

AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70024**
 Date **12-Feb-17**
 Call Letters **WTVX** **20**
 Frequency **509 MHz**
 Antenna Type **TFU-24JTT/VP P216**

Gain **2.14 (3.31dB)**
Calculated

Directional
 Drawing # **TFU-P216H**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.895	36	0.425	72	0.701	108	0.460	144	0.805	180	0.895	216	0.425	252	0.701	288	0.460
1	0.882	37	0.427	73	0.702	109	0.452	145	0.822	181	0.882	217	0.427	253	0.702	289	0.452
2	0.868	38	0.432	74	0.703	110	0.445	146	0.837	182	0.868	218	0.432	254	0.703	290	0.445
3	0.853	39	0.438	75	0.704	111	0.438	147	0.853	183	0.853	219	0.438	255	0.704	291	0.438
4	0.837	40	0.445	76	0.703	112	0.432	148	0.868	184	0.837	220	0.445	256	0.703	292	0.432
5	0.822	41	0.452	77	0.702	113	0.427	149	0.882	185	0.822	221	0.452	257	0.702	293	0.427
6	0.805	42	0.460	78	0.701	114	0.425	150	0.895	186	0.805	222	0.460	258	0.701	294	0.425
7	0.788	43	0.469	79	0.699	115	0.422	151	0.909	187	0.788	223	0.469	259	0.699	295	0.422
8	0.771	44	0.479	80	0.696	116	0.422	152	0.920	188	0.771	224	0.479	260	0.696	296	0.422
9	0.753	45	0.488	81	0.693	117	0.422	153	0.932	189	0.753	225	0.488	261	0.693	297	0.422
10	0.735	46	0.499	82	0.689	118	0.425	154	0.942	190	0.735	226	0.499	262	0.689	298	0.425
11	0.717	47	0.509	83	0.685	119	0.428	155	0.952	191	0.717	227	0.509	263	0.685	299	0.428
12	0.699	48	0.520	84	0.680	120	0.434	156	0.961	192	0.699	228	0.520	264	0.680	300	0.434
13	0.680	49	0.531	85	0.675	121	0.440	157	0.969	193	0.680	229	0.531	265	0.675	301	0.440
14	0.662	50	0.542	86	0.668	122	0.449	158	0.976	194	0.662	230	0.542	266	0.668	302	0.449
15	0.643	51	0.553	87	0.662	123	0.458	159	0.983	195	0.643	231	0.553	267	0.662	303	0.458
16	0.625	52	0.563	88	0.655	124	0.470	160	0.987	196	0.625	232	0.563	268	0.655	304	0.470
17	0.607	53	0.574	89	0.648	125	0.481	161	0.992	197	0.607	233	0.574	269	0.648	305	0.481
18	0.589	54	0.584	90	0.640	126	0.494	162	0.995	198	0.589	234	0.584	270	0.640	306	0.494
19	0.572	55	0.594	91	0.632	127	0.508	163	0.998	199	0.572	235	0.594	271	0.632	307	0.508
20	0.555	56	0.604	92	0.623	128	0.523	164	0.999	200	0.555	236	0.604	272	0.623	308	0.523
21	0.539	57	0.614	93	0.614	129	0.539	165	1.000	201	0.539	237	0.614	273	0.614	309	0.539
22	0.523	58	0.623	94	0.604	130	0.555	166	0.999	202	0.523	238	0.623	274	0.604	310	0.555
23	0.508	59	0.632	95	0.594	131	0.572	167	0.998	203	0.508	239	0.632	275	0.594	311	0.572
24	0.494	60	0.640	96	0.584	132	0.589	168	0.995	204	0.494	240	0.640	276	0.584	312	0.589
25	0.481	61	0.648	97	0.574	133	0.607	169	0.992	205	0.481	241	0.648	277	0.574	313	0.607
26	0.470	62	0.655	98	0.563	134	0.625	170	0.987	206	0.470	242	0.655	278	0.563	314	0.625
27	0.458	63	0.662	99	0.553	135	0.643	171	0.983	207	0.458	243	0.662	279	0.553	315	0.643
28	0.449	64	0.668	100	0.542	136	0.662	172	0.976	208	0.449	244	0.668	280	0.542	316	0.662
29	0.440	65	0.675	101	0.531	137	0.680	173	0.969	209	0.440	245	0.675	281	0.531	317	0.680
30	0.434	66	0.680	102	0.520	138	0.699	174	0.961	210	0.434	246	0.680	282	0.520	318	0.699
31	0.428	67	0.685	103	0.509	139	0.717	175	0.952	211	0.428	247	0.685	283	0.509	319	0.717
32	0.425	68	0.689	104	0.499	140	0.735	176	0.942	212	0.425	248	0.689	284	0.499	320	0.735
33	0.422	69	0.693	105	0.488	141	0.753	177	0.932	213	0.422	249	0.693	285	0.488	321	0.753
34	0.422	70	0.696	106	0.479	142	0.771	178	0.920	214	0.422	250	0.696	286	0.479	322	0.771
35	0.422	71	0.699	107	0.469	143	0.788	179	0.909	215	0.422	251	0.699	287	0.469	323	0.788

