

Answer on Question #43195 – Physics – Electric Circuits

Question.

What is the name of the physical quantity which is equal to v/i and define its unit

Solution.

From the Ohm's law we know the following relationship:

$$I = \frac{V}{R}$$

I is the current through the conductor (unit is ampere – A);

V is the potential difference measured across the conductor (unit is volt – V);

R is the resistance of the conductor in (unit is ohm – Ω).

Therefore,

$$R = \frac{V}{I}$$

So, it's the resistance. Its units are ohms (Ω).

The ohm is defined as a resistance between two points of a conductor when a constant potential difference of 1.0 volt, applied to these points, produces in the conductor a current of 1.0 ampere.

Answer.

Name of physical quantity is the resistance (R).

Its units are ohms (Ω).