



Proposal #: **C-03604**

Antenna Type: **TFU-30DSC/VP-R C170**

Channel: **50 DTV**

Call Letters: **KTEH-DT**

Location: **San Jose, CA**

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	36.8	15.66	
	Vpol	9.2	9.64	
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	15.5	11.90	
	Vpol	3.9	5.91	
Circularity Directional		dB		
Axial Ratio		dB		
Beam Tilt		1.00 deg	1° M @ 225° TN	
Average Power		30 kW	14.77 dBk	
Antenna Input: T/L		6-1/8 in	75.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel	1.08 : 1	Notes:
Patterns	Azimuth	TFU-C170-HP	TFU-C240-VP	
	Elevation	30Q255100	30Q255100-90	
Mechanical Specifications		Metric	English	Preliminary
Height with Lightning Protector	H4	m	ft	Side mounted
Height Less Lightning Protector	H2	14.5 m	47.7 ft	TIA/EIA-222-F.
Height of Center of Radiation	H3	7.3 m	23.9 ft	
Basic Wind Speed	V	112.7 km/h	70 mi/h	
Force Coeff. x Projected Area	CaAc	6.5 m ²	69.6 ft ²	Excludes Mounts
Moment Arm	D1	m	ft	
Force Coeff. x Projected Area	CaAc	m ²	ft ²	
Moment Arm	D3	m	ft	
Pole Bury Length	D2	m	ft	
Weight	W	0.4 t	920 lbs	Excludes Mounts
Radome				
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F. Mechanical Loads Exclude Mounts				

NOTE:

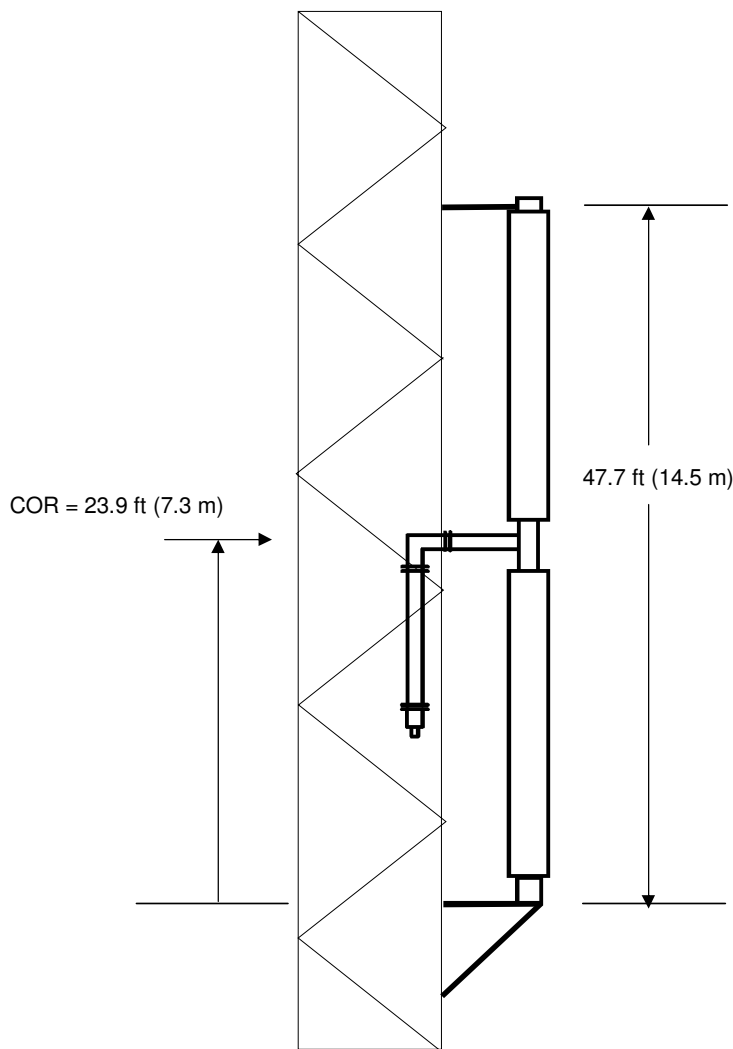
Prepared By : JBC

Approved By :

PSJ

Original Date : 25-Jun-09

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Mechanical Specifications
TIA/EIA-222-F. @ 70 mi/h (112.7 km/h)

CaAc = 69.6 ft²(6.5 m²)

W = 920 lbs(0.4 t)

