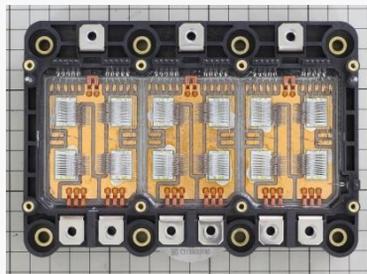


## FUJI ELECTRIC 6MBI800XV-075V-01 IGBT MODULE FOR EV & HEV DETAILED ANALYSIS REPORTS

**February 2020.** LTEC Corporation released three analysis reports (structure, IGBT die, and process flow and electrical characteristics) of the Fuji Electric IGBT module. This module is for automotive application,  $V_{ces}=750V$ ,  $I_c=800A$ . The IGBT die is a 7<sup>th</sup> generation X series Reverse Conducting device (RC-IGBT).



Module



Module inside



IGBT die image

### Report contents

- Layout, the device structure, the internal configuration of the cooler, and an analysis of the heat removal mechanism.
- Planar layout, cross section, EDX analysis of the RC-IGBT, and die structure analysis including analysis of the FWD regions.
- Process analysis report, including process technology of the RC-IGBT
- Estimate of the number of masks and the manufacturing process flow. The integration of the IGBT, the Free Wheeling Diode and temperature sensors.
- $I_c$ - $V_{ce}$  characteristics, off-state collector leakage current and breakdown voltage, extraction of the activation energy from the temperature dependency of off-state leakage current.
- Comparison with Infineon IGBT7.

**Module structure analysis report: \$3,500 IGBT die analysis: \$5,800  
Process and electrical characteristics analysis: \$4,600**

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