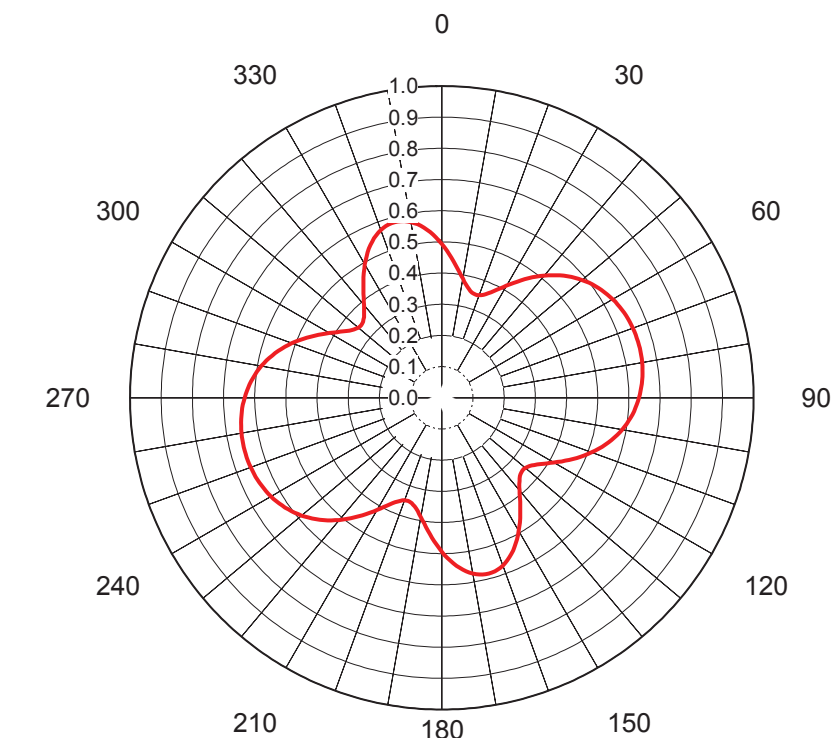
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AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70024**
Date **12-Feb-17**
Call Letters **WTVX 20**
Frequency **509 MHz**
Antenna Type **TFU-24JTT/VP P216**

