IMPROVEMENT TO THE ANISOTROPIC CHEMICAL ETCHING PROCESS OF SILICON OXIDE IN THE MANUFACTURE OF MOS TRANSISTOR FLASH EPROM DEVICES

ABSTRACT

This invention relates to an improvement to an anisotropic chemical etching process for silicon oxide and to a manufacturing process for silicon FAMOS transistor Flash EPROM memory devices including said improvement, said silicon oxide chemical etching process having an etching direction and being characterised in that the following steps are performed:

- a preliminary deposition of a layer of silicon nitride on the silicon oxide;

- a first anisotropic chemical etching or break-through stage, along said etching direction, aimed at removing the nitride layer from the silicon oxide surfaces orthogonal to said etching direction;

- a second anisotropic chemical etching stage along said etching direction, aimed at removing the silicon oxide surfaces orthogonal to said etching direction.

Figure 5