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New Formula for Current(I) Using Voltage(V), Resistance®, Capacitor©, Inductance(L), Conductivity(G)

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According to Ohms law:(In the Direct Current)

V=IR

R=V/I

According to Capacitor,Inductance,Conductivity formula for Resistance:

CR=LG

R=LG/C

Using both formulas the derivation of formula for Current(I):

R*R=LG/C*V/I

R^2=LGV/CI

I=LGV/CR^2

Voltage(V)=ML^2T^-3A^-1

Resistance®=ML^2T^-3A^-2

Capacitance©=M^-1L^-2T^4A^2

Conductaivity(G)=ML^2T^-2A^-2

Inductivity(L)=M^-1L^-3T^3A^2

Current(I)=A

Current(I)=GLV/CR^2

= (M^-1L^-3T^3A^2)(ML^2T^-2A^-2) (ML^2T^-3A^-1)/(M^-1L^-2T^4A^2)(ML^2T^-3A^-2)^2

Current(I)=A

FOR EXAMPLE:

Resistance=40 ohms

Inductivity=0.1 H

Conductance=0.025 S

Capacitnace=100 micro F

Voltage=120 V

According to Ohms law:(Direct Current)

$$V=IR$$

$$I=V/R$$

$$I=120/40=3\ A$$

NEW FORMULA FOR CURRENT(I) USING VOLTAGE(V),RESISTANCE®,CAPACITOR©,INDUCTANCE(L),CONDUCTIVITY(G)

$$I=LGV/CR^2$$

$$I=0.1*0.025*120/100*10^-6*(40)^2$$

$$I=0.3/0.16$$

$$\boxed{I=1.875\ A}$$

Note: The difference betweent the Current in Ohms law in D.C. and New formula for Current using Voltage, Resistance, Inductivity, Capacitor, Conductivity, the loss of Current(I) is due to the impedence(Z) in the Alternating Current(A.C.)

Conclusion:

This formula is used to calculate the Current by using Voltage, Resistance, Inductivity,Capacitor and conductivity.