Abstracts

High-Q Microwave Filters Employing IMPATT Active Elements (Correspondence)

R.W. Dawson and L.P. Marinaccio. "High-Q Microwave Filters Employing IMPATT Active Elements (Correspondence)." 1967 Transactions on Microwave Theory and Techniques 15.4 (Apr. 1967 [T-MTT]): 272-273.

During the course of switching studies an unusually large transmission on/off ratio was obtained from an X-band single PIN diode switch operating in the milliwatt range. The phenomenon is attributed to the generation of a microwave negative resistance of the IMPATT type (Impact Avalanche Transit Time) when reverse bias current flows. This negative resistance cancels the normal series R/sub S/ loss of the diode and associated contact losses giving a true wideband zero loss waveguide switch.

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