielectric model TFU-8WB/VP-R C230 elliptically polarized directional transmitting antenna with its center of radiation located at a height above ground of 47.2 meters, and a height above average terrain of 369.5 meters. The antenna manufacturer's horizontal plane azimuth radiation patterns for both the horizontally polarized and vertically polarized components, and the manufacturer's vertical plane

elevation radiation pattern, illustrating the antenna's radiation characteristics above and below the horizontal plane are shown and tabulated in the antenna exhibit.

## **PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 3 shows the auxiliary facility predicted Noise Limited (40.23 dBu) contour, and the principal community (48 dBu) contour. The 48 dBu contour completely encompasses the principal community of license, Las Vegas, Nevada.

Exhibit 2 demonstrates that the proposed auxiliary noise limited contour exists wholly within the licensed noise limited contour, as required by the FCC's Rules.

## **BLANKETING AND INTERMODULATION INTERFERENCE**

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the KVCW site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

## **RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE**

The licensed KVCW facility designated as DTS-1 is licensed to broadcast ATSC 3.0 and the instant application for a construction permit for an auxiliary facility at DTS-1 seeks no changes in that facility. DTS-1 has previously been evaluated in regard to the FCC guidelines on human exposure to non-ionizing radiation. The calculated levels of RF exposure in the area below the DTS-1 tower is less than 3% of the allowable limit for a controlled environment and less than 15% of the allowable limit for an uncontrolled environment. The Black Mountain antenna farm is a controlled access site. Access to the transmitting tower site and any RF transmitting equipment is restricted and clearly marked with warning signs. When workers or other authorized personnel enter the restricted area appropriate measures are taken to assure worker safety.

## **OCCUPATIONAL SAFETY**

In accordance with its obligations as an occupant of the Black Mountain site the applicant is committed to the protection of station personnel and/or tower contractors working on the tower support structure, or in the vicinity of the KVCW licensed ATSC 3.0 operation that is designated as DTS-1, by reducing power and/or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure the proper protection of persons who might be required to perform their assigned tasks in this controlled environment.

**STATEMENT OF JOHN E. HIDLE, P.E.**  
**KVCW - Las Vegas, Nevada**  
**PAGE 4**

**SUMMARY**

It is submitted that the instant application for a minor modification of KVCW's auxiliary construction permit, file number 0000184912, which seeks only to reduce the authorized Effective Radiated Power from 164 kW to 57.14 kW, to provide an auxiliary DTV facility for KVCW, as described herein, complies with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: September 23, 2022



