

BASIC ELECTRICITY CONCEPTS

Parameter	Symbol	Measuring Unit	Description
Voltage	Volt	V or E	Unit of Electrical Potential $V = I \times R$
Current	Ampere	I or i	Unit of Electrical Current $I = V \div R$
Resistance	Ohm	R or Ω	Unit of DC Current $R = V \div I$
Conductance	Siemen or Mho	G or $\mathcal{O}$	Unit of Conductance $G = 1 \div R$
Power	Watts	W	Unit of Power $P = V \times I$
Capacitance	Farad	C	Unit of Capacitance $C = Q \div V$
Inductance	Henery	L or H	Unit of Inductance $V_L = -L(di \div dt)$
Impedance	Ohm	Z	Unit of AC Resistance $Z^2 = R^2 + X^2$
Charge	Coulomb	Q	Unit of Electrical Charge $Q = C \times V$
Frequency	Hertz	Hz	Unit of Frequency $f = 1 \div T$
Period	sec	s	Unite of Period $T = 1 \div f$

Ohms Law Formulas				
Known Values	Resistance (R)	Current (I)	Voltage (V)	Power (P)
Current & Resistance	---	---	$V = I \times R$	$P = I^2 \times R$
Voltage & Current	$R = \frac{V}{I}$	---	---	$P = V \times I$
Power & Current	$R = \frac{P}{I^2}$	---	$V = \frac{P}{I}$	---
Voltage & Resistance	---	$I = \frac{V}{R}$	---	$P = \frac{V^2}{R}$
Power & Resistance	---	$I = \sqrt{\frac{P}{R}}$	$V = \sqrt{P \times R}$	---
Voltage & Power	$R = \frac{V^2}{P}$	$I = \frac{P}{V}$	---	---