



VDMOSFET Model Parameter Extraction Based on Electrical and Optical Measurements

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Lateral Device parameters for VDMOSFET (Vertical double diffused metal oxide semiconductor field effect transistor) with hexagonal cells has been extracted by an original model based on electrical and optical measurements. Using microscopic observation for the shape of the device and by C-V characterization, the lateral device structure parameters could be extracted. Values of the extracted parameters are in good correlation with the values given by the manufacturer. Advantage of this model the high precision results with a low cost. Perhaps, the most important point in this model, that we can replace the other techniques usually employed in this study where we destroyed the device for cut and cross section of the structure. The proposed technique in this paper can be very useful for analyzing any complex geometrical structure of VDMOS transistors (hexagonal, triangular, square etc...).

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