Gain **1.57 (1.97dB)**
Calculated

Directional
Drawing # **TFU-P216V D20**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.494	36	0.474	72	0.654	108	0.529	144	0.428	180	0.494	216	0.474	252	0.654	288	0.529
1	0.483	37	0.484	73	0.654	109	0.521	145	0.439	181	0.483	217	0.484	253	0.654	289	0.521
2	0.472	38	0.493	74	0.655	110	0.512	146	0.450	182	0.472	218	0.493	254	0.655	290	0.512
3	0.461	39	0.503	75	0.655	111	0.503	147	0.461	183	0.461	219	0.503	255	0.655	291	0.503
4	0.450	40	0.512	76	0.655	112	0.493	148	0.472	184	0.450	220	0.512	256	0.655	292	0.493
5	0.439	41	0.521	77	0.654	113	0.484	149	0.483	185	0.439	221	0.521	257	0.654	293	0.484
6	0.428	42	0.529	78	0.654	114	0.474	150	0.494	186	0.428	222	0.529	258	0.654	294	0.474
7	0.417	43	0.538	79	0.653	115	0.464	151	0.504	187	0.417	223	0.538	259	0.653	295	0.464
8	0.407	44	0.546	80	0.652	116	0.454	152	0.514	188	0.407	224	0.546	260	0.652	296	0.454
9	0.397	45	0.553	81	0.651	117	0.445	153	0.523	189	0.397	225	0.553	261	0.651	297	0.445
10	0.388	46	0.561	82	0.650	118	0.435	154	0.532	190	0.388	226	0.561	262	0.650	298	0.435
11	0.380	47	0.568	83	0.649	119	0.425	155	0.541	191	0.380	227	0.568	263	0.649	299	0.425
12	0.372	48	0.575	84	0.647	120	0.415	156	0.549	192	0.372	228	0.575	264	0.647	300	0.415
13	0.365	49	0.581	85	0.645	121	0.406	157	0.556	193	0.365	229	0.581	265	0.645	301	0.406
14	0.359	50	0.588	86	0.643	122	0.397	158	0.562	194	0.359	230	0.588	266	0.643	302	0.397
15	0.355	51	0.593	87	0.641	123	0.389	159	0.568	195	0.355	231	0.593	267	0.641	303	0.389
16	0.351	52	0.599	88	0.638	124	0.381	160	0.572	196	0.351	232	0.599	268	0.638	304	0.381
17	0.349	53	0.604	89	0.636	125	0.374	161	0.576	197	0.349	233	0.604	269	0.636	305	0.374
18	0.348	54	0.609	90	0.633	126	0.367	162	0.579	198	0.348	234	0.609	270	0.633	306	0.367
19	0.349	55	0.614	91	0.629	127	0.361	163	0.582	199	0.349	235	0.614	271	0.629	307	0.361
20	0.350	56	0.618	92	0.626	128	0.356	164	0.583	200	0.350	236	0.618	272	0.626	308	0.356
21	0.353	57	0.622	93	0.622	129	0.353	165	0.583	201	0.353	237	0.622	273	0.622	309	0.353
22	0.356	58	0.626	94	0.618	130	0.350	166	0.583	202	0.356	238	0.626	274	0.618	310	0.350
23	0.361	59	0.629	95	0.614	131	0.349	167	0.582	203	0.361	239	0.629	275	0.614	311	0.349
24	0.367	60	0.633	96	0.609	132	0.348	168	0.579	204	0.367	240	0.633	276	0.609	312	0.348
25	0.374	61	0.636	97	0.604	133	0.349	169	0.576	205	0.374	241	0.636	277	0.604	313	0.349
26	0.381	62	0.638	98	0.599	134	0.351	170	0.572	206	0.381	242	0.638	278	0.599	314	0.351
27	0.389	63	0.641	99	0.593	135	0.355	171	0.568	207	0.389	243	0.641	279	0.593	315	0.355
28	0.397	64	0.643	100	0.588	136	0.359	172	0.562	208	0.397	244	0.643	280	0.588	316	0.359
29	0.406	65	0.645	101	0.581	137	0.365	173	0.556	209	0.406	245	0.645	281	0.581	317	0.365
30	0.415	66	0.647	102	0.575	138	0.372	174	0.549	210	0.415	246	0.647	282	0.575	318	0.372
31	0.425	67	0.649	103	0.568	139	0.380	175	0.541	211	0.425	247	0.649	283	0.568	319	0.380
32	0.435	68	0.650	104	0.561	140	0.388	176	0.532	212	0.435	248	0.650	284	0.561	320	0.388
33	0.445	69	0.651	105	0.553	141	0.397	177	0.523	213	0.445	249	0.651	285	0.553	321	0.397
34	0.454	70	0.652	106	0.546	142	0.407	178	0.514	214	0.454	250	0.652	286	0.546	322	0.407
35	0.464	71	0.653	107	0.538	143	0.417	179	0.504	215	0.464	251	0.653	287	0.538	323	0.417

