



Automotive Ethernet Protection

High Speed (1 GBit/s) In-Vehicle Data Line Protection Series for OPEN Alliance 10BASE-T1S, 100BASE-T1, and 1000BASE-T1 Applications

FEATURES

Single-line Bidirectional ESD Protection Diode

Clamping voltage $V_C = 32\text{ V typ.}$

Working range $V_{RWM} = \pm 24\text{ V}$

Trigger voltage $V_T > 100\text{ V}$

Leakage current $