

Force Between Parallel Lines of Electric Charge



- Electric charge densities: λ_a, λ_b
- Electric field generated by line a : $E_a = \frac{1}{2\pi\epsilon_0} \frac{\lambda_a}{d}$
- Electric force on segment of line b : $F_{ab} = \lambda_b L E_a$
- Electric force per unit length (repulsive): $\frac{F_{ab}}{L} = \frac{1}{2\pi\epsilon_0} \frac{\lambda_a \lambda_b}{d}$

