

## S1A00121F Power Management IC(PMIC)

### ■ DESCRIPTIONS

S1A00121F is the control IC for the 0.1 W Primary (Tx) system. This Primary (Tx) system can transmit power to Secondary (Rx) systems. This IC includes Power-MOS driver control, Drive voltage control with an external Step-Up converter, Thermal detection, and Safety circuits, enabling it to safely transmit power to the Secondary (Rx) system consisting of the S1A00112B.

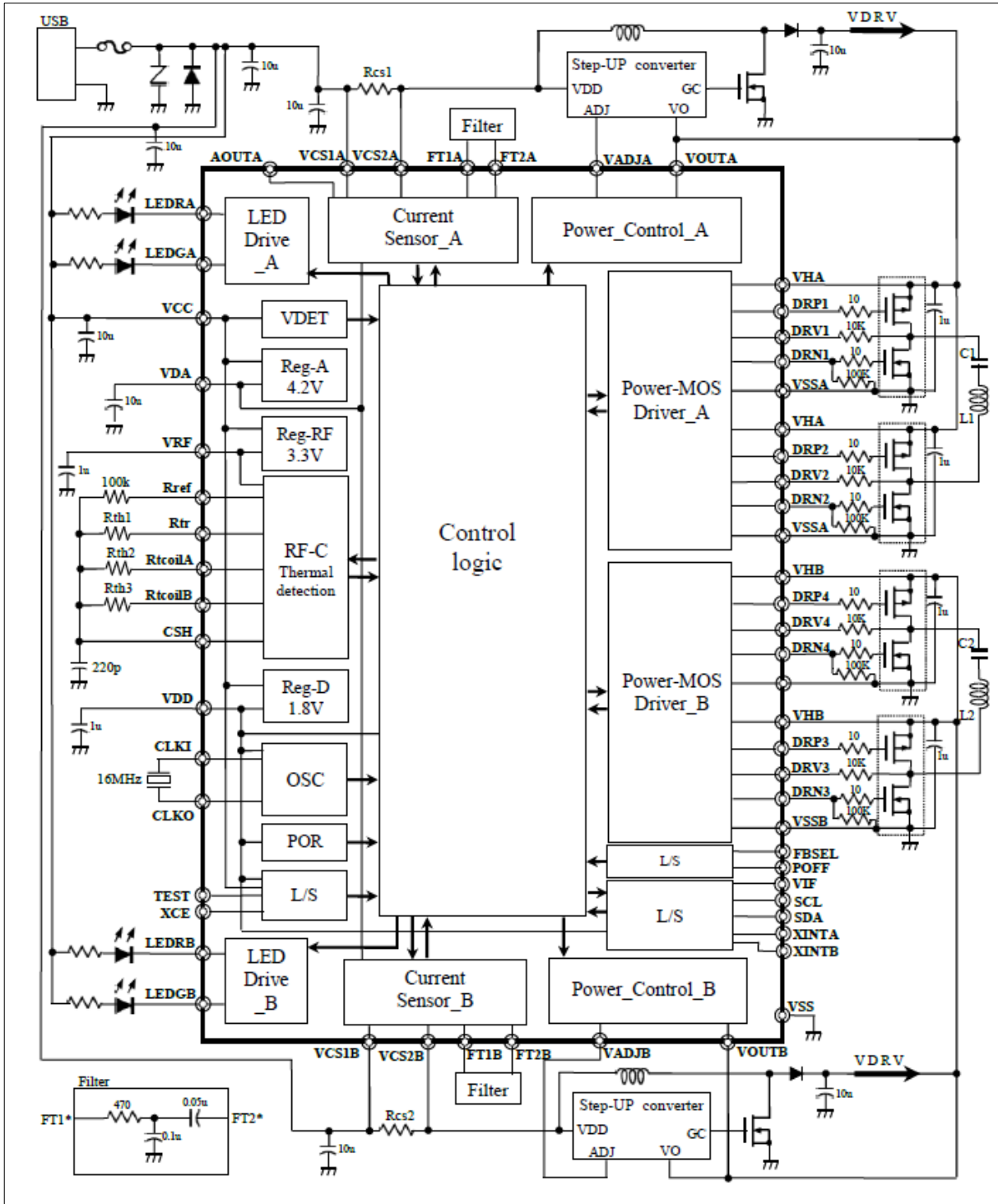
S1A00121F can receive information from the Secondary (Rx) system, such as the status of the charging battery, the condition of the charging battery (voltage, current, temperature), the battery code, and the condition of received power (rectified output voltage). This process is facilitated by data communication between the coils of the Primary (Tx) and Secondary (Rx) systems.

### ■ FEATURES

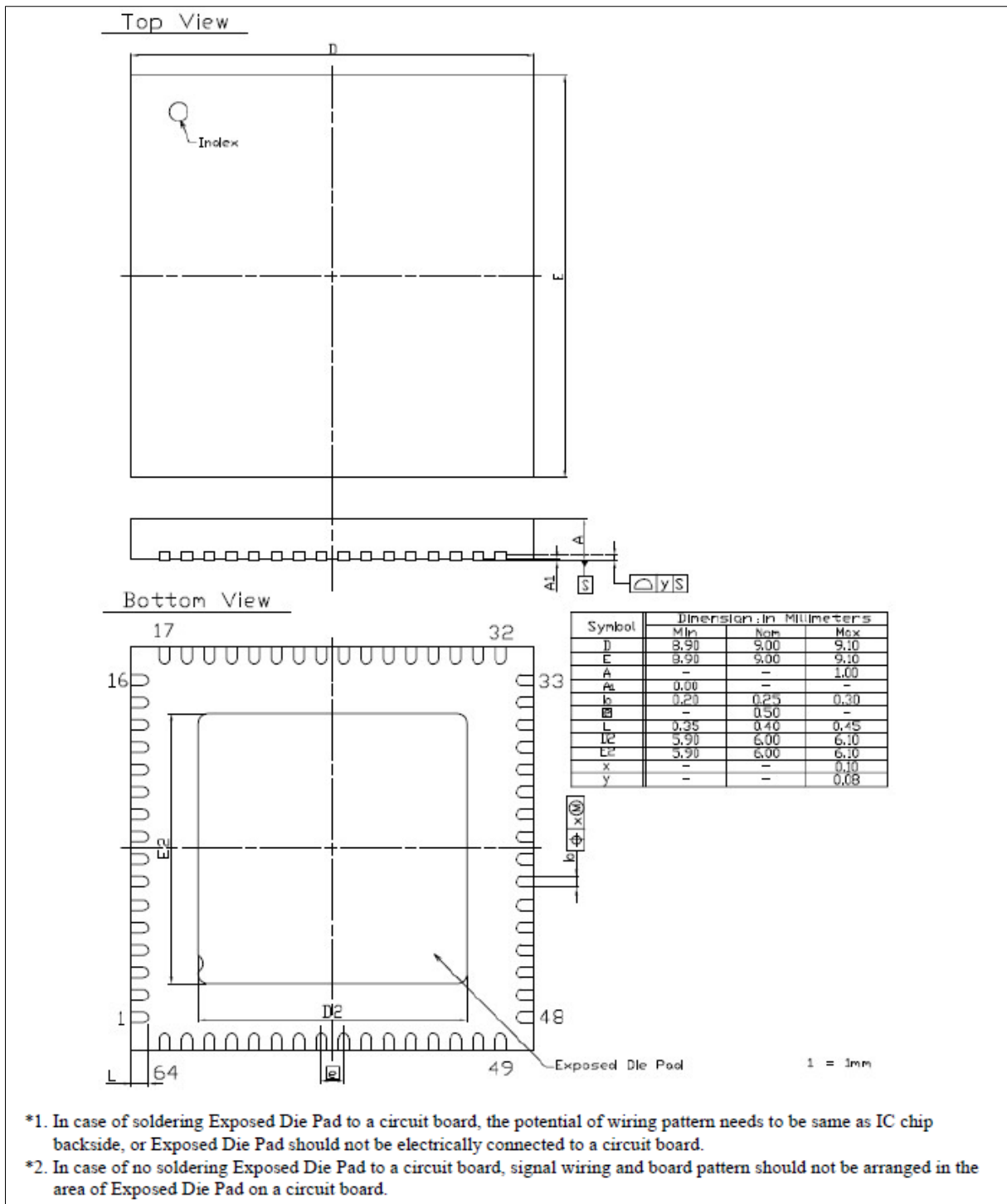
- **0.1W Primary (Tx) power transmitter.**
  - ✓ Driver control circuit that drives external Power-MOS.
  - ✓ Power control with external Step-Up Converter.
  - ✓ Small controllable Landing/Removal detection
  - ✓ Automatic coil driving mode switching (Full bridge/Half bridge)
  - ✓ Driver phase control to reduce the interference between the coils
- **Safety circuit**
  - ✓ Thermal detection.
  - ✓ Power-MOS short-circuit detection.
  - ✓ Voltage monitoring circuit.
- **Communicate from receiver**
  - ✓ The information of battery charging status.
  - ✓ The conditions of charging battery (voltage, current, temperature, cycle time)
  - ✓ The condition of received power (rectified output voltage)
  - ✓ IC Number (12-bit)
  - ✓ ID control (Epson's control code:4-bit+User's free code:11-bit)
- **Serial interface to set parameter and function, monitor from MCU (I2C bus)**
- **LED output control**
- **Band-gap reference.**
- **Oscillator (16MHz)**
- **Shipment in SQFN9-64PIN (9.0mm×9.0mm)**
- **No anti-radiation and light resistance design**0.1W secondary power receiver

# S1A00121F

## ■ BLOCK DIAGRAM



## ■ PACKAGE OUTLINE



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