Dielectric®

AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	**C-70053**
Date	**9-Mar-17**
Call Letters	**1049**
Channel	**16**
Frequency	**485 MHz**
Antenna Type	**TFU-19ETT/VP-R 3S230**
Gain	**2.35 (3.7dB)**
	Calculated
Drawing #	**TFU-3S230-49**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.762	36	0.504	72	0.235	108	0.207	144	0.229	180	0.463	216	0.748	252	0.858	288	0.999	324	0.878
1	0.759	37	0.494	73	0.234	109	0.207	145	0.230	181	0.473	217	0.752	253	0.863	289	1.000	325	0.873
2	0.756	38	0.484	74	0.232	110	0.207	146	0.232	182	0.484	218	0.756	254	0.868	290	1.000	326	0.868
3	0.752	39	0.473	75	0.230	111	0.207	147	0.233	183	0.494	219	0.759	255	0.873	291	1.000	327	0.863
4	0.748	40	0.463	76	0.229	112	0.207	148	0.235	184	0.504	220	0.762	256	0.879	292	0.999	328	0.858
5	0.744	41	0.452	77	0.227	113	0.207	149	0.237	185	0.515	221	0.765	257	0.884	293	0.999	329	0.853
6	0.740	42	0.442	78	0.226	114	0.207	150	0.240	186	0.525	222	0.768	258	0.889	294	0.998	330	0.848
7	0.735	43	0.431	79	0.225	115	0.207	151	0.242	187	0.535	223	0.771	259	0.895	295	0.997	331	0.844
8	0.730	44	0.421	80	0.224	116	0.208	152	0.245	188	0.545	224	0.774	260	0.900	296	0.995	332	0.839
9	0.725	45	0.411	81	0.223	117	0.208	153	0.249	189	0.555	225	0.776	261	0.905	297	0.994	333	0.835
10	0.720	46	0.401	82	0.222	118	0.208	154	0.252	190	0.565	226	0.778	262	0.911	298	0.992	334	0.831
11	0.714	47	0.391	83	0.221	119	0.208	155	0.256	191	0.574	227	0.781	263	0.916	299	0.989	335	0.827
12	0.708	48	0.381	84	0.220	120	0.209	156	0.261	192	0.584	228	0.783	264	0.921	300	0.987	336	0.824
13	0.702	49	0.371	85	0.219	121	0.209	157	0.265	193	0.593	229	0.785	265	0.927	301	0.984	337	0.820
14	0.696	50	0.361	86	0.218	122	0.209	158	0.270	194	0.602	230	0.787	266	0.932	302	0.981	338	0.817
15	0.689	51	0.352	87	0.217	123	0.210	159	0.276	195	0.611	231	0.789	267	0.937	303	0.978	339	0.814
16	0.683	52	0.343	88	0.216	124	0.210	160	0.282	196	0.620	232	0.791	268	0.942	304	0.975	340	0.811
17	0.676	53	0.334	89	0.215	125	0.211	161	0.288	197	0.628	233	0.794	269	0.946	305	0.971	341	0.808
18	0.668	54	0.326	90	0.214	126	0.211	162	0.295	198	0.637	234	0.796	270	0.951	306	0.968	342	0.805
19	0.661	55	0.318	91	0.214	127	0.212	163	0.302	199	0.645	235	0.798	271	0.955	307	0.964	343	0.803
20	0.653	56	0.310	92	0.213	128	0.213	164	0.309	200	0.653	236	0.800	272	0.960	308	0.960	344	0.800
21	0.645	57	0.302	93	0.212	129	0.214	165	0.317	201	0.661	237	0.803	273	0.964	309	0.955	345	0.798
22	0.637	58	0.295	94	0.212	130	0.214	166	0.326	202	0.668	238	0.805	274	0.968	310	0.951	346	0.796
23	0.628	59	0.288	95	0.211	131	0.215	167	0.334	203	0.675	239	0.808	275	0.972	311	0.946	347	0.793
24	0.620	60	0.282	96	0.210	132	0.216	168	0.343	204	0.682	240	0.811	276	0.975	312	0.941	348	0.791
25	0.611	61	0.276	97	0.210	133	0.217	169	0.352	205	0.689	241	0.814	277	0.979	313	0.936	349	0.789
26	0.602	62	0.271	98	0.209	134	0.218	170	0.361	206	0.696	242	0.817	278	0.982	314	0.931	350	0.787
27	0.593	63	0.265	99	0.209	135	0.219	171	0.371	207	0.702	243	0.820	279	0.984	315	0.926	351	0.785
28	0.584	64	0.261	100	0.209	136	0.220	172	0.381	208	0.708	244	0.824	280	0.987	316	0.921	352	0.783
29	0.574	65	0.256	101	0.208	137	0.221	173	0.390	209	0.714	245	0.828	281	0.990	317	0.916	353	0.781
30	0.565	66	0.252	102	0.208	138	0.222	174	0.400	210	0.720	246	0.832	282	0.992	318	0.910	354	0.778
31	0.555	67	0.249	103	0.208	139	0.223	175	0.411	211	0.725	247	0.836	283	0.994	319	0.905	355	0.776
32	0.545	68	0.246	104	0.208	140	0.224	176	0.421	212	0.730	248	0.840	284	0.995	320	0.900	356	0.774
33	0.535	69	0.243	105	0.207	141	0.225	177	0.431	213	0.735	249	0.844	285	0.997	321	0.894	357	0.771
34	0.525	70	0.240	106	0.207	142	0.226	178	0.442	214	0.740	250	0.849	286	0.998	322	0.889	358	0.768
35	0.515	71	0.238	107	0.207	143	0.227	179	0.452	215	0.744	251	0.853	287	0.999	323	0.884	359	0.765

