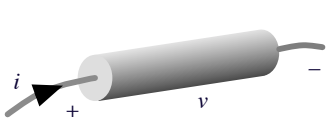
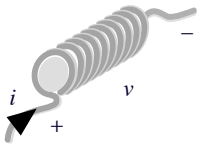
ELETTROTECNICA CIRCUITALE

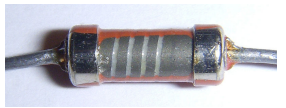
M. GUARNIERI

COMPONENTI ADINAMICI
cap. 2

Resistori ohmici







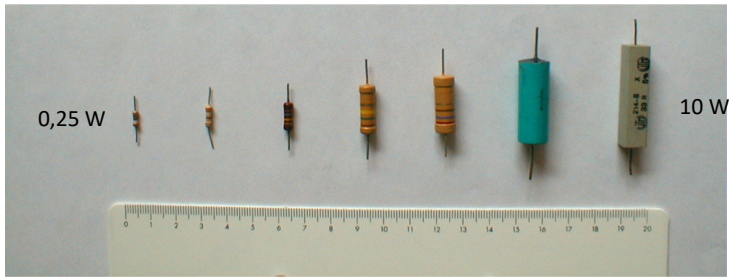
$$\boldsymbol{E}(P,t) = \rho\, \boldsymbol{J}(P,t)$$

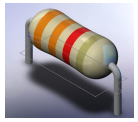
$$\left(\int_S dS\right)\left(\int_\ell \boldsymbol{E}\, d\ell\right) = \rho\left(\int_\ell d\ell\right)\left(\int_S \boldsymbol{J}\, dS\right) \Rightarrow \quad S v = \rho\, \ell\, i$$

$$v = \rho \frac{\ell}{S}\, i = R\, i \qquad \text{con} \qquad R = \rho \frac{\ell}{S}$$

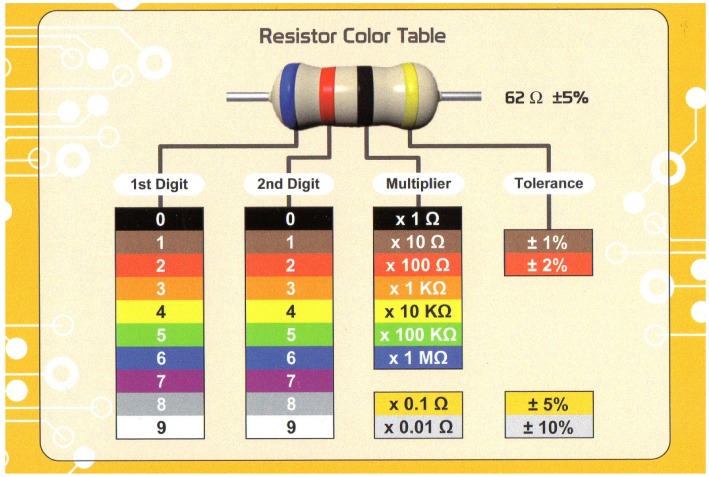
Resistori ohmici
“resistenze”

per circuiti di segnale o di piccola potenza
possono dissipare alcuni watt per centimetro cubo.

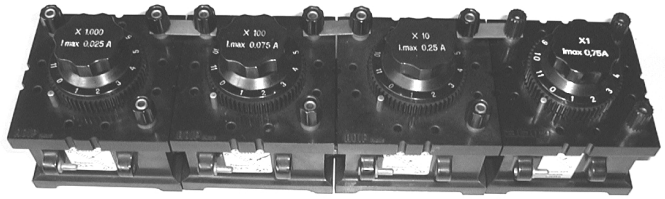




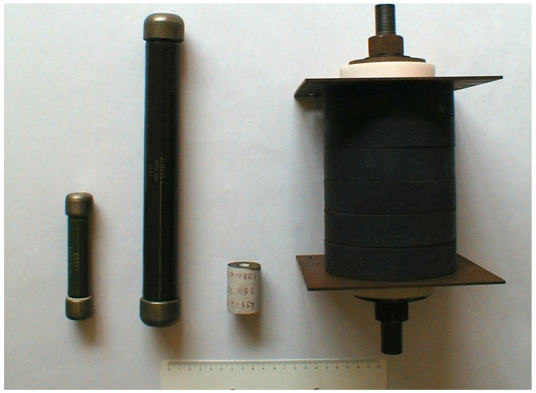
Resistori ohmici
“resistenze” – scala colori



Resistori ohmici a decadi da laboratorio

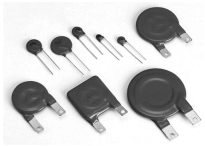


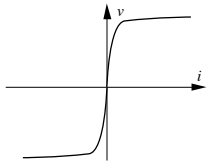
Resistori per alta tensione /alta potenza continuativa

