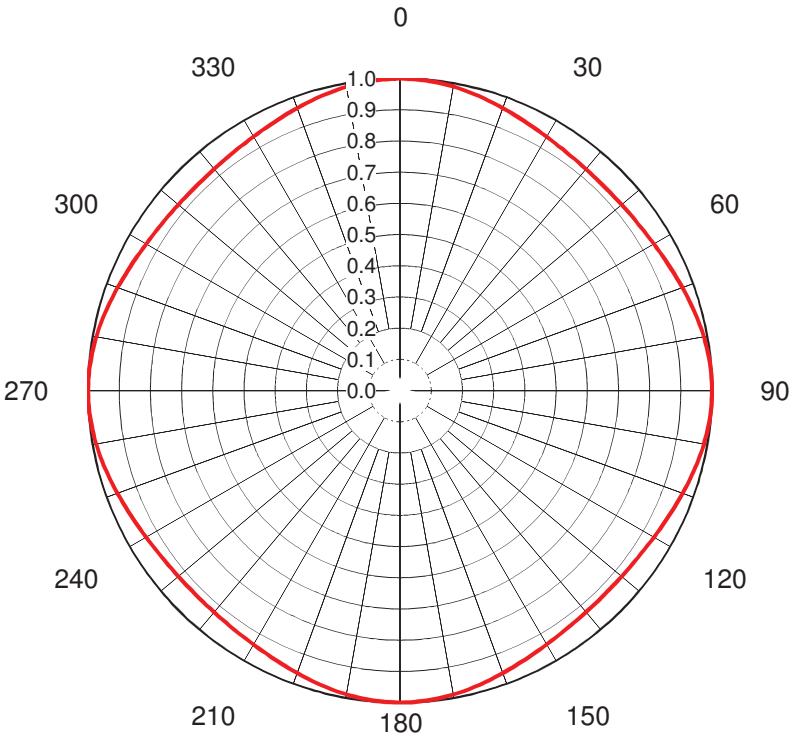
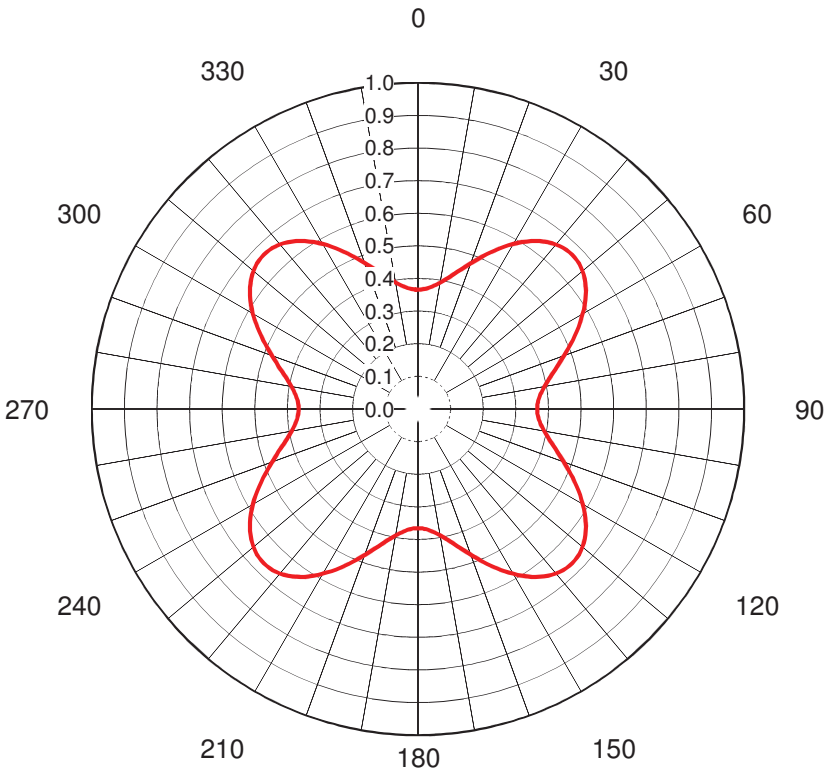
Dielectric®



AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	**C-70014**
Date	**4-Mar-17**
Call Letters	**KFDM**
Channel	**15**
Frequency	**479 MHz**
Antenna Type	**TFU-24GTH/VP-R 04**
Gain	**1.08 (0.35dB)**
	Calculated
Circularity	**+/- 1.0 dB**
Drawing #	**TFU-04H D15**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.931	72	0.969	108	0.969	144	0.931	180	1.000	216	0.931	252	0.969	288	0.969	324	0.931
1	1.000	37	0.929	73	0.972	109	0.966	145	0.932	181	1.000	217	0.929	253	0.972	289	0.966	325	0.932
2	1.000	38	0.929	74	0.974	110	0.964	146	0.933	182	1.000	218	0.929	254	0.974	290	0.964	326	0.933
3	0.999	39	0.928	75	0.977	111	0.961	147	0.935	183	0.999	219	0.928	255	0.977	291	0.961	327	0.935
4	0.998	40	0.927	76	0.980	112	0.958	148	0.936	184	0.998	220	0.927	256	0.980	292	0.958	328	0.936
5	0.997	41	0.926	77	0.982	113	0.956	149	0.938	185	0.997	221	0.926	257	0.982	293	0.956	329	0.938
6	0.996	42	0.926	78	0.985	114	0.953	150	0.940	186	0.996	222	0.926	258	0.985	294	0.953	330	0.940
7	0.994	43	0.926	79	0.987	115	0.951	151	0.942	187	0.994	223	0.926	259	0.987	295	0.951	331	0.942
8	0.993	44	0.926	80	0.989	116	0.948	152	0.944	188	0.993	224	0.926	260	0.989	296	0.948	332	0.944
9	0.991	45	0.925	81	0.991	117	0.946	153	0.946	189	0.991	225	0.926	261	0.991	297	0.946	333	0.946
10	0.989	46	0.926	82	0.993	118	0.944	154	0.948	190	0.989	226	0.926	262	0.993	298	0.944	334	0.948
11	0.987	47	0.926	83	0.994	119	0.942	155	0.951	191	0.987	227	0.926	263	0.994	299	0.942	335	0.951
12	0.985	48	0.926	84	0.996	120	0.940	156	0.953	192	0.985	228	0.926	264	0.996	300	0.940	336	0.953
13	0.982	49	0.926	85	0.997	121	0.938	157	0.956	193	0.982	229	0.927	265	0.997	301	0.938	337	0.956
14	0.980	50	0.927	86	0.998	122	0.936	158	0.958	194	0.980	230	0.927	266	0.998	302	0.936	338	0.958
