

Formula

TM
Seismo-Quake

LET IT SHAKE !

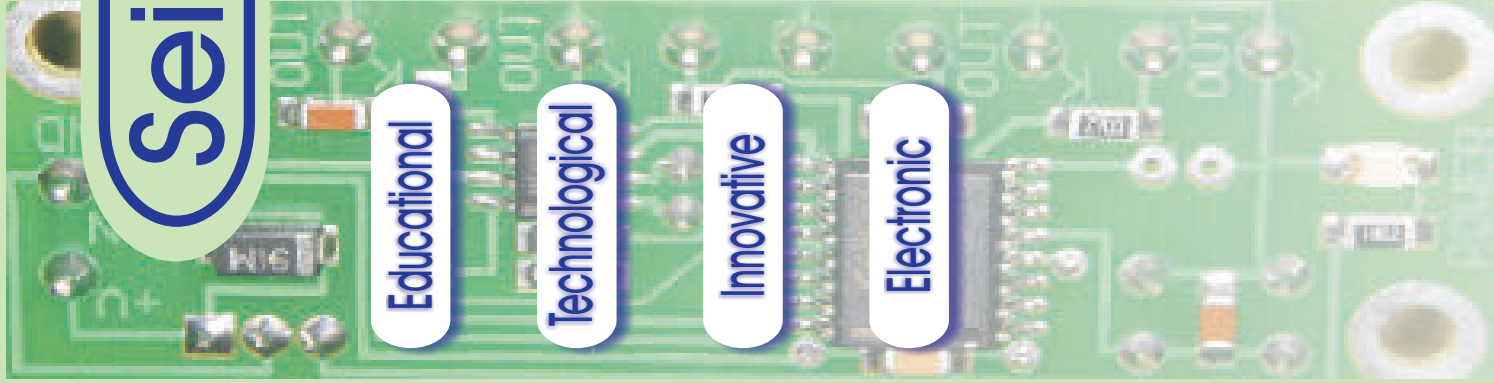
Educational

Technological

Innovative

Electronic

FORMULA




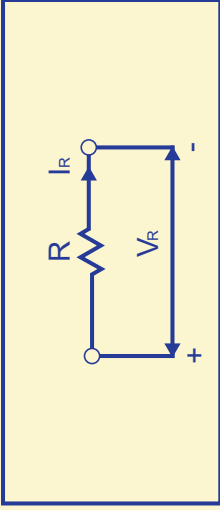

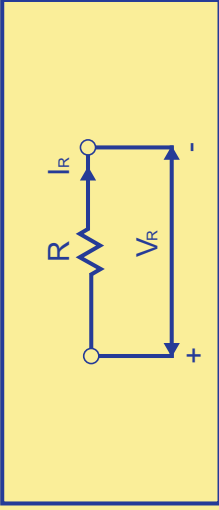

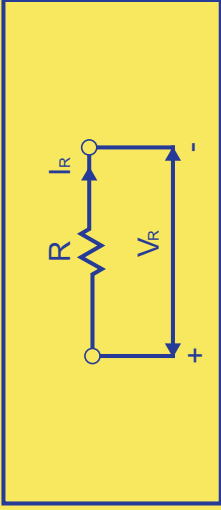
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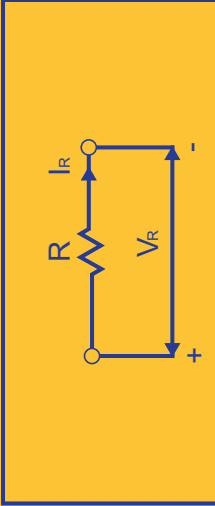
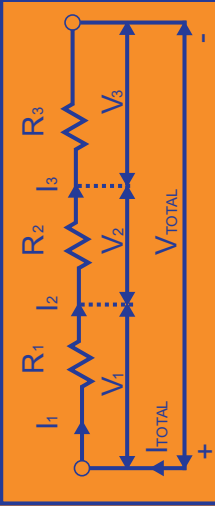
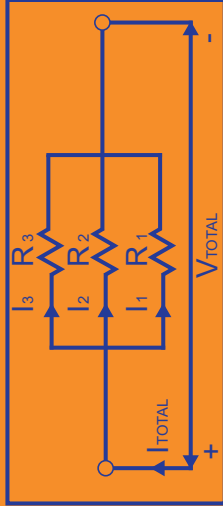
FORMULA

