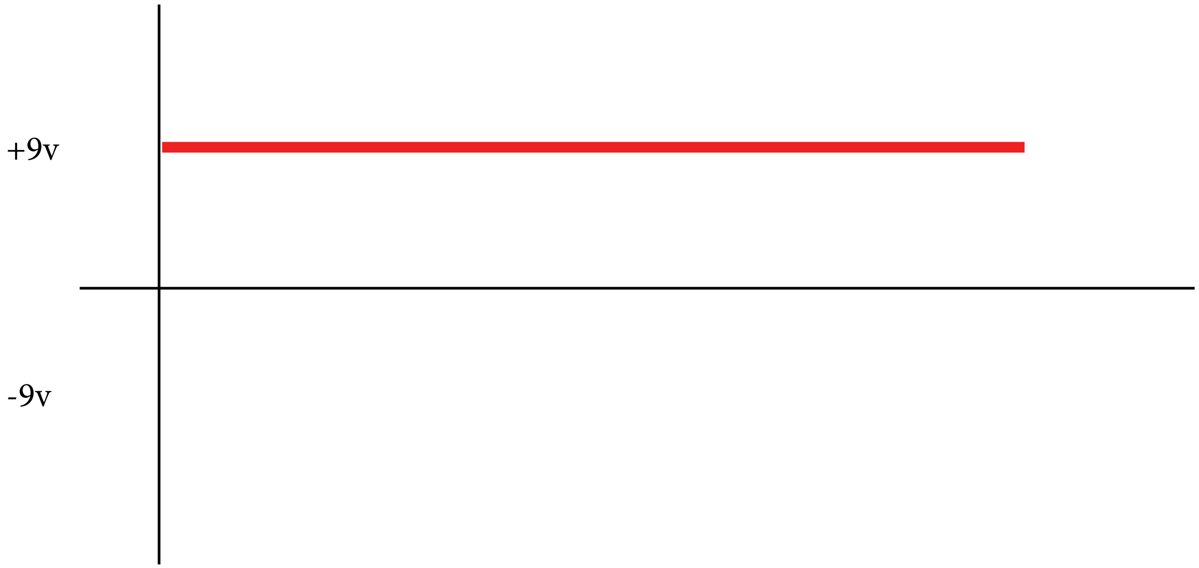
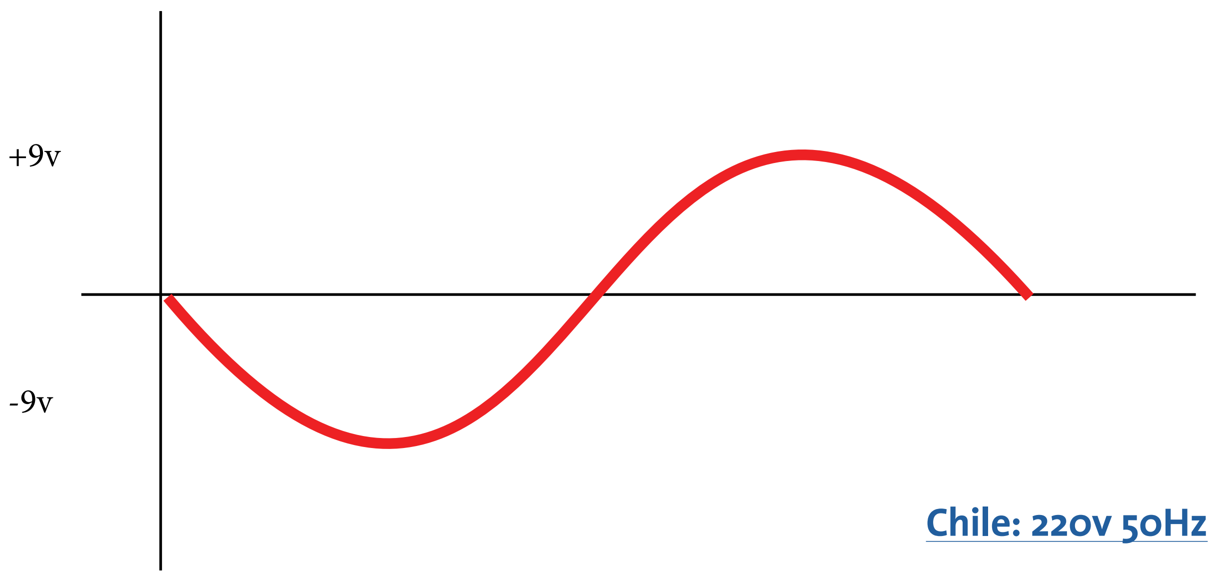
Electricidad, conceptos básicos.