TFU-30DSC/VP-R C170
Channel: D50

JBC-090625-0

Not to Scale

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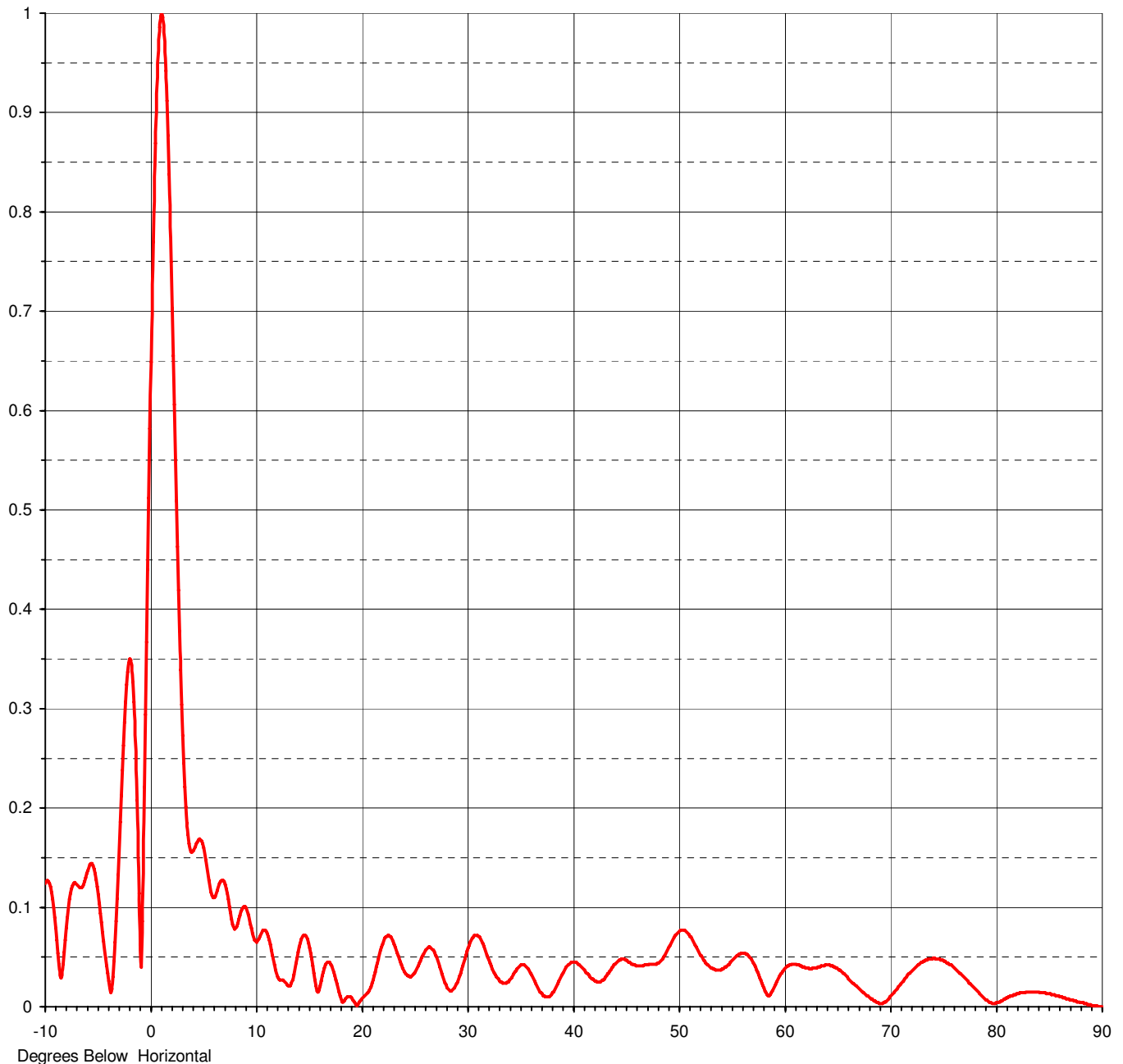


Proposal Number	C-03604	
Date	25-Jun-09	
Call Letters	KTEH-DT	Channel 50
Location	San Jose, CA	
Customer	Northern California Public	
Antenna Type	TFU-30DSC/VP-R C170	

ELEVATION PATTERN

RMS Gain at Main Lobe	25.50 (14.07 dB)
RMS Gain at Horizontal	10.70 (10.29 dB)
Calculated / Measured	Calculated

