Possibly Useful Formulas

Ohm's Law $I = V / R$

Power Law $P = V \times I$

Resistors in series $R_{eq}=R_1+R_2$

Resistors in parallel $R_{eq} = \frac{1}{\frac{1}{R_1}+\frac{1}{R_2}} = \frac{R_1 R_2}{R_1 + R_2}$

Capacitors in series $C_{eq} = \frac{1}{\frac{1}{C_1}+\frac{1}{C_2}} = \frac{C_1 C_2}{C_1 + C_2}$

Capacitors in parallel $C_{eq}=C_1+C_2$

Inductors in Series $L_{eq}=L_1+L_2$

Inductors in Parallel $L_{eq} = \frac{1}{\frac{1}{L_1}+\frac{1}{L_2}} = \frac{L_1 L_2}{L_1 + L_2}$

Impedance of an inductor $|Z_L| = 2\pi fL$

Impedance of a Capacitor $|Z_C| = \frac{1}{2\pi fC}$

RC Time constant $\tau = R \times C$

RL Time constant $\tau = L / R$

L-C Resonant Frequency $f = \frac{1}{2\pi\sqrt{LC}}$

Sine Waves $V(t)=V_m \sin(2\pi ft)$

$V_{RMS} = \frac{V_m}{\sqrt{2}}$ Where V_m is the amplitude of the wave.

$I_{RMS} = \frac{I_m}{\sqrt{2}}$ Where V_m is the amplitude of the wave.

Period $T = \frac{1}{f}$ $\omega = 2\pi f$

Electron Charge $e^- = 1.6 \times 10^{-19}$

Duty Cycle $D = T_{on} / T_{period}$

Mega	10^{6}
Kilo	10^{3}
Milli	10^{-3}
Micro	10^{-6}
Nano	10^{-9}
Pico	10^{-12}