New Release

LTEC Corporation

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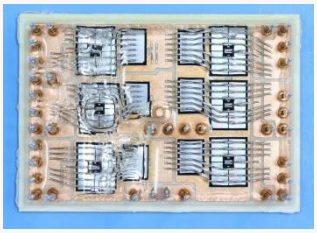
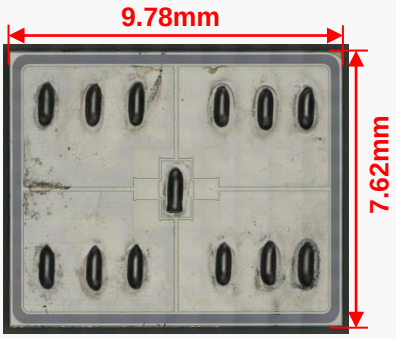
INFINEON EasyPACK™ 7th GEN. IGBT module STRUCTURE and PROCESS ANALYSIS REPORTS

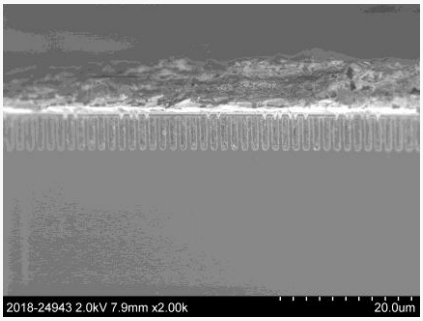
February 2020. LTEC Corporation released a detailed structure and process analysis reports of the S100R12W2T7_B11 7th Gen IGBT module.



Module



Die image



Cross section of the cell area

Product overview

The FS100R12W2T7_B11 is a 1200 V, 100A power module featuring a new high-density Micro Pattern Trench (MPT) design developed to reduce saturation voltage, Vce(sat) from 1.85V to 1.5V by (~19%) relative to 6th Generation device.

Summary of the analysis results

- The unit IGBT cell, formed by a set of seven trenches, and the electrical connection of these trenches is discussed.
- The effective process technology node is extracted from the trench pitch and contact opening. These are the minimum processing dimensions of the manufacturing process technology.
- The off-state collector leakage current of IGBT7 and IGBT6 transistors are measured. A significant difference in activation energy is confirmed.
- The breakdown voltages of the IGBT chip and the parallel-connected FWD are measured.

Structure analysis report: $7,000 / Process analysis report: $4,600

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