

NU1628

NU1628: High Efficiency, High Integration Wireless Power Receiver and Transmitter

1 Features

- Integrated 27V High-efficiency Synchronous Rectifier.
- Integrated LDO to Provide Regulated Output Programmable VOUT from 3.5V to 21V with 20mV resolution.
- Low Dropout of LDO.
- Integrated Full Bridge Inverter and PWM Controller for transmitter.
- LDO5P0 Power Supply Path Management: Internal LDO or External VDD.
- Robust and Quick-responsive OVP, OCP, OTP, OPP and SCP.
- 10 Channels, 14bit ADC.
- Integrated 32Bit MCU Core.
- 400kHz I²C Interface.
- In-system Programmability.
- Build-in Bi-directional Communications: ASK/FSK Modulation and ASK/FSK Demodulation.
- Integrated Q Factor Measurement.
- Programmable FOD Gain and Offset.
- WPC 1.3+ compatible.
- 54-WCSP 4mm x 2.8mm, 0.4mm pitch.

2 Applications

- WPC 15W EPP Compliant Receiver
- WPC 5W BPP Compliant Transmitter with Maximum 10W Transmit Power.
- Smartphones, Power Bank.
- Medical, Industrial and Consumer Equipment.

3 Descriptions

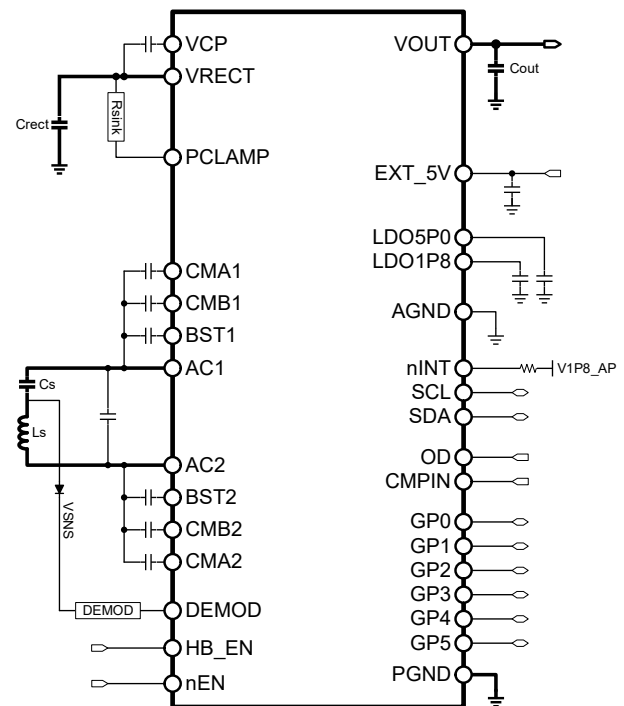
NU1628 is a highly integrated and efficient wireless power receiver and suitable for up to 30W output power application. It integrates a synchronous rectifier and a programmable low drop-out regulator. The regulator can provide

a wide range regulated voltage. NU1628 can conduct bi-directional communication with a transmitter system through ASK and FSK. The communication is compliant with WPC.

NU1628 can also be operated as a transmitter (Tx) to charge other receivers.

NU1628's flexibility is provided by an on-chip 32Bit MCU which can customize and optimize the device for various applications and custom needs. The programmability includes output power, bidirectional communication scheme, system protection, status reporting and error reporting.

NU1628 protection includes standard such as input under-voltage lockout, short-circuit protection, over-voltage protection, over-current protection, over-power protection and over-temperature protection.



Simplified Application Diagram

This document contains confidential and proprietary information of NuVolta. Any information in this document is prohibited from being used, reproduced or disseminated to any third party in any form and/or through any means without the prior written consent of NuVolta. **ALL RIGHTS RESERVED.**