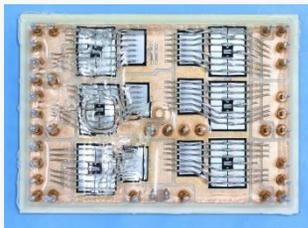
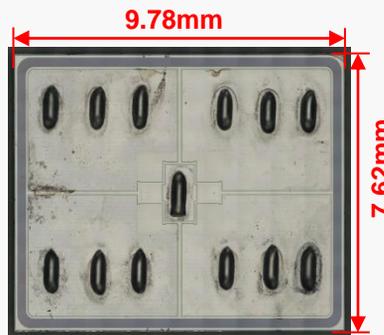


## INFINEON EasyPACK™ 7<sup>th</sup> GEN. IGBT module STRUCTURE and PROCESS ANALYSIS REPORTS

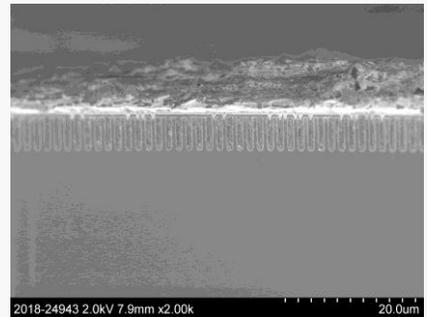
**February 2020.** LTEC Corporation released a detailed structure and process analysis reports of the S100R12W2T7\_B11 7<sup>th</sup> Gen IGBT module.



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,  $V_{ce(sat)}$  from 1.85V to 1.5V by (~19%) relative to 6<sup>th</sup> 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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