Corriente alterna y corriente continua



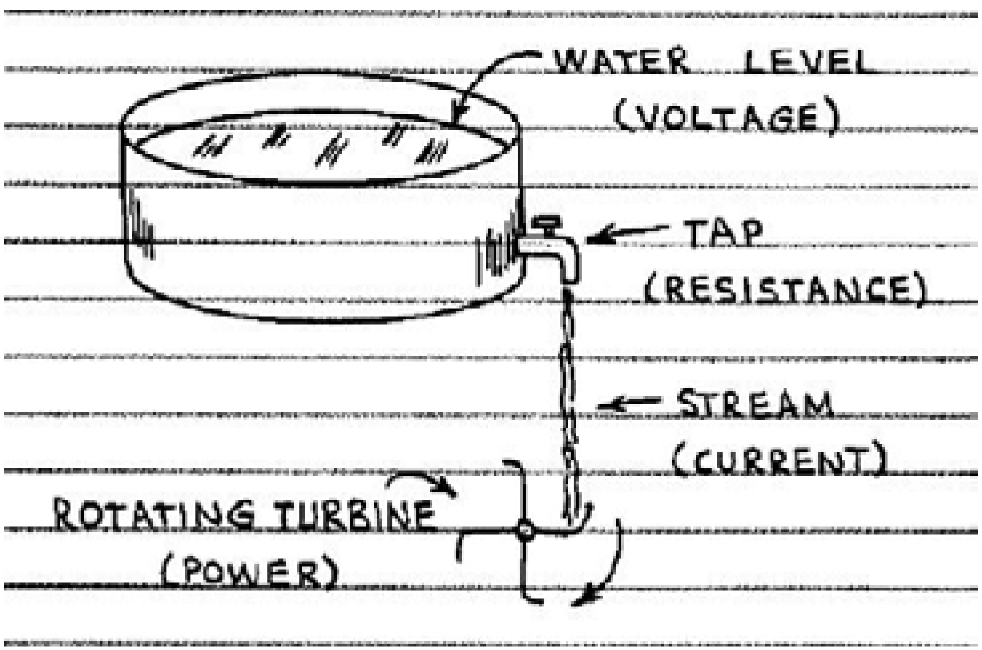
DC

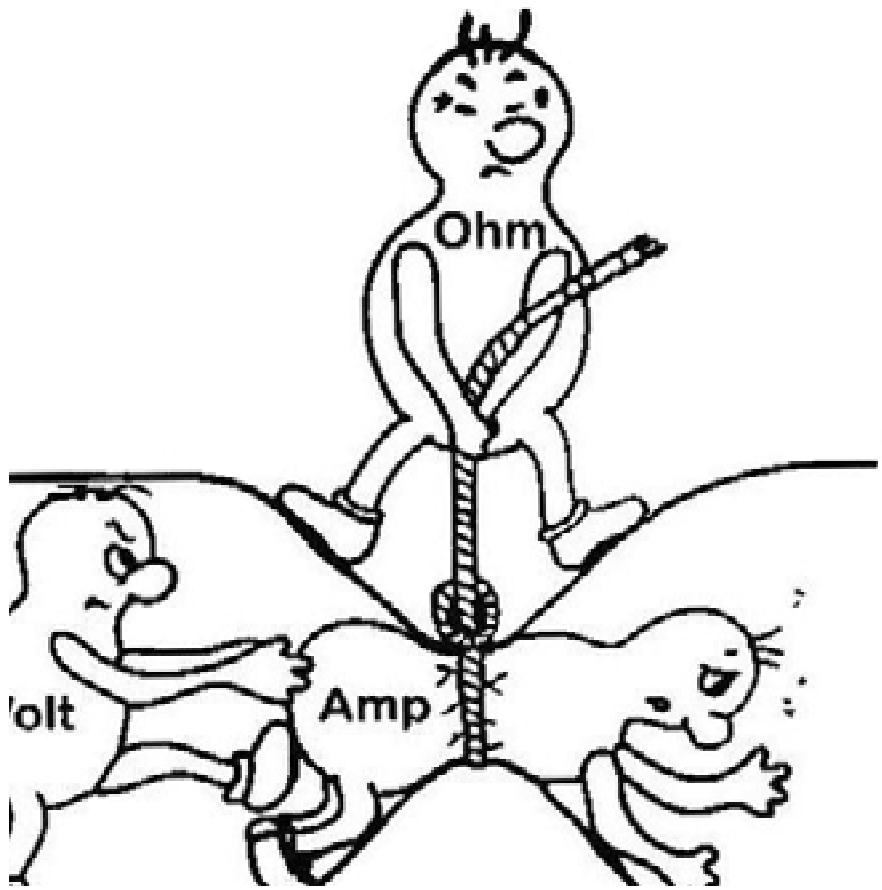


AC

Chile: 220v 50Hz

Corriente, voltaje y resistencia



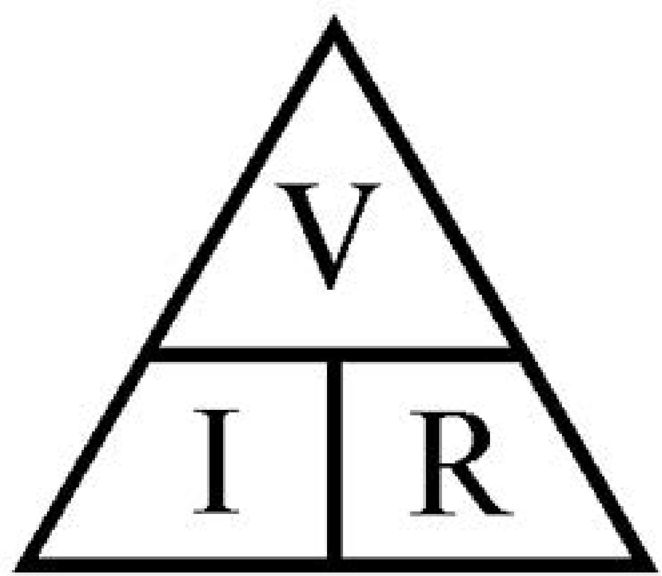


Ley de Ohm

$V = I \times R$

$I = V / R$

$R = V / I$



Resistencias: conexión en serie y paralelo

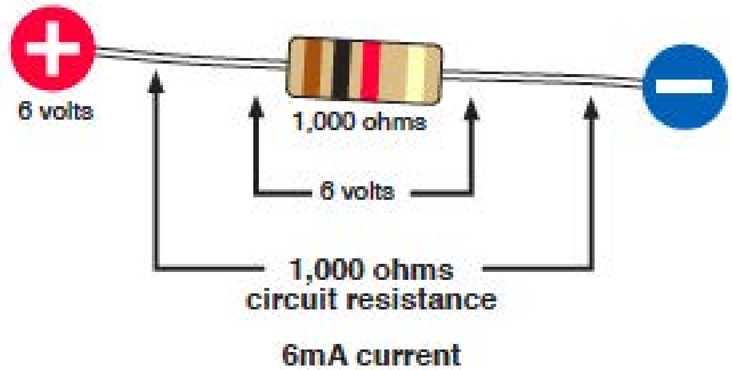


