



BCR4xxxE6327

SOT343/SC74 Space-Saving LED Driver

The Infineon BCR family of LED drivers is offered at very low cost options. It comes in small package sizes (such as the 2.1 mm x 2 mm SOT343), input voltages up to 40V, and with the ability to drive LEDs up to 3W.

BCR40XX devices offer a cost effective alternative to resistor biasing providing the following advantages:

- Constant light output since drivers compensate for voltage and temperature variations
- Protection from thermal runaway, overvoltage, polarity reversal
- Higher efficiency and lower overhead voltage requirements
- Lower system cost by allowing use of LEDs with variations in forward voltage instead of requiring binned LEDs for consistent light output

The BCR450 plus NPN is an ideal product for driving high current LEDs since it provides tight current control and thermal protection. This solution provides Switchmode solutions with following advantages:

- 1/4 to 1/3 of the system cost
- No EMI radiation
- Low component count small size circuit
- Efficiency of up to 85%

Applications

- Industrial
 - Signs (replaces Neon illumination)
 - Architectural lighting
 - Landscape, pool, and accent lighting
 - Traffic lights
 - Emergency lighting
 - Display backlighting
 - Incandescent replacement lamps

- Automotive
 - Signal lights
 - Daytime running and fog lights
 - Interior illumination
 - Accent light strips
 - Backlighting

Features

BCR40x

- Constant current adjustable from 10 mA to 65 mA, extendable to 700 mA using external booster transistor
- Operating voltage up to 40V
- ON/OFF feature
- Self protection due to negative temperature coefficient
- Control input for PWM dimming

BCR450

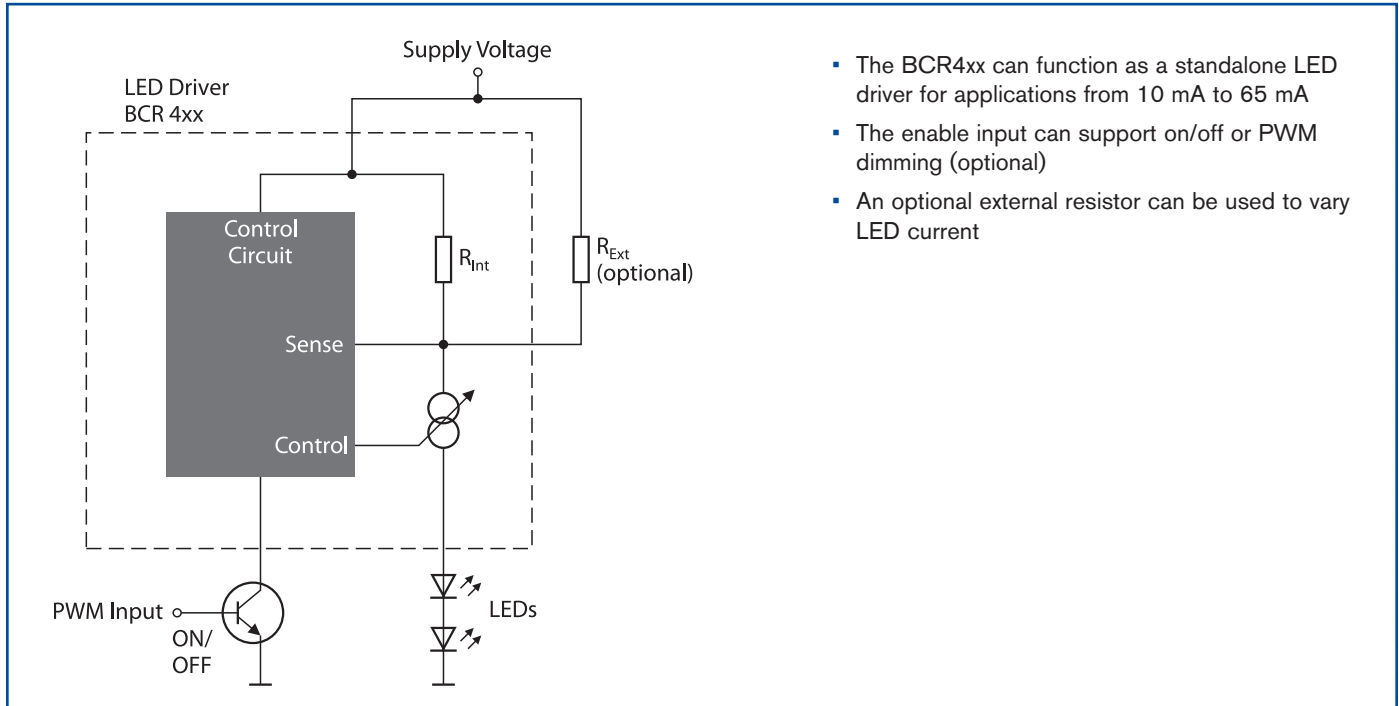
- High precision current control $\pm 1.6\%$ at 25°C
- Output current adjustable from 10 mA to 85 mA in stand-alone, or 85 mA to 5A with external transistor
- Over voltage protection up to 45V, maximum operating voltage 27V
- Thermal shutdown-protection for LEDs
- Low-voltage overhead of 0.45V (when used with external NPN)
- Control input for PWM dimming