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Azimuth polar plot (0–359°) with radial scale 0.0 to 1.0, vertical polarization pattern shown in red.
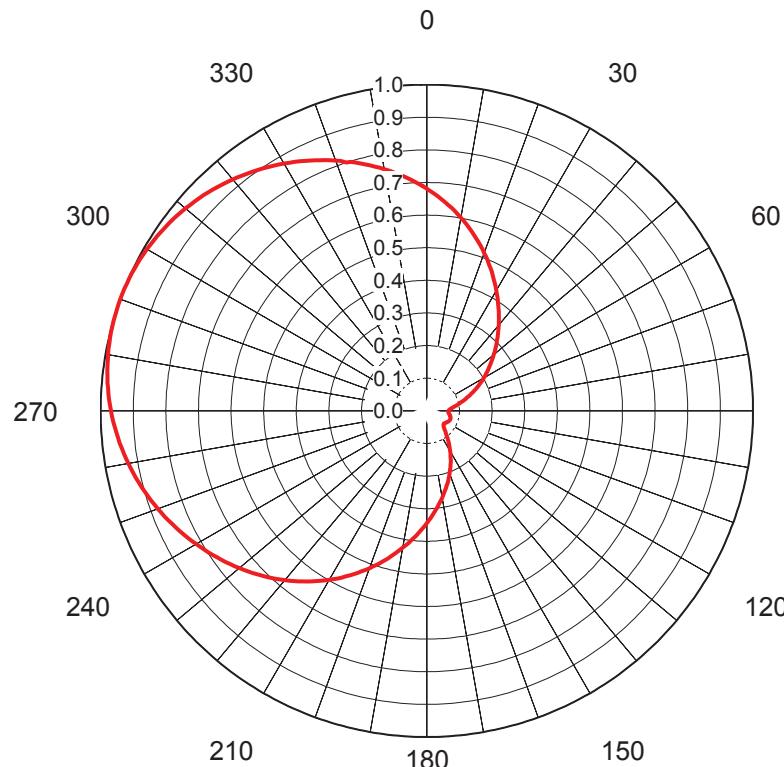
AZIMUTH PATTERN
Vertical Polarization

Proposal No.	C-70053
Date	9-Mar-17
Call Letters	1049
Channel	16
Frequency	485 MHz
Antenna Type	TFU-19ETT/VP-R 3S230
Gain	2.64 (4.22dB)
	Calculated
Drawing #	3S230V-D16

