

TEMPERATURE SENSING DEVICE, SEMICONDUCTOR DEVICE HAVING
TEMPERATURE SENSING DEVICE INSTALLED THEREIN AND AUTO-
FOCUSING SYSTEM USING THIS SEMICONDUCTOR DEVICE

ABSTRACT

In view of the fact as found in the prior art that a measured device as hardly installed on a chip and a temperature variation in the measured device could not be detected accurately, the present invention provides a system in which a MOS transistor is arranged, there is provided a potential control circuit for sensing a potential in the case of depletion under a gate of a certain specified MOS transistor and controlling a gate voltage of the MOS transistor while comparing the detected output with the reference voltage V_{ref} , and a temperature is detected in reference to a variation in current of the MOS transistor while controlling a gate voltage of the MOS transistor by this potential control circuit.

Figure 1