Figure 1-65. *One resistor takes the entire voltage, and according to Ohm's Law, it draws v/R = 6/1,000 = 0.006 amps = 6mA of current.*

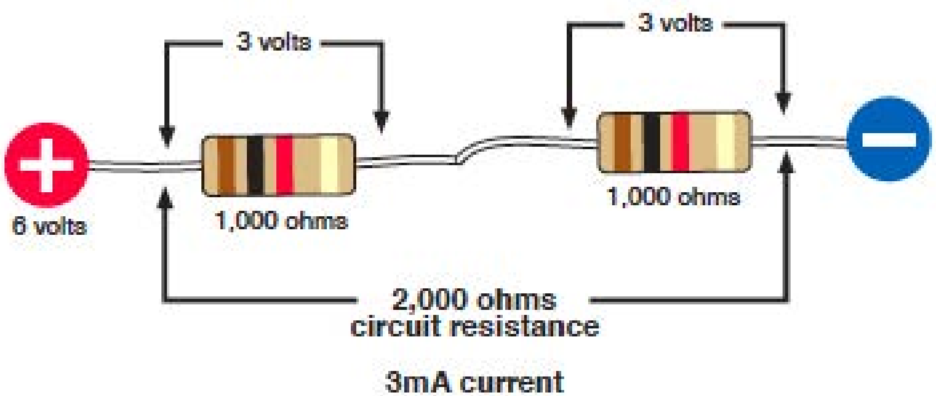


Figure 1-66. *When two resistors are in series, the electricity has to pass through one to reach the other, and therefore each of them takes half the voltage. Total resistance is now 2,000 ohms, and according to Ohm's Law, the circuit draws v/R = 6/2,000 = 0.003 amps = 3mA of current.*

