

High Efficiency Full-Bridge Power Stage Wireless Power Transmitter

1 Features

- VDD Input Voltage Range: 3V to 20.5V
- PVIN Input Voltage Range: 3V to 20.5V
- Integrated High-Efficiency Full- Bridge FETs and FET Driver Optimized for Low EMI
- Integrated 4.8V LDO
- Integrated two channel High-Side drives to drive external FETs
- High-Accuracy Input Current Measurement for FOD and In-Band Communication
- Low R_{dson} for good thermal performance
- Robust OVP, OCP, UVLO and OTP Protection
- 3mm×4mm QFN Package

2 Applications

- Wireless Power Transmitter Compliant with WPC V1.3 Extended Power Profile (EPP), Maximum 30W wireless transfer power
- Wireless Power Transmitter for Consumer, Industrial, Automotive Aftermarket, and Medical Applications

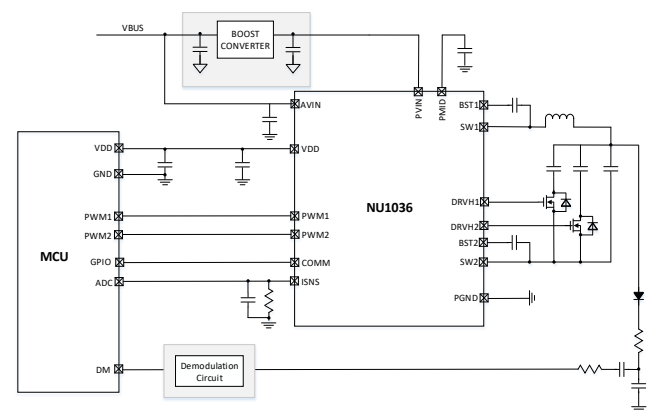
3 Descriptions

NU1036 is a new generation of high integrated efficiency power transmitter power stage, it integrates a full-bridge power stage designed for a wide frequency range, high accuracy

current sense and high side driver to drive external FETs.

Full-Bridge with adaptive deadtime control makes strong robust and high efficiency. Slew rate control optimizes the low -EMI design. LDO optionally be able to output 4.8V or 3.3V. The proprietary current-measurement circuit provides an accurate current signal to MCU used for the FOD (Foreign Object Detection) power measurement without extra sense resistor. It also includes protection functions such as input under-voltage lockout, over-voltage protection, over current protection, and thermal shutdown. These provisions further enhance the reliability of the total system solution.

The device is housed in a thermally enhanced 3mm×4mm QFN package.



Simplified Application Diagram