



Proposal #: **C-03652-1**
 Call Letters: **KSAT-DT**

Antenna Type: **THV-12A12/VP-R C150**
 Location: **San Antonio, TX**

Channel: **12 DTV**

Electrical Specifications		Value		Remarks
		Ratio	dBd	
RMS Gain at Main Lobe over Halfwave Dipole	Hpol			
	Vpol			
RMS Gain at Horizontal over Halfwave Dipole	Hpol			
	Vpol			
Peak Directional Gain over Halfwave Dipole	Hpol	18.0	12.55	
	Vpol	25.2	14.01	
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	15.6	11.93	
	Vpol	21.9	13.40	
Circularity	Directional	dB		
Horizontal Polarization Losses		0.58 (value)	-2.34 dB	
Vertical Polarization Losses		0.42 (value)	-3.80 dB	
Beam Tilt		1.00 deg		
Average Power		25 kW	13.98 dBk	
Antenna Input: T/L		6-1/8 in	75.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel	1.08 : 1	
Patterns	Azimuth	THV-C150-12H	THV-C150-12V	
	Elevation	12V120100	12V120100-90	
Mechanical Specifications		Metric	English	Preliminary
Height with Lightning Protector	H4	20.3 m	66.7 ft	
Height Less Lightning Protector	H2	19.1 m	62.7 ft	TIA/EIA-222-F.
Height of Center of Radiation	H3	9.6 m	31.4 ft	
Basic Wind Speed	V	120.7 km/h	75 mi/h	
Force Coeff. x Projected Area	CaAc	7.6 m ²	82.3 ft ²	Above base flange
Moment Arm	D1	10.0 m	32.9 ft	Above base flange
Force Coeff. x Projected Area	CaAc	m ²	ft ²	
Moment Arm	D3	m	ft	
Pole Bury Length	D2	m	ft	
Weight	W	5.8 t	12,700 lbs	
Radome				
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.				

NOTE:

Prepared By : JBC
 Original Date : 28-Jul-09

Approved By : PSJ
 Revision: 1 Rev. Date: 18-Feb-11

JBC

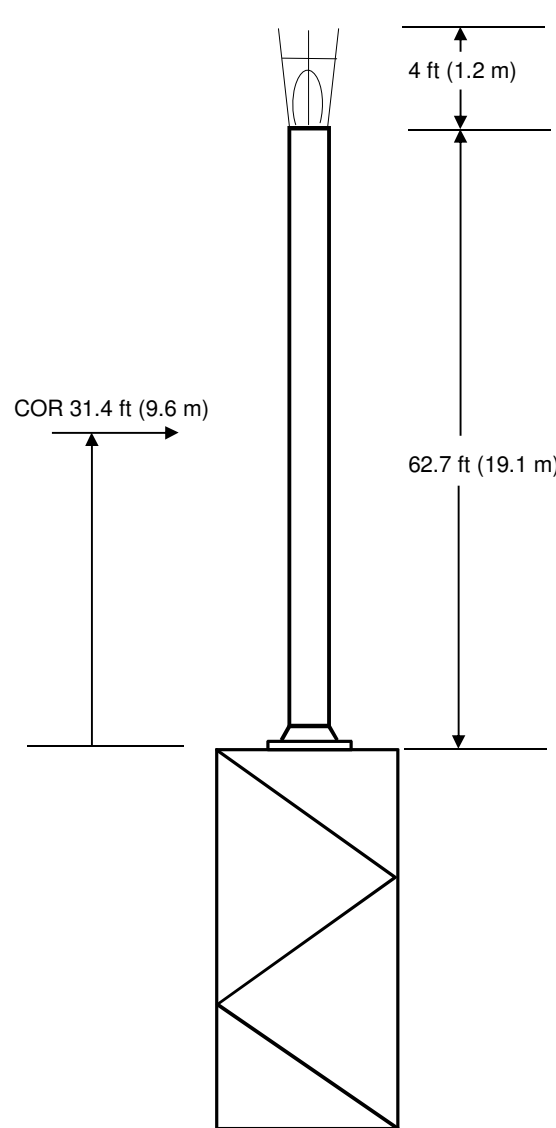
This document contains proprietary and confidential information of Dielectric Communications and SPX Corporation. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric Communications or SPX Corporation.



Proposal #: **C-03652-1**
Call Letters: **KSAT-DT**

Antenna Type: **THV-12A12/VP-R C150**
Location: **San Antonio, TX**

Channel: **12 DTV**



Mechanical Specifications
TIA/EIA-222-F, @ 75 mi/h (120.7 km/h)

CaAc = 82.3 ft²(7.6 m²)
W = 12700 lbs(5.8 t)

THV-12A12/VP-R C150
Channel: D12

JBC-090706-0

Not to Scale

This document contains proprietary and confidential information of Dielectric Communications and SPX Corporation. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric Communications or SPX Corporation.