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.681	36	0.375	72	0.129	108	0.076	144	0.111	180	0.345	216	0.647	252	0.889	288	1.000	324	0.907
1	0.674	37	0.367	73	0.124	109	0.077	145	0.116	181	0.352	217	0.655	253	0.894	289	1.000	325	0.902
2	0.666	38	0.359	74	0.119	110	0.077	146	0.121	182	0.360	218	0.662	254	0.899	290	1.000	326	0.897
3	0.658	39	0.351	75	0.113	111	0.077	147	0.127	183	0.368	219	0.670	255	0.905	291	1.000	327	0.891
4	0.650	40	0.343	76	0.108	112	0.076	148	0.132	184	0.377	220	0.678	256	0.910	292	1.000	328	0.886
5	0.642	41	0.335	77	0.104	113	0.076	149	0.138	185	0.385	221	0.685	257	0.915	293	0.999	329	0.881
6	0.634	42	0.327	78	0.099	114	0.075	150	0.143	186	0.393	222	0.693	258	0.920	294	0.998	330	0.875
7	0.626	43	0.320	79	0.095	115	0.075	151	0.149	187	0.401	223	0.700	259	0.924	295	0.998	331	0.870
8	0.618	44	0.312	80	0.090	116	0.074	152	0.155	188	0.410	224	0.707	260	0.929	296	0.997	332	0.864
9	0.610	45	0.305	81	0.087	117	0.073	153	0.161	189	0.418	225	0.715	261	0.934	297	0.995	333	0.858
10	0.602	46	0.297	82	0.083	118	0.072	154	0.167	190	0.427	226	0.722	262	0.938	298	0.994	334	0.853
11	0.593	47	0.290	83	0.080	119	0.072	155	0.173	191	0.435	227	0.729	263	0.942	299	0.993	335	0.847
12	0.585	48	0.283	84	0.077	120	0.071	156	0.179	192	0.444	228	0.736	264	0.946	300	0.991	336	0.841
13	0.576	49	0.275	85	0.074	121	0.070	157	0.186	193	0.452	229	0.743	265	0.950	301	0.989	337	0.835
14	0.568	50	0.268	86	0.072	122	0.069	158	0.192	194	0.461	230	0.750	266	0.954	302	0.987	338	0.829
15	0.559	51	0.261	87	0.070	123	0.068	159	0.198	195	0.470	231	0.757	267	0.958	303	0.985	339	0.823
16	0.550	52	0.254	88	0.068	124	0.067	160	0.204	196	0.479	232	0.764	268	0.962	304	0.983	340	0.817
17	0.541	53	0.248	89	0.067	125	0.066	161	0.211	197	0.487	233	0.771	269	0.965	305	0.980	341	0.811
18	0.533	54	0.241	90	0.066	126	0.066	162	0.217	198	0.496	234	0.778	270	0.968	306	0.978	342	0.800
19	0.524	55	0.234	91	0.066	127	0.066	163	0.224	199	0.505	235	0.784	271	0.971	307	0.975	343	0.798
20	0.515	56	0.228	92	0.066	128	0.066	164	0.230	200	0.513	236	0.791	272	0.974	308	0.972	344	0.792
21	0.506	57	0.221	93	0.066	129	0.066	165	0.237	201	0.522	237	0.798	273	0.977	309	0.969	345	0.785
22	0.497	58	0.214	94	0.066	130	0.067	166	0.243	202	0.531	238	0.804	274	0.980	310	0.966	346	0.779
23	0.488	59	0.208	95	0.067	131	0.068	167	0.250	203	0.539	239	0.811	275	0.982	311	0.962	347	0.772
24	0.479	60	0.202	96	0.068	132	0.069	168	0.257	204	0.548	240	0.817	276	0.985	312	0.959	348	0.766
25	0.471	61	0.195	97	0.068	133	0.071	169	0.264	205	0.556	241	0.823	277	0.987	313	0.955	349	0.759
26	0.462	62	0.189	98	0.069	134	0.073	170	0.271	206	0.565	242	0.830	278	0.989	314	0.951	350	0.752
27	0.453	63	0.183	99	0.070	135	0.075	171	0.278	207	0.573	243	0.836	279	0.991	315	0.947	351	0.746
28	0.444	64	0.176	100	0.071	136	0.078	172	0.285	208	0.582	244	0.842	280	0.992	316	0.943	352	0.739
29	0.435	65	0.170	101	0.072	137	0.081	173	0.292	209	0.590	245	0.848	281	0.994	317	0.939	353	0.732
30	0.426	66	0.164	102	0.073	138	0.085	174	0.299	210	0.598	246	0.854	282	0.995	318	0.935	354	0.725
31	0.418	67	0.158	103	0.074	139	0.088	175	0.307	211	0.607	247	0.860	283	0.996	319	0.931	355	0.718
32	0.409	68	0.152	104	0.075	140	0.092	176	0.314	212	0.615	248	0.866	284	0.997	320	0.926	356	0.711
33	0.401	69	0.146	105	0.075	141	0.097	177	0.322	213	0.623	249	0.872	285	0.998	321	0.921	357	0.703
34	0.392	70	0.141	106	0.076	142	0.101	178	0.329	214	0.631	250	0.878	286	0.999	322	0.917	358	0.696
35	0.384	71	0.135	107	0.076	143	0.106	179	0.337	215	0.639	251	0.883	287	0.999	323	0.912	359	0.689

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ELEVATION PATTERN

Proposal No.	**C-70053**
Date	**9-Mar-17**
Call Letters	**1049**
Channel	**16**
Frequency	**485 MHz**
Antenna Type	**TFU-19ETT/VP-R 3S230**

