

## Product Overview

### HBL5006: LED Electronic Shunt

For complete documentation, see the data sheet.

The HBL5006 Series are electronic shunts which provide a current bypass in the case of LEDs going into open circuit. LEDs are by nature quite fragile when subjected to transients and surge conditions. There are also many cases where high reliability of the LED lighting must be maintained such as in headlights, lighthouses, bridges, aircraft, runways and so forth. In these cases the low cost addition of the shunt device will provide full assurance that an entire string of LEDs will not extinguish should one LED fail open. The shunt device is also applicable to other loads where circuit continuity is required. The devices are designed to be used with currents from 30 to 500 mA.

### Features

- A Bidirectional Device
- Automatically Resests Itself if the LED Heals Itself or is Replaced
- ON-State Voltage Typically 1.1 V
- OFF-State Current less than 1.0  $\mu$ A
- SZ Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb-Free and are RoHS Compliant

### Applications

- LEDs where Preventive Maintenance is Impractical
- LED Headlights in Automobiles
- Automotive LED Applications
- LEDs with High Reliability Requirements
- Crowbar Protection for Open Circuit Conditions

## Part Electrical Specifications

Product	Compliance	Status	Channel Polarity	$V_{(BR)DSS}$ Min (V)	$I_D$ Typ (A)	$r_{DS(on)}$ Max (m $\Omega$ )	$P_D$ Max (W)	Package Type
HBL5006HT1G	Pb-free	Active	-	5.5	0.0000005	-	1.56	SOD-323
	Halide free							
HBL5006P2T5G	Pb-free	Active	-	5.5	0.0000005	-	1.56	SOD-923-2
	Halide free							
HBL5006XV2T1G	Pb-free	Active	-	5.5	0.0000005	-	1.56	SOD-523-2
	Halide free							
HBL5006XV2T5G	Pb-free	Active		5.5	0.0000005		1.56	SOD-523-2
	Halide free							
SZHBL5006HT1G	AEC Qualified	Active	-	5.5	0.0000005	-	1.56	SOD-323
	PPAP Capable							
	Pb-free							
	Halide free							
SZHBL5006P2T5G	AEC Qualified	Active	-	5.5	0.0000005	-	1.56	SOD-923-2
	PPAP Capable							
	Pb-free							
	Halide free							
SZHBL5006XV2T1G	AEC Qualified	Active	-	5.5	0.0000005	-	1.56	SOD-523-2
	PPAP Capable							
	Pb-free							
	Halide free							
SZHBL5006XV2T5G	AEC Qualified	Active		5.5	0.0000005		1.56	SOD-523-2
	PPAP Capable							
	Pb-free							
	Halide free							

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Created on: 9/23/2019