Panasonic PGA26C09DV 600V GaN HEMT: Complete Teardown Analysis

Description: Panasonic's PGA26C09DV features a medium-voltage breakdown of 600V for a current of 15A (25°C), with very low RdsOn compared to its competitors. The transistor is optimized for AC-DC power supply, photovoltaic, and motor inverters.

The GaN and AlGaN layers are deposited by epitaxy on a silicon substrate. A complex buffer and template layer structure is used to reduce stress and dislocation. This is complemented by a thick superlattice structure clearly visible in the TEM analysis.

Based on a complete teardown analysis, this report also provides a production cost estimate for the epitaxy, HEMT, and package.

Moreover, this report offers a comparison with GaN Systems' GS66504B and Transphorm's GaN HEMT, highlighting the huge differences in design and manufacturing process and their impact on device size and production cost.

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