

# 24 V XClampR® TVS in SMC (DO-214AB) and DO-218AB Packages

## KEY BENEFITS

- High peak pulse power dissipation
  - 180 A at 10/1000  $\mu$ s, equivalent to 7 kW power rating of conventional TVS, in the SMC (DO-214AB)
  - 120 A and 180 A at 10/10,000  $\mu$ s, equivalent to 4.6 kW and 7 kW power rating of conventional TVS, respectively, in the DO-218AB
- Low clamping voltage
  - Down to 24 V maximum in the SMC (DO-214AB)
  - Down to 26 V maximum in the DO-218AB
- Wide operating temperature range of -55 °C to +175 °C
- Suitable for high reliability applications
  - Available in AEC-Q101 qualified versions
  - Extremely stable breakdown voltage from 26.7 V to 29.5 V over their entire operating temperature range
- RoHS-compliant and halogen-free
- Moisture sensitivity level (MSL) of 1 in accordance with J-STD-020, LF maximum peak of 245 °C
- Delivers industry-low clamping ratios for high power density



## APPLICATIONS

- Automotive load dump and signal line protection in industrial robot arms and telecom systems



The DNA of tech.®

## XClampR® Transient Voltage Suppressors

### 24 V XClampR® TVS in SMC (DO-214AB) and DO-218AB Packages Deliver Industry-Low Clamping Ratios for High Power Density

The three bidirectional 24 V surface-mount XClampR® transient voltage suppressors (TVS) offer high peak pulse power dissipation equivalent to a 7 kW power rating of conventional TVS at 10/1000  $\mu$ s in the SMC (DO-214AB) and DO-218AB packages. The devices deliver high power density over a wide operating temperature range of -55 °C to +175 °C for automotive, telecom, and industrial applications.

Suitable for high reliability applications, the devices are available in AEC-Q101 qualified versions and offer extremely stable breakdown voltage 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 and signal line protection in industrial robot arms and telecom systems.

#### XClampR® VTS

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

#### Note

<sup>(1)</sup> Equivalent  $I_{PPM}$  with conventional TVS