Ivins  
Saint George

Mesquite

Indian Springs

LAS VEGAS,  
NEVADA

KCVW  
SITE

Pahrump



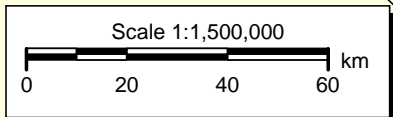
Las Vegas

Henderson

Boulder City

Bullhead City

Kingman



SEPTEMBER, 2022

# PREDICTED COVERAGE CONTOURS

**KVCW (TV) - LAS VEGAS, NV**  
**AUXILIARY 29 - 57.1 kW ERP - 382.9 M HAAT**

**AUXILIARY**  
**57.1 KW - 369.5 M HAAT**



Predicted Noise Limited 40.23 dBu  
F(50,90) Coverage Contour



Predicted Auxiliary Transmitter 48.0 dBu  
F(50,90) Coverage Contour



Ivins  
Saint George

Mesquite

LAS VEGAS,  
NEVADA

Indian Springs

KCVW  
SITE

Pahrump

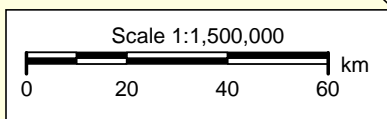
Las Vegas

Henderson

Boulder City

Kingman

Bullhead City



SEPTEMBER, 2022

## PREDICTED COVERAGE CONTOURS

**KVCW (TV) - LAS VEGAS, NV**  
**DTV Channel 29 - 1000 kW ERP - 382.9 M HAAT**

**AUXILIARY**  
**57.1 KW - 369.5 M HAAT**

Predicted Noise Limited 40.23 dBu  
F(50,90) Coverage Contour

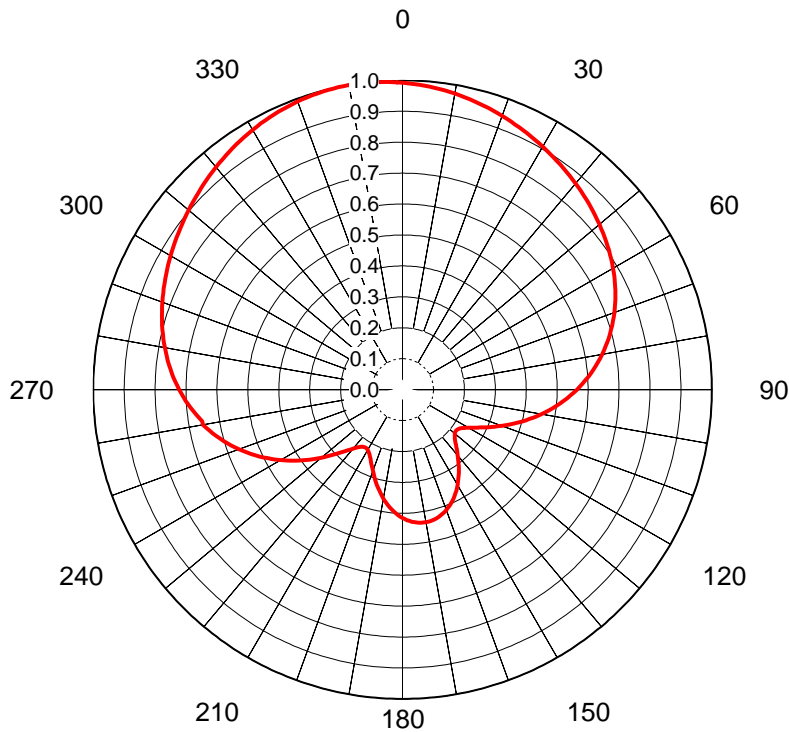


Predicted Auxiliary Transmitter 40.23 dBu  
F(50,90) Coverage Contour

## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **KVCW-Aux**  
Date **10-Feb-22**  
Call Letters **KVCW**  
Channel **29**  
Frequency **563 MHz**  
Antenna Type **TFU-8WB/VP-R S230**  
Gain **2.15 (3.33dB)**  
Calculated

