

FREE SPACE SIGNAL LEVEL

Computation of Signal Level on the Ground W286BB OCEAN PINES, MARYLAND

JUNE 27,2011

Depression Angle, Degrees	Relative Field	ERP Watts	dBk	Distance to the Ground in Kilometers	Free Space Signal
90	0.010	0.0250	-46.0	0.0610	85.2
85	0.042	0.4410	-33.6	0.0612	97.6
80	0.090	2.0250	-26.9	0.0619	104.1
75	0.150	5.6250	-22.5	0.0632	108.4
70	0.210	11.0250	-19.6	0.0649	111.1
65	0.271	18.3603	-17.4	0.0673	113.0
60	0.340	28.9000	-15.4	0.0704	114.6
55	0.411	42.2303	-13.7	0.0745	115.7
50	0.490	60.0250	-12.2	0.0796	116.7
45	0.569	80.9403	-10.9	0.0863	117.3
40	0.640	102.4000	-9.9	0.0949	117.5
35	0.718	128.8810	-8.9	0.1064	117.5
30	0.780	152.1000	-8.2	0.1220	117.0
25	0.848	179.7760	-7.5	0.1443	116.3
20	0.900	202.5000	-6.9	0.1784	115.0
15	0.939	220.4303	-6.6	0.2357	112.9
10	0.970	235.2250	-6.3	0.3513	109.7
5	0.989	244.5303	-6.1	0.6999	103.9
2	0.996	248.0040	-6.1	1.7479	96.0
0	1.000	250.0000	-6.0	#DIV/0!	#DIV/0!

Notes:

Antenna radiation center above ground (meters):
Maximum ERP (watts) at 0° Depression angle:
Free Space Signal = $106.92 - 20 \cdot \log(\text{distance in km}) + \text{dBk}$
Relative Field Based on Nicom BKY3 single yagi

61
250