

## PowerZero™ Series PWM Flyback Controller

### General Description

The RT7781 is a series of high-performance current mode PWM controllers with Richtek proprietary PowerZero™ technology. The PowerZero™ provides an excellent green power solution, especially under light-load and no-load conditions. The integrated high-voltage device provides fast start-up function without external start-up resistors. It also features brown-in and brown-out detection.

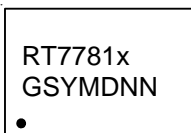
The RT7781 offers complete protection functions such as internal Over-Temperature Protection (OTP), Over-Load Protection (OLP) and VDD Over-Voltage Protection (OVP). It also features Secondary Rectifier Short-circuit Protection (SRSP) and Current Sensing pin (CS) open-circuit protection. Due to these protections, design of power supply unit becomes simple and reliable.

The RT7781 provides several versions, shown in the RT7781 version table, for various applications. It is targeted for cost-effective and compact power supply units such as NB adaptors.

### Features

- PowerZero™ Technology
  - Integrated 700V Start-Up Device
  - Brown-In and Brown-Out
- Low No-Load Input Power (<50mW) (RT7781G/L/A/C)
- Low No-Load Input Power (<30mW) (RT7781T)
- Accurate Over Load Protection
- Driver Capability : 400mA/–400mA
- PRO Pin for Arbitrary External Protection (RT7781G/L/A/T)
- ACD Pin for TV Application (RT7781C)
- Disable Mode for 30mW Solution (RT7781T)
- Jittering Frequency
- Soft Driving for Reducing EMI Noise
- VDD Over Voltage Protection
- Internal Over Temperature Protection
- Secondary Rectifier Short Protection
- CS Pin Open Protection
- RoHS Compliant and Halogen Free

### Marking Information



RT7781xGS : Product Number  
 x : G/L/A/T/C  
 YMDNN : Date Code

### Applications

- NB Adaptor
- Switching AC/DC Adaptor with Low No-Load Input Power
- TV and Monitor Applications
- Open Frame Power Supply

### Simplified Application Circuit