Pattern Number **WB-S230-29 Hpol**



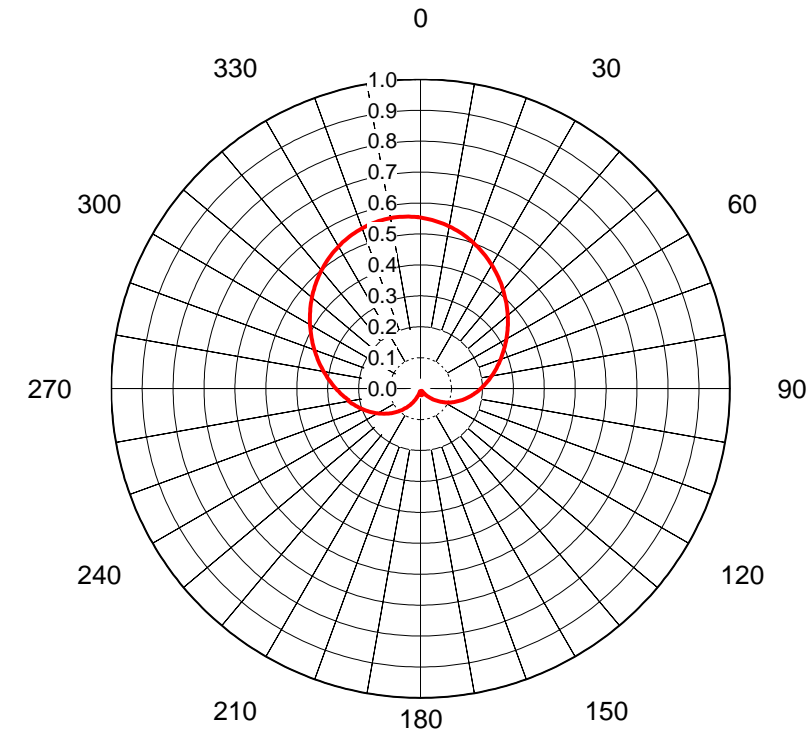
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.992	36	0.885	72	0.716	108	0.364	144	0.309	180	0.415	216	0.228	252	0.583	288	0.818	324	0.952
1	0.991	37	0.881	73	0.709	109	0.353	145	0.317	181	0.411	217	0.232	253	0.593	289	0.822	325	0.955
2	0.989	38	0.878	74	0.702	110	0.342	146	0.325	182	0.406	218	0.237	254	0.602	290	0.826	326	0.958
3	0.988	39	0.874	75	0.694	111	0.331	147	0.333	183	0.401	219	0.243	255	0.611	291	0.830	327	0.961
4	0.986	40	0.870	76	0.687	112	0.320	148	0.341	184	0.396	220	0.249	256	0.620	292	0.835	328	0.964
5	0.984	41	0.866	77	0.679	113	0.309	149	0.349	185	0.390	221	0.256	257	0.629	293	0.839	329	0.967
6	0.981	42	0.863	78	0.672	114	0.299	150	0.356	186	0.384	222	0.264	258	0.638	294	0.843	330	0.970
7	0.979	43	0.859	79	0.664	115	0.289	151	0.363	187	0.378	223	0.272	259	0.647	295	0.846	331	0.972
8	0.977	44	0.855	80	0.656	116	0.279	152	0.370	188	0.371	224	0.281	260	0.655	296	0.850	332	0.975
9	0.974	45	0.851	81	0.647	117	0.270	153	0.377	189	0.364	225	0.291	261	0.655	297	0.854	333	0.977
10	0.972	46	0.847	82	0.639	118	0.262	154	0.383	190	0.357	226	0.300	262	0.663	298	0.858	334	0.980
11	0.969	47	0.843	83	0.630	119	0.254	155	0.389	191	0.350	227	0.310	263	0.671	299	0.862	335	0.982
12	0.966	48	0.839	84	0.621	120	0.246	156	0.395	192	0.343	228	0.321	264	0.679	300	0.866	336	0.984
13	0.964	49	0.835	85	0.612	121	0.240	157	0.400	193	0.335	229	0.331	265	0.687	301	0.869	337	0.986
14	0.961	50	0.831	86	0.603	122	0.234	158	0.405	194	0.327	230	0.342	266	0.694	302	0.873	338	0.988
15	0.958	51	0.827	87	0.593	123	0.229	159	0.410	195	0.319	231	0.353	267	0.701	303	0.877	339	0.990
16	0.955	52	0.823	88	0.584	124	0.225	160	0.414	196	0.311	232	0.364	268	0.708	304	0.881	340	0.991
17	0.951	53	0.818	89	0.574	125	0.222	161	0.418	197	0.304	233	0.376	269	0.715	305	0.884	341	0.993
18	0.948	54	0.814	90	0.564	126	0.219	162	0.422	198	0.296	234	0.387	270	0.722	306	0.888	342	0.994
19	0.945	55	0.810	91	0.554	127	0.218	163	0.425	199	0.288	235	0.398	271	0.729	307	0.892	343	0.995
20	0.942	56	0.805	92	0.543	128	0.218	164	0.428	200	0.280	236	0.410	272	0.735	308	0.896	344	0.997
21	0.938	57	0.800	93	0.533	129	0.219	165	0.430	201	0.273	237	0.421	273	0.741	309	0.899	345	0.997
22	0.935	58	0.796	94	0.522	130	0.221	166	0.432	202	0.265	238	0.433	274	0.747	310	0.903	346	0.998
23	0.932	59	0.791	95	0.512	131	0.224	167	0.433	203	0.259	239	0.444	275	0.753	311	0.907	347	0.999
24	0.928	60	0.786	96	0.501	132	0.227	168	0.435	204	0.252	240	0.455	276	0.759	312	0.910	348	0.999
25	0.925	61	0.781	97	0.490	133	0.232	169	0.435	205	0.246	241	0.467	277	0.764	313	0.914	349	1.000
26	0.921	62	0.776	98	0.479	134	0.237	170	0.435	206	0.240	242	0.478	278	0.770	314	0.917	350	1.000
27	0.918	63	0.770	99	0.467	135	0.242	171	0.435	207	0.235	243	0.489	279	0.775	315	0.921	351	1.000
28	0.914	64	0.765	100	0.456	136	0.249	172	0.435	208	0.231	244	0.500	280	0.780	316	0.925	352	1.000
29	0.911	65	0.759	101	0.445	137	0.255	173	0.434	209	0.228	245	0.511	281	0.785	317	0.928	353	0.999
30	0.907	66	0.753	102	0.433	138	0.262	174	0.432	210	0.225	246	0.522	282	0.790	318	0.932	354	0.999
31	0.903	67	0.747	103	0.422	139	0.270	175	0.430	211	0.223	247	0.532	283	0.795	319	0.935	355	0.998
32	0.900	68	0.741	104	0.410	140	0.278	176	0.428	212	0.222	248	0.543	284	0.800	320	0.939	356	0.997
33	0.896	69	0.735	105	0.399	141	0.285	177	0.425	213	0.222	249	0.553	285	0.805	321	0.942	357	0.996
34	0.892	70	0.729	106	0.387	142	0.293	178	0.422	214	0.223	250	0.563	286	0.809	322	0.945	358	0.995
35	0.889	71	0.722	107	0.376	143	0.301	179	0.419	215	0.225	251	0.573	287	0.813	323	0.949	359	0.994