15	0.977	51	0.928	87	0.999	123	0.935	159	0.961	195	0.977	231	0.928	267	0.999	303	0.935	339	0.961
16	0.974	52	0.929	88	1.000	124	0.933	160	0.964	196	0.974	232	0.929	268	1.000	304	0.933	340	0.964
17	0.972	53	0.929	89	1.000	125	0.932	161	0.966	197	0.972	233	0.929	269	1.000	305	0.932	341	0.966
18	0.969	54	0.931	90	1.000	126	0.931	162	0.969	198	0.969	234	0.931	270	1.000	306	0.931	342	0.969
19	0.966	55	0.932	91	1.000	127	0.929	163	0.972	199	0.966	235	0.932	271	1.000	307	0.929	343	0.972
20	0.964	56	0.933	92	1.000	128	0.929	164	0.974	200	0.964	236	0.933	272	1.000	308	0.929	344	0.974
21	0.961	57	0.935	93	0.999	129	0.928	165	0.977	201	0.961	237	0.935	273	0.999	309	0.928	345	0.977
22	0.958	58	0.936	94	0.998	130	0.927	166	0.980	202	0.958	238	0.936	274	0.998	310	0.927	346	0.980
23	0.956	59	0.938	95	0.997	131	0.926	167	0.982	203	0.956	239	0.938	275	0.997	311	0.926	347	0.982
24	0.953	60	0.940	96	0.996	132	0.926	168	0.985	204	0.953	240	0.940	276	0.996	312	0.926	348	0.985
25	0.951	61	0.942	97	0.994	133	0.926	169	0.987	205	0.951	241	0.942	277	0.994	313	0.926	349	0.987
26	0.948	62	0.944	98	0.993	134	0.926	170	0.989	206	0.948	242	0.944	278	0.993	314	0.926	350	0.989
27	0.946	63	0.946	99	0.991	135	0.926	171	0.991	207	0.946	243	0.946	279	0.991	315	0.926	351	0.991
28	0.944	64	0.948	100	0.989	136	0.926	172	0.993	208	0.944	244	0.948	280	0.989	316	0.926	352	0.993
29	0.942	65	0.951	101	0.987	137	0.926	173	0.994	209	0.942	245	0.951	281	0.987	317	0.926	353	0.994
30	0.940	66	0.953	102	0.985	138	0.926	174	0.996	210	0.940	246	0.953	282	0.985	318	0.926	354	0.996
31	0.938	67	0.956	103	0.982	139	0.926	175	0.997	211	0.938	247	0.956	283	0.982	319	0.926	355	0.997
32	0.936	68	0.958	104	0.980	140	0.927	176	0.998	212	0.936	248	0.958	284	0.980	320	0.927	356	0.998
33	0.935	69	0.961	105	0.977	141	0.928	177	0.999	213	0.935	249	0.961	285	0.977	321	0.928	357	0.999
