

Common Conversion Tables and Equations

Common Antenna Gain Conversion Table

If you are...	And you...	Step 1	Step 2
Calculating ERP	Start with dBi	$\text{dBi} - 2.15 \text{ dB} = Y$	N/A
Calculating ERP	Start with dBic	$\text{dBic} - 3\text{dB} = X$	$X - 2.15 \text{ dB} = Y$
Calculating ERP	Start with dBd	Keep as is	N/A
Calculating ERP	Start with dBiL	$\text{dBiL} - 2.15 = Y$	N/A
Calculating EIRP	Start with dBi	Keep as is	N/A
Calculating EIRP	Start with dBic	$\text{dBic} - 3\text{dB} = Y$	N/A
Calculating EIRP	Start with dBd	$\text{dBd} + 2.15 \text{ dB} = Y$	N/A
Calculating EIRP	Start with dBiL	Keep as is	N/A

dBm to mW to W Conversion Table

dBm	mW	W
0 dBm	1 mW	N/A
1 dBm	1.26 mW	N/A
2 dBm	1.58 mW	N/A
3 dBm	2 mW	N/A
4 dBm	2.51 mW	N/A
5 dBm	3.16 mW	N/A
6 dBm	3.98 mW	N/A
7 dBm	5.01 mW	N/A
8 dBm	6.31 mW	N/A
9 dBm	7.94 mW	N/A
10 dBm	10 mW	0.01 W
11 dBm	12.59 mW	0.01 W
12 dBm	15.85 mW	0.02 W
13 dBm	19.95 mW	0.02 W
14 dBm	25.12 mW	0.03 W
15 dBm	31.62 mW	0.03 W
16 dBm	39.81 mW	0.04 W
17 dBm	50.11 mW	0.05 W
18 dBm	63.10 mW	0.06 W
19 dBm	79.43 mW	0.08 W
20 dBm	100 mW	0.1 W
21 dBm	125.89 mW	0.13 W
22 dBm	158.49 mW	0.16 W
23 dBm	199.53 mW	0.2 W
24 dBm	251.19 mW	0.25 W
25 dBm	316.23 mW	0.31 W
26 dBm	398.11 mW	0.4 W
27 dBm	501.19 mW	0.5 W
28 dBm	630.96 mW	0.6 W
29 dBm	794.33 mW	0.8 W
30 dBm	1000 mW	1 W
31 dBm	1258.93 mW	1.26 W
32 dBm	1584.89 mW	1.58 W
33 dBm	1995.26 mW	2 W
34 dBm	2511.89 mW	2.51 W
35 dBm	3162.28 mW	3.16 W
36 dBm	3981.07 mW	3.98 W
37 dBm	5011.87 mW	5.01 W
38 dBm	6309.57 mW	6.31 W
39 dBm	7943.28 mW	7.94 W
40 dBm	10000 mW	10 W
50 dBm	100000 mW	100 W

Cable Loss Chart

Cable	LMR-195	LMR-240	LMR-400
Loss per 100 ft. in dB @ 900 MHz	11.1	7.6	3.9
Cable Length			
0	0	0	0
5	0.6	0.4	0.2
10	1.1	0.8	0.4
15	1.7	1.1	0.6
20	2.2	1.5	0.8
25	2.8	1.9	1
30	3.3	2.3	1.2
35	3.9	2.7	1.4
40	4.4	3	1.6
45	5	3.4	1.8
50	5.6	3.8	2
55	6.1	4.2	2.1
60	6.7	4.6	2.3
65	7.2	4.9	2.5
70	7.8	5.3	2.7
75	8.3	5.7	2.9
80	8.9	6.1	3.1
85	9.4	6.5	3.3
90	10	6.8	3.5
95	10.5	7.2	3.7
100	11.1	7.6	3.9
105	11.7	8	4.1
110	12.2	8.4	4.3
115	12.8	8.7	4.5
120	13.3	9.1	4.7
125	13.9	9.5	4.9
130	14.4	9.9	5.1
135	15	10.3	5.3
140	15.5	10.6	5.5
145	16.1	11	5.7
150	16.7	11.4	5.9
155	17.2	11.8	6
160	17.8	12.2	6.2
165	18.3	12.5	6.4
170	18.9	12.9	6.6
175	19.4	13.3	6.8
180	20	13.7	7