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## AZIMUTH PATTERN Vertical Polarization

Proposal No. **KVCW-Aux**  
Date **10-Feb-22**  
Call Letters **KVCW**  
Channel **29**  
Frequency **563 MHz**  
Antenna Type **TFU-8WB/VP-R S230**  
Gain **3.08 (4.88dB)**  
Calculated

Pattern Number **WB-S230-29 Vpol**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.553	36	0.434	72	0.267	108	0.130	144	0.016	180	0.017	216	0.074	252	0.205	288	0.355	324	0.513
1	0.552	37	0.430	73	0.262	109	0.126	145	0.014	181	0.016	217	0.077	253	0.208	289	0.360	325	0.516
2	0.550	38	0.425	74	0.258	110	0.123	146	0.012	182	0.015	218	0.081	254	0.212	290	0.365	326	0.519
3	0.548	39	0.420	75	0.254	111	0.119	147	0.011	183	0.014	219	0.084	255	0.216	291	0.370	327	0.522
4	0.546	40	0.416	76	0.250	112	0.116	148	0.009	184	0.013	220	0.088	256	0.220	292	0.374	328	0.525
5	0.544	41	0.411	77	0.246	113	0.112	149	0.008	185	0.012	221	0.091	257	0.224	293	0.379	329	0.528
6	0.542	42	0.406	78	0.242	114	0.109	150	0.008	186	0.011	222	0.095	258	0.228	294	0.384	330	0.531
7	0.540	43	0.401	79	0.237	115	0.106	151	0.008	187	0.010	223	0.098	259	0.232	295	0.389	331	0.533
8	0.538	44	0.397	80	0.233	116	0.102	152	0.008	188	0.009	224	0.102	260	0.236	296	0.394	332	0.536
9	0.535	45	0.392	81	0.229	117	0.099	153	0.009	189	0.008	225	0.105	261	0.239	297	0.398	333	0.538
10	0.533	46	0.387	82	0.225	118	0.095	154	0.010	190	0.008	226	0.109	262	0.243	298	0.403	334	0.541
11	0.530	47	0.382	83	0.222	119	0.092	155	0.011	191	0.008	227	0.113	263	0.247	299	0.408	335	0.543
12	0.527	48	0.378	84	0.218	120	0.088	156	0.012	192	0.009	228	0.116	264	0.251	300	0.413	336	0.545
13	0.524	49	0.373	85	0.214	121	0.085	157	0.014	193	0.010	229	0.120	265	0.255	301	0.417	337	0.547
14	0.521	50	0.368	86	0.210	122	0.081	158	0.015	194	0.012	230	0.123	266	0.259	302	0.422	338	0.549
15	0.518	51	0.363	87	0.206	123	0.078	159	0.016	195	0.013	231	0.127	267	0.263	303	0.427	339	0.550
16	0.515	52	0.358	88	0.202	124	0.075	160	0.017	196	0.015	232	0.131	268	0.267	304	0.431	340	0.552
17	0.512	53	0.354	89	0.198	125	0.071	161	0.018	197	0.018	233	0.134	269	0.271	305	0.436	341	0.553
18	0.508	54	0.349	90	0.195	126	0.068	162	0.019	198	0.020	234	0.138	270	0.275	306	0.440	342	0.554
19	0.505	55	0.344	91	0.191	127	0.065	163	0.019	199	0.022	235	0.141	271	0.279	307	0.445	343	0.556
20	0.501	56	0.339	92	0.187	128	0.062	164	0.020	200	0.025	236	0.145	272	0.283	308	0.449	344	0.557
21	0.498	57	0.335	93	0.184	129	0.058	165	0.021	201	0.028	237	0.149	273	0.287	309	0.454	345	0.558
22	0.494	58	0.330	94	0.180	130	0.055	166	0.021	202	0.030	238	0.152	274	0.291	310	0.458	346	0.558
23	0.490	59	0.325	95	0.176	131	0.052	167	0.021	203	0.033	239	0.156	275	0.295	311	0.462	347	0.559
24	0.486	60	0.321	96	0.173	132	0.049	168	0.022	204	0.036	240	0.160	276	0.300	312	0.467	348	0.559
25	0.482	61	0.316	97	0.169	133	0.046	169	0.022	205	0.039	241	0.163	277	0.304	313	0.471	349	0.560
26	0.478	62	0.311	98	0.165	134	0.043	170	0.022	206	0.042	242	0.167	278	0.309	314	0.475	350	0.560
27	0.474	63	0.307	99	0.162	135	0.040	171	0.022	207	0.045	243	0.171	279	0.313	315	0.479	351	0.560
28	0.470	64	0.302	100	0.158	136	0.037	172	0.022	208	0.048	244	0.174	280	0.318	316	0.483	352	0.560
29	0.466	65	0.298	101	0.155	137	0.034	173	0.022	209	0.051	245	0.178	281	0.323	317	0.487	353	0.559
30	0.461	66	0.293	102	0.151	138	0.031	174	0.021	210	0.054	246	0.182	282	0.327	318	0.491	354	0.559
31	0.457	67	0.289	103	0.148	139	0.029	175	0.021	211	0.057	247	0.186	283	0.332	319	0.495	355	0.558
32	0.452	68	0.284	104	0.144	140	0.026	176	0.020	212	0.061	248	0.189	284	0.337	320	0.499	356	0.557
33	0.448	69	0.280	105	0.141	141	0.023	177	0.020	213	0.064	249	0.193	285	0.341	321	0.502	357	0.556
34	0.444	70	0.275	106	0.137	142	0.021	178	0.019	214	0.067	250	0.197	286	0.346	322	0.506	358	0.555
35	0.439	71	0.271	107	0.133	143	0.018	179	0.018	215	0.071	251	0.201	287	0.351	323	0.509	359	0.554

