

# Abstracts

## Temperature-Variable Characteristics and Noise in Metal--Semiconductor Junctions

---

*E.L. Kollberg, H. Zirath and A. Jelenski. "Temperature-Variable Characteristics and Noise in Metal--Semiconductor Junctions." 1986 Transactions on Microwave Theory and Techniques 34.9 (Sep. 1986 [T-MTT]): 913-922.*

Although metal-semiconductor junctions were first explored a hundred years ago, some important aspects of the transport mechanism of electrons across the metal-semiconductor barrier have not yet been fully explained. In this paper, we report on a new model and supporting experimental results which explain deviations observed from the ideal exponential current-voltage characteristic. The model and results are applicable to the optimization of microwave and millimeter-wave front ends.

[Return to main document.](#)