DUAL-TYPE THIN –FILM FIELD-EFFECT TRANSISTORS AND APPLICATIONS

ABSTRACT

A microelectronic device (100) includes a gate layer (101) adapted to receive an input voltage. An insulating layer (105) is formed on the gate layer, and a conductive channel layer (108) is formed on the insulating layer (105) and carries current between a source (104) and a drain (106). The conductive channel layer (108) is adapted to provide a dual channel. The dual channel includes both a p-channel and a n-channel wherein one of the p-channel and the n-channel are selectively enabled responsive to the input voltage polarity. A method (Figs.4-12) for forming the device and applications are also disclosed and claimed.

FIG. 2