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| **Title:** | Temperature Effects on Subthreshold Drain Current of Nano Scale Pocket Implanted n-MOSFET | | |
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| **Abstract:** |  |
| Abstract— Temperature fluctuations affect threshold voltage, carrier mobility and transit time of an n-MOSFET. This phenomenon induces the variations of drain current in the device. This paper presents an analytical model of the temperature effects of subthreshold drain current of pocket implanted n-MOSFET. The model has also been used to study the device behavior at low and high ambient temperatures. The model includes the effects of temperature on the threshold voltage, the carrier mobility and hence on the subthreshold drain current for nano scale pocket implanted n-MOSFET. | |