34	0.933	70	0.964	106	0.974	142	0.929	178	1.000	214	0.933	250	0.964	286	0.974	322	0.929	358	1.000
35	0.932	71	0.966	107	0.972	143	0.929	179	1.000	215	0.932	251	0.966	287	0.972	323	0.929	359	1.000



AZIMUTH PATTERN
Vertical Polarization

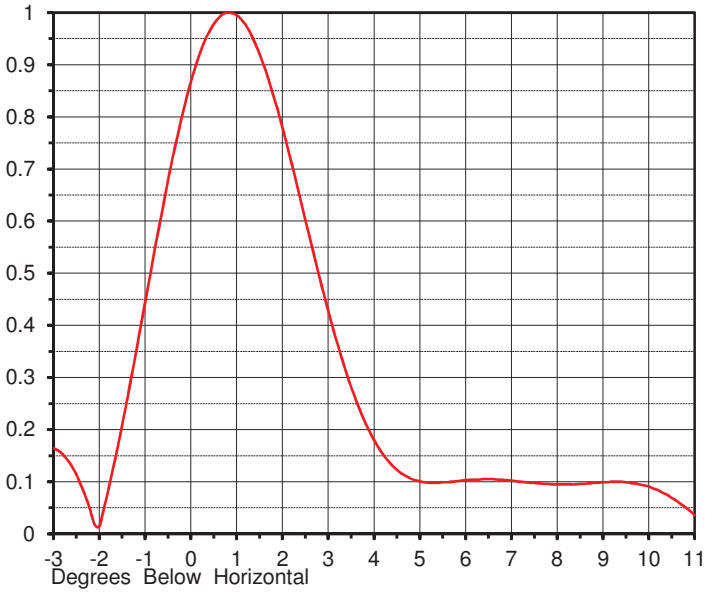
Proposal No.	**C-70014**
Date	**4-Mar-17**
Call Letters	**KFDM**
Channel	**15**
Frequency	**479 MHz**
Antenna Type	**TFU-24GTH/VP-R 04**
Gain	**1.65 (2.16dB)**
	Calculated
Circularity	**+/- 3.0 dB**
Drawing #	**TFU-04V D15**

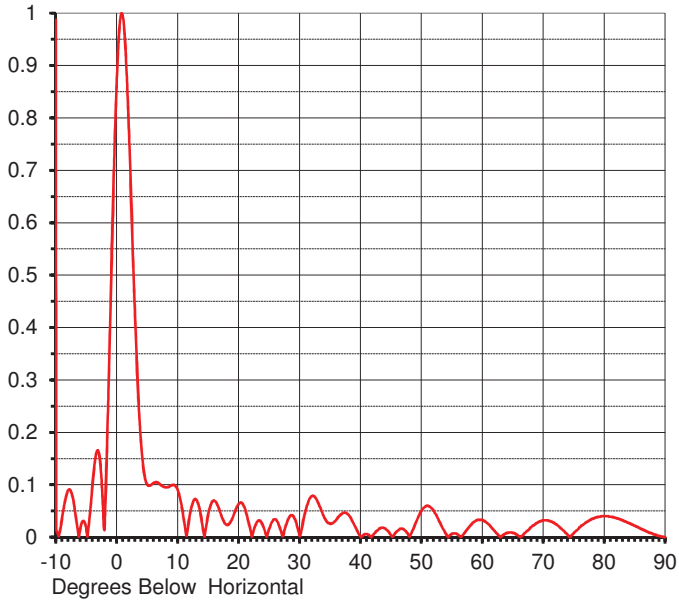
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.366	36	0.636	72	0.456	108	0.456	144	0.636	180	0.366	216	0.636	252	0.456	288	0.456	324	0.636
1	0.366	37	0.643	73	0.447	109	0.466	145	0.629	181	0.366	217	0.643	253	0.447	289	0.466	325	0.629
2	0.367	38	0.649	74	0.438	110	0.476	146	0.621	182	0.367	218	0.649	254	0.438	290	0.476	326	0.621
3	0.368	39	0.654	75	0.429	111	0.487	147	0.612	183	0.368	219	0.654	255	0.429	291	0.487	327	0.612
4	0.370	40	0.658	76	0.421	112	0.498	148	0.603	184	0.370	220	0.658	256	0.421	292	0.498	328	0.603
5	0.372	41	0.662	77	0.413	113	0.509	149	0.594	185	0.372	221	0.662	257	0.413	293	0.509	329	0.594
6	0.376	42	0.665	78	0.406	114	0.520	150	0.584	186	0.376	222	0.665	258	0.406	294	0.520	330	0.584
7	0.379	43	0.667	79	0.399	115	0.531	151	0.574	187	0.379	223	0.667	259	0.399	295	0.531	331	0.574
8	0.383	44	0.668	80	0.393	116	0.542	152	0.563	188	0.383	224	0.668	260	0.393	296	0.542	332	0.563
9	0.388	45	0.669	81	0.388	117	0.553	153	0.553	189	0.388	225	0.669	261	0.388	297	0.553	333	0.553
10	0.393	46	0.668	82	0.383	118	0.563	154	0.542	190	0.393	226	0.668	262	0.383	298	0.563	334	0.542
11	0.399	47	0.667	83	0.379	119	0.574	155	0.531	191	0.399	227	0.667	263	0.379	299	0.574	335	0.531
12	0.406	48	0.665	84	0.376	120	0.584	156	0.520	192	0.406	228	0.665	264	0.376	300	0.584	336	0.520
