

# SC9625 50W Highly Integrated Wireless RTx

## 1 Descriptions

The SC9625 is a high-integrated and high-efficient single-chip wireless power receiver/transmitter IC(RTx).

The SC9625 integrates a high efficiency synchronous full-bridge rectifier with ultra-low RDS to convert the AC power signal from a wireless transmitter to DC power and a programmable low-dropout LDO allowing for extremely high efficiency and system optimization.

The SC9625 contains an industry-leading on-chip 32-bit MCU with extremely low standby power consumption and MTP memory offering great flexibility for system firmware update.

As a receiver, it can deliver 50W(20V/2.5A) output power to the downstream charger system.

As a transmitter, it can support up to 15W output power to other wireless receivers.

The SC9625 is compatible to WPC Qi (v1.3) protocol and in support for propriety protocols.

The device is available in an ultra-small 2.875mm x 4.035mm WLCSP-54 package.

## 3 Applications

- Smart phone
- Tablet PC
- Other medical and industrial instrumentation

## 2 Features

- Deliver up to 50W power as a receiver and 15W in TX mode
- Integrated high-efficiency synchronous rectifier
- High performance LDO with programmable output voltage from 3.5V to 20V with 10mV step
- 10mA current sense accuracy
- Support Half-bridge mode start up and operation
- Ultra-low standby current
- Embedded on-chip 32bit MCU and 32kB MTP
- Support I2C interface and GPIOs
- 97% AC to DC efficiency
- Protection
  - ✧ VRECT UVP/OVP protection
  - ✧ AC SCP protection
  - ✧ LDO OCP/SCP/OPP protection
  - ✧ OTP
- WLCSP-54 2.875mm x 4.035mm package

## 4 Device Information

ORDER NUMBER	PACKAGE	BODY SIZE
SC9625CFFR	WLCSP-54	2.875mm x 4.035mm

