Abstracts

Breakdown in the Inhomogeneous Electric Field of a Microwave Transmit-Receive Switch (Short Papers)

V. Semenov, D. Anderson and M. Lisak. "Breakdown in the Inhomogeneous Electric Field of a Microwave Transmit-Receive Switch (Short Papers)." 1993 Transactions on Microwave Theory and Techniques 41.5 (May 1993 [T-MTT]): 879-881.

A detailed analytical investigation is made of the threshold for breakdown in microwave transmit-receive switches. The geometry of the keep alive contacts of the switch is modelled as a double cone configuration and the subsequent diffusion equation for the electron density in the presence of strongly inhomogeneous ionization is solved analytically. Predictions for the breakdown power are found to be in agreement with previously presented experimental results.

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