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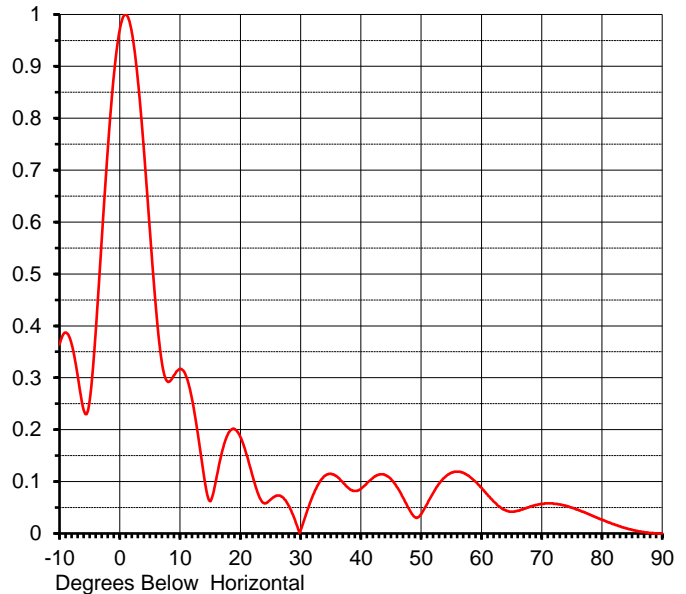
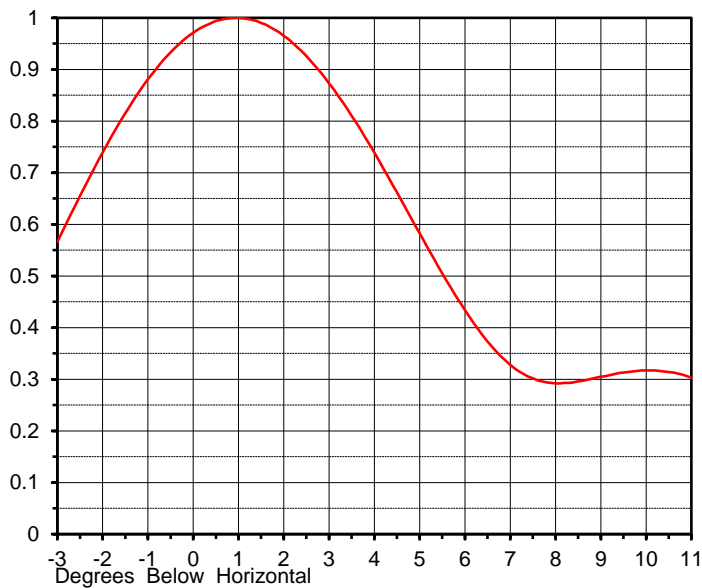