Proposal Number	C-03652	Revision:	1
Date	18-Feb-11		
Call Letters	KSAT-DT	Channel	12
Location	San Antonio, TX		
Customer	Post Newsweek		
Antenna Type	THV-12A12/VP-R C150		

SYSTEM SUMMARY

Antenna:

			H Pol	V Pol
Type:	THV-12A12/VP-R C150	ERP:	63.4 kW (18.02 dBk)	63.4 kW (18.02 dBk)
Channel:	12	Peak Directivity:	18.0 (12.55 dB)	25.2 (14.01 dB)
Location:	San Antonio, TX	Polarization losses:	0.58 -(2.34 dB)	0.42 -(3.80 dB)
		Peak Gain*:	10.5 (10.21 dB)	10.5 (10.22 dB)
		Input Power:	6.0 kW (7.81 dBk)	

Transmission Line:

Type:	EIA/DCA	Attenuation:	1.01 dB
Size:	6-1/8 in	Efficiency:	79.3%
Impedance:	75 ohm		
Length:	1,500 ft		457.2 m

Transmitter:

Power Required: **7.6 kW (8.82 dBk)**

* Gain is with respect to half wave dipole.

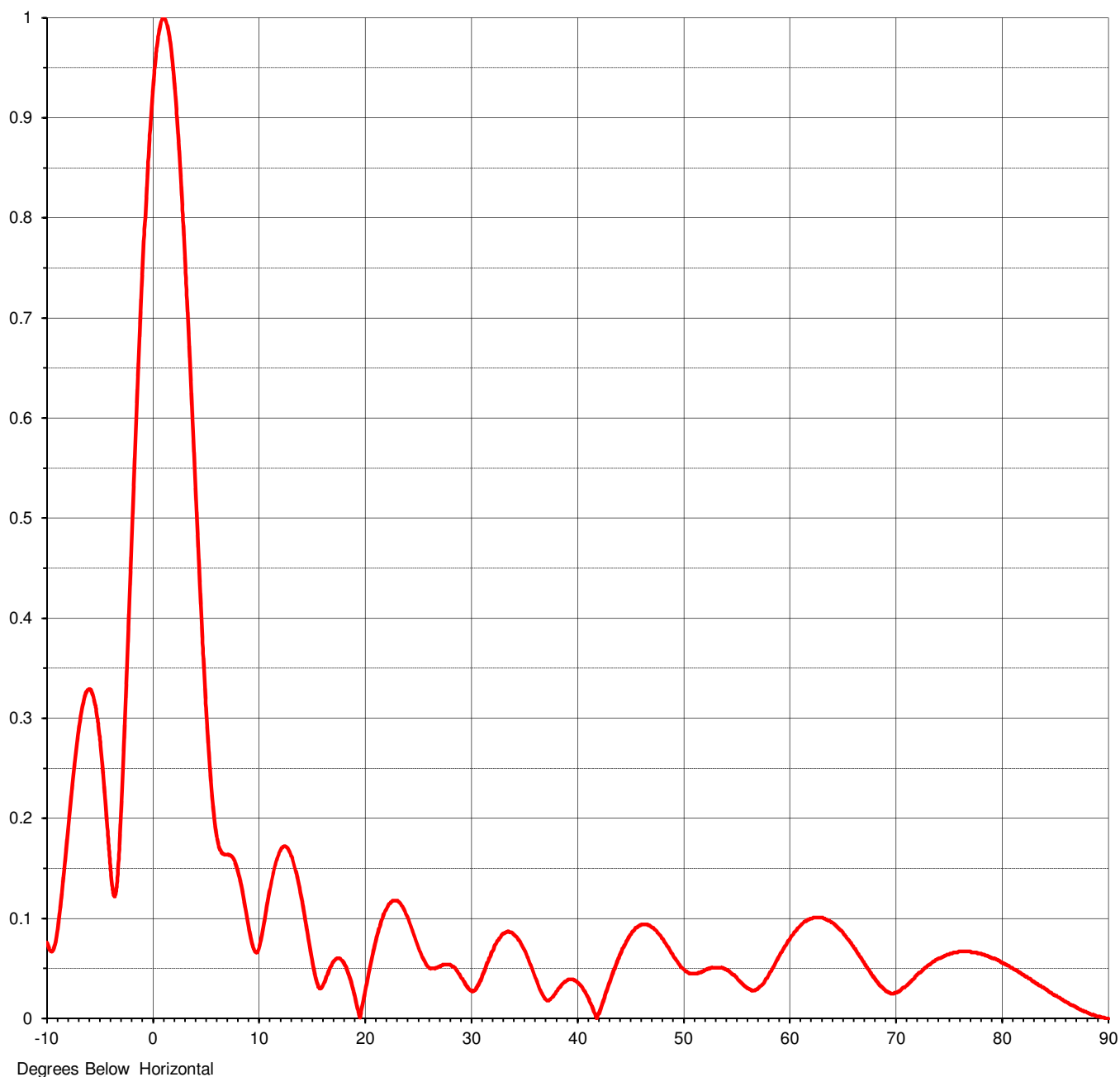
This document contains proprietary and confidential information of Dielectric Communications and SPX Corporation. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric Communications or SPX Corporation.



