

FOUR RIVERS COMMUNITY BROADCASTING CORPORATION

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

Antenna Make: **SHI**

Antenna Model: **6812B** 1-bay

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	-74.20	0.1000	52.7	0	52.7	0.00
85	0.087	0.288	-35.41	0.1004	91.5	0	91.5	8.75
80	0.174	1.150	-29.39	0.1015	97.4	0	97.4	17.63
75	0.259	2.549	-25.94	0.1035	100.7	0	100.7	26.79
70	0.342	4.445	-23.52	0.1064	102.9	0	102.9	36.40
65	0.423	6.799	-21.68	0.1103	104.4	0	104.4	46.63
60	0.500	9.500	-20.22	0.1155	105.4	0	105.4	57.74
55	0.573	12.477	-19.04	0.1221	106.1	0	106.1	70.02
50	0.643	15.711	-18.04	0.1305	106.6	0	106.6	83.91
45	0.707	18.994	-17.21	0.1414	106.7	0	106.7	100.00
40	0.766	22.297	-16.52	0.1556	106.6	0	106.6	119.18
35	0.819	25.489	-15.94	0.1743	106.2	0	106.2	142.81
30	0.866	28.498	-15.45	0.2000	105.4	0	105.4	173.21
25	0.906	31.192	-15.06	0.2366	104.4	0	104.4	214.45
20	0.940	33.577	-14.74	0.2924	102.9	0	102.9	274.75
15	0.966	35.460	-14.50	0.3864	100.7	0	100.7	373.21
10	0.985	36.869	-14.33	0.5759	97.4	0	97.4	567.13
5	0.996	37.697	-14.24	1.1474	91.5	0	91.5	1143.01

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

Maximum ERP 38 watts
Radiation Center AG 0.100 km
Radiation Center AG 328.084 ft.

Max dBu to Ground Level 106.70