## ELEVATION PATTERN

Proposal No. **KVCW-Aux**  
 Date **10-Feb-22**  
 Call Letters **KVCW**  
 Channel **29**  
 Frequency **563 MHz**  
 Antenna Type **TFU-8WB/VP-R S230**

RMS Directivity at Main Lobe **8.0 ( 9.03 dB )**  
 RMS Directivity at Horizontal **7.5 ( 8.75 dB )**  
**Calculated**

Beam Tilt **1.05 deg**  
 Pattern Number **08W080105-29**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.364	10.0	0.317	30.0	0.006	50.0	0.037	70.0	0.057
-9.0	0.387	11.0	0.303	31.0	0.040	51.0	0.057	71.0	0.058
-8.0	0.365	12.0	0.258	32.0	0.072	52.0	0.078	72.0	0.057
-7.0	0.305	13.0	0.188	33.0	0.096	53.0	0.096	73.0	0.056
-6.0	0.238	14.0	0.108	34.0	0.111	54.0	0.109	74.0	0.053
-5.0	0.256	15.0	0.062	35.0	0.115	55.0	0.117	75.0	0.050
-4.0	0.388	16.0	0.105	36.0	0.110	56.0	0.119	76.0	0.046
-3.0	0.566	17.0	0.159	37.0	0.099	57.0	0.117	77.0	0.041
-2.0	0.739	18.0	0.193	38.0	0.087	58.0	0.110	78.0	0.036
-1.0	0.881	19.0	0.201	39.0	0.082	59.0	0.100	79.0	0.031
0.0	0.971	20.0	0.186	40.0	0.086	60.0	0.088	80.0	0.027
1.0	1.000	21.0	0.153	41.0	0.097	61.0	0.075	81.0	0.022
2.0	0.965	22.0	0.112	42.0	0.107	62.0	0.062	82.0	0.018
3.0	0.873	23.0	0.075	43.0	0.113	63.0	0.052	83.0	0.014
4.0	0.739	24.0	0.058	44.0	0.113	64.0	0.045	84.0	0.010
5.0	0.583	25.0	0.065	45.0	0.105	65.0	0.042	85.0	0.007
6.0	0.434	26.0	0.073	46.0	0.089	66.0	0.044	86.0	0.004
7.0	0.328	27.0	0.070	47.0	0.069	67.0	0.047	87.0	0.002
8.0	0.292	28.0	0.054	48.0	0.047	68.0	0.051	88.0	0.001
9.0	0.305	29.0	0.028	49.0	0.031	69.0	0.055	89.0	0.000
								90.0	0.000

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## **RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE**

The licensee of KVCW is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KVCW antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

The licensed KVCW facility designated as DTS-1 is licensed to broadcast ATSC 3.0 and the instant application for a construction permit for an auxiliary facility at DTS-1 seeks no changes in that facility. DTS-1 has previously been evaluated in regard to the FCC guidelines on human exposure to non-ionizing radiation. The calculated levels of RF exposure in the area below the DTS-1 tower is less than 3% of the allowable limit for a controlled environment and less than 15% of the allowable limit for an uncontrolled environment. The Black Mountain antenna farm is a controlled access site. Access to the transmitting tower site and any RF transmitting equipment is restricted and clearly marked with warning signs. When workers or other authorized personnel enter the restricted area appropriate measures are taken to assure worker safety.

## **OCCUPATIONAL SAFETY**

In accordance with its obligations as an occupant of the Black Mountain site the applicant is committed to the protection of station personnel and/or tower contractors working on the tower support structure, or in the vicinity of the KVCW licensed ATSC 3.0 operation that is designated as DTS-1, by reducing power and/or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure the protection of persons who perform their assigned tasks in this controlled environment.