



CA2-FM/CP/RM Yagi

FM

Maximum gain: 4.0 dBd

Circular polarization

Vertical radiation pattern

0 degree electrical downtilt



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Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.157	-16.06	-10.06	0.10	-45	0.423	-7.47	-1.47	0.71
-89	0.156	-16.14	-10.14	0.10	-44	0.444	-7.05	-1.05	0.79
-88	0.154	-16.23	-10.23	0.09	-43	0.465	-6.64	-0.64	0.86
-87	0.153	-16.31	-10.31	0.09	-42	0.486	-6.26	-0.26	0.94
-86	0.151	-16.39	-10.39	0.09	-41	0.507	-5.89	0.11	1.02
-85	0.150	-16.48	-10.48	0.09	-40	0.528	-5.54	0.46	1.11
-84	0.148	-16.58	-10.58	0.09	-39	0.548	-5.22	0.78	1.20
-83	0.147	-16.67	-10.67	0.09	-38	0.568	-4.91	1.09	1.29
-82	0.145	-16.77	-10.77	0.08	-37	0.588	-4.61	1.39	1.38
-81	0.143	-16.87	-10.87	0.08	-36	0.608	-4.32	1.68	1.47
-80	0.142	-16.97	-10.97	0.08	-35	0.628	-4.04	1.96	1.57
-79	0.140	-17.06	-11.06	0.08	-34	0.646	-3.79	2.21	1.66
-78	0.139	-17.14	-11.14	0.08	-33	0.664	-3.55	2.45	1.76
-77	0.138	-17.22	-11.22	0.08	-32	0.682	-3.32	2.68	1.85
-76	0.136	-17.31	-11.31	0.07	-31	0.700	-3.09	2.91	1.95
-75	0.135	-17.39	-11.39	0.07	-30	0.718	-2.87	3.13	2.05
-74	0.135	-17.41	-11.41	0.07	-29	0.734	-2.69	3.31	2.14
-73	0.135	-17.42	-11.42	0.07	-28	0.749	-2.51	3.49	2.24
-72	0.134	-17.43	-11.43	0.07	-27	0.765	-2.33	3.67	2.33
-71	0.134	-17.44	-11.44	0.07	-26	0.780	-2.15	3.85	2.42
-70	0.134	-17.46	-11.46	0.07	-25	0.796	-1.98	4.02	2.52
-69	0.136	-17.36	-11.36	0.07	-24	0.810	-1.83	4.17	2.61
-68	0.137	-17.26	-11.26	0.07	-23	0.824	-1.68	4.32	2.70
-67	0.139	-17.16	-11.16	0.08	-22	0.838	-1.54	4.46	2.80
-66	0.140	-17.07	-11.07	0.08	-21	0.852	-1.39	4.61	2.89
-65	0.142	-16.97	-10.97	0.08	-20	0.866	-1.25	4.75	2.99
-64	0.151	-16.40	-10.40	0.09	-19	0.876	-1.15	4.85	3.05
-63	0.161	-15.86	-9.86	0.10	-18	0.885	-1.06	4.94	3.12
-62	0.171	-15.36	-9.36	0.12	-17	0.895	-0.96	5.04	3.19
-61	0.180	-14.88	-8.88	0.13	-16	0.905	-0.87	5.13	3.26
-60	0.190	-14.42	-8.42	0.14	-15	0.915	-0.77	5.23	3.33
-59	0.201	-13.92	-7.92	0.16	-14	0.922	-0.70	5.30	3.39
-58	0.213	-13.45	-7.45	0.18	-13	0.930	-0.63	5.37	3.44
-57	0.224	-13.00	-7.00	0.20	-12	0.937	-0.56	5.44	3.50
-56	0.235	-12.57	-6.57	0.22	-11	0.945	-0.49	5.51	3.55
-55	0.247	-12.16	-6.16	0.24	-10	0.952	-0.42	5.58	3.61
-54	0.263	-11.59	-5.59	0.28	-9	0.958	-0.37	5.63	3.66
-53	0.280	-11.07	-5.07	0.31	-8	0.964	-0.32	5.68	3.70
-52	0.296	-10.57	-4.57	0.35	-7	0.970	-0.26	5.74	3.75
-51	0.313	-10.09	-4.09	0.39	-6	0.976	-0.21	5.79	3.79
-50	0.329	-9.65	-3.65	0.43	-5	0.982	-0.15	5.85	3.84
-49	0.348	-9.17	-3.17	0.48	-4	0.986	-0.12	5.88	3.87
-48	0.367	-8.71	-2.71	0.54	-3	0.989	-0.09	5.91	3.90
-47	0.386	-8.27	-2.27	0.59	-2	0.993	-0.06	5.94	3.93
-46	0.405	-7.86	-1.86	0.65	-1	0.996	-0.03	5.97	3.95
					0	1.000	0.00	6.00	3.98



