

	Formula	Symbols	Application
1.		$I = \text{current, } Q = \text{charged, } t = \text{time, } e = \text{charge of electron}$	$I = \text{current, } Q = \text{charged, } t = \text{time, } e = \text{charge of electron}$
2.		$V = \text{Potential difference, } R = \text{Resistance}$	Relation between V and I
3.		$V_d = \text{Drift Velocity}$ $A = \text{Areas of cross section}$	Relation between current and drift velocity
4.		$R = \text{Resistance, } \rho = \text{Resistivity}$ $\tau = \text{relaxation time, } m = \text{mass of electron}$	Relation between (i) R and ρ (ii) R and relaxation time
5.		$e = \text{charge of electron}$ $\rho = \text{resistivity}$	Relation for resistivity and relaxation time τ
6.		$C = \text{conductance, } \sigma = \text{conductivity}$	To find C and σ
7.		$j = \text{current density}$ $\sigma = \text{conductance resistivity}$	Relation between j with V_d and j with E
8.		$\mu = \text{mobility of electron}$	To find μ from V_d
9.		$\alpha = \text{temperature coefficient of resistance/resistivity}$	Variation of ρ with temperature
10.		$T_2 - T_1 = \text{temperature difference}$	Formula for α
11.		$R_s = \text{equivalent resistance in series combination}$	Series combination
12.		$R_p = \text{equivalent resistance in parallel combination}$	Parallel combination
13.		$P = \text{electrical power}$	Relation for P with V, I and R
14.		$r = \text{internal resistance}$ $R = \text{External resistance}$	(I) Current is drawn (II) cell is being charged
15.		$r = \text{internal resistance}$ $R = \text{External resistance}$	To find internal resistance by potentiometer
16.		$n = \text{number of cells in series}$ $R = \text{External resistance}$	Current drawn when n identical cells are connected in series