5. Multitouch Resistive Touchscreen

(a) $4k\Omega$

Since $W = 3cm = 0.03m, H = 12cm = 0.12m, T = 1mm = 1 \cdot 10^{-3}m = 0.001m$, so we can calculate the resistance between E_1 and E_2 as:

$$R = \rho \cdot \frac{L}{A} = \rho \cdot \frac{H}{W \cdot T} = 1\Omega m \cdot \frac{0.12m}{0.03m \cdot 0.001m} = 4000\Omega = 4\ k\Omega$$