

NIS6150

+5 Volt Electronic eFuse

Product Overview

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 _I Max (V)	r _{DS(on)} Max (mΩ)	T _{SD} Typ (°C)	T _{hyst} Typ (°C)	Package Type
NIS6150MT1TXG	0.2888		Active	Latch	10	200	175	45	WDFNW-10
NIS6150MT2TXG	0.2888		Active	Auto-Retry	10	200	175	45	WDFNW-10
NIV6150MT1TXG	0.4547		Active	Latch	10	200	175	45	WDFNW-10
NIV6150MT2TXG	0.4547		Active	Auto-Retry	10	200	175	45	WDFNW-10