

Electric. Transistor and the general concept of electric current in objects.

Electrical wires.

Wires.

Main transmissions:

1. In metals-free electrons;
2. In a vacuum-are electrons evaporated from heated metal;
3. In gases-free electrons and positive, negative ions;
4. In electrolytes-positive and negative ions;
5. In semiconductors-free electrons and holes.

Substances with a high concentration of electrical charge carriers are called WIRES.

Electric current in metals.

The main charge carriers in metals are: free electrons. When voltage is generated at the ends of the wire, free electrons begin regular movement – an electric current is generated.

As the temperature increases,

$$\frac{R - R_0}{R_0} = \alpha \cdot \Delta t.$$

the resistance of metals increases.

In this formula α –

- is the temperature coefficient of resistance;
- unit of measure: $[\alpha] = 1/K$
- $\alpha > 0$ for metals;