Ohm
Volt
Ampere
Watt
Resistor
Capacitor



Description	Formula	Diagram
<p>Ohm's Law</p> <p>Ohm may be defined as the resistance of a conductor to a 1 volt voltage difference across the terminals to allow a current of 1 ampere to flow. The current that flows is proportional to the supply voltage and inversely proportional to the resistance.</p>	$R = \frac{V}{I}$ <p>R = Resistance measured in ohm</p> 	
<p>Volt</p> <p>Volt may be defined as the difference in electrical potential between two points on a conductor producing a power of 1 watt when a constant current of 1 ampere is flowing.</p>	$V = I \times R$ <p>V = Voltage measured in volt</p> 	
<p>Ampere</p> <p>Ampere may be defined as the current exercising a force of 2 x 10 Newton per meter on each of two conductors of endless length that is placed in a vacuum one meter apart.</p>	$I = \frac{V}{R}$ <p>I = Current measured in ampere</p> 	

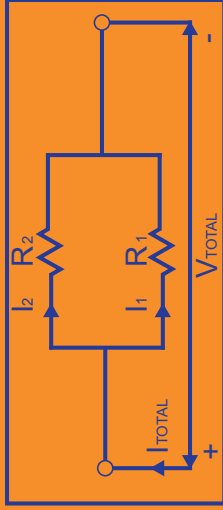
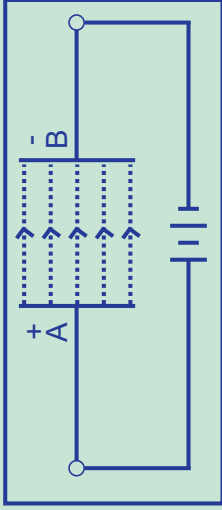
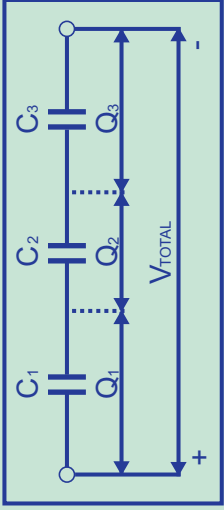
FORMULA

	Ohm
	Volt
	Ampere
	Watt
	Resistor
	Capacitor

Description	Formula	Diagram
<p>Watt</p> <p>Watt may be defined as the power that constitutes the production of energy at a rate of 1 Joule per second.</p>	$P = \frac{V^2}{R}$ $P = I^2 \times R$ $P = V \times I$ 	
<p>Resistors in series</p> <p>Kirchhoff have proved the following:</p> <ul style="list-style-type: none"> * The current value is the same through all the resistors. * A voltage drop exist across each resistor depending on the value of the resistor. 	$R_{TOTAL} = R_1 + R_2 + R_3$ $I_{TOTAL} = I_1 = I_2 = I_3$ $V_{TOTAL} = V_1 + V_2 + V_3$	
<p>Resistors in parallel</p> <ul style="list-style-type: none"> * The voltage drop across each resistor is the same value. * The total current divides through each resistor depending on the value of the resistor. 	$\frac{1}{R_{TOTAL}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$ $I_{TOTAL} = I_1 + I_2 + I_3$ $V_{TOTAL} = V_1 = V_2 = V_3$	