RMS Directivity at Main Lobe **17.5 (12.43 dB)** Beam Tilt **1.00 deg**
RMS Directivity at Horizontal **11.5 (10.61 dB)** Drawing Number **19E175100**
Calculated
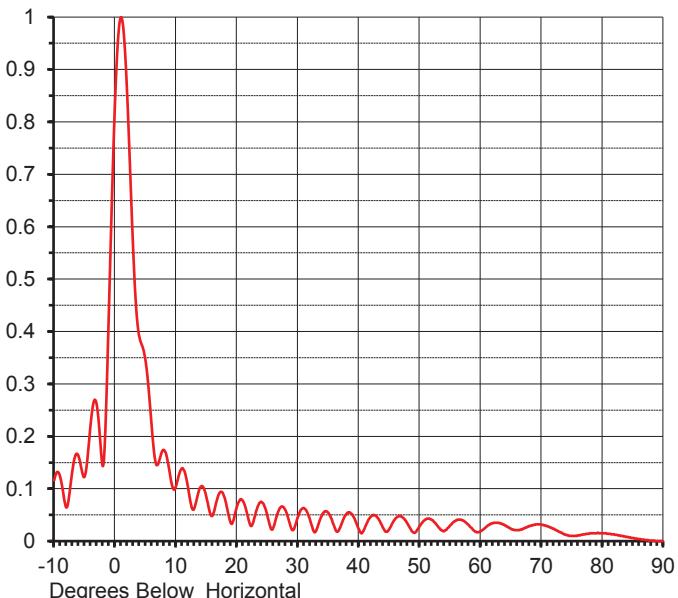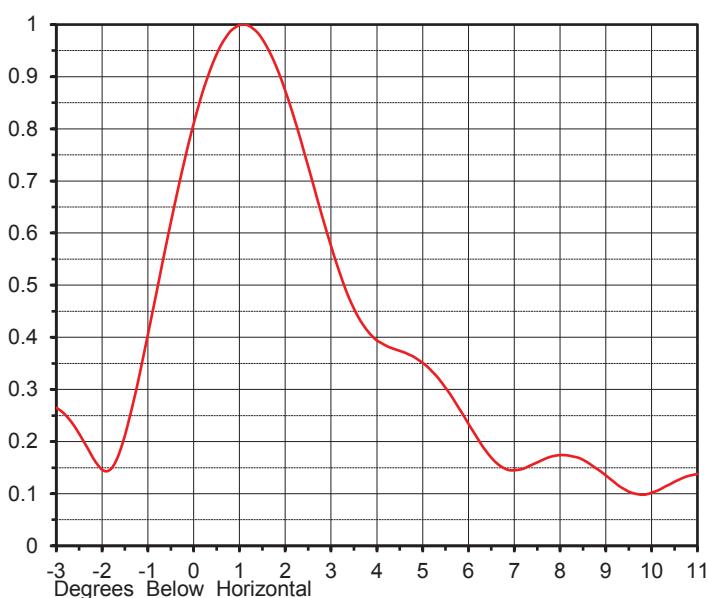
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.116	10.0	0.105	30.0	0.046	50.0	0.029	70.0	0.031
-9.0	0.122	11.0	0.139	31.0	0.063	51.0	0.042	71.0	0.028
-8.0	0.064	12.0	0.100	32.0	0.040	52.0	0.040	72.0	0.023
-7.0	0.135	13.0	0.063	33.0	0.020	53.0	0.028	73.0	0.017
-6.0	0.162	14.0	0.103	34.0	0.051	54.0	0.019	74.0	0.012
-5.0	0.123	15.0	0.083	35.0	0.054	55.0	0.030	75.0	0.010
-4.0	0.225	16.0	0.049	36.0	0.027	56.0	0.040	76.0	0.011
-3.0	0.259	17.0	0.089	37.0	0.028	57.0	0.040	77.0	0.013
-2.0	0.143	18.0	0.082	38.0	0.052	58.0	0.031	78.0	0.015
-1.0	0.448	19.0	0.034	39.0	0.049	59.0	0.019	79.0	0.015
0.0	0.842	20.0	0.066	40.0	0.023	60.0	0.019	80.0	0.015
1.0	1.000	21.0	0.076	41.0	0.026	61.0	0.028	81.0	0.014
2.0	0.847	22.0	0.037	42.0	0.047	62.0	0.034	82.0	0.012
3.0	0.547	23.0	0.050	43.0	0.046	63.0	0.035	83.0	0.010
4.0	0.389	24.0	0.075	44.0	0.025	64.0	0.030	84.0	0.008
5.0	0.344	25.0	0.048	45.0	0.023	65.0	0.023	85.0	0.006
6.0	0.220	26.0	0.027	46.0	0.043	66.0	0.021	86.0	0.004
7.0	0.146	27.0	0.062	47.0	0.047	67.0	0.024	87.0	0.002
8.0	0.174	28.0	0.058	48.0	0.033	68.0	0.029	88.0	0.001
9.0	0.128	29.0	0.022	49.0	0.016	69.0	0.032	89.0	0.000
								90.0	0.000

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