

Intro to Electronics Formulas

Series Circuits

$$V_T = V_1 + V_2 + V_3 \dots + V_n$$

$$I_T = I_1 = I_2 = I_3 \dots = I_n$$

$$R_T = R_1 + R_2 + R_3 \dots + R_n$$

Parallel Circuits

$$V_T = V_1 = V_2 = V_3 \dots = V_n$$

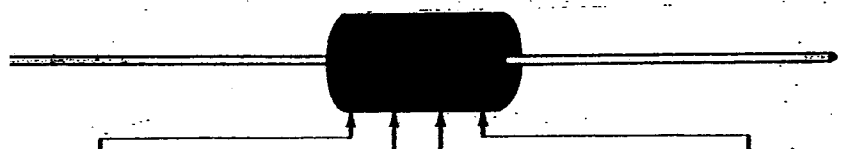
$$I_T = I_1 + I_2 + I_3 \dots + I_n$$

$$R_T = \frac{R_1 \times R_2}{R_1 + R_2}$$

$$1/R_T = 1/R_1 + 1/R_2 + 1/R_3 + \dots + 1/R_n$$

$$R_T = R/N$$

Ohm's Law and Power formulas



First Band 1st Digit		Second Band 2nd Digit		Third Band Multiplier		Fourth Band* Resistance Tolerance	
Color	Digit	Color	Digit	Color	Multiplier	Color	Tolerance
Black	0	Black	0	Black	1	Silver	± 10%
Brown	1	Brown	1	Brown	10	Gold	± 5%
Red	2	Red	2	Red	100	*No Band	± 20%
Orange	3	Orange	3	Orange	1,000		
Yellow	4	Yellow	4	Yellow	10,000		
Green	5	Green	5	Green	100,000		
Blue	6	Blue	6	Blue	1,000,000		
Violet	7	Violet	7	Silver	0.01		
Gray	8	Gray	8	Gold	0.1		

