



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 = 107.1 Mhz  
Interfering Contour 107.9 dBu (50,10)

ERP= 250 watts  
Height = 104 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	248.0	444.87	5,959.06	5514
2	0.993	246.5	443.53	2,979.99	2536
3	0.989	244.5	441.74	1,987.16	1545
4	0.986	243.0	440.40	1,490.90	1051
5	0.982	241.1	438.61	1,193.27	755
6	0.976	238.1	435.93	994.94	559
7	0.970	235.2	433.25	853.37	420
8	0.964	232.3	430.57	747.27	317
9	0.958	229.4	427.89	664.82	237
10	0.952	226.6	425.21	598.91	174
11	0.945	223.3	422.09	545.05	123
12	0.937	219.5	418.51	500.21	82
13	0.930	216.2	415.39	462.32	47
14	0.922	212.5	411.81	429.89	18
15	0.915	209.3	408.69	401.83	(7)
16	0.905	204.8	404.22	377.31	(27)
17	0.895	200.3	399.75	355.71	(44)
18	0.885	195.8	395.29	336.55	(59)
19	0.876	191.8	391.27	319.44	(72)
20	0.866	187.5	386.80	304.08	(83)
21	0.852	181.5	380.55	290.20	(90)
22	0.838	175.6	374.29	277.62	(97)
23	0.824	169.7	368.04	266.17	(102)
24	0.810	164.0	361.79	255.69	(106)
25	0.796	158.4	355.54	246.08	(109)
26	0.780	152.1	348.39	237.24	(111)
27	0.765	146.3	341.69	229.08	(113)
28	0.749	140.3	334.54	221.53	(113)
29	0.734	134.7	327.84	214.52	(113)
30	0.718	128.9	320.70	208.00	(113)
31	0.700	122.5	312.66	201.93	(111)
32	0.682	116.3	304.62	196.26	(108)
33	0.664	110.2	296.58	190.95	(106)
34	0.646	104.3	288.54	185.98	(103)
35	0.628	98.6	280.50	181.32	(99)
36	0.608	92.4	271.56	176.94	(95)
37	0.588	86.4	262.63	172.81	(90)
38	0.568	80.7	253.70	168.92	(85)
39	0.548	75.1	244.77	165.26	(80)
40	0.528	69.7	235.83	161.80	(74)
41	0.507	64.3	226.45	158.52	(68)
42	0.486	59.0	217.07	155.43	(62)
43	0.465	54.1	207.69	152.49	(55)
44	0.444	49.3	198.31	149.71	(49)
45	0.423	44.7	188.93	147.08	(42)

Depression Angle	Relative Field	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
46	0.405	41.0	180.89	144.58	(36)
47	0.386	37.2	172.41	142.20	(30)
48	0.367	33.7	163.92	139.95	(24)
49	0.348	30.3	155.44	137.80	(18)
50	0.329	27.1	146.95	135.76	(11)
51	0.313	24.5	139.80	133.82	(6)
52	0.296	21.9	132.21	131.98	(0)
53	0.280	19.6	125.06	130.22	5
54	0.263	17.3	117.47	128.55	11
55	0.247	15.3	110.32	126.96	17
56	0.235	13.8	104.96	125.45	20
57	0.224	12.5	100.05	124.01	24
58	0.213	11.3	95.14	122.63	27
59	0.201	10.1	89.78	121.33	32
60	0.190	9.0	84.86	120.09	35
61	0.180	8.1	80.40	118.91	39
62	0.171	7.3	76.47	117.79	41
63	0.161	6.5	71.91	116.72	45
64	0.151	5.7	67.44	115.71	48
65	0.142	5.0	63.42	114.75	51
66	0.140	4.9	62.53	113.84	51
67	0.139	4.8	62.08	112.98	51
68	0.137	4.7	61.19	112.17	51
69	0.136	4.6	60.74	111.40	51
70	0.134	4.5	59.85	110.67	51
71	0.134	4.5	59.85	109.99	50
72	0.134	4.5	59.85	109.35	50
73	0.135	4.6	60.30	108.75	48
74	0.135	4.6	60.30	108.19	48
75	0.135	4.6	60.30	107.67	47
76	0.136	4.6	60.74	107.18	46
77	0.138	4.8	61.64	106.74	45
78	0.139	4.8	62.08	106.32	44
79	0.140	4.9	62.53	105.95	43
80	0.142	5.0	63.42	105.60	42
81	0.143	5.1	63.87	105.30	41
82	0.145	5.3	64.76	105.02	40
83	0.147	5.4	65.66	104.78	39
84	0.148	5.5	66.10	104.57	38
85	0.150	5.6	67.00	104.40	37
86	0.151	5.7	67.44	104.25	37
87	0.153	5.9	68.34	104.14	36
88	0.154	5.9	68.78	104.06	35
89	0.156	6.1	69.68	104.02	34
90	0.157	6.2	0.00	104.00	104

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