13	0.413	49	0.662	85	0.372	121	0.594	157	0.509	193	0.413	229	0.662	265	0.372	301	0.594	337	0.509
14	0.421	50	0.658	86	0.370	122	0.603	158	0.498	194	0.421	230	0.658	266	0.370	302	0.603	338	0.498
15	0.429	51	0.654	87	0.368	123	0.612	159	0.487	195	0.429	231	0.654	267	0.368	303	0.612	339	0.487
16	0.438	52	0.649	88	0.367	124	0.621	160	0.476	196	0.438	232	0.649	268	0.367	304	0.621	340	0.476
17	0.447	53	0.643	89	0.366	125	0.629	161	0.466	197	0.447	233	0.643	269	0.366	305	0.629	341	0.466
18	0.456	54	0.636	90	0.366	126	0.636	162	0.456	198	0.456	234	0.636	270	0.366	306	0.636	342	0.456
19	0.466	55	0.629	91	0.366	127	0.643	163	0.447	199	0.466	235	0.629	271	0.366	307	0.643	343	0.447
20	0.476	56	0.621	92	0.367	128	0.649	164	0.438	200	0.476	236	0.621	272	0.367	308	0.649	344	0.438
21	0.487	57	0.612	93	0.368	129	0.654	165	0.429	201	0.487	237	0.612	273	0.368	309	0.654	345	0.429
22	0.498	58	0.603	94	0.370	130	0.658	166	0.421	202	0.498	238	0.603	274	0.370	310	0.658	346	0.421
23	0.509	59	0.594	95	0.372	131	0.662	167	0.413	203	0.509	239	0.594	275	0.372	311	0.662	347	0.413
24	0.520	60	0.584	96	0.376	132	0.665	168	0.406	204	0.520	240	0.584	276	0.376	312	0.665	348	0.406
25	0.531	61	0.574	97	0.379	133	0.667	169	0.399	205	0.531	241	0.574	277	0.379	313	0.667	349	0.399
26	0.542	62	0.563	98	0.383	134	0.668	170	0.393	206	0.542	242	0.563	278	0.383	314	0.668	350	0.393
27	0.553	63	0.553	99	0.388	135	0.669	171	0.388	207	0.553	243	0.553	279	0.388	315	0.669	351	0.388
28	0.563	64	0.542	100	0.393	136	0.668	172	0.383	208	0.563	244	0.542	280	0.393	316	0.668	352	0.383
29	0.574	65	0.531	101	0.399	137	0.667	173	0.379	209	0.574	245	0.531	281	0.399	317	0.667	353	0.379
30	0.584	66	0.520	102	0.406	138	0.665	174	0.376	210	0.584	246	0.520	282	0.406	318	0.665	354	0.376
31	0.594	67	0.509	103	0.413	139	0.662	175	0.372	211	0.594	247	0.509	283	0.413	319	0.662	355	0.372
