

*Parameters Subject to Change Without Notice*

### DESCRIPTION

JW<sup>®</sup>1221 is a controller for driving external NMOSFET to remove the 100/120Hz LED current ripple on AC/DC power by a capacitor between VC and GND.

The adaptive technology of JW1221 ensures minimum power dissipation on NMOSFET while removing LED current ripple.

JW1221 allows user to setup maximum LED current by the sensing resistor between the source of NMOSFET and ground, which protects NMOSFET from being damaged when LED short connected or hot-plug.

By sensing the drain voltage of NMOSFET via a resistor between the drain and VLMT pin, JW1221 allows user to setup the maximum cathode voltage of LED string, which could help limit the power dissipation on chip.

It is considered that LED is shorted when the cathode voltage of LED is higher than short connecting threshold and remains over 60us JW1221 shuts down NMOSFET when LED is shorted and recovers after 13ms.

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JW1221 provides over thermal protection. When the temperature of JW1221 exceed 135°C, OTP is trigged. JW1221 shuts down NMOSFET until the temperature decrease to 110°C.

### FEATURES

- Controller for adaptive 100/120Hz current ripple remover
- Built-in zener diode for input voltage clamping
- VG output voltage high to 10V
- Programmable amplitude of LED current ripple
- Programmable maximum cathode voltage of LED
- Programmable maximum LED current
- Short protection
- Over temperature protection
- SOT23-6 Package

### APPLICATIONS

- LED lighting

### TYPICAL APPLICATION