FORMULA

	Ohm
	Volt
	Ampere
	Watt
	Resistor
	Capacitor


Description	Formula	Diagram
<p>Resistors in parallel</p> <ul style="list-style-type: none"> * When there are only two resistors connected in parallel, use the following formula. * The total resistance value of a parallel circuit is always less than the smallest resistance value in the circuit. 	$R_{TOTAL} = \frac{R_1 \times R_2}{R_1 + R_2}$	
<p>Factors influencing capacitance</p> <ul style="list-style-type: none"> * The plate surface. * The distance between the plates. * The material used for the dielectric. <p>An electric field exist between the charged plates A and B. The field direction is from plate A to plate B.</p>	<p>Intentionally Left Blank</p>	
<p>Capacitors in series</p> <ul style="list-style-type: none"> * The charge across each capacitor is the same. * The total voltage divides across each capacitor depending on the value of the capacitor. * The total capacitance value decreases. 	$\frac{1}{C_{TOTAL}} = \frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3}$ $V_{TOTAL} = V_1 + V_2 + V_3$ $Q_{TOTAL} = Q_1 = Q_2 = Q_3$	

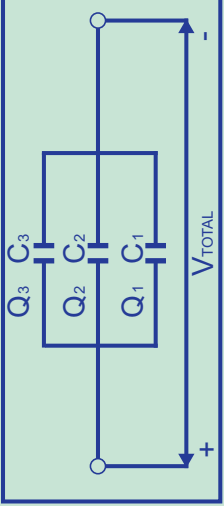
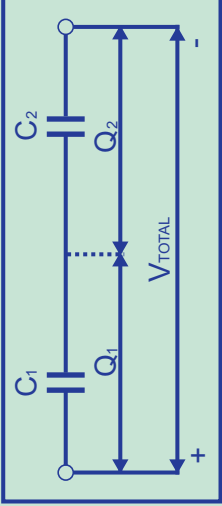
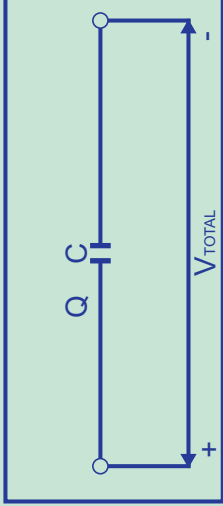
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	Volt
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	Resistor
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Description	Formula	Diagram
<p>Capacitors in parallel</p> <ul style="list-style-type: none"> * The voltage drop across each capacitor is the same. * A charge exist across each capacitor depending on the value of the capacitor. * The total capacitance value increases. 	$Q_{TOTAL} = Q_1 + Q_2 + Q_3$ $C_{TOTAL} = C_1 + C_2 + C_3$ $V_{TOTAL} = V_1 = V_2 = V_3$	
<p>Capacitors in series</p> <ul style="list-style-type: none"> * When there is only two capacitors connected in series, use the following formula. 	$C_{TOTAL} = \frac{C_1 \times C_2}{C_1 + C_2}$	
<p>Charge in a capacitor</p> <ul style="list-style-type: none"> * Coulomb is the electrical quantity for energy and is the quantity of electrons flowing through a specific point when a current of 1 ampere flows for 1 second. 	$Q = V \times C$ <p>Q = Charge measured in coulomb</p> $C = \frac{Q}{V}$ <p>C = Capacitance measured in farad</p>	

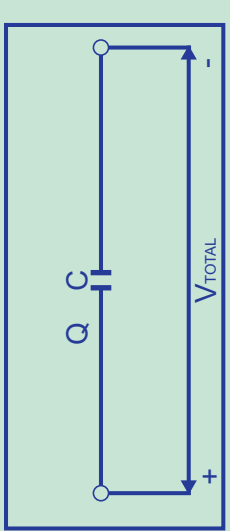
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Description	Formula	Diagram
<p>Charge in a capacitor</p> <p>* Farad is capacitance that need a voltage difference of 1 volt between the plates to allow a charge of 1 coulomb.</p>	$W = \frac{1}{2} C \times V^2$ $W = \frac{1}{2} Q \times V$ <p>W = Energy measured in joules</p>	

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Contact Details for Seismo-Quake™

Information

Website

www.seismoquake.com