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Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	6.00	3.98	45	0.423	-7.47	-1.47	0.71
1	0.996	-0.03	5.97	3.95	46	0.405	-7.86	-1.86	0.65
2	0.993	-0.06	5.94	3.93	47	0.386	-8.27	-2.27	0.59
3	0.989	-0.09	5.91	3.90	48	0.367	-8.71	-2.71	0.54
4	0.986	-0.12	5.88	3.87	49	0.348	-9.17	-3.17	0.48
5	0.982	-0.15	5.85	3.84	50	0.329	-9.65	-3.65	0.43
6	0.976	-0.21	5.79	3.79	51	0.313	-10.09	-4.09	0.39
7	0.970	-0.26	5.74	3.75	52	0.296	-10.57	-4.57	0.35
8	0.964	-0.32	5.68	3.70	53	0.280	-11.07	-5.07	0.31
9	0.958	-0.37	5.63	3.66	54	0.263	-11.59	-5.59	0.28
10	0.952	-0.42	5.58	3.61	55	0.247	-12.16	-6.16	0.24
11	0.945	-0.49	5.51	3.55	56	0.235	-12.57	-6.57	0.22
12	0.937	-0.56	5.44	3.50	57	0.224	-13.00	-7.00	0.20
13	0.930	-0.63	5.37	3.44	58	0.213	-13.45	-7.45	0.18
14	0.922	-0.70	5.30	3.39	59	0.201	-13.92	-7.92	0.16
15	0.915	-0.77	5.23	3.33	60	0.190	-14.42	-8.42	0.14
16	0.905	-0.87	5.13	3.26	61	0.180	-14.88	-8.88	0.13
17	0.895	-0.96	5.04	3.19	62	0.171	-15.36	-9.36	0.12
18	0.885	-1.06	4.94	3.12	63	0.161	-15.86	-9.86	0.10
19	0.876	-1.15	4.85	3.05	64	0.151	-16.40	-10.40	0.09
20	0.866	-1.25	4.75	2.99	65	0.142	-16.97	-10.97	0.08
21	0.852	-1.39	4.61	2.89	66	0.140	-17.07	-11.07	0.08
22	0.838	-1.54	4.46	2.80	67	0.139	-17.16	-11.16	0.08
23	0.824	-1.68	4.32	2.70	68	0.137	-17.26	-11.26	0.07
24	0.810	-1.83	4.17	2.61	69	0.136	-17.36	-11.36	0.07
25	0.796	-1.98	4.02	2.52	70	0.134	-17.46	-11.46	0.07
26	0.780	-2.15	3.85	2.42	71	0.134	-17.44	-11.44	0.07
27	0.765	-2.33	3.67	2.33	72	0.134	-17.43	-11.43	0.07
28	0.749	-2.51	3.49	2.24	73	0.135	-17.42	-11.42	0.07
29	0.734	-2.69	3.31	2.14	74	0.135	-17.41	-11.41	0.07
30	0.718	-2.87	3.13	2.05	75	0.135	-17.39	-11.39	0.07
31	0.700	-3.09	2.91	1.95	76	0.136	-17.31	-11.31	0.07
32	0.682	-3.32	2.68	1.85	77	0.138	-17.22	-11.22	0.08
33	0.664	-3.55	2.45	1.76	78	0.139	-17.14	-11.14	0.08
34	0.646	-3.79	2.21	1.66	79	0.140	-17.06	-11.06	0.08
35	0.628	-4.04	1.96	1.57	80	0.142	-16.97	-10.97	0.08
36	0.608	-4.32	1.68	1.47	81	0.143	-16.87	-10.87	0.08
37	0.588	-4.61	1.39	1.38	82	0.145	-16.77	-10.77	0.08
38	0.568	-4.91	1.09	1.29	83	0.147	-16.67	-10.67	0.09
39	0.548	-5.22	0.78	1.20	84	0.148	-16.58	-10.58	0.09
40	0.528	-5.54	0.46	1.11	85	0.150	-16.48	-10.48	0.09
41	0.507	-5.89	0.11	1.02	86	0.151	-16.39	-10.39	0.09
42	0.486	-6.26	-0.26	0.94	87	0.153	-16.31	-10.31	0.09
43	0.465	-6.64	-0.64	0.86	88	0.154	-16.23	-10.23	0.09
44	0.444	-7.05	-1.05	0.79	89	0.156	-16.14	-10.14	0.10
					90	0.157	-16.06	-10.06	0.10

SCALA
Model CA2-CP RM Circularly Polarized FM Antenna



Frequency = 106.1 Mhz
Interfering Contour 107 dBu (50,10)

