

CLPhys1 28.P.039. (381941)

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Certain Substance A certain substance has a dielectric constant of 2.9 and a dielectric strength of 22 MV/m. If it is used as the dielectric material in a parallel-plate capacitor, what minimum area should the plates of the capacitor have to obtain a capacitance of $7.0 \times 10^{-2} \mu\text{F}$ and to ensure that the capacitor will be able to withstand a potential difference of 4.0 kV?

 m²

Question Details

Name (QID): CLPhys1 28.P.039. (381941)

Usable/Draft: Usable

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Textbook

Cummings, Laws, Redish, and Cooney, "Understanding Physics", ed.1

Chapter

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