

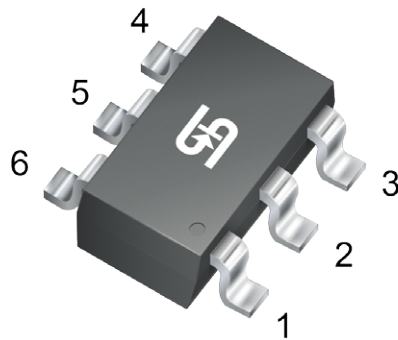


TSCR400CX6H, TSCR402CX6H

AUTOMOTIVE CONSTANT CURRENT REGULATED LED DRIVER

The [TSCR400](#) & [TSCR402](#) are High-Side Constant Current Regulator (CCR) for linear LED driving. The device regulates with a preset [TSCR400](#) 0.1mA and [TSCR402](#) 20mA nominal that can be adjusted with an external resistor up to 65mA. It is designed for driving LEDs in strings and will reduce current at increasing temperatures to self-protect. Operating as a series linear CCR for LED string current control, it can be used in multiple applications, as long as the maximum supply voltage to the device is <40V.

The output current at higher temperatures is the result of the negative temperature coefficient of $-0.07\%/^{\circ}\text{C}$ of the LED driver.



Pin Definition

1. GND	6. R_{EXT}
2. OUT	5. OUT
3. OUT	4. V_S

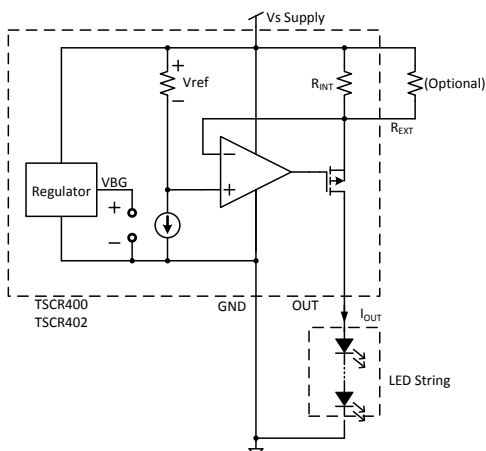
KEY FEATURES & ADVANTAGES:

- AEC-Q100 qualified with the following results:
 - Device temperature grade 1: -40°C to 125°C
 - Device HBM ESD classification level H2
 - Device CDM ESD classification level C6
- LED drive current preset:
 - TSCR400CX6: 0.1mA
 - TSCR402CX6: 20mA
- Continuous output current up to 65mA with an external resistor
- Easy paralleling of drivers to increase current
- Supply voltage up to 40V
- Good temperature coefficient vs. output current
- PPAP capable

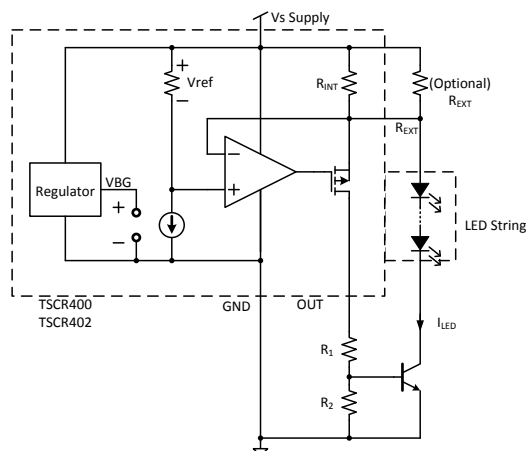
APPLICATION:

- Ambient light
- Interior light
- Turn signals
- Rear cluster lighting
- Puddle & Sill lights
- Reading light
- Instrument cluster illumination

TYPICAL APPLICATION CIRCUIT:



Application Circuit for LED Stand-alone current source



Application Circuit for Boost mode current source with external power transistor

COMPARABLE ALTERNATIVE:

PART NUMBER	INFINEON	DIODE INC	NEXPERIA
TSCR400CX6H	BCR401UE6327 BCR400W	BCR401UW6Q-7	NCR401U
TSCR402CX6H	BCR402UE6327 BCR405UE6327	BCR402UW6Q-7 BCR405UW6Q-7	NCR402U NCR405U

KEY PERFORMANCE:

Part Number	Breakdown Voltage [V]	Input Voltage [V]	Preset Current [mA]	Adj. Output Current [mA]	Configuration	PWM from MCU	Package
TSCR400CX6H	40	1.6 ~ 40	0.1	0.1 ~ 65	High-Side	No	SOT-26
TSCR402CX6H	40	1.4 ~ 40	20	20 ~ 65	High-Side	No	SOT-26

ORDERING INFORMATION:

Ordering Part Number	Outline [Package]	Reel [PCS]	Reel Size [Inch]	Inner Box [PCS]	Carton [PCS]	Carton Size [PCS]	Gross Weight [Kg/ Carton]
TSCR400CX6H RFG	SOT-26	3,000	7	12,000	144,000	390*290*400	9.5
TSCR402CX6H RFG	SOT-26	3,000	7	12,000	144,000	390*290*400	9.5

For pricing and more information, please contact TSC sales or authorized distributors.