$$\frac{U}{R_{ekv}} = I_1 + I_2 + I_3 + \cdots + I_n$$

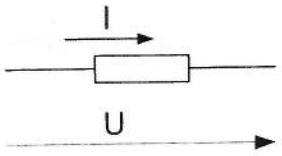
$$\frac{1}{R_{ekv}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \cdots + \frac{1}{R_n}$$

$$\frac{1}{R_{ekv}} = \sum_{i=1}^{n} \frac{1}{R_i}$$

DŽULOV ZAKON

ZAPAMTITI: SUPROTNO U ODNOSU NA KONDENZATORE!

Pri prolasku struje kroz otpor razvija se toplota



Slika 37

$$dA = U \cdot dQ$$

$$dA = U \cdot I \cdot dt$$

$$dW = dA = U \cdot I \cdot dt$$

$$P = U \cdot I = \frac{dA}{dt}$$

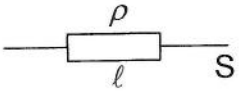
$$U = R \cdot I$$

$$P = R \cdot I^2 \quad \rightarrow \quad \text{važi samo za linearne otpore}$$

$$W = R \cdot I^2 \cdot t$$

$$P = \frac{U^2}{R}$$

Lokalni oblik Džulovog zakona



Slika 38

$$R = \rho \cdot \frac{\ell}{S}$$

$$P = J^2 \cdot R = \rho \cdot \frac{\ell}{S} \cdot J^2 = \rho \cdot \frac{\ell}{S} \cdot \left(J^2 \cdot S^2\right) = \rho \cdot J^2 \cdot V$$