Proposal Number	C-03652	Revision:	1
Date	18-Feb-11		
Call Letters	KSAT-DT	Channel	12
Location	San Antonio, TX		
Customer	Post Newsweek		
Antenna Type	THV-12A12/VP-R C150		

ELEVATION PATTERN

RMS Gain at Main Lobe	12.00 (10.79 dB)	Beam Tilt	1.00 deg
RMS Gain at Horizontal	10.40 (10.17 dB)	Frequency	207.00 MHz
Calculated / Measured	Calculated	Drawing #	12V120100-90

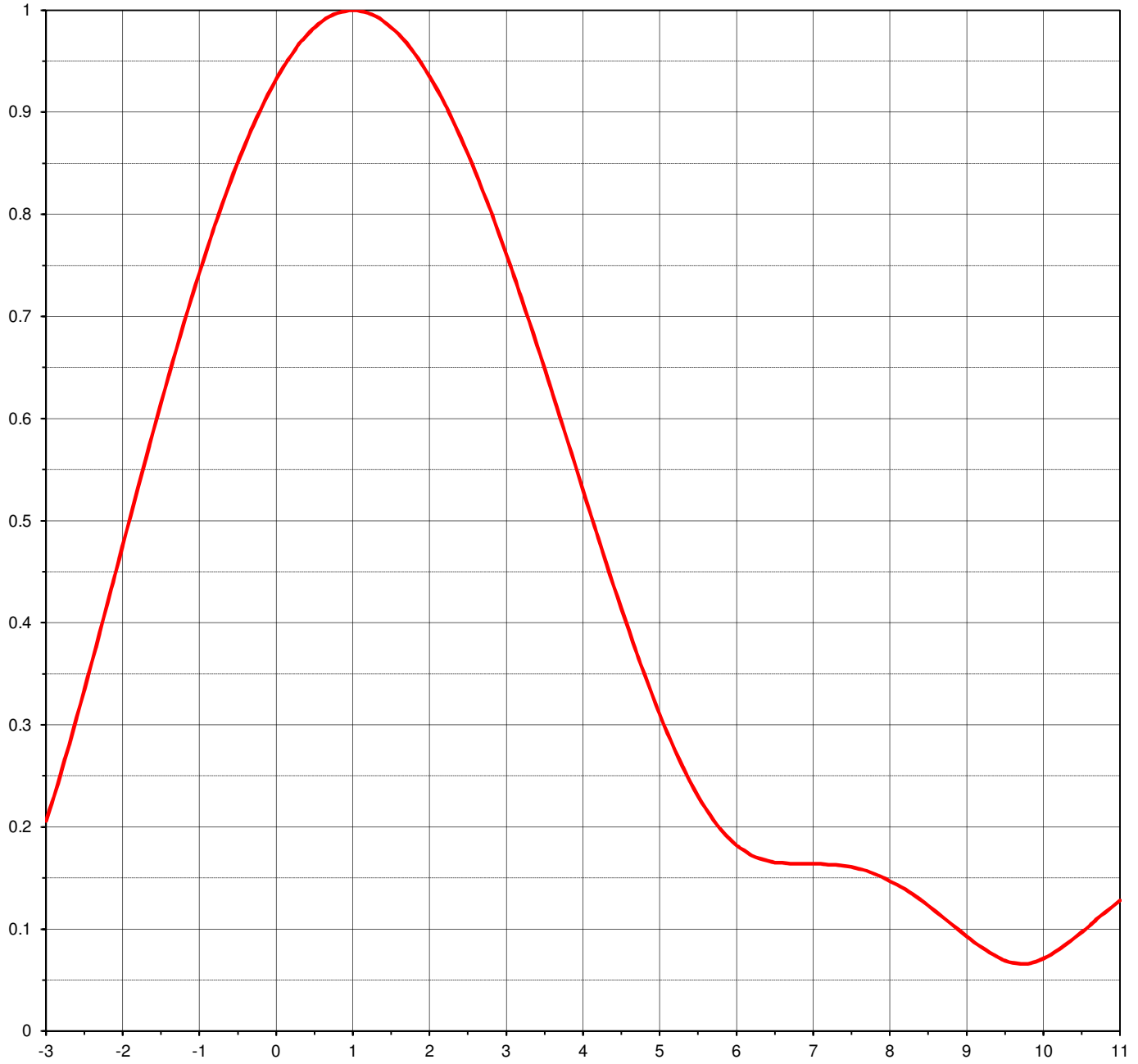




Proposal Number	C-03652	Revision:	1
Date	18-Feb-11		
Call Letters	KSAT-DT	Channel	12
Location	San Antonio, TX		
Customer	Post Newsweek		
Antenna Type	THV-12A12/VP-R C150		

ELEVATION PATTERN

RMS Gain at Main Lobe	12.00 (10.79 dB)	Beam Tilt	1.00 deg
RMS Gain at Horizontal	10.40 (10.17 dB)	Frequency	207.00 MHz
Calculated / Measured	Calculated	Drawing #	12V120100



