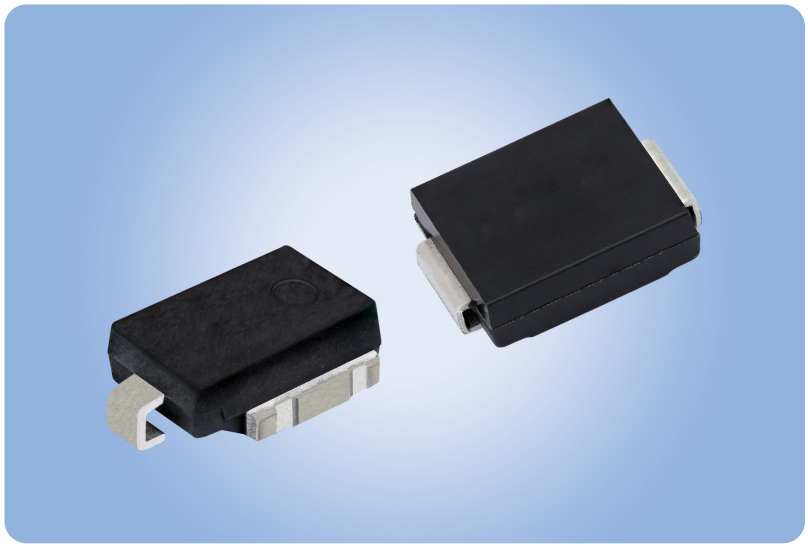
VISHAY
The DNA of tech.™

DIODES

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



KEY BENEFITS

- High peak pulse power dissipation
  - 7 kW at 10/1000 µs in the SMC (DO-214AB)
  - 7 kW at 10/10000 µs in the DO-218AB
- Low maximum clamping voltage
  - Down to 24 V in the SMC (DO-214AB)
  - Down to 26 V in the DO-218AB
- Low clamping ratios (V_C/V_{BR})
  - Down to 0.81 in the SMC (DO-214AB)
  - Down to 0.88 in the DO-218AB
- Wide operating temperature range of -55 °C to +175 °C
- High peak pulse current
  - 180 A at a 7 kW power rating in the SMC (DO-214AB)
  - 120 A and 180 A in the DO-218AB at power ratings of 4.6 kW and 7 kW, respectively
- 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

APPLICATIONS

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

RESOURCES

- Datasheets: XLD5A24CA - www.vishay.com/ppg?87199
  XLD8A24CA - www.vishay.com/ppg?87200
  XMC7K24CA - www.vishay.com/ppg?87023
- For technical questions contact DiodesAmericas@vishay.com, DiodesEurope@vishay.com, DiodesAsia@vishay.com
- Material categorization: for definitions of compliance, please see www.vishay.com/doc?99912

The DNA of tech.™

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 to 7 kW at 10/1000 µs in the SMC (DO-214AB) package and 7 kW at 10/10 000 µs in the DO-218AB. Featuring industry-low clamping ratios (V_C/V_{BR}), 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 protection and signal line protection in industrial robot arms and telecom systems.

XClampR™ TRANSIENT VOLTAGE SUPPRESSORS			
PART NUMBER	**XLD5A24CA**	**XLD8A24CA**	**XMC7K24CA**
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 µs)	7700 W (1)	11 000 W (1)	7000 W (1)
Peak pulse current (10/1000 µs)	200 A	300 A	180 A
Peak pulse power (10/10 000 µs)	4600 W (1)	7000 W (1)	1100 W (1)
Peak pulse current (10/10 000 µs)	120 A	180 A	30 A
Maximum reverse leakage current	1.0 µA	1.0 µA	1.0 µA
Maximum operating junction temperature	175 °C	175 °C	175 °C
Polarity	Bidirectional	Bidirectional	Bidirectional
Package	DO-218AB	DO-218AB	SMC (DO-214AB)

Note

(1) Equivalent I_{PPM} with conventional TVS