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Introduction To Modern Electronics – Lesson 4: The Capacitor

FORMULAS

The following formulas and information are meant to go with the online lesson found here:
http://www.pyroelectro.com/edu/basics/capacitor/

A CAPACITOR'S CAPACITANCE

In this lesson we learned about Capacitance and we saw the simple example of two parallel plates acting like a capacitor. To calculate the capacitance of such a resister you would use the following formula:

$$Capacitance = \frac{Electrical\ Charge}{Voltage}$$

$$\boldsymbol{C = \frac{Q}{V}}$$

In this equation, capacitance is represented by the capitol letter **C**, charge on the plates by the letter **Q** and the voltage **V**.

Since many different types of capacitors exist this formula is not universally helpful, but it gives you an idea of how to related electrical properties to a capacitance value.

CAPACITANCE VALUES

Farads also follows the rules of the metric system. Below is a simple chart that shows you how to convert 1 Farad or 1F between the different multipliers.

micro-Farad	milli-Farad	Farad	kilo-Farad	mega-Farad
100,000 µF =	1000 mF =	1 F =	0.001 kF =	0.000001 MF

Just like meters, liters and grams, the Farad follows the metric system making it very easy to translate between milli-Ohms and kilo-Ohms or any other multiplier for that matter.

ADDITIONAL INFORMATION

If you have any questions about the formulas or information found in this document, please feel free to head on over to the forums and ask us some questions!
http://www.pyroelectro.com/forums/viewforum.php?f=22