Degrees Below Horizontal



Proposal Number **C-03652** Revision: **1**
 Date **18-Feb-11**
 Call Letters **KSAT-DT** Channel **12**
 Location **San Antonio, TX**
 Customer **Post Newsweek**
 Antenna Type **THV-12A12/VP-R C150**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **12V120100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.076	2.4	0.876	10.6	0.097	30.5	0.029	51.0	0.045	71.5	0.038
-9.5	0.067	2.6	0.841	10.8	0.110	31.0	0.039	51.5	0.046	72.0	0.044
-9.0	0.089	2.8	0.803	11.0	0.122	31.5	0.053	52.0	0.048	72.5	0.048
-8.5	0.136	3.0	0.761	11.5	0.149	32.0	0.066	52.5	0.050	73.0	0.053
-8.0	0.190	3.2	0.717	12.0	0.166	32.5	0.077	53.0	0.051	73.5	0.057
-7.5	0.244	3.4	0.672	12.5	0.172	33.0	0.084	53.5	0.051	74.0	0.060
-7.0	0.289	3.6	0.625	13.0	0.166	33.5	0.087	54.0	0.049	74.5	0.062
-6.5	0.319	3.8	0.578	13.5	0.149	34.0	0.085	54.5	0.046	75.0	0.064
-6.0	0.329	4.0	0.530	14.0	0.124	34.5	0.079	55.0	0.042	75.5	0.066
-5.5	0.316	4.2	0.483	14.5	0.094	35.0	0.070	55.5	0.036	76.0	0.067
-5.0	0.279	4.4	0.436	15.0	0.063	35.5	0.058	56.0	0.031	76.5	0.067
-4.5	0.219	4.6	0.392	15.5	0.037	36.0	0.044	56.5	0.028	77.0	0.067
-4.0	0.149	4.8	0.350	16.0	0.031	36.5	0.030	57.0	0.029	77.5	0.066
-3.5	0.126	5.0	0.310	16.5	0.043	37.0	0.020	57.5	0.034	78.0	0.065
-3.0	0.206	5.2	0.275	17.0	0.055	37.5	0.019	58.0	0.042	78.5	0.063
-2.8	0.254	5.4	0.244	17.5	0.060	38.0	0.025	58.5	0.051	79.0	0.061
-2.6	0.307	5.6	0.218	18.0	0.057	38.5	0.032	59.0	0.061	79.5	0.059
-2.4	0.362	5.8	0.197	18.5	0.045	39.0	0.037	59.5	0.070	80.0	0.056
-2.2	0.419	6.0	0.182	19.0	0.027	39.5	0.039	60.0	0.078	80.5	0.053
-2.0	0.476	6.2	0.172	19.5	0.004	40.0	0.037	60.5	0.086	81.0	0.050
-1.8	0.532	6.4	0.167	20.0	0.022	40.5	0.032	61.0	0.092	81.5	0.047
-1.6	0.588	6.6	0.165	20.5	0.049	41.0	0.023	61.5	0.097	82.0	0.044
-1.4	0.642	6.8	0.164	21.0	0.073	41.5	0.011	62.0	0.100	82.5	0.040
-1.2	0.694	7.0	0.164	21.5	0.093	42.0	0.003	62.5	0.101	83.0	0.037
-1.0	0.743	7.2	0.163	22.0	0.108	42.5	0.017	63.0	0.101	83.5	0.033
-0.8	0.789	7.4	0.162	22.5	0.116	43.0	0.033	63.5	0.099	84.0	0.030
-0.6	0.831	7.6	0.159	23.0	0.118	43.5	0.048	64.0	0.096	84.5	0.026
-0.4	0.869	7.8	0.154	23.5	0.113	44.0	0.061	64.5	0.091	85.0	0.023
-0.2	0.903	8.0	0.147	24.0	0.103	44.5	0.073	65.0	0.086	85.5	0.020
0.0	0.932	8.2	0.139	24.5	0.089	45.0	0.083	65.5	0.079	86.0	0.017
0.2	0.956	8.4	0.129	25.0	0.074	45.5	0.090	66.0	0.072	86.5	0.014
0.4	0.975	8.6	0.117	25.5	0.061	46.0	0.093	66.5	0.064	87.0	0.011
0.6	0.989	8.8	0.105	26.0	0.052	46.5	0.094	67.0	0.056	87.5	0.008
0.8	0.997	9.0	0.093	26.5	0.050	47.0	0.092	67.5	0.048	88.0	0.006
1.0	1.000	9.2	0.082	27.0	0.052	47.5	0.088	68.0	0.040	88.5	0.004
1.2	0.997	9.4	0.073	27.5	0.054	48.0	0.081	68.5	0.033	89.0	0.002
1.4	0.989	9.6	0.067	28.0	0.054	48.5	0.073	69.0	0.028	89.5	0.001
1.6	0.976	9.8	0.066	28.5	0.051	49.0	0.065	69.5	0.025	90.0	0.000
1.8	0.958	10.0	0.068	29.0	0.044	49.5	0.057	70.0	0.026		
2.0	0.935	10.2	0.075	29.5	0.035	50.0	0.050	70.5	0.029		
2.2	0.908	10.4	0.085	30.0	0.028	50.5	0.046	71.0	0.033		

This document contains proprietary and confidential information of Dielectric Communications and SPX Corporation. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric Communications or SPX Corporation.



