Process Development and Integration of Power MEMS Devices ch:Process Development and Integration of Power MEMS Devices

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In this chapter, I would develop the corresponding fabrication process parameters and their process integration based on the manufacturing technology and equipment in Chapter Three, thus realizing the whole process Fabrication process from GaN wafer to device. In order to simplify the expression of the process and clarify the steps of the process, this chapter uses different codes to represent the different steps and their meanings. For example MESA.3) indicates that this process is the third step in the mesa preparation process, and [AE-N] indicates the alignment and exposure of negative photoresist. The process that first appears in this chapter would be described in detail about the main purpose of the process, the equipment used, and the detailed recipe parameters and shorthand code, while the same process in the following steps is only represented by the shorthand code. I've listed every step without omission based on shorthand code. Moreover, in order to visualize the fabrication process flow, a corresponding flow chart has been drawn to illustrate the main process steps.

Process flow and recipe

Wafer growth

figure[H] [width=0.7]structure [GaN-on-SiC wafer hetero-epitaxial structure]GaN-on-SiC wafer hetero-epitaxial structure fig:structure