

ESD protection for CAN nodes

Semtech (USA) has launched the μ Clamp2492SQ circuitry, which is AEC-Q100 qualified. The company established in 1967 is a supplier of analog and mixed-signal semiconductors.



The shown ESD protection circuitry is suitable for Classical CAN and CAN FD nodes (Photo: Semtech)

The 24-V transient voltage protection array is optimized to safeguard automotive CAN nodes from electrostatic discharge (ESD) and overvoltage transient threats. It features an 18-pF capacitance. "The new μ Clamp2492SQ, with its superior ESD robustness and low clamping voltage performance, provides automotive engineers a much needed solution to safeguard CAN nodes," stated Tamir Reshef from Semtech.

To adequately provide ESD immunity, CAN nodes require ESD protection circuits with 24-V working voltage and a low ESD clamping voltage to safeguard nodes from the harsh electrical environment in the car. The two-line μ Clamp2492SQ offers a low ESD clamping voltage while minimizing loading capacitance.

The component is housed in an SOT-23 3L package, and provides two lines of robust transient protection. The component exceeds the IEC 61000-4-2 ESD immunity standards, offering an industry-leading protection level of ± 30 -kV air and ± 30 -kV contact, and is qualified to Grade 1 of the AEC-Q100 Automotive Standard. The product is Pb-free and it is RoHS/WEEE compliant.

The Circuitry is available in production quantities. The supplier offers comprehensive design assistance, including field- and factory-based support. Data sheets, volume pricing, and delivery quotes, as well as evaluation kits and samples, are available by visiting the product page.

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