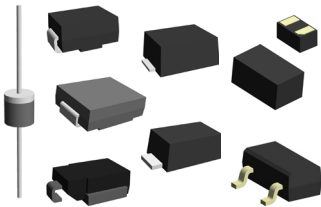




Eaton TVS diodes provide overvoltage protection in automotive and high-reliability applications



Eaton's high-reliability transient voltage suppression (TVS) diodes provide overvoltage protection with very fast response times, low clamping voltage, and high peak current capability in a host of automotive applications.

Product description

Eaton's high-reliability transient voltage suppression (TVS) diodes provide overvoltage protection with very fast response times, low clamping voltage, and high peak current capability in a host of automotive applications. These products are AEC-Q101 qualified and available in surface mount and radial/through-hole footprints. Eaton TVS diodes utilize silicon avalanche technology for excellent protection against damaging transients, from ESD up to induced lightning.

Eaton's power TVS diodes can suppress up to 8 kW of peak power dissipation and 247 A to 350 A on a 10/1000 μ s waveform for surface-mount packages. The radial/through-hole packages can suppress up to 12 kW peak power and 270 A on 10/1000 μ s waveforms. Many of these families also meet ISO 16750. The high peak power and current capability combined with their fast-acting response times make these TVS diodes ideal for protecting circuits. Eaton's TVS

diodes are offered in the most common surface-mount diode packages for both ESD and high-power suppression.

Eaton's ESD Suppressor TVS Diodes provide highly reliable protection against very fast and damaging voltage transients, such as electrostatic discharge (ESD) and electrically fast transient (EFT) events. With their high peak power and current capability combined with very fast-acting response times, they are ideal for protecting I/O interfaces as well as digital and analog signal lines by using very low clamping voltage and operating in nanoseconds. Eaton's TVS Diode ESD Suppressors are AEC-Q101 qualified and available in reverse working voltages from 3.3 V up to 36 V and capacitances down to 0.25 pF.

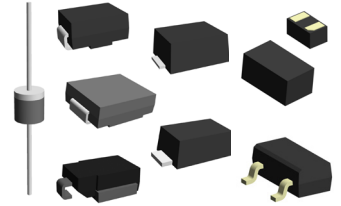
Features and benefits

- Multiple surface-mount and radial/through-hole footprints suitable for a broad range of applications
- A wide range of reverse working voltages with ultra-low clamping voltages, suitable for both low and high-power applications
- ESD, EFT, and induced lightning protection in surface mount and radial/through-hole constructions
- AEC-Q101 qualified for superior performance and reliability in automotive applications
- Low capacitance options, down to 0.25 pF
- Protects automotive communication protocols (CAN and LIN) and also higher speed data
- ESD portfolio offers discrete and array packages

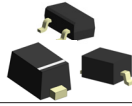


Powering Business Worldwide

Automotive-rated TVS diodes: sizes and selection



Automotive-rated TVS diodes - Surface mount

Photo	Family	Package type	Reverse working voltage (V _{BR})	Peak pulse power (8/20µs)	Peak pulse current (10/1000 µs)
	STN101050* STN254050*	DFN1006 DFN2510	5 V	100 W**	Up to 7 A**
	STS232* STS321* STS521*	SOT-23 SOT-323 SOD-523	5 to 24 V 3.3 to 24 V 3.3 to 36 V	350 W** 400 W** 300 W**	Up to 18 A**
	SMFE (200 W) SMFE (400 W)	SOD-123FL	5 to 220 V 5 to 85 V	200 W 400 W	Up to 22 A Up to 40 A
	SMAJE	SMA	5 to 440 V	400 W	Up to 44 A
	SMBJE	SMB	5 to 460 V	600 W	Up to 65 A
	15BJ	SMBF	5 to 200 V	1500 W	Up to 163 A
	SMCJE SMDJE 5-OSMDJ	SMC	15 to 440 V 12 to 54 V 15 to 43 V	1500 W 3000 W 5000 W	Up to 62 A Up to 151 A Up to 205 A
	SM8S SM8T	DO-218AB	10 to 43 V 20 to 43 V	6600 W 8000 W	Up to 247 A

Automotive-rated TVS diodes - Radial/Through-hole

Photo	Series	Package type	Reverse working voltage (V _{BR})	Peak pulse power (10/1000 µs)	Peak pulse current (10/1000 µs)
	6KPE	R-6/P-600	15 to 43 V	6600 W	Up to 271 A
	12KPE	R-6/P-600	20 to 72 V	12000 W	Up to 350 A

*= Indicates ESD Suppressor automotive TVS diode

No * = Indicates High power automotive TVS diode

**= 8/20 µs waveform

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