

NU1007: 9V/10W Full-Bridge Power Stage for High- Integration and High-Efficiency Medium-Power Wireless Power Transmitter

Feature

- Input Voltage: 4V to 10V
- Output Power: 10W
- Integrated High-Efficiency Full- Bridge FETs
- Integrated FET Driver Optimized for Low EMI
- Integrated 2.5V LDO to Bias External Circuit and Provide Reference Voltage
- High-Accuracy, High-Speed, Lossless Current Measurement for FOD and In-Band Communication
- Input Under-Voltage Lockout
- Short-Circuit Protection
- Thermal Shutdown
- 3mm x3mm QFN Package

Applications

- Wireless Power Transmitter Compliant with WPC V1.2.3 Baseline Power Profile (BPP)
- General Wireless Power Transmitter for Consumer, Industrial and Medical Applications
- Motor Drivers

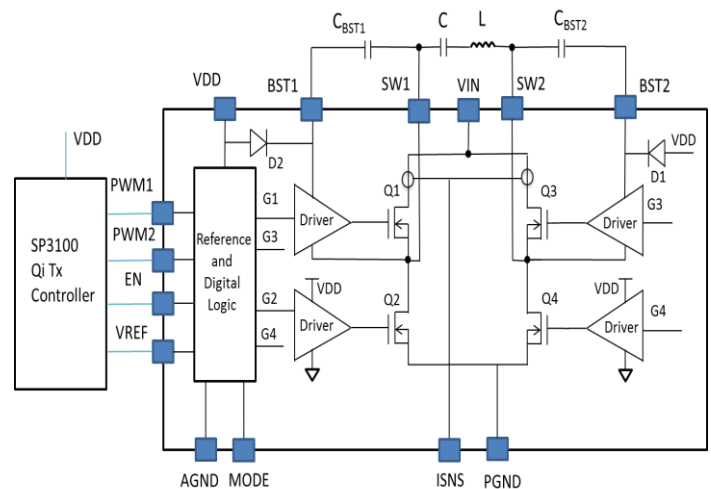
Descriptions

NU1007 is a highly integrated 9V/10W full-bridge power stage IC optimized for wireless power transmitter solutions. It works with transmitter controller SP3100 to create a high-performance wireless power transmitter compliant with WPC 1.2.3 BPP or customized for any customer-requested solutions. The device integrates all critical functions, such as high-efficiency power FETs, low-EMI FET driver, bootstrap circuit, 2.5V LDO and lossless current measurement. The proprietary current-measurement circuit provides accurate current reading used by FOD (Foreign Object Detection) power measurement and in-band communication. It eliminates the current-sense resistor and amplifier circuit, and thus saves cost and improves efficiency.

The IC also includes protection functions such as input under-voltage lockout, short-circuit protection, and thermal shutdown. These provisions further enhance the reliability of the total system solution.

The device is housed in a thermally enhanced 16-pin 3mmx3mm QFN package.

Functional Block Diagram



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