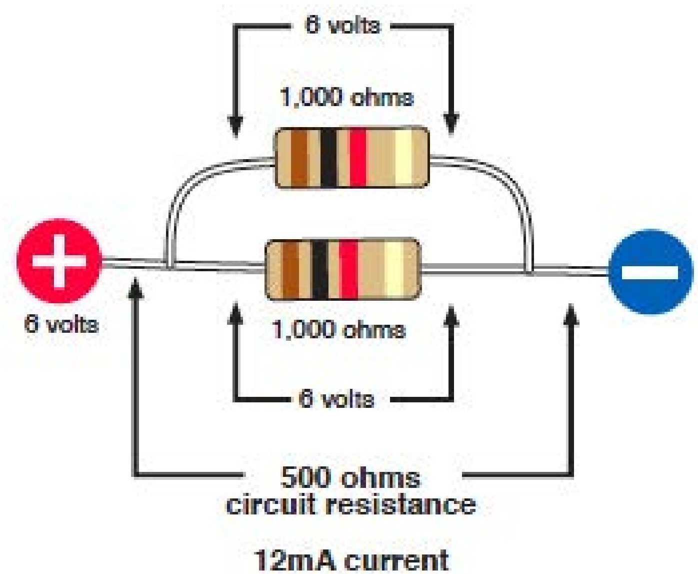
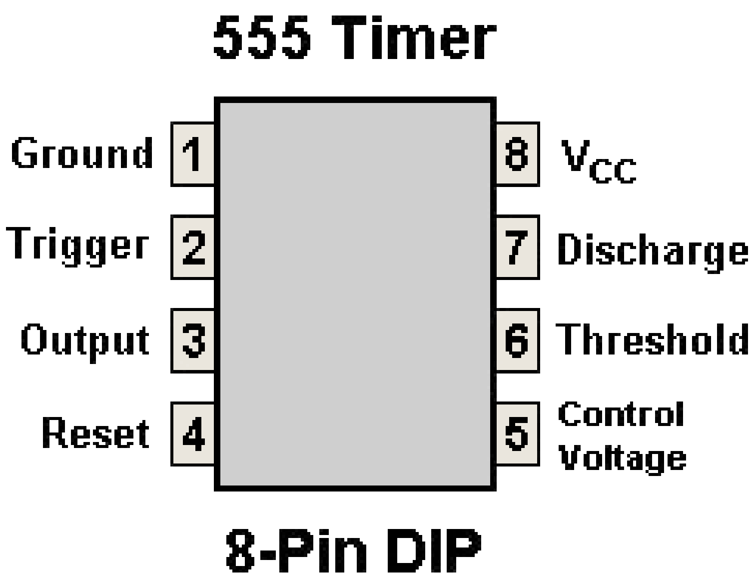


Figure 1-67. *When two resistors are in parallel, each is exposed to the full voltage, so each of them takes 6 volts. The electricity can now flow through both at once, so the total resistance of the circuit is half as much as before. According to Ohm's Law, the circuit draws v/R = 6/500 = 0.012 amps = 12mA of current.*

Voltajes Leds (aproximaciones)

color	voltage (Volts)
IR	1.5
red	2.0
orange	2.0
yellow	2.1
green	2.2
true green	3.3
blue	3.3
white	3.3
UV	3.3
blue (430 nm)	4.6

Circuito integrado 555



Astable

Pulso inf inito, es un circuito que nunca está esable y cambia de encendido a apagado constantemente. Por ejemplo: un oscilador.

Monostable

Es un circuito que está estable hasta que un pulso eléctrico lo hace cambiar por un período de tiempo def inido. Por ejemplo: un sistema de alarma.

Biestable

Combina los modos anteriores.