Product Overview

NSIC2020JB: LED Driver, Constant Current Regulator, 120 V, 20 mA, ±15%, for A/C off-line applications

For complete documentation, see the data sheet.

The linear constant current regulator (CCR) is a simple, economical and robust device designed to provide a cost-effective solution for regulating current in LEDs (similar to Constant Current Diode, CCD). The CCR is based on Self-Biased Transistor (SBT) technology and regulates current over a wide voltage range. It is designed with a negative temperature coefficient to protect LEDs from thermal runaway at extreme voltages and currents.

The CCR turns on immediately and is at 45% of regulation with only 0.5 V Vak. It requires no external components allowing it to be designed as a high or low-side regulator.

The 120 V anode-cathode voltage rating is designed to withstand the high peak voltage incurred in A/C offline applications. The high anode-cathode voltage rating withstands surges common in Automotive, Industrial and Commercial Signage applications.

Features

- Voltage Surge Suppressing
- SBT (Self-Biased Transistor) Technology
- Robust Power Package: 3 W
- Wide Operating Voltage Range
- Immediate Turn-On
- Negative Temperature Coefficient
- Also available in 30 mA (NSIC2030JBT3G) and 50 mA (NSIC2050JBT3G)
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant
- UL94-V0 Certified
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable

  For more features, see the data sheet

Benefits

- Protecting LEDs
- Simplfies design, minimizes required components

Applications

- LED Driving
- Current regulation

End Products

- Automotive: Chevron Side Mirror Markers, Cluster, Displays & Instruments Backlighting, CHMSL, Map Light
- AC Lighting Panels, Display Signage, Decorative Lighting, Channel Lettering

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	V_I Max (V)	I_O Max (mA)	LEDs in Series, Max #	LEDs in Parallel, Max #	Package Type
NSIC2020JBT3G	0.1827	Pb-free Halide free non AEC-Q and PPAP	Active	120	20	80	18	SMB-2
NSVC2020JBT3G	0.2009	AEC Qualified PPAP Capable Pb-free Halide free	Active	120	20	80	18	SMB-2

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