ERP= 99 watts
Height = 245 m AGL

Depression Angle	Relative Field (o)	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
1	0.996	98.2	310.51	14,038.18	13728
2	0.993	97.6	309.58	7,020.16	6711
3	0.989	96.8	308.33	4,681.29	4373
4	0.986	96.2	307.39	3,512.22	3205
5	0.982	95.5	306.15	2,811.06	2505
6	0.976	94.3	304.28	2,343.86	2040
7	0.970	93.1	302.41	2,010.35	1708
8	0.964	92.0	300.53	1,760.40	1460
9	0.958	90.9	298.66	1,566.15	1267
10	0.952	89.7	296.79	1,410.90	1114
11	0.945	88.4	294.61	1,284.01	989
12	0.937	86.9	292.12	1,178.38	886
13	0.930	85.6	289.93	1,089.13	799
14	0.922	84.2	287.44	1,012.72	725
15	0.915	82.9	285.26	946.61	661
16	0.905	81.1	282.14	888.85	607
17	0.895	79.3	279.02	837.97	559
18	0.885	77.5	275.91	792.84	517
19	0.876	76.0	273.10	752.53	479
20	0.866	74.2	269.98	716.33	446
21	0.852	71.9	265.62	683.65	418
22	0.838	69.5	261.25	654.02	393
23	0.824	67.2	256.89	627.03	370
24	0.810	65.0	252.52	602.36	350
25	0.796	62.7	248.16	579.72	332
26	0.780	60.2	243.17	558.89	316
27	0.765	57.9	238.49	539.66	301
28	0.749	55.5	233.51	521.86	288
29	0.734	53.3	228.83	505.35	277
30	0.718	51.0	223.84	490.00	266
31	0.700	48.5	218.23	475.69	257
32	0.682	46.0	212.62	462.33	250
33	0.664	43.6	207.01	449.84	243
34	0.646	41.3	201.40	438.13	237
35	0.628	39.0	195.78	427.14	231
36	0.608	36.6	189.55	416.82	227
37	0.588	34.2	183.31	407.10	224
38	0.568	31.9	177.08	397.95	221
39	0.548	29.7	170.84	389.31	218
40	0.528	27.6	164.61	381.15	217
41	0.507	25.4	158.06	373.44	215
42	0.486	23.4	151.51	366.15	215
43	0.465	21.4	144.97	359.24	214
44	0.444	19.5	138.42	352.69	214
45	0.423	17.7	131.87	346.48	215

Depression Angle	Relative Field	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
46	0.405	16.2	126.26	340.59	214
47	0.386	14.8	120.34	335.00	215
48	0.367	13.3	114.42	329.68	215
49	0.348	12.0	108.49	324.63	216
50	0.329	10.7	102.57	319.82	217
51	0.313	9.7	97.58	315.26	218
52	0.296	8.7	92.28	310.91	219
53	0.280	7.8	87.29	306.77	219
54	0.263	6.8	81.99	302.84	221
55	0.247	6.0	77.00	299.09	222
56	0.235	5.5	73.26	295.52	222
57	0.224	5.0	69.83	292.13	222
58	0.213	4.5	66.40	288.90	222
59	0.201	4.0	62.66	285.83	223
60	0.190	3.6	59.23	282.90	224
61	0.180	3.2	56.12	280.12	224
62	0.171	2.9	53.37	277.48	224
63	0.161	2.6	50.19	274.97	225
64	0.151	2.3	47.08	272.59	226
65	0.142	2.0	44.27	270.33	226
66	0.140	1.9	43.65	268.19	225
67	0.139	1.9	43.33	266.16	223
68	0.137	1.9	42.71	264.24	222
69	0.136	1.8	42.40	262.43	220
70	0.134	1.8	41.78	260.72	219
71	0.134	1.8	41.78	259.12	217
72	0.134	1.8	41.78	257.61	216
73	0.135	1.8	42.09	256.19	214
74	0.135	1.8	42.09	254.87	213
75	0.135	1.8	42.09	253.64	212
76	0.136	1.8	42.40	252.50	210
77	0.138	1.9	43.02	251.44	208
78	0.139	1.9	43.33	250.47	207
79	0.140	1.9	43.65	249.59	206
80	0.142	2.0	44.27	248.78	205
81	0.143	2.0	44.58	248.05	203
82	0.145	2.1	45.20	247.41	202
83	0.147	2.1	45.83	246.84	201
84	0.148	2.2	46.14	246.35	200
85	0.150	2.2	46.76	245.94	199
86	0.151	2.3	47.08	245.60	199
87	0.153	2.3	47.70	245.34	198
88	0.154	2.3	48.01	245.15	197
89	0.156	2.4	48.63	245.04	196
90	0.157	2.4	0.00	245.00	245

NOTES:
- HEIGHT HAS BEEN REDUCED BY 2 METERS TO ALLOW FOR HUMAN EXPOSURE
- DISTANCE FROM ANTENNA TO GROUND IS ACTUALLY TO A POINT 2 METERS ABOVE GROUND