Abstracts

The Influence of Cataphoresis Upon the Noise Temperature of F8T5 Lamps

R.E. Guentzler. "The Influence of Cataphoresis Upon the Noise Temperature of F8T5 Lamps." 1970 Transactions on Microwave Theory and Techniques 18.7 (Jul. 1970 [T-MTT]): 393-400.

Fluorescent lamps were once used as standard noise sources for microwave measurements. Because of unpredictable noise output, they were abandoned in favor of pure-gas discharge tubes. It is shown that the unpredictability resulted from changes in Hg vapor pressure which were indirectly caused by cataphoretic pumping of the Hg ions. Data are presented which give excess noise as a function of discharge current and as a function of bulb temperature. These data were obtained for normal and abnormal lamps at 147 MHz.

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