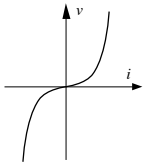


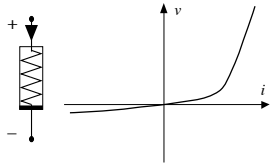
Resistori non lineari

Varistori





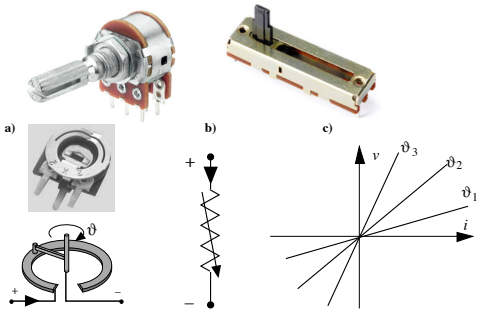




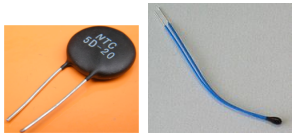
Lampadina a incandescenza convesso

Resistore

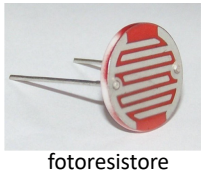
Resistori comandati



potenziometro, trimmer



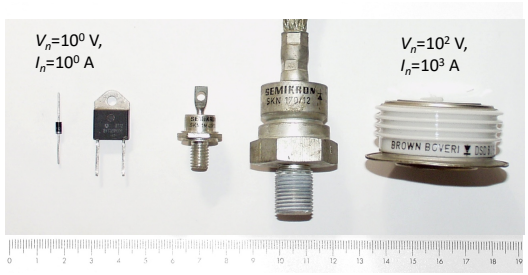
termoresistore

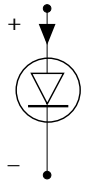


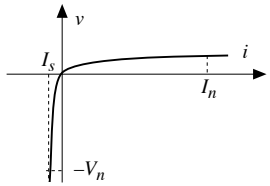
fotoresistore

magnetoresistore

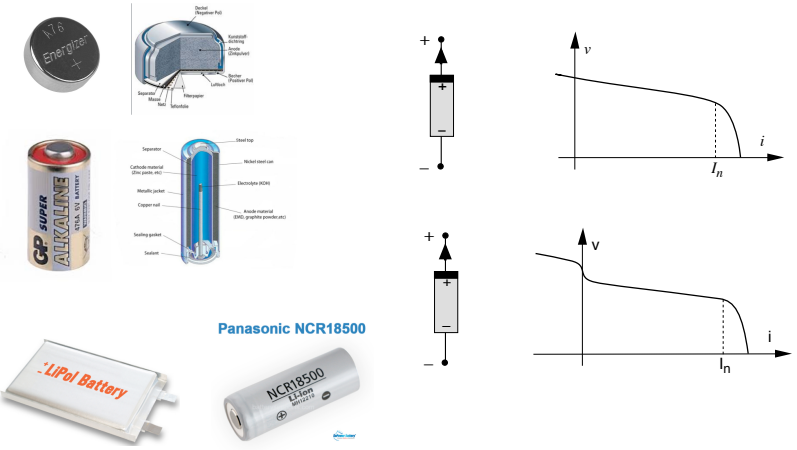
Diodi







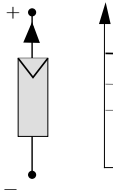
Generatori reali di potenza elettrochimici

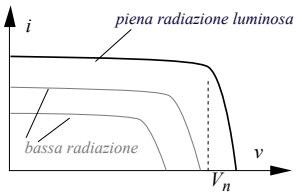


Generatori reali di potenza elettrochimici

185 kW, 53 kWh → 210 km/h 393 km

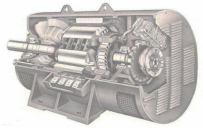
Generatori reali di potenza fotovoltaici (PV)

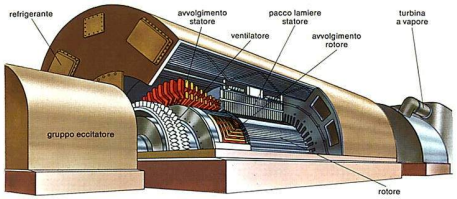




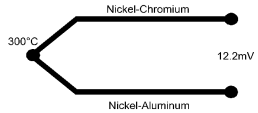
non più la maggiore:
Longyangxia Dam (China): 850 MW

Generatori reali di potenza elettromeccanici

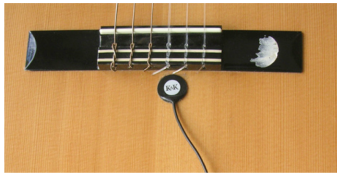




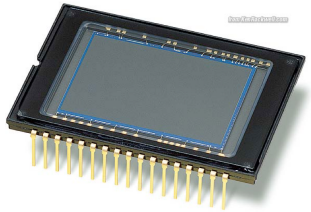
Generatori reali di segnale



Termocoppia



generatori piezoelettrici



Trasduttore di immagine a matrice di sensori fotovoltaici – CCD (charge-coupled device)

Generatore elettronico di segnali