Basic MOSFET / EPAD® MOSFET Inverter Circuit

Description

This circuit shows a basic MOSFET (or EPAD MOSFET) inverter circuit. The drain terminal is the output and the gate terminal is the input. The output voltage $V_O$ is determined by the input voltage and the output loading $R$. $V_O$ can be a voltage either above or below threshold voltage, which depends on the drain current $I_{ds}$ as controlled by the gate voltage, and which in turn depends on $R$ value. The drain current is given by $I_{ds} = (V_+ - V_{DS})/R$.

At very high $R$ values, the drain current may decrease to such a low level that leakage current becomes a significant factor. The drain leakage current is a function of ambient temperature, and it ranges from nA to a few pA, depending on the ambient temperature range of operation considered and the device selected.

For full schematic diagram and notes, please register and login at aldinc.com