

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	-75.69	0.0790	53.3	0	53.3	0.00
85	0.001	0.000	-75.69	0.0793	53.2	0	53.2	6.91
80	0.001	0.000	-75.69	0.0802	53.1	0	53.1	13.93
75	0.001	0.000	-75.69	0.0818	53.0	0	53.0	21.17
70	0.002	0.000	-69.67	0.0841	58.8	0	58.8	28.75
65	0.003	0.000	-66.14	0.0872	62.0	0	62.0	36.84
60	0.003	0.000	-66.14	0.0912	61.6	0	61.6	45.61
55	0.001	0.000	-75.69	0.0964	51.5	0	51.5	55.32
50	0.013	0.005	-53.41	0.1031	73.2	0	73.2	66.29
45	0.038	0.039	-44.09	0.1117	81.9	0	81.9	79.00
40	0.085	0.195	-37.10	0.1229	88.0	0	88.0	94.15
35	0.160	0.691	-31.60	0.1377	92.5	0	92.5	112.82
30	0.267	1.925	-27.16	0.1580	95.8	0	95.8	136.83
25	0.395	4.213	-23.75	0.1869	97.7	0	97.7	169.42
20	0.495	6.616	-21.79	0.2310	97.9	0	97.9	217.05
15	0.627	10.614	-19.74	0.3052	97.5	0	97.5	294.83
10	0.868	20.342	-16.92	0.4549	96.8	0	96.8	448.03
5	0.965	25.143	-16.00	0.9064	91.8	0	91.8	902.97

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

Maximum ERP 27 watts
Radiation Center AG 0.079 km
Radiation Center AG 259.186 ft.

Max dBu to Ground Level 97.85