Beam Tilt	1.00 deg
Frequency	689.00 MHz
Drawing #	30Q255100-90

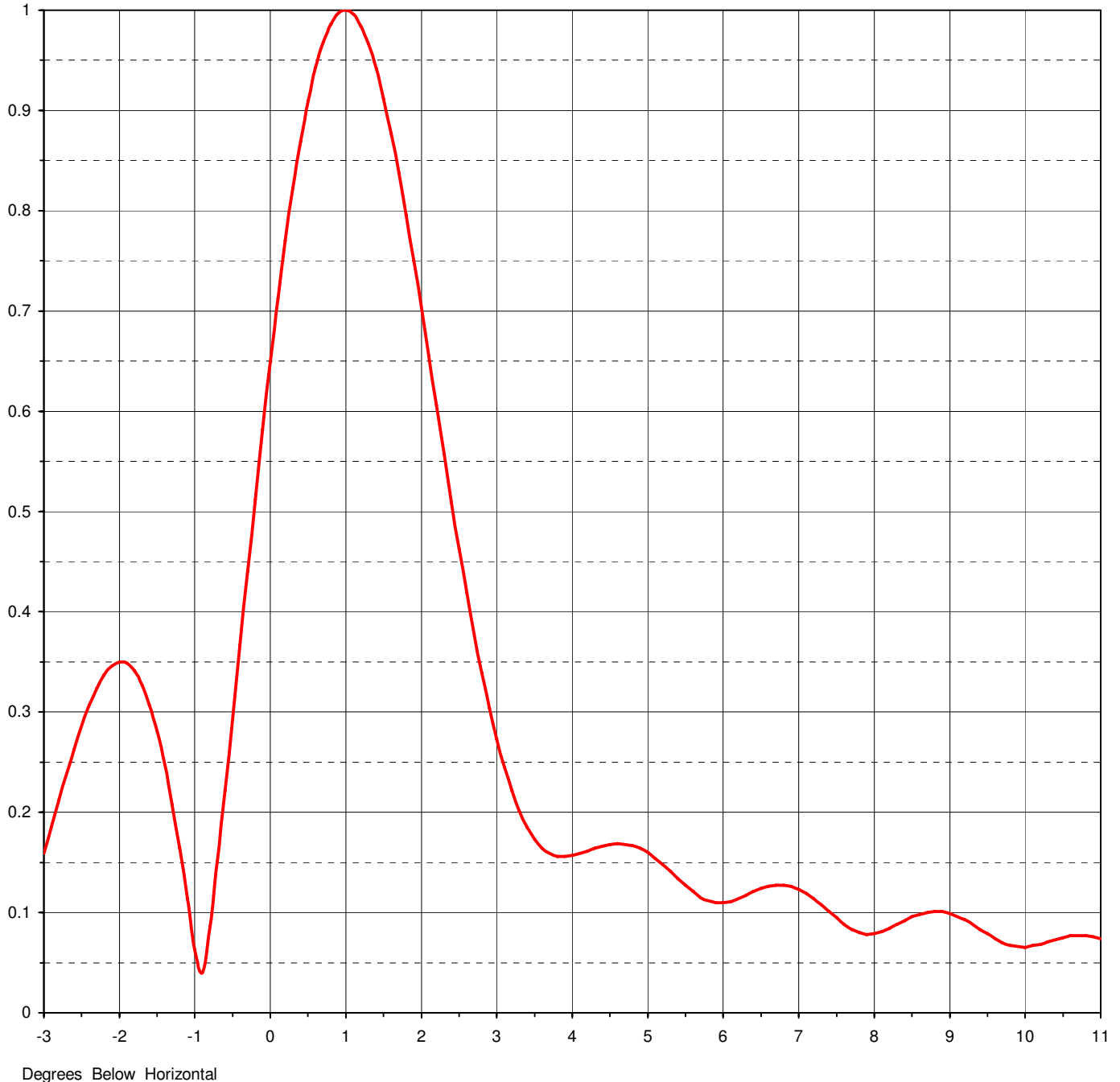




Proposal Number	C-03604	
Date	25-Jun-09	
Call Letters	KTEH-DT	Channel 50
Location	San Jose, CA	
Customer	Northern California Public	
Antenna Type	TFU-30DSC/VP-R C170	

ELEVATION PATTERN

RMS Gain at Main Lobe	25.50 (14.07 dB)	Beam Tilt	1.00 deg
RMS Gain at Horizontal	10.70 (10.29 dB)	Frequency	689.00 MHz
Calculated / Measured	Calculated	Drawing #	30Q255100





