

## FREE SPACE SIGNAL LEVEL

### Computation of Signal Level TWO METERS ABOVE GROUND W283CA PROPOSED FACILITY ST. LOUIS, MISSOURI

Depression Angle, Degrees	Relative Field	ERP Watts	dBk	Distance to the Ground in Kilometers	Free Space Signal
90	0.100	0.9900	-30.0	0.1550	93.1
85	0.100	0.9900	-30.0	0.1556	93.0
80	0.100	0.9900	-30.0	0.1574	92.9
75	0.100	0.9900	-30.0	0.1605	92.8
70	0.120	1.4256	-28.5	0.1649	94.1
65	0.130	1.6731	-27.8	0.1710	94.5
60	0.150	2.2275	-26.5	0.1790	95.3
55	0.170	2.8611	-25.4	0.1892	95.9
50	0.190	3.5739	-24.5	0.2023	96.3
45	0.230	5.2371	-22.8	0.2192	97.3
40	0.300	8.9100	-20.5	0.2411	98.8
35	0.380	14.2956	-18.4	0.2702	99.8
30	0.470	21.8691	-16.6	0.3100	100.5
25	0.600	35.6400	-14.5	0.3668	101.2
20	0.700	48.5100	-13.1	0.4532	100.7
15	0.810	64.9539	-11.9	0.5989	99.5
10	0.900	80.1900	-11.0	0.8926	96.9
5	0.960	91.2384	-10.4	1.7784	91.5
4	0.970	93.1491	-10.3	2.2220	89.7
3	0.980	95.0796	-10.2	2.9616	87.3
2	0.990	97.0299	-10.1	4.4413	83.8
1	1.000	99.0000	-10.0	8.8813	77.9

**Notes:**

Antenna radiation center above ground (meters): 155

Maximum ERP (watts) at 0° Depression angle: 99

Free Space Signal =  $106.92 - 20 \cdot \log(\text{distance in km}) + \text{dBk}$ 

Relative field base on Aldena 5 element yagi