

Freespace Interference Study for a given antenna based on Vertical Radiation Pattern

Antenna Make: ETC

Antenna Model: FM-4CP (1/2 lambda)

Depression Angle from <u>Antenna</u>	Antenna Relative <u>Field</u>	ERP <u>Watts</u>	ERP <u>dBk</u>	Distance to Ground from <u>Antenna (km)</u>	Free Space <u>Signal (dBu)</u>	2.5 dB Loss <u>for Reflection</u>	Signal Strength <u>at Ground (dBu)</u>	Circular Distance <u>From Tower (m)</u>
90	0.001	0.000	-78.86	0.0510	53.9	0	53.9	0.00
85	0.001	0.000	-78.86	0.0512	53.9	0	53.9	4.46
80	0.001	0.000	-78.86	0.0518	53.8	0	53.8	8.99
75	0.001	0.000	-78.86	0.0528	53.6	0	53.6	13.67
70	0.002	0.000	-72.84	0.0543	59.4	0	59.4	18.56
65	0.003	0.000	-69.32	0.0563	62.6	0	62.6	23.78
60	0.003	0.000	-69.32	0.0589	62.2	0	62.2	29.44
55	0.001	0.000	-78.86	0.0623	52.2	0	52.2	35.71
50	0.013	0.002	-56.58	0.0666	73.9	0	73.9	42.79
45	0.038	0.019	-47.26	0.0721	82.5	0	82.5	51.00
40	0.085	0.094	-40.27	0.0793	88.7	0	88.7	60.78
35	0.160	0.333	-34.78	0.0889	93.2	0	93.2	72.84
30	0.267	0.927	-30.33	0.1020	96.4	0	96.4	88.33
25	0.395	2.028	-26.93	0.1207	98.4	0	98.4	109.37
20	0.495	3.185	-24.97	0.1491	98.5	0	98.5	140.12
15	0.627	5.111	-22.92	0.1970	98.1	0	98.1	190.33
10	0.868	9.795	-20.09	0.2937	97.5	0	97.5	289.24
5	0.965	12.106	-19.17	0.5852	92.4	0	92.4	582.93

Distance to Ground Level assumes flat ground or a site where the ground level is above average terrain in all azimuths.

Maximum ERP 13 watts
Radiation Center AG 0.051 km
Radiation Center AG 167.323 ft.

Max dBu to Ground Level 98.48