Proposal Number **C-03604**
 Date **25-Jun-09**
 Call Letters **KTEH-DT** Channel **50**
 Location **San Jose, CA**
 Customer **Northern California Public**
 Antenna Type **TFU-30DSC/VP-R C170**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **30Q255100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.124	2.4	0.509	10.6	0.075	30.5	0.069	51.0	0.073	71.5	0.030
-9.5	0.121	2.6	0.419	10.8	0.077	31.0	0.072	51.5	0.064	72.0	0.036
-9.0	0.079	2.8	0.339	11.0	0.076	31.5	0.064	52.0	0.054	72.5	0.041
-8.5	0.029	3.0	0.273	11.5	0.057	32.0	0.049	52.5	0.046	73.0	0.045
-8.0	0.079	3.2	0.221	12.0	0.033	32.5	0.036	53.0	0.040	73.5	0.048
-7.5	0.119	3.4	0.185	12.5	0.027	33.0	0.028	53.5	0.037	74.0	0.049
-7.0	0.123	3.6	0.164	13.0	0.022	33.5	0.024	54.0	0.037	74.5	0.048
-6.5	0.121	3.8	0.156	13.5	0.027	34.0	0.027	54.5	0.040	75.0	0.046
-6.0	0.137	4.0	0.157	14.0	0.055	34.5	0.035	55.0	0.046	75.5	0.043
-5.5	0.142	4.2	0.161	14.5	0.072	35.0	0.041	55.5	0.051	76.0	0.039
-5.0	0.113	4.4	0.166	15.0	0.064	35.5	0.041	56.0	0.054	76.5	0.034
-4.5	0.066	4.6	0.169	15.5	0.034	36.0	0.034	56.5	0.053	77.0	0.029
-4.0	0.026	4.8	0.167	16.0	0.017	36.5	0.023	57.0	0.046	77.5	0.023
-3.5	0.046	5.0	0.160	16.5	0.039	37.0	0.014	57.5	0.035	78.0	0.018
-3.0	0.159	5.2	0.148	17.0	0.045	37.5	0.010	58.0	0.021	78.5	0.012
-2.8	0.212	5.4	0.134	17.5	0.031	38.0	0.012	58.5	0.011	79.0	0.007
-2.6	0.263	5.6	0.121	18.0	0.011	38.5	0.021	59.0	0.018	79.5	0.004
-2.4	0.307	5.8	0.112	18.5	0.008	39.0	0.032	59.5	0.029	80.0	0.004
-2.2	0.337	6.0	0.110	19.0	0.010	39.5	0.041	60.0	0.037	80.5	0.006
-2.0	0.350	6.2	0.114	19.5	0.002	40.0	0.045	60.5	0.042	81.0	0.009
-1.8	0.341	6.4	0.121	20.0	0.007	40.5	0.043	61.0	0.043	81.5	0.011
-1.6	0.307	6.6	0.126	20.5	0.013	41.0	0.038	61.5	0.041	82.0	0.013
-1.4	0.248	6.8	0.127	21.0	0.024	41.5	0.032	62.0	0.039	82.5	0.014
-1.2	0.164	7.0	0.123	21.5	0.044	42.0	0.027	62.5	0.038	83.0	0.015
-1.0	0.063	7.2	0.114	22.0	0.063	42.5	0.025	63.0	0.039	83.5	0.015
-0.8	0.086	7.4	0.101	22.5	0.072	43.0	0.028	63.5	0.041	84.0	0.015
-0.6	0.221	7.6	0.088	23.0	0.066	43.5	0.036	64.0	0.042	84.5	0.014
-0.4	0.367	7.8	0.080	23.5	0.051	44.0	0.043	64.5	0.041	85.0	0.013
-0.2	0.512	8.0	0.079	24.0	0.037	44.5	0.047	65.0	0.038	85.5	0.012
0.0	0.649	8.2	0.084	24.5	0.031	45.0	0.047	65.5	0.034	86.0	0.010
0.2	0.770	8.4	0.092	25.0	0.033	45.5	0.044	66.0	0.028	86.5	0.009
0.4	0.869	8.6	0.098	25.5	0.044	46.0	0.041	66.5	0.023	87.0	0.007
0.6	0.943	8.8	0.101	26.0	0.055	46.5	0.041	67.0	0.018	87.5	0.006
0.8	0.986	9.0	0.099	26.5	0.060	47.0	0.042	67.5	0.013	88.0	0.004
1.0	1.000	9.2	0.093	27.0	0.052	47.5	0.043	68.0	0.009	88.5	0.003
1.2	0.984	9.4	0.083	27.5	0.037	48.0	0.044	68.5	0.006	89.0	0.001
1.4	0.942	9.6	0.074	28.0	0.022	48.5	0.048	69.0	0.003	89.5	0.001
1.6	0.877	9.8	0.070	28.5	0.016	49.0	0.058	69.5	0.005	90.0	0.000
1.8	0.796	10.0	0.066	29.0	0.023	49.5	0.068	70.0	0.011		
2.0	0.703	10.2	0.067	29.5	0.038	50.0	0.075	70.5	0.017		
2.2	0.606	10.4	0.071	30.0	0.056	50.5	0.077	71.0	0.024		

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Proposal Number	C-03604	
Date	25-Jun-09	
Call Letters	KTEH-DT	Channel 50
Location	San Jose, CA	
Customer	Northern California Public	
Antenna Type	TFU-30DSC/VP-R C170	