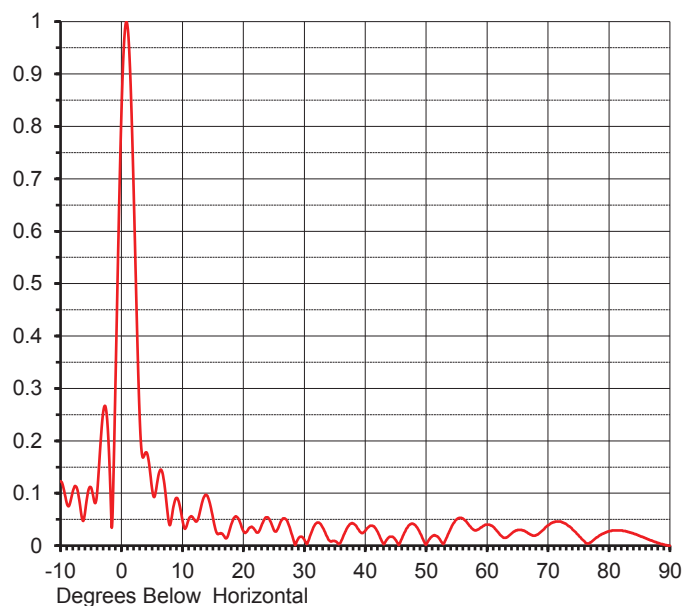
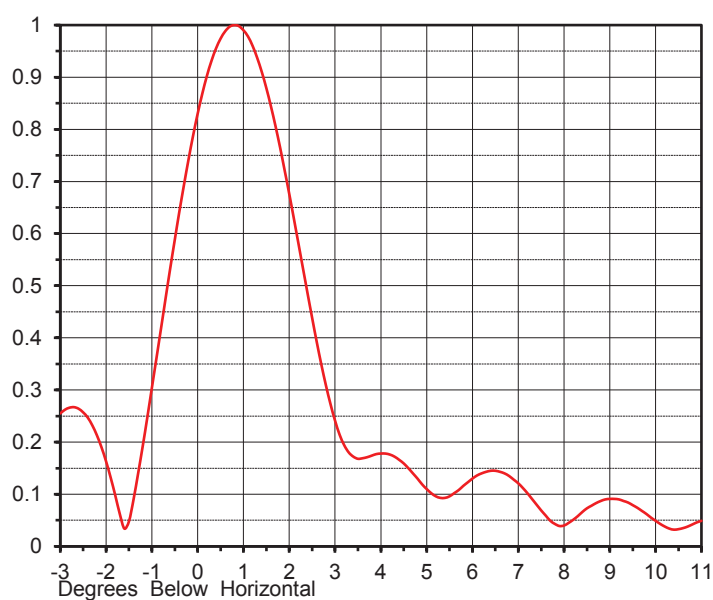
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ELEVATION PATTERN

Proposal No. **C-70024**
 Date **12-Feb-17**
 Call Letters **WTVX 20**
 Frequency **509 MHz**
 Antenna Type **TFU-24JTT/VP P216**

RMS Directivity at Main Lobe **24.50 (13.89 dB)**
 RMS Directivity at Horizontal **16.90 (12.28 dB)**
Calculated

Beam Tilt **0.75 deg**
 Drawing Number **24J245075**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.123	10.0	0.049	30.0	0.012	50.0	0.002	70.0	0.039
-9.0	0.082	11.0	0.049	31.0	0.020	51.0	0.018	71.0	0.045
-8.0	0.103	12.0	0.049	32.0	0.043	52.0	0.016	72.0	0.046
-7.0	0.092	13.0	0.071	33.0	0.035	53.0	0.006	73.0	0.041
-6.0	0.062	14.0	0.096	34.0	0.011	54.0	0.032	74.0	0.031
-5.0	0.111	15.0	0.054	35.0	0.009	55.0	0.050	75.0	0.020
-4.0	0.101	16.0	0.023	36.0	0.007	56.0	0.052	76.0	0.008
-3.0	0.255	17.0	0.015	37.0	0.033	57.0	0.040	77.0	0.006
-2.0	0.163	18.0	0.040	38.0	0.042	58.0	0.029	78.0	0.016
-1.0	0.304	19.0	0.054	39.0	0.029	59.0	0.035	79.0	0.023
0.0	0.830	20.0	0.028	40.0	0.028	60.0	0.040	80.0	0.027
1.0	0.990	21.0	0.034	41.0	0.038	61.0	0.036	81.0	0.029
2.0	0.676	22.0	0.028	42.0	0.027	62.0	0.023	82.0	0.029
3.0	0.241	23.0	0.039	43.0	0.003	63.0	0.015	83.0	0.027
4.0	0.178	24.0	0.054	44.0	0.017	64.0	0.023	84.0	0.023
5.0	0.110	25.0	0.030	45.0	0.011	65.0	0.030	85.0	0.019
6.0	0.130	26.0	0.042	46.0	0.013	66.0	0.029	86.0	0.014
7.0	0.121	27.0	0.050	47.0	0.036	67.0	0.022	87.0	0.010
8.0	0.040	28.0	0.020	48.0	0.041	68.0	0.020	88.0	0.005
9.0	0.091	29.0	0.013	49.0	0.024	69.0	0.028	89.0	0.002
								90.0	0.000

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