

## AZIMUTH PATTERN Horizontal Polarization

Proposal No.

Date

22-Mar-17

Call Letters

WTAT

Channel

17

Frequency

491 MHz

Antenna Type

TUD-P5SP-16/48-1-B

Gain

1.91 (2.82dB)

Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.999	36	0.962	72	0.765	108	0.215	144	0.330	180	0.279	216	0.811	252	0.952	288	0.966
1	0.997	37	0.960	73	0.756	109	0.213	145	0.327	181	0.295	217	0.815	253	0.948	289	0.955
2	0.993	38	0.957	74	0.746	110	0.213	146	0.324	182	0.311	218	0.818	254	0.944	290	0.942
3	0.989	39	0.954	75	0.735	111	0.214	147	0.320	183	0.329	219	0.822	255	0.940	291	0.927
4	0.984	40	0.949	76	0.724	112	0.216	148	0.316	184	0.348	220	0.826	256	0.936	292	0.911
5	0.979	41	0.944	77	0.711	113	0.219	149	0.311	185	0.368	221	0.830	257	0.933	293	0.894
6	0.973	42	0.938	78	0.697	114	0.222	150	0.306	186	0.388	222	0.834	258	0.930	294	0.875
7	0.966	43	0.932	79	0.683	115	0.226	151	0.301	187	0.409	223	0.838	259	0.927	295	0.855
8	0.960	44	0.925	80	0.667	116	0.230	152	0.296	188	0.430	224	0.843	260	0.925	296	0.833
9	0.954	45	0.918	81	0.651	117	0.235	153	0.290	189	0.452	225	0.848	261	0.923	297	0.811
10	0.947	46	0.911	82	0.633	118	0.240	154	0.284	190	0.473	226	0.854	262	0.923	298	0.788
11	0.942	47	0.903	83	0.615	119	0.246	155	0.278	191	0.495	227	0.860	263	0.923	299	0.764
12	0.937	48	0.896	84	0.597	120	0.251	156	0.273	192	0.516	228	0.866	264	0.924	300	0.740
13	0.932	49	0.888	85	0.580	121	0.256	157	0.267	193	0.537	229	0.873	265	0.926	301	0.715
14	0.929	50	0.880	86	0.558	122	0.262	158	0.262	194	0.558	230	0.880	266	0.929	302	0.690
15	0.926	51	0.873	87	0.537	123	0.267	159	0.256	195	0.580	231	0.888	267	0.932	303	0.665
16	0.924	52	0.866	88	0.516	124	0.273	160	0.251	196	0.597	232	0.896	268	0.937	304	0.640
17	0.923	53	0.860	89	0.495	125	0.278	161	0.246	197	0.615	233	0.903	269	0.942	305	0.615
18	0.923	54	0.854	90	0.473	126	0.284	162	0.240	198	0.633	234	0.911	270	0.947	306	0.591
19	0.923	55	0.848	91	0.452	127	0.290	163	0.235	199	0.651	235	0.918	271	0.954	307	0.567
20	0.925	56	0.843	92	0.430	128	0.296	164	0.230	200	0.667	236	0.925	272	0.960	308	0.543
21	0.927	57	0.838	93	0.409	129	0.301	165	0.226	201	0.683	237	0.932	273	0.966	309	0.521
22	0.930	58	0.834	94	0.388	130	0.306	166	0.222	202	0.697	238	0.938	274	0.973	310	0.501
23	0.933	59	0.830	95	0.368	131	0.311	167	0.219	203	0.711	239	0.944	275	0.979	311	0.482
24	0.936	60	0.826	96	0.348	132	0.316	168	0.216	204	0.724	240	0.949	276	0.984	312	0.464
25	0.940	61	0.822	97	0.329	133	0.320	169	0.214	205	0.735	241	0.954	277	0.989	313	0.449
26	0.944	62	0.818	98	0.311	134	0.324	170	0.213	206	0.746	242	0.957	278	0.993	314	0.436
27	0.948	63	0.815	99	0.295	135	0.327	171	0.213	207	0.756	243	0.960	279	0.997	315	0.424
28	0.952	64	0.811	100	0.279	136	0.330	172	0.215	208	0.765	244	0.962	280	0.999	316	0.415
29	0.955	65	0.807	101	0.266	137	0.332	173	0.217	209	0.773	245	0.964	281	1.000	317	0.408
30	0.958	66	0.803	102	0.253	138	0.333	174	0.221	210	0.780	246	0.964	282	1.000	318	0.403
31	0.961	67	0.798	103	0.243	139	0.334	175	0.227	211	0.787	247	0.964	283	0.998	319	0.400
32	0.962	68	0.793	104	0.234	140	0.334	176	0.234	212	0.793	248	0.962	284	0.995	320	0.399
33	0.964	69	0.787	105	0.227	141	0.334	177	0.243	213	0.798	249	0.961	285	0.990	321	0.400
34	0.964	70	0.780	106	0.221	142	0.333	178	0.253	214	0.803	250	0.958	286	0.984	322	0.403
35	0.964	71	0.773	107	0.217	143	0.332	179	0.266	215	0.807	251	0.955	287	0.976	323	0.408

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## ELEVATION PATTERN

Proposal No.