32	0.603	68	0.498	104	0.421	140	0.658	176	0.370	212	0.603	248	0.498	284	0.421	320	0.658	356	0.370
33	0.612	69	0.487	105	0.429	141	0.654	177	0.368	213	0.612	249	0.487	285	0.429	321	0.654	357	0.368
34	0.621	70	0.476	106	0.438	142	0.649	178	0.367	214	0.621	250	0.476	286	0.438	322	0.649	358	0.367
35	0.629	71	0.466	107	0.447	143	0.643	179	0.366	215	0.629	251	0.466	287	0.447	323	0.643	359	0.366

ELEVATION PATTERN

Proposal No.	**C-70014**
Date	**4-Mar-17**
Call Letters	**KFDM**
Channel	**15**
Frequency	**479 MHz**
Antenna Type	**TFU-24GTH/VP-R 04**

RMS Directivity at Main Lobe	**21.5 (13.32 dB)**	Beam Tilt	**0.75 deg**
RMS Directivity at Horizontal	**16.2 (12.10 dB)**	Drawing Number	**24G215075**
	Calculated		





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.987	10.0	0.091	30.0	0.003	50.0	0.050	70.0	0.032
-9.0	0.033	11.0	0.036	31.0	0.050	51.0	0.060	71.0	0.031
-8.0	0.089	12.0	0.041	32.0	0.078	52.0	0.051	72.0	0.025
-7.0	0.063	13.0	0.072	33.0	0.067	53.0	0.029	73.0	0.016
-6.0	0.014	14.0	0.029	34.0	0.040	54.0	0.007	74.0	0.005
-5.0	0.016	15.0	0.042	35.0	0.026	55.0	0.006	75.0	0.007
-4.0	0.095	16.0	0.070	36.0	0.033	56.0	0.005	76.0	0.019
-3.0	0.164	17.0	0.047	37.0	0.045	57.0	0.007	77.0	0.028
-2.0	0.014	18.0	0.024	38.0	0.043	58.0	0.022	78.0	0.035
-1.0	0.443	19.0	0.036	39.0	0.023	59.0	0.032	79.0	0.039
0.0	0.867	20.0	0.063	40.0	0.002	60.0	0.033	80.0	0.040
1.0	0.995	21.0	0.056	41.0	0.006	61.0	0.025	81.0	0.039
2.0	0.779	22.0	0.011	42.0	0.003	62.0	0.012	82.0	0.036
3.0	0.428	23.0	0.028	43.0	0.015	63.0	0.000	83.0	0.032
4.0	0.180	24.0	0.022	44.0	0.017	64.0	0.008	84.0	0.027
5.0	0.101	25.0	0.015	45.0	0.004	65.0	0.008	85.0	0.022
6.0	0.103	26.0	0.034	46.0	0.011	66.0	0.002	86.0	0.016
7.0	0.102	27.0	0.010	47.0	0.016	67.0	0.008	87.0	0.011
8.0	0.095	28.0	0.030	48.0	0.002	68.0	0.019	88.0	0.006
9.0	0.099	29.0	0.040	49.0	0.025	69.0	0.027	89.0	0.002
								90.0	0.000