

## Decibel (dB) Tables **Common Ratios**

Voltage or Current Ratio	Power Ratio	Positive Decibel(s)	Negative Decibel(s)	Voltage or Current Ratio	Power Ratio
1.0000	1.0000	+0 dB	-0 dB	1.0000	1.0000
1.1220	1.2589	+1 dB	-1 dB	.8913	.7943
1.2589	1.5849	+2 dB	-2 dB	.7943	.6310
1.4125	1.9953	+3 dB	-3 dB	.7079	.5012
1.5849	2.5119	+4 dB	-4 dB	.6310	.3981
1.7783	3.1623	+5 dB	-5 dB	.5623	.3162
1.9953	3.9811	+6 dB	-6 dB	.5012	.2512
2.2387	5.0119	+7 dB	-7 dB	.4467	.1995
2.5119	6.3096	+8 dB	-8 dB	.3981	.1585
2.8184	7.9433	+9 dB	-9 dB	.3548	.1259
3.1623	10.000	+10 dB	-10 dB	.3162	.1000
10.000	100.00	+20 dB	-20 dB	.1000	.0100
31.623	1,000	+30 dB	-30 dB	.0316	.0010
100.000	10,000	+40 dB	-40 dB	.0100	.0001
316.23	100,000	+50 dB	-50 dB	.0032	.00001
1,000	10 <sup>6</sup>	+60 dB	-60 dB	.0010	10 <sup>-6</sup>
3,162.300	10 <sup>7</sup>	+70 dB	-70 dB	.0003	10 <sup>-7</sup>
10,000	10 <sup>8</sup>	+80 dB	-80 dB	.0001	10 <sup>-8</sup>
31,263	10 <sup>9</sup>	+90 dB	-90 dB	.00003	10 <sup>-9</sup>
100,000	10 <sup>10</sup>	+100 dB	-100 dB	.00001	10 <sup>-10</sup>

To calculate power:  
dB = 10 log (P2/P1)

To calculate voltage or current:  
dB = 20 log (V2/V1)      dB = 20 log (I2/I1)

dBm	Power (mW)	Power
+10 dBm	10.000	10 milliwatts
+0 dBm	1.0000	1 milliwatt
-10 dBm	.10000	100 μwatts
-20 dBm	.01000	10 μwatts
-30 dBm	.00100	1 μwatt
-40 dBm	.00010	100 nanowatts
-50 dBm	.000010	10 nanowatts
-60 dBm	.000001	1 nanowatt