Date **22-Mar-17**

Call Letters **WTAT**

Channel **17**

Frequency **491 MHz**

Antenna Type **TUD-P5SP-16/48-1-B**

RMS Directivity at Main Lobe

**24.0 ( 13.80 dB )**

Beam Tilt

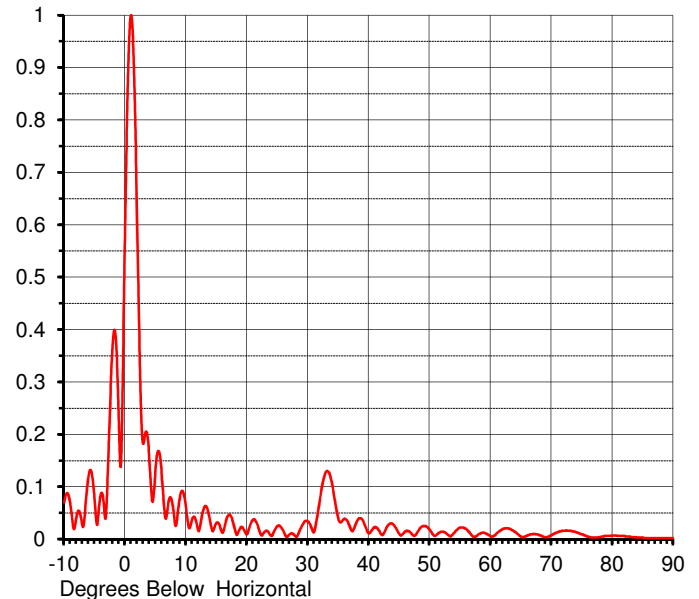
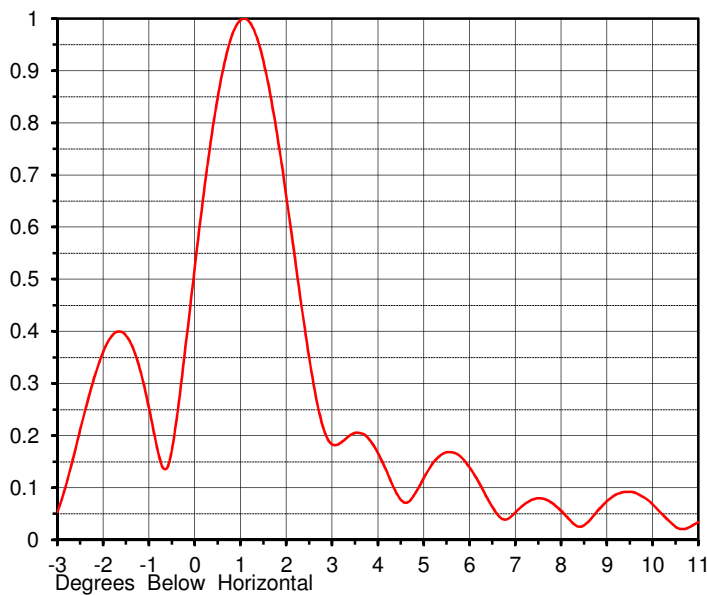
**1.00 deg**

RMS Directivity at Horizontal

**8.5 ( 9.29 dB )**

Pattern Number

**Calculated**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.070	10.0	0.059	30.0	0.034	50.0	0.018	70.0	0.008
-9.0	0.067	11.0	0.038	31.0	0.013	51.0	0.007	71.0	0.013
-8.0	0.041	12.0	0.017	32.0	0.078	52.0	0.014	72.0	0.016
-7.0	0.025	13.0	0.061	33.0	0.129	53.0	0.008	73.0	0.016
-6.0	0.120	14.0	0.031	34.0	0.103	54.0	0.012	74.0	0.013
-5.0	0.074	15.0	0.031	35.0	0.038	55.0	0.022	75.0	0.009
-4.0	0.085	16.0	0.012	36.0	0.039	56.0	0.019	76.0	0.005
-3.0	0.078	17.0	0.046	37.0	0.020	57.0	0.006	77.0	0.003
-2.0	0.379	18.0	0.019	38.0	0.033	58.0	0.009	78.0	0.004
-1.0	0.211	19.0	0.023	39.0	0.036	59.0	0.012	79.0	0.006
0.0	0.595	20.0	0.009	40.0	0.011	60.0	0.005	80.0	0.007
1.0	1.000	21.0	0.037	41.0	0.023	61.0	0.011	81.0	0.006
2.0	0.597	22.0	0.017	42.0	0.010	62.0	0.019	82.0	0.006
3.0	0.182	23.0	0.015	43.0	0.024	63.0	0.020	83.0	0.004
4.0	0.149	24.0	0.006	44.0	0.028	64.0	0.014	84.0	0.003
5.0	0.133	25.0	0.025	45.0	0.010	65.0	0.005	85.0	0.003
6.0	0.126	26.0	0.015	46.0	0.015	66.0	0.007	86.0	0.002
7.0	0.061	27.0	0.009	47.0	0.010	67.0	0.010	87.0	0.002
8.0	0.047	28.0	0.005	48.0	0.014	68.0	0.008	88.0	0.002
9.0	0.081	29.0	0.025	49.0	0.025	69.0	0.004	89.0	0.002
								90.0	0.002

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