Proposal Number	C-03652	Revision:	1
Date	18-Feb-11		
Call Letters	KSAT-DT	Channel	12
Location	San Antonio, TX		
Customer	Post Newsweek		
Antenna Type	THV-12A12/VP-R C150		

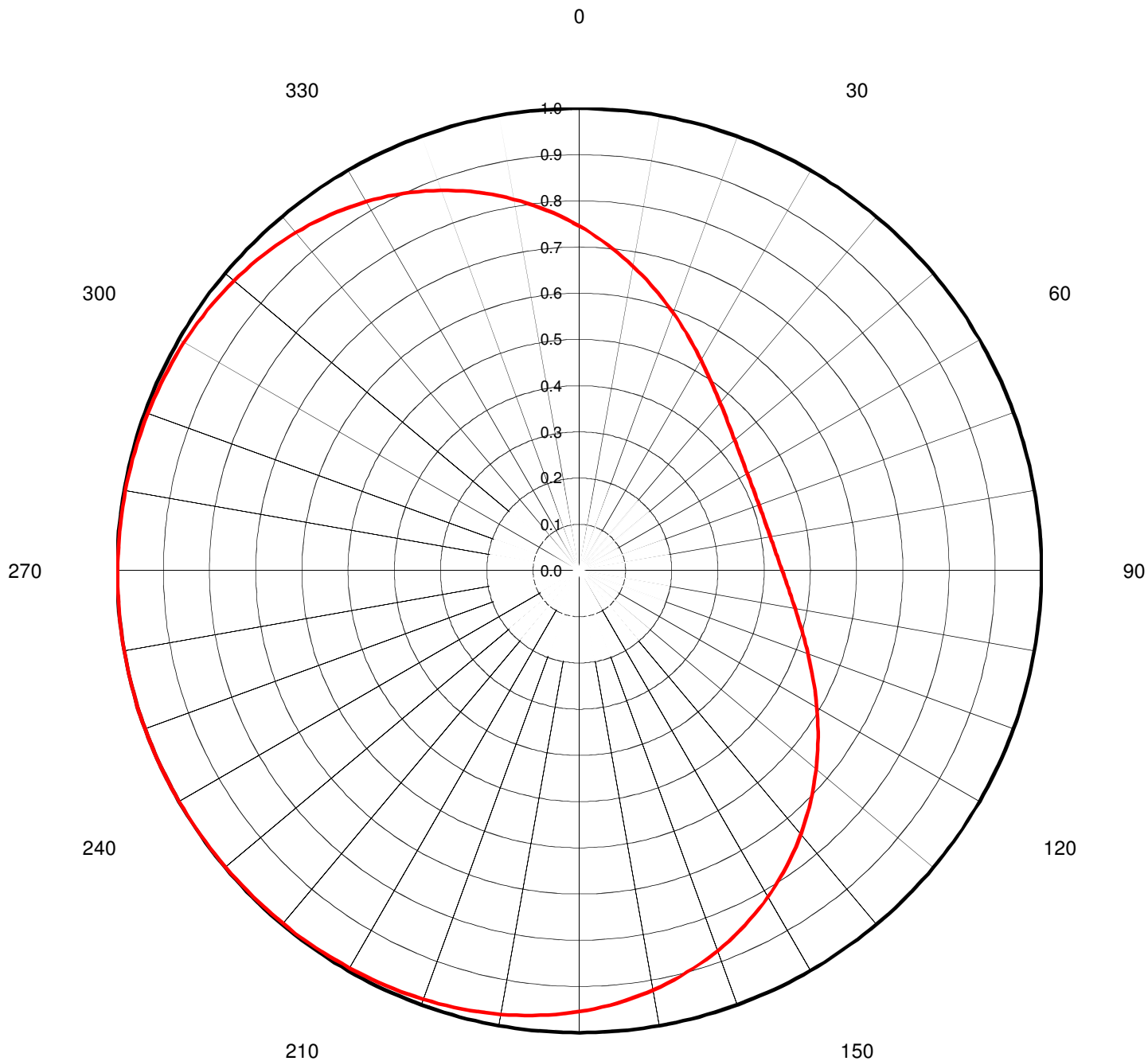
AZIMUTH PATTERN

Gain **1.50**
Calculated / Measured

(1.76 dB)
Calculated

Frequency
Drawing #

207.00 MHz
THV-C150-12H





Proposal Number	C-03652	Revision:	1
Date	18-Feb-11		
Call Letters	KSAT-DT	Channel	12
Location	San Antonio, TX		
Customer	Post Newsweek		
Antenna Type	THV-12A12/VP-R C150		

