

# PCC110/PCC210

## Powerharvester<sup>®</sup> Chipset



### DESCRIPTION

The Powercast Powerharvester<sup>®</sup> Chipset includes the PCC110 RF-to-DC converter and the PCC210 Boost Converter. The Chipset is used in conjunction with numerous Powercast Reference Designs, including the P1110B and P2110B Powerharvester Modules. The PCC110 is designed to maximize RF to DC conversion efficiency, up to 75%, while supporting a wide range of input power levels, load voltages, and frequency bands. The PCC210 is designed to efficiently boost low input voltages to provide extended range and provide a regulated output voltage to a load device.

### APPLICATIONS

- High-function RFID
  - Sensors/Displays/Microprocessors
- Battery-free wireless sensors
  - Industrial Monitoring
  - Smart Grid
  - Defense
  - Building Automation
  - Oil & Gas
  - Medical
- Recharging
  - Super capacitors
  - Coin or thin-film cells
- Low power electronics
  - Devices that typically last for weeks, months, or years on a battery

### REFERENCE DESIGNS AVAILABLE

- P1110B** 915MHz high-efficiency continuous powering and battery recharging
- P2110B** 915MHz long-range pulsed powering and pulsed battery recharging
- P2111** P2110 with enhanced sensitivity
- P2120** 2.45GHz long-range pulsed powering and pulsed battery recharging

### REFERENCE DESIGN INCLUDES:

- Schematic
- PCB Layout
- Bill of Material
- Performance Data



### FEATURES (DESIGN DEPENDENT)

#### PCC110

- High conversion efficiency, up to 75%
- Converts low-level RF signals enabling long range applications
- Wide RF operating range: -17dBm to +20dBm
- Wide Frequency range: 10MHz to 6GHz
- Harvests from all modulation types
- Interoperable with numerous RF sources: Powercast TX91501 series transmitter, RFID readers, Wi-Fi routers, NFC, etc.
- SC-70 package
- RoHS compliant

#### PCC210

- High efficiency, up to 95%
- Operation down to 0.4V input
- Capable of 5.5V @ 50mA output
- Resistor settable output voltage
- SOT23-6 package
- RoHS compliant

### CHIP MARKINGS

PCC110	F1X
PCC210	P2X

### ORDERING INFORMATION

Qualified high-volume customers can obtain the Powercast Reference Design best suited for their application by contacting Powercast and completing a questionnaire and a reference design confidentiality agreement:

<http://www.powercastco.com/contact/>

*Powercast products, reference designs, and technology are covered by one or more of the following patents and other patents pending:*

6,289,237 | 6,615,074 | 6,856,291 | 7,027,311 | 7,057,514 | 7,639,994 | 7,643,312 | 7,812,771 | 7,844,306 | 7,868,482 | 7,898,105 | 7,925,308 | 8,159,090 | 8,380,255 | 8,432,062 | 8,461,817 | 8,621,245 | 9,000,616 | 9,021,277