

Taiwan Semi Adds First SMC/SMB Devices to Its Automotive-Grade 24V SUPER CLAMP™ TVS Series

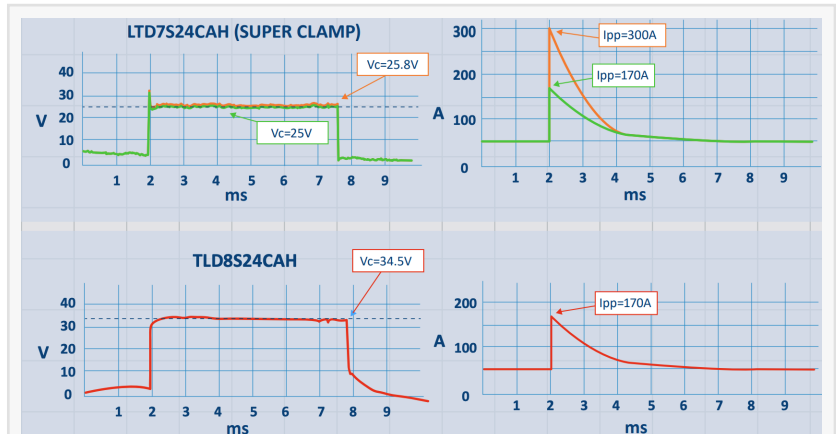
SUPER CLAMP TVS in SMC/SMB packages combine ultra-low clamping voltage and high surge current for superior protection in space-constrained automotive designs

BREA, CA, UNITED STATES, November 12, 2025 /EINPresswire.com/ -- [Taiwan Semiconductor](https://www.einpresswire.com/), global supplier of discrete power electronics devices, LED drivers, analog ICs, TVSs and ESD protection devices, introduces new automotive-grade 24V SUPER CLAMP snapback TVS devices in compact SMC and SMB surface-mount packages. With lower clamping voltages, higher peak pulse currents (I_{ppm} max.) and lower-voltage ratings than conventional TVSs,

SUPER CLAMP snapback devices allow circuit designers to use fewer, less costly components without compromising circuit reliability. Moreover, the new devices in SMC (LSMC24CAH) and SMB (LSMB24CAH) package options can help further reduce PCB space.

The complete [SUPER CLAMP TVS](#) series is offered in three package types: DO-214AB (SMC), DO-214AA (SMB) and DO-218AB. When used in compact surface-mount PCB layouts, SUPER CLAMP TVSs can reduce parts count and eliminate the need to overdesign to achieve automotive-level reliability. Providing maximum pulse currents of up to 300A, SUPER CLAMP TVSs provide a margin of system protection much higher than alternative options. They also provide protection superior to MOVs and GDTs, which are subject to failure after repetitive transients. In comparison, SUPER CLAMP TVS technology can provide virtually infinite lifespans if maximum die temperatures are not exceeded. This superior performance has significant reliability improvement implications for both new and existing applications.

“As processor and other VCC voltages in automotive designs keep getting lower, the need for more precise and aggressive transient protection is needed to reduce parts count and to protect these sensitive electronics,” said Sam Wang, vice president, TSC Products. “In addition to saving money and design time, the new SMB- and SMC-packaged SUPER CLAMP devices offer options



Super Clamp vs. TVS

Part Number	Package	V_{WM} (V)	V_{BR} (V)	Max I_{ppm} (A)	VC clamping (V)
LSMC24CAH	DO-214AB (SMC)	24	29.5 – 32.5	170	24
LSMB24CAH	DO-214AA (SMB)		31.0 – 35.0	45	
LTD7S24CAH	DO-218AB		26.7 – 29.5	300	

Super Clamp Specs



In addition to saving money and design time, the new SMB- and SMC-packaged SUPER CLAMP devices offer options for drop-in upgrades in space-limited designs where better protection is needed.”

Sam Wang

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Available Now: Samples: In-stock (DigiKey and Mouser)

Lead Time: Production Quantities: 8-14 weeks (ARO)

Design resources include comprehensive datasheets, spice models and CAD files (symbol, footprint, 3D model).

About Taiwan Semiconductor (TSC).

Recognized for more than 45 years for its core competence in discrete power rectifiers, Taiwan Semiconductor’s expanded product portfolio provides a complete solution

from one source: including trench Schottky’s, MOSFETs, power transistors, LED driver ICs, analog ICs and ESD protection devices. A global enterprise with over 2,000 employees, TSC’s production facilities in China and Taiwan are fully compliant with current automotive and environmental standards such as IATF16949, ISO9001 and ISO14001. Taiwan Semiconductor products are used in a vast array of applications in the electronics industry including automotive, computer, consumer, industrial, telecom and photovoltaic. Through strategic expansion of innovative manufacturing capabilities and its focus on pioneering efficient semiconductor solutions, TSC is the right choice for a successful and lasting business relationship.

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