

## Product Overview

### NIS6150: +5 Volt Electronic eFuse

For complete documentation, see the data sheet.

The NIS6150 is a cost effective, resettable fuse which can greatly enhance the reliability of a USB application from both catastrophic and shutdown failures. It is designed to buffer the load device from excessive input voltage which can damage sensitive circuits and to protect the input side circuitry from reverse currents. It includes an overvoltage clamp circuit that limits the output voltage during transients but does not shut the unit down, thereby allowing the load circuit to continue its operation.

#### Features

- 200 mΩ Max RDS(on)
- Integrated Reverse Current Protection
- Adjustable Output Current Limit Protection with Thermal Shutdown
- IEC61000-4-2 Level 4 ESD Protection for Vbus up to ±8 kV
- Fast Response Overvoltage Clamp Circuit with Selectable Level
- Digital Enable with Separate FLAG pins
- Integrated Current Monitoring
- Both Latching and Auto-Retry Options Available
- NIV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

For more features, see the data sheet

#### Benefits

- Increased Efficiency
- Automotive Short-to-Battery Protection
- Accurate Over-current Protection for Sensitive Loads
- Robust System Level ESD Protection
- Accommodating for different VBUS drive levels
- Load Diagnostics and fault identification
- Load Diagnostics
- Fail-Open Options
- Automotive Qualified

#### Applications

- USB 2.0/3.0/3.1 VBUS
- USB Type-C PD Charging
- Solid State Drives
- Mother Boards

#### End Products

- Solid State Drives
- Automotive Infotainment

### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Type	V <sub>I</sub> Max (V)	r <sub>DS(on)</sub> Max (mΩ)	T <sub>SD</sub> Typ (°C)	T <sub>hyst</sub> Typ (°C)	Package Type
NIS6150MT1TXG	0.3851	Pb-free Halide free non AEC-Q and PPAP	Active	Latch	10	200	175	45	WDFNW-10
NIS6150MT2TXG	0.3851	Pb-free Halide free non AEC-Q and PPAP	Active	Auto-Retry	10	200	175	45	WDFNW-10
NIV6150MT1TXG	0.4547	AEC Qualified PPAP Capable Pb-free Halide free	Active	Latch	10	200	175	45	WDFNW-10
NIV6150MT2TXG	0.4547	AEC Qualified PPAP Capable Pb-free Halide free	Active	Auto-Retry	10	200	175	45	WDFNW-10

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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