

Level 2 EMQ5 2002/3

At a frequency of 1.3 GHz a non-magnetic material has a relative permittivity of 15.0 and a conductivity of  $0.8 \Omega^{-1} \text{ m}^{-1}$ .

Can this material be considered to be a good or a bad conductor at this frequency?

What depth of such material will a plane EM wave of the above frequency have passed through if the electric field is reduced by a factor of 10?