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XR46083 Product Brief

Three Terminal Current Controller

Description

The XR46083 is a Three Terminal Current Controller (TTCC) for regulating the current flowing through an LED string.

The application of the XR46083 is configured in parallel with an LED string. The XR46083 can work as voltage controlled current source, current regulator, or cut-off. It is suitable for the applications adopting periodical AC voltage source.

The layout is very flexible allowing for PCB designs in any conceivable shape. Whether high bay, downlights, or unique architectural shapes the XR46083 can provide an excellent LED lighting solution

FEATURES

- System
  - All solid state components
  - No electrolytic capacitor required
  - Compact size to minimize mechanical cost
  - Driver-on-board and chip-on-board available which minimize process flow and assembly cost
  - High PF and low THD performance
  - High efficiency achieved
  - Flexible PCB layout style
  - Wide range of LED forward voltage selection
  - Distributed heat to several chips
  - TRIAC dimmable
- Chip
  - 88V input sustaining voltage
  - < 3V dropout voltage for up to 150mA regulating current

APPLICATIONS

- LED Lighting Applications
  - Downlight
  - High bay
  - Specialty
  - Architectural

Typical Application

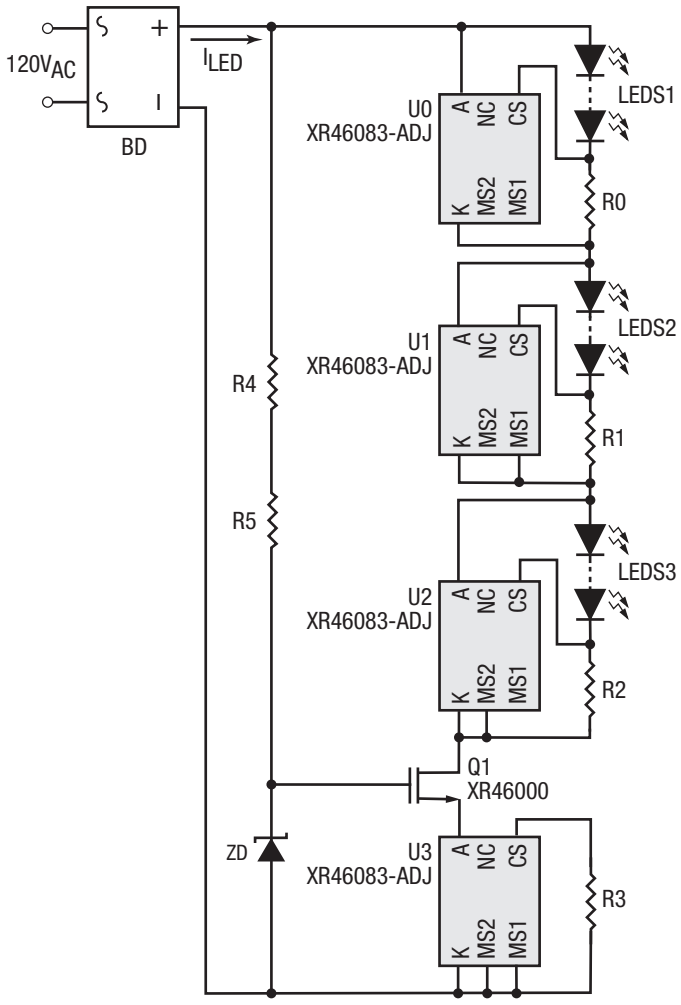

Figure 1. Typical Application

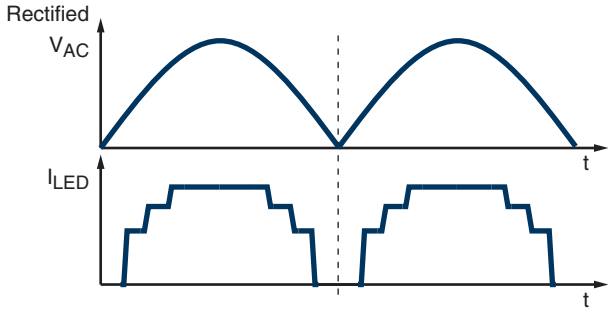

Figure 2. Typical Performance

Ordering Information[1]

Part Number	Regulating Current (mA)	Operating Temperature Range	Lead-Free	Package	Packag Method
XR46083EHTR-C1[3]	40	-40°C ≤ T_J ≤ 150°C	Yes[2)]	TDFN6 2x2	Reel
XR46083EHTR-C2[3]	66				
XR46083EHTR-C3[3]	52				
XR46083EHTR-D1[3]	80				
XR46083EHTR-D2[3]	130				
XR46083EHTR-D3[3]	104				
XR46083EHTR-ADJ	Determined by external resistor only				
XR46083ESFTR-C1[3]	40	-40°C ≤ T_J ≤ 150°C	Yes[2]	SOT-89-5	Reel
XR46083ESFTR-C2[3]	66				
XR46083ESFTR-C3[3]	52				
XR46083ESFTR-D1[3]	80				
XR46083ESFTR-D2[3]	130				
XR46083ESFTR-D3[3]	104				
XR46083ESFTR-ADJ	Determined by external resistor only				
XR46083ECF-C1[3]	40	-40°C ≤ T_J ≤ 150°C	Yes[2]	Dice	Wafer
XR46083ECF-C2[3]	66				
XR46083ECF-C3[3]	52				
XR46083ECF-D1[3]	80				
XR46083ECF-D2[3]	130				
XR46083ECF-D3[3]	104				
XR46083ECF-ADJ	Determined by external resistor only				

NOTE:
1. Refer to www.exar.com/XR46084 for most up-to-date Ordering Information.
2. Visit www.exar.com for more information.
3. Contact factory for availability.

Please contact LEDtechsupport@exar.com to request a complete datasheet.

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