NU1512: High Performance Wireless Power Transmitter Controller

Feature

- Input Voltage: 3.3V to 5.5V
- Integrated ARM® Cortex®-M0
- Compliant with WPC 1.2.4 BPP
- PWM Output 127.7KHz ±6Hz
- Output to Control External DCDC Output
- Reliable and Accurate Foreign Object Detection (FOD)
- LED for Charging Status and Fault Reporting
- Built-in Frequency Shift Keying Modulate(FSK)
- Built-in Fast Charge Protocol
- Input Low Voltage Detection
- Limited Power to Prevent Overloading Input Sourcesdd
- Over-current Protection and Over- temperature Protection with NTC Input
- Internal Oscillator or External Crystal Oscillator
- Interface with NU1009 to Form High Performance 10W Transmitter Solution
- 28 Pin 4mm x 4mm QFN Package

Applications

- Wireless Power Transmitter Compliant with WPC V1.2.4 EPP
- Fast Wireless Charger for 10W Received Power
- Embedded Wireless Power Transmitter for Smart Home

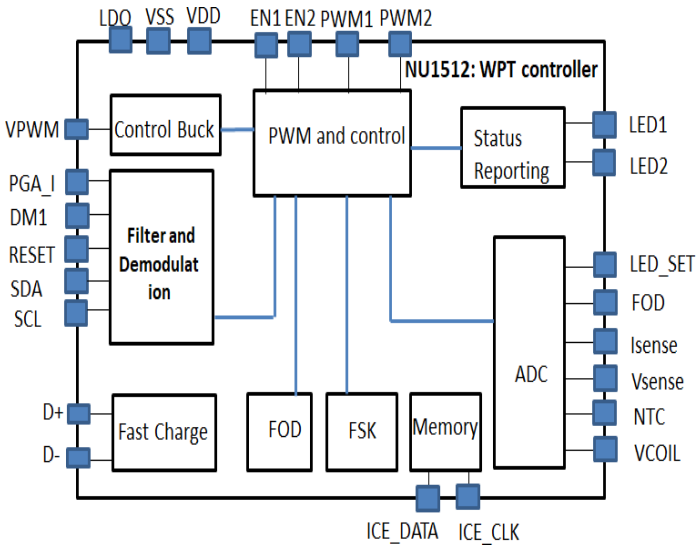
Descriptions

NU1512 is a highly integrated digital controller for wireless power transmitter compliant with WPC 1.2.4 BPP standard. This device and NU1009, the companion power stage ICs, form simple, high-performance and cost- effective wireless power transmitter solutions suitable for a wide range of applications.

NU1512 integrates all essential functions to deliver regulated power and maintain robust communications with WPC compliant receivers. Used with NU1009, the smallest and most integrated power stage IC, the two- chip turnkey design provides the most space saving solutions.

NU1512 also emphasizes on providing reliable and robust charging experience by preventing any transient conditions, such as receiver load variations and Rx/Tx coupling changes, from disrupting communications and continuous charging. The device adopts a proven foreign object detection (FOD) scheme to detect metal objects and prevent harmful heating. The device also integrates the protection features such as over- temperature and over-current protections, input low-voltage detection and input power limit

Block Diagram



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