



Vishay Intertechnology 24 V XClampR TVS in SMC and DO-218AB Packages Deliver Industry's Lowest Clamping Ratios for High Power Density

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Bidirectional Devices Combine High Power Dissipation and Pulse Current With High Temperature Reliability for Automotive, Telecom, and Industrial Applications

MALVERN, Pa., June 14, 2022 (GLOBE NEWSWIRE) -- Vishay Intertechnology, Inc. (NYSE: VSH) today introduced three new series of 24 V surface-mount XClampR transient voltage suppressors (TVS) that offer high peak pulse power dissipation equivalent to the 7 kW of conventional TVS at 10/1000 μ s in the SMC (DO-214AB) package and 10/10 000 μ s in the DO-218AB. The bidirectional devices deliver high power density over a wide operating temperature range of -55 C to +175 C for automotive, telecom, and industrial applications.

With a low clamping voltage of 24 V maximum, [XMC7K24CA](#) series devices offer a higher peak pulse current (I_{ppm}) of 180 A at 10/1000 μ s — equivalent to the 7 kW power rating of conventional TVS — in the SMC package. With a clamping voltage of 26 V maximum, the [XLD5A24CA](#) and [XLD8A24CA](#) series offer I_{ppm} of 120 A and 180 A at 10/10 000 μ s, which is equivalent to the 4.6 kW and 7 kW power ratings of conventional TVS, respectively, in the DO-218AB package.

Suitable for high reliability applications, the Vishay General Semiconductor TVS released today are available in AEC-Q101 qualified versions and offer extremely stable breakdown voltages from 26.7 V to 29.5 V over their entire operating temperature range. Designed to protect sensitive electronic equipment against voltage transients induced by inductive load switching and lightning, the TVS are intended for automotive load dump protection and signal line protection in industrial robot arms and telecom systems.

For applications with stand-off voltages greater than 24 V — such as 48 V belt starter (BSG) and integrated starter (ISG) generators in mild hybrid electric vehicles (HEV) — XLD5A24CA, XLD8A24CA, and XMC7K24CA series devices can be paired in series with a standard TVS. The devices are RoHS-compliant and halogen-free, and they offer a moisture sensitivity level (MSL) of 1 in accordance with J-STD-020, LF maximum peak of 245 C.

Device Specification Table:

Part number	XLD5A24CA	XLD8A24CA	XMC7K24CA
Max. working stand-off voltage	24 V		
Breakdown voltage	26.7 V to 29.5 V		
Max. clamping voltage	26 V	26 V	24 V
Peak pulse power (10/1000 μ s)	7700 W ⁽¹⁾	11 000 W ⁽¹⁾	7000 W ⁽¹⁾
Peak pulse current (10/1000 μ s)	200 A	300 A	180 A
Peak pulse power (10/10 000 μ s)	4600 W ⁽¹⁾	7000 W ⁽¹⁾	1100 W ⁽¹⁾
Peak pulse current (10/10 000 μ s)	120 A	180 A	30 A
Max. reverse leakage current	1.0 μ A		
Max. operating junction temperature	+175 C		
Polarity	Bidirectional		
Package	DO-218AB	DO-218AB	SMC (DO-214AB)

(1) Equivalent I_{ppm} with conventional TVS

Samples and production quantities of the XClampR TVS are available now, with lead times of 12 weeks.

Vishay manufactures one of the world's largest portfolios of discrete semiconductors and passive electronic components that are essential to innovative designs in the automotive, industrial, computing, consumer, telecommunications, military, aerospace, and medical markets. Serving customers worldwide, Vishay is **The DNA of tech**.[™] Vishay Intertechnology, Inc. is a Fortune 1000 Company listed on the NYSE (VSH). More on Vishay at www.Vishay.com.

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Link to product datasheet:

<http://www.vishay.com/ppg298241> (SMC3K10CAHM3_A THRU SMC3K120CAHM3_A)

Link to product photo:

<https://www.flickr.com/photos/vishay/albums/72177720299640455>

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