



## The Effect of Discontinuities of Dielectric Constant on Electrostatic Fields Near Conductors (Classic Reprint)

By S N Karp

Forgotten Books, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Excerpt from The Effect of Discontinuities of Dielectric Constant on Electrostatic Fields Near Conductors It is well known that electric fields tend to become singular near sharp edges or peaks in conducting bodies. Bouwkamp, Meixner, Maue, Jones and others have discussed the character of the singularities and the restrictions which must be imposed on them to insure uniqueness and physical significance, in the case of locally wedge-shaped conductors in homogeneous media. The purpose of the present work is to investigate the effect of a discontinuity of medium on the singularity. The investigation is confined to the electrostatic case, but it is hoped that the information obtained may prove of some value also in the electromagnetic case, since both cases usually present similar behavior at singularities. In addition, the electrostatic results obtained may be of some intrinsic interest. Some of these results are independent of the form of the conductor. This investigation originated in an attempt to explain the phenomena which occur under certain conditions when irises in waveguides are covered with transparent plastics. It is observed that...



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