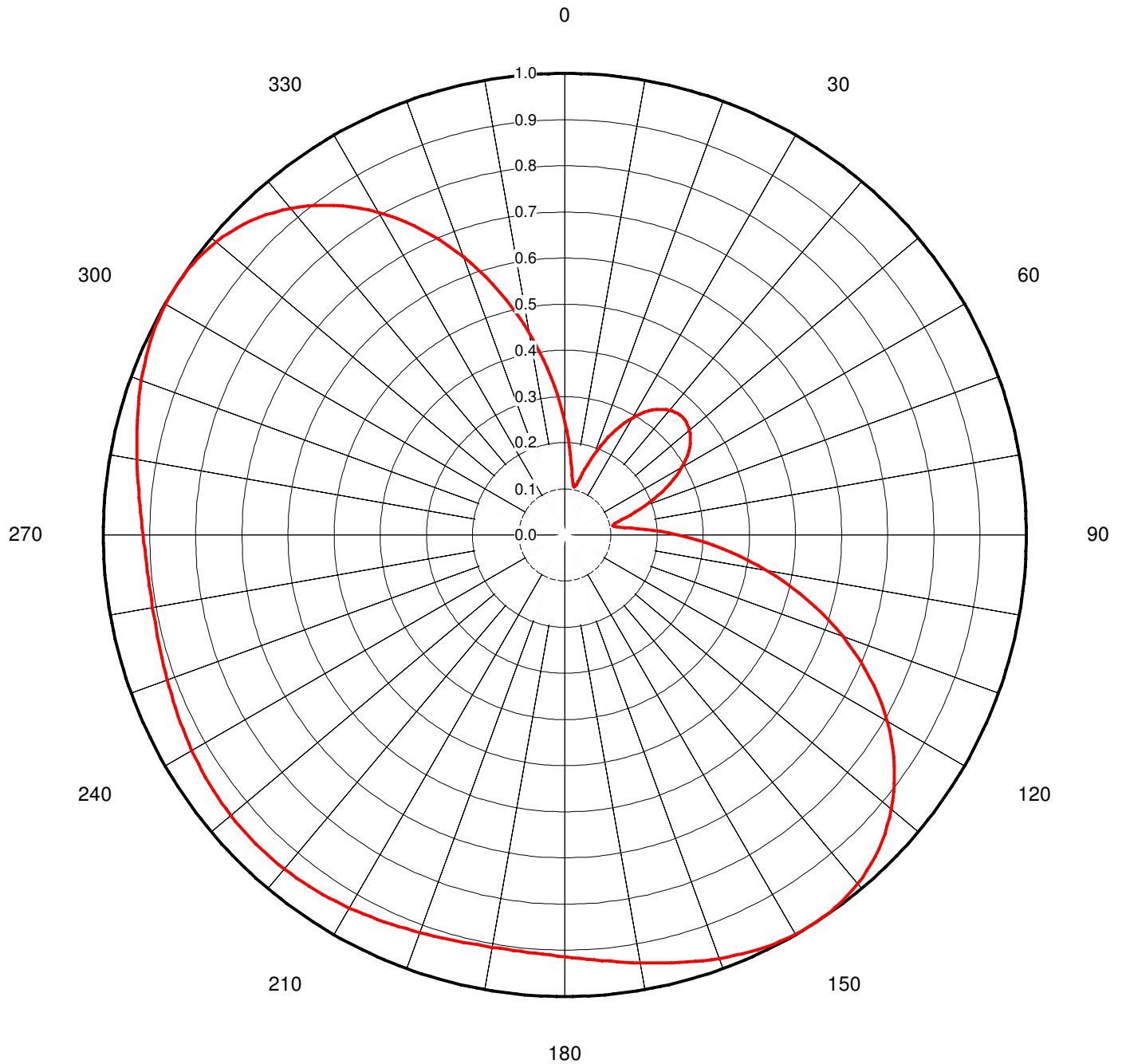
AZIMUTH PATTERN

Gain **1.70**
Calculated / Measured

(2.30 dB)
Calculated

Frequency
Drawing #

689.00 MHz
TFU-C170-HP





Proposal Number **C-03604**
Date **25-Jun-09**
Call Letters **KTEH-DT** Channel **50**
Location **San Jose, CA**
Customer **Northern California Public**
Antenna Type **TFU-30DSC/VP-R C170**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-C170-HP**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.244	45	0.361	90	0.244	135	0.962	180	0.914	225	0.947	270	0.914	315	0.962
1	0.225	46	0.360	91	0.263	136	0.968	181	0.912	226	0.946	271	0.916	316	0.956
2	0.207	47	0.359	92	0.283	137	0.974	182	0.911	227	0.946	272	0.918	317	0.949
3	0.190	48	0.357	93	0.302	138	0.978	183	0.910	228	0.946	273	0.920	318	0.941
4	0.174	49	0.356	94	0.322	139	0.983	184	0.909	229	0.945	274	0.923	319	0.933
5	0.157	50	0.353	95	0.342	140	0.987	185	0.908	230	0.945	275	0.926	320	0.924
6	0.144	51	0.349	96	0.363	141	0.990	186	0.907	231	0.944	276	0.928	321	0.915
7	0.131	52	0.345	97	0.383	142	0.993	187	0.907	232	0.943	277	0.931	322	0.905
8	0.122	53	0.341	98	0.404	143	0.995	188	0.907	233	0.942	278	0.935	323	0.894
9	0.113	54	0.335	99	0.424	144	0.997	189	0.906	234	0.941	279	0.938	324	0.883
10	0.109	55	0.330	100	0.444	145	0.999	190	0.907	235	0.940	280	0.941	325	0.872
11	0.106	56	0.323	101	0.465	146	0.999	191	0.907	236	0.939	281	0.945	326	0.860
12	0.109	57	0.317	102	0.485	147	1.000	192	0.908	237	0.938	282	0.948	327	0.847
13	0.112	58	0.309	103	0.505	148	1.000	193	0.908	238	0.936	283	0.952	328	0.834
14	0.120	59	0.301	104	0.525	149	1.000	194	0.909	239	0.935	284	0.955	329	0.820
15	0.128	60	0.292	105	0.545	150	0.999	195	0.910	240	0.933	285	0.959	330	0.806
16	0.138	61	0.284	106	0.564	151	0.998	196	0.911	241	0.932	286	0.963	331	0.792
17	0.149	62	0.274	107	0.584	152	0.997	197	0.912	242	0.930	287	0.966	332	0.776
18	0.160	63	0.264	108	0.603	153	0.995	198	0.914	243	0.928	288	0.970	333	0.761
19	0.172	64	0.254	109	0.622	154	0.993	199	0.915	244	0.927	289	0.973	334	0.745