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **THV-C150-12H**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.745	45	0.454	90	0.439	135	0.708	180	0.954	225	0.998	270	0.999	315	0.966
1	0.738	46	0.451	91	0.442	136	0.715	181	0.957	226	0.998	271	0.999	316	0.964
2	0.730	47	0.448	92	0.445	137	0.723	182	0.959	227	0.998	272	0.998	317	0.962
3	0.723	48	0.445	93	0.448	138	0.730	183	0.962	228	0.998	273	0.998	318	0.959
4	0.715	49	0.442	94	0.451	139	0.738	184	0.964	229	0.999	274	0.998	319	0.957
5	0.708	50	0.439	95	0.454	140	0.745	185	0.966	230	0.999	275	0.998	320	0.954
6	0.700	51	0.436	96	0.458	141	0.753	186	0.968	231	0.999	276	0.998	321	0.952
7	0.692	52	0.434	97	0.462	142	0.760	187	0.970	232	0.999	277	0.998	322	0.949
8	0.684	53	0.432	98	0.466	143	0.767	188	0.972	233	0.999	278	0.997	323	0.946
9	0.677	54	0.430	99	0.470	144	0.775	189	0.974	234	0.999	279	0.997	324	0.943
10	0.669	55	0.428	100	0.474	145	0.782	190	0.975	235	0.999	280	0.997	325	0.940
11	0.661	56	0.426	101	0.479	146	0.789	191	0.977	236	0.999	281	0.997	326	0.936
12	0.654	57	0.424	102	0.483	147	0.796	192	0.978	237	0.999	282	0.996	327	0.933
13	0.646	58	0.423	103	0.488	148	0.803	193	0.980	238	1.000	283	0.996	328	0.929
14	0.638	59	0.421	104	0.493	149	0.809	194	0.981	239	1.000	284	0.996	329	0.926
15	0.631	60	0.420	105	0.498	150	0.816	195	0.982	240	1.000	285	0.996	330	0.922
16	0.623	61	0.419	106	0.504	151	0.822	196	0.983	241	1.000	286	0.995	331	0.918
17	0.616	62	0.418	107	0.509	152	0.829	197	0.984	242	1.000	287	0.995	332	0.914
18	0.608	63	0.417	108	0.515	153	0.835	198	0.985	243	1.000	288	0.994	333	0.909
19	0.601	64	0.416	109	0.521	154	0.841	199	0.986	244	1.000	289	0.994	334	0.905
20	0.594	65	0.416	110	0.527	155	0.847	200	0.987	245	1.000	290	0.994	335	0.900
21	0.586	66	0.415	111	0.533	156	0.853	201	0.988	246	1.000	291	0.993	336	0.896
22	0.579	67	0.415	112	0.539	157	0.859	202	0.989	247	1.000	292	0.993	337	0.891
23	0.572	68	0.414	113	0.545	158	0.865	203	0.990	248	1.000	293	0.992	338	0.886
24	0.565	69	0.414	114	0.552	159	0.870	204	0.990	249	1.000	294	0.992	339	0.881
25	0.559	70	0.414	115	0.559	160	0.876	205	0.991	250	1.000	295	0.991	340	0.875
26	0.552	71	0.414	116	0.565	161	0.881	206	0.992	251	1.000	296	0.990	341	0.870
27	0.545	72	0.414	117	0.572	162	0.886	207	0.992	252	1.000	297	0.990	342	0.865
28	0.539	73	0.415	118	0.579	163	0.891	208	0.993	253	1.000	298	0.989	343	0.859
29	0.533	74	0.415	119	0.586	164	0.896	209	0.993	254	1.000	299	0.988	344	0.853
30	0.527	75	0.416	120	0.594	165	0.900	210	0.994	255	1.000	300	0.987	345	0.847
31	0.521	76	0.416	121	0.601	166	0.905	211	0.994	256	1.000	301	0.986	346	0.841
32	0.515	77	0.417	122	0.608	167	0.909	212	0.994	257	1.000	302	0.985	347	0.835
33	0.509	78	0.418	123	0.616	168	0.914	213	0.995	258	1.000	303	0.984	348	0.829
34	0.504	79	0.419	124	0.623	169	0.918	214	0.995	259	1.000	304	0.983	349	0.822
35	0.498	80	0.420	125	0.631	170	0.922	215	0.996	260	1.000	305	0.982	350	0.816
36	0.493	81	0.421	126	0.638	171	0.926	216	0.996	261	1.000	306	0.981	351	0.809
37	0.488	82	0.423	127	0.646	172	0.929	217	0.996	262	1.000	307	0.980	352	0.803
38	0.483	83	0.424	128	0.654	173	0.933	218	0.996	263	0.999	308	0.978	353	0.796
39	0.479	84	0.426	129	0.661	174	0.936	219	0.997	264	0.999	309	0.977	354	0.789
40	0.474	85	0.428	130	0.669	175	0.940	220	0.997	265	0.999	310	0.975	355	0.782
41	0.470	86	0.430	131	0.677	176	0.943	221	0.997	266	0.999	311	0.974	356	0.775
42	0.466	87	0.432	132	0.685	177	0.946	222	0.997	267	0.999	312	0.972	357	0.767
43	0.462	88	0.434	133	0.692	178	0.949	223	0.998	268	0.999	313	0.970	358	0.760
44	0.458	89	0.436	134	0.700	179	0.952	224	0.998	269	0.999	314	0.968	359	0.753

This document contains proprietary and confidential information of Dielectric Communications and SPX Corporation. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric Communications or SPX Corporation.



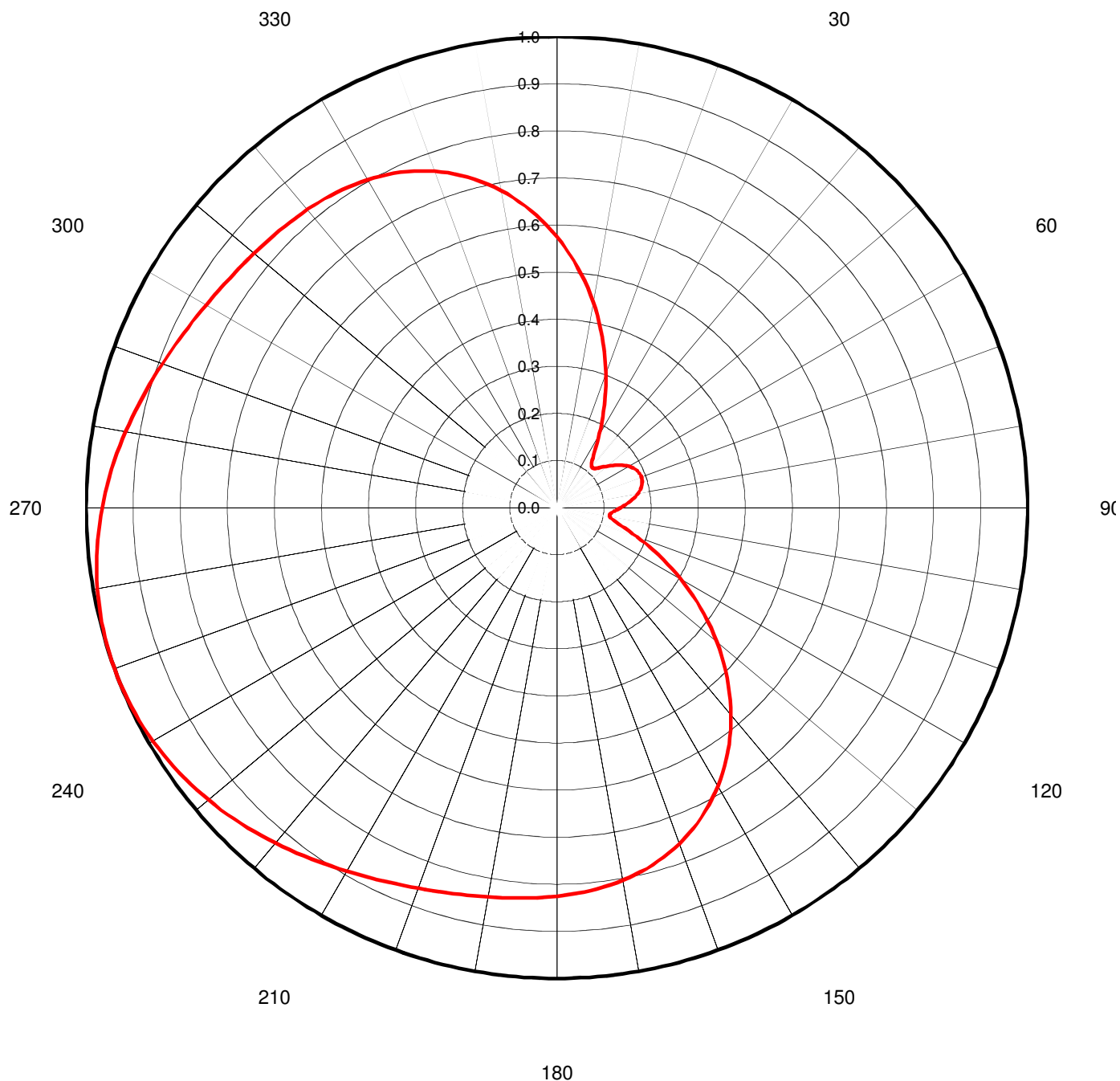
Proposal Number	C-03652	Revision:	1
Date	18-Feb-11		
Call Letters	KSAT-DT	Channel	12
Location	San Antonio, TX		
Customer	Post Newsweek		
Antenna Type	THV-12A12/VP-R C150		

AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain	2.10	(3.22 dB)
Calculated / Measured		Calculated

Frequency	207.00 MHz
Drawing #	THV-C150-12V

0





Proposal Number	C-03652	Revision:	1
Date	18-Feb-11		
Call Letters	KSAT-DT	Channel	12
Location	San Antonio, TX		
Customer	Post Newsweek		
Antenna Type	THV-12A12/VP-R C150		

TABULATION OF AZIMUTH PATTERN/VERTICAL POLARIZATION

Azimuth Pattern Drawing #: **THV-C150-12V**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.575	45	0.118	90	0.136	135	0.511	180	0.825	225	0.949	270	0.966	315	0.832
1	0.563	46	0.120	91	0.132	136	0.525	181	0.827	226	0.952	271	0.963	316	0.831
2	0.550	47	0.124	92	0.128	137	0.538	182	0.828	227	0.956	272	0.959	317	0.830
3	0.538	48	0.128	93	0.124	138	0.550	183	0.830	228	0.959	273	0.956	318	0.828
4	0.525	49	0.132	94	0.120	139	0.563	184	0.831	229	0.963	274	0.952	319	0.827
5	0.511	50	0.136	95	0.118	140	0.575	185	0.832	230	0.966	275	0.949	320	0.825
6	0.498	51	0.140	96	0.115	141	0.587	186	0.834	231	0.969	276	0.945	321	0.824
7	0.485	52	0.145	97	0.114	142	0.599	187	0.835	232	0.972	277	0.942	322	0.822
8	0.471	53	0.149	98	0.113	143	0.611	188	0.837	233	0.975	278	0.938	323	0.820
9	0.457	54	0.153	99	0.113	144	0.622	189	0.838	234	0.978	279	0.934	324	0.818
10	0.444	55	0.157	100	0.114	145	0.633	190	0.840	235	0.980	280	0.930	325	0.816
11	0.430	56	0.161	101	0.117	146	0.644	191	0.841	236	0.983	281	0.926	326	0.814
12	0.416	57	0.165	102	0.120	147	0.654	192	0.843	237	0.985	282	0.922	327	0.812
13	0.402	58	0.169	103	0.125	148	0.665	193	0.845	238	0.987	283	0.918	328	0.809
14	0.388	59	0.172	104	0.130	149	0.674	194	0.847	239	0.989	284	0.915	329	0.807
15	0.374	60	0.175	105	0.137	150	0.684	195	0.849	240	0.991	285	0.911	330	0.804
16	0.360	61	0.178	106	0.144	151	0.693	196	0.851	241	0.993	286	0.907	331	0.801
17	0.346	62	0.181	107	0.152	152	0.702	197	0.853	242	0.994	287	0.903	332	0.797
18	0.332	63	0.183	108	0.161	153	0.710	198	0.855	243	0.996	288	0.899	333	0.794
19	0.318	64	0.185	109	0.171	154	0.718	199	0.858	244	0.997	289	0.896	334	0.790
20	0.304	65	0.187	110	0.181	155	0.726	200	0.860	245	0.998	290	0.892	335	0.785
21	0.291	66	0.188	111	0.192	156	0.734	201	0.863	246	0.999	291	0.888	336	0.781
22	0.278	67	0.190	112	0.203	157	0.741	202	0.866	247	0.999	292	0.885	337	0.776
23	0.264	68	0.190	113	0.215	158	0.747	203	0.869	248	1.000	293	0.881	338	0.771
24	0.252	69	0.191	114	0.227	159	0.754	204	0.872	249	1.000	294	0.878	339	0.766
25	0.239	70	0.191	115	0.239	160	0.760	205	0.875	250	1.000	295	0.875	340	0.760
26	0.227	71	0.191	116	0.252	161	0.766	206	0.878	251	1.000	296	0.872	341	0.754
27	0.215	72	0.190	117	0.264	162	0.771	207	0.881	252	1.000	297	0.869	342	0.747
28	0.203	73	0.190	118	0.278	163	0.776	208	0.885	253	0.999	298	0.866	343	0.741
29	0.192	74	0.188	119	0.291	164	0.781	209	0.888	254	0.999	299	0.863	344	0.734
30	0.181	75	0.187	120	0.304	165	0.785	210	0.892	255	0.998	300	0.860	345	0.726
31	0.171	76	0.185	121	0.318	166	0.790	211	0.896	256	0.997	301	0.858	346	0.718
32	0.161	77	0.183	122	0.332	167	0.794	212	0.899	257	0.996	302	0.855	347	0.710
33	0.152	78	0.181	123	0.346	168	0.797	213	0.903	258	0.994	303	0.853	348	0.702
34	0.144	79	0.178	124	0.360	169	0.801	214	0.907	259	0.993	304	0.851	349	0.693
35	0.137	80	0.175	125	0.374	170	0.804	215	0.911	260	0.991	305	0.849	350	0.684
36	0.130	81	0.172	126	0.388	171	0.807	216	0.915	261	0.989	306	0.847	351	0.674
37	0.125	82	0.169	127	0.402	172	0.809	217	0.918	262	0.987	307	0.845	352	0.665
38	0.120	83	0.165	128	0.416	173	0.812	218	0.922	263	0.985	308	0.843	353	0.654
39	0.117	84	0.161	129	0.430	174	0.814	219	0.926	264	0.983	309	0.841	354	0.644
40	0.114	85	0.157	130	0.444	175	0.816	220	0.930	265	0.980	310	0.840	355	0.633
41	0.113	86	0.153	131	0.457	176	0.818	221	0.934	266	0.978	311	0.838	356	0.622
42	0.113	87	0.149	132	0.471	177	0.820	222	0.938	267	0.975	312	0.837	357	0.611
43	0.114	88	0.145	133	0.485	178	0.822	223	0.942	268	0.972	313	0.835	358	0.599
44	0.115	89	0.140	134	0.498	179	0.824	224	0.945	269	0.969	314	0.834	359	0.587