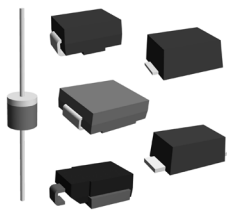




TVS diodes for transient voltage suppression in automotive applications



Eaton 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 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.

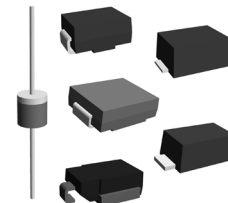
Features and benefits

- 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 or through-hole constructions
- AEC-Q101 qualified for superior performance and reliability in automotive applications









Powering Business Worldwide



Automotive-rated TVS diodes: sizes and selection



Automotive-rated TVS diodes - Surface mount

Photo	Series	Package type	Reverse working voltage (V_{BR})	Peak pulse power (10/1000 μ s)	Peak pulse current (10/1000 μ s)
	SMFE (200 W)	SOD-123FL	5 to 220 V	200 W	Up to 22 A
	SMFE (400 W)		5 to 85 V	400 W	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	SMC	15 to 440 V	1500 W	Up to 62 A
	SMDJE		12 to 54 V	3000 W	Up to 151 A
	5-OSMDJ		15 to 43 V	5000 W	Up to 205 A
	SM8S	DO-218AB	10 to 43 V	6600 W	Up to 247 A
	SM8T		20 to 43 V	8000 W	

Automotive-rated TVS diodes - Radial/Through-hole

Photo	Series	Package type	Reverse working voltage (V_{BR})	Peak pulse power (10/1000 μ s)	Peak pulse current (10/1000 μ s)
	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

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