20	0.184	65	0.243	110	0.641	155	0.991	200	0.917	245	0.925	290	0.976	335	0.729
21	0.196	66	0.232	111	0.659	156	0.988	201	0.918	246	0.923	291	0.980	336	0.712
22	0.208	67	0.220	112	0.677	157	0.986	202	0.920	247	0.921	292	0.983	337	0.695
23	0.220	68	0.208	113	0.695	158	0.983	203	0.921	248	0.920	293	0.986	338	0.677
24	0.232	69	0.196	114	0.712	159	0.980	204	0.923	249	0.918	294	0.988	339	0.659
25	0.243	70	0.184	115	0.729	160	0.976	205	0.925	250	0.917	295	0.991	340	0.641
26	0.254	71	0.172	116	0.745	161	0.973	206	0.927	251	0.915	296	0.993	341	0.622
27	0.264	72	0.160	117	0.761	162	0.970	207	0.928	252	0.914	297	0.995	342	0.603
28	0.274	73	0.149	118	0.776	163	0.966	208	0.930	253	0.912	298	0.997	343	0.584
29	0.284	74	0.138	119	0.792	164	0.963	209	0.932	254	0.911	299	0.998	344	0.564
30	0.292	75	0.128	120	0.806	165	0.959	210	0.933	255	0.910	300	0.999	345	0.545
31	0.301	76	0.120	121	0.820	166	0.955	211	0.935	256	0.909	301	1.000	346	0.525
32	0.309	77	0.112	122	0.834	167	0.952	212	0.936	257	0.908	302	1.000	347	0.505
33	0.317	78	0.109	123	0.847	168	0.948	213	0.938	258	0.908	303	1.000	348	0.485
34	0.323	79	0.106	124	0.860	169	0.945	214	0.939	259	0.907	304	0.999	349	0.465
35	0.330	80	0.109	125	0.872	170	0.941	215	0.940	260	0.907	305	0.999	350	0.444
36	0.335	81	0.113	126	0.883	171	0.938	216	0.941	261	0.906	306	0.997	351	0.424
37	0.341	82	0.122	127	0.894	172	0.935	217	0.942	262	0.907	307	0.995	352	0.404
38	0.345	83	0.131	128	0.905	173	0.931	218	0.943	263	0.907	308	0.993	353	0.383
39	0.349	84	0.144	129	0.915	174	0.928	219	0.944	264	0.907	309	0.990	354	0.363
40	0.353	85	0.157	130	0.924	175	0.926	220	0.945	265	0.908	310	0.987	355	0.342
41	0.356	86	0.174	131	0.933	176	0.923	221	0.945	266	0.909	311	0.983	356	0.322
42	0.357	87	0.190	132	0.941	177	0.920	222	0.946	267	0.910	312	0.978	357	0.302
43	0.359	88	0.207	133	0.949	178	0.918	223	0.946	268	0.911	313	0.974	358	0.283
44	0.360	89	0.225	134	0.956	179	0.916	224	0.946	269	0.912	314	0.968	359	0.263