BCR4xxxE6327 Family

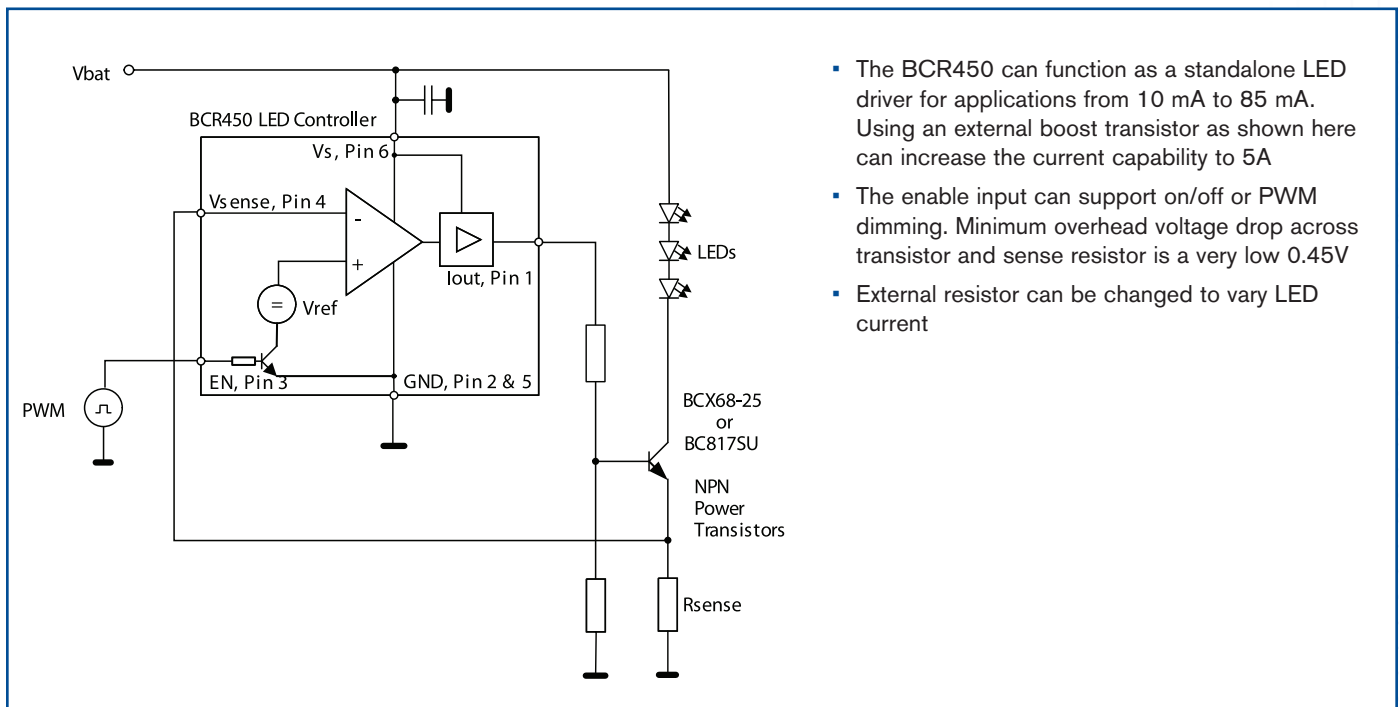
Product	Package	V _{CC} Maximum (V)	Current*		P _{tot} (W)	Thermal Protection
			I _d Typical (mA)	I _d Maximum (mA)		
BCR401W	SOT343	18	10	60	0.5	No
BCR402W	SOT343	18	20	60	0.5	No
BCR401U	SC74	40	10	65	0.5	No
BCR402U	SC74	40	20	65	0.5	No
BCR405U	SC74	40	50	65	0.5	No
BCR450	SC74	27	–	85	0.5	Yes
BCR450 +NPN*	SC74	27	–	2000	5	Yes

* Current can be adjusted by usage of external resistor.

BCR4xx Application Example



BCR450 Application Example



For more information, such as datasheets and app notes, visit www.arrow.com/arrowedge.