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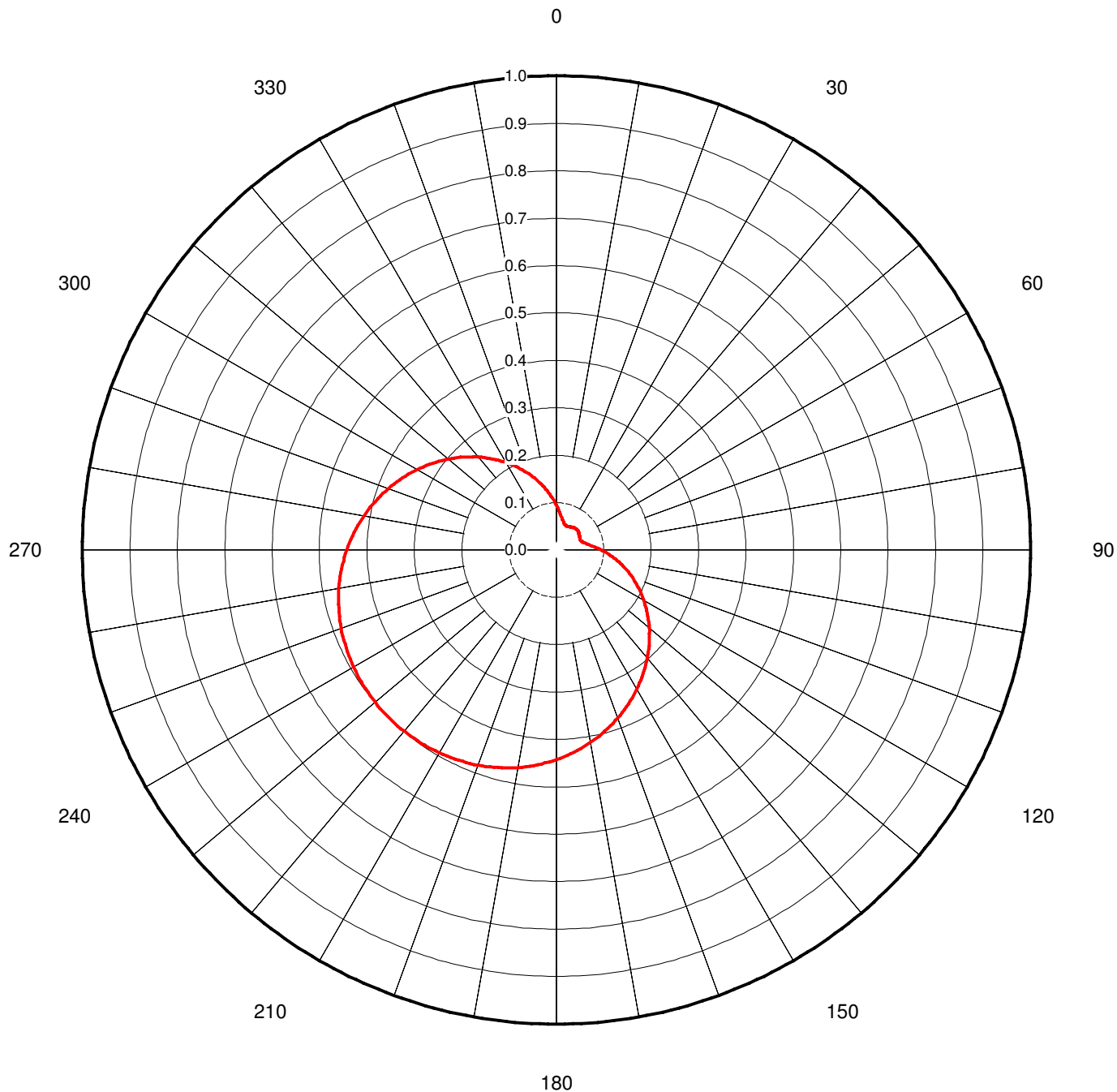


Proposal Number	C-03604	
Date	25-Jun-09	
Call Letters	KTEH-DT	Channel 50
Location	San Jose, CA	
Customer	Northern California Public	
Antenna Type	TFU-30DSC/VP-R C170	

AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain	2.40	(3.80 dB)
Calculated / Measured		Calculated

Frequency	689.00 MHz
Drawing #	TFU-C240-VP





Proposal Number

C-03604

Date

25-Jun-09

Call Letters

KTEH-DT

Channel

50

Location

San Jose, CA

Customer

Northern California Public

Antenna Type

TFU-30DSC/VP-R C170**TABULATION OF AZIMUTH PATTERN/VERTICAL POLARIZATION**

Azimuth Pattern Drawing #:

TFU-C240-VP

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.095	45	0.061	90	0.095	135	0.277	180	0.442	225	0.500	270	0.442	315	0.277
1	0.091	46	0.061	91	0.098	136	0.281	181	0.445	226	0.500	271	0.440	316	0.273
2	0.088	47	0.061	92	0.101	137	0.285	182	0.447	227	0.500	272	0.437	317	0.268
3	0.085	48	0.060	93	0.105	138	0.290	183	0.450	228	0.500	273	0.434	318	0.264
4	0.083	49	0.060	94	0.108	139	0.294	184	0.452	229	0.500	274	0.431	319	0.260
5	0.080	50	0.060	95	0.112	140	0.298	185	0.455	230	0.499	275	0.428	320	0.256
6	0.077	51	0.060	96	0.115	141	0.302	186	0.457	231	0.499	276	0.425	321	0.251
7	0.075	52	0.059	97	0.119	142	0.306	187	0.459	232	0.499	277	0.422	322	0.247
8	0.072	53	0.059	98	0.123	143	0.310	188	0.462	233	0.498	278	0.419	323	0.243
9	0.070	54	0.059	99	0.126	144	0.314	189	0.464	234	0.498	279	0.416	324	0.239
10	0.068	55	0.058	100	0.130	145	0.319	190	0.466	235	0.497	280	0.412	325	0.234
11	0.066	56	0.058	101	0.134	146	0.323	191	0.468	236	0.497	281	0.409	326	0.230
12	0.064	57	0.057	102	0.138	147	0.327	192	0.470	237	0.496	282	0.406	327	0.226
13	0.062	58	0.057	103	0.142	148	0.331	193	0.472	238	0.496	283	0.402	328	0.221
14	0.061	59	0.056	104	0.146	149	0.335	194	0.474	239	0.495	284	0.399	329	0.217
15	0.060	60	0.056	105	0.150	150	0.339	195	0.475	240	0.494	285	0.395	330	0.213
16	0.058	61	0.056	106	0.154	151	0.343	196	0.477	241	0.493	286	0.392	331	0.209
17	0.057	62	0.055	107	0.158	152	0.347	197	0.479	242	0.492	287	0.388	332	0.204
18	0.057	63	0.055	108	0.162	153	0.351	198	0.480	243	0.491	288	0.385	333	0.200
19	0.056	64	0.055	109	0.166	154	0.355	199	0.482	244	0.490	289	0.381	334	0.196
20	0.055	65	0.055	110	0.171	155	0.358	200	0.483	245	0.489	290	0.377	335	0.192
21	0.055	66	0.054	111	0.175	156	0.362	201	0.484	246	0.488	291	0.374	336	0.187
22	0.055	67	0.055	112	0.179	157	0.366	202	0.486	247	0.487	292	0.370	337	0.183
23	0.055	68	0.055	113	0.183	158	0.370	203	0.487	248	0.486	293	0.366	338	0.179
24	0.054	69	0.055	114	0.187	159	0.374	204	0.488	249	0.484	294	0.362	339	0.175
25	0.055	70	0.055	115	0.192	160	0.377	205	0.489	250	0.483	295	0.358	340	0.171
26	0.055	71	0.056	116	0.196	161	0.381	206	0.490	251	0.482	296	0.355	341	0.166
27	0.055	72	0.057	117	0.200	162	0.385	207	0.491	252	0.480	297	0.351	342	0.162
28	0.055	73	0.057	118	0.204	163	0.388	208	0.492	253	0.479	298	0.347	343	0.158
29	0.056	74	0.058	119	0.209	164	0.392	209	0.493	254	0.477	299	0.343	344	0.154
30	0.056	75	0.060	120	0.213	165	0.395	210	0.494	255	0.475	300	0.339	345	0.150
31	0.056	76	0.061	121	0.217	166	0.399	211	0.495	256	0.474	301	0.335	346	0.146
32	0.057	77	0.062	122	0.221	167	0.402	212	0.496	257	0.472	302	0.331	347	0.142
33	0.057	78	0.064	123	0.226	168	0.406	213	0.496	258	0.470	303	0.327	348	0.138
34	0.058	79	0.066	124	0.230	169	0.409	214	0.497	259	0.468	304	0.323	349	0.134
35	0.058	80	0.068	125	0.234	170	0.412	215	0.497	260	0.466	305	0.319	350	0.130
36	0.059	81	0.070	126	0.239	171	0.416	216	0.498	261	0.464	306	0.314	351	0.126
37	0.059	82	0.072	127	0.243	172	0.419	217	0.498	262	0.462	307	0.310	352	0.123
38	0.059	83	0.075	128	0.247	173	0.422	218	0.499	263	0.459	308	0.306	353	0.119
39	0.060	84	0.077	129	0.251	174	0.425	219	0.499	264	0.457	309	0.302	354	0.115
40	0.060	85	0.080	130	0.256	175	0.428	220	0.499	265	0.455	310	0.298	355	0.112
41	0.060	86	0.083	131	0.260	176	0.431	221	0.500	266	0.452	311	0.294	356	0.108
42	0.060	87	0.085	132	0.264	177	0.434	222	0.500	267	0.450	312	0.290	357	0.105
43	0.061	88	0.088	133	0.268	178	0.437	223	0.500	268	0.447	313	0.285	358	0.101
44	0.061	89	0.091	134	0.273	179	0.440	224	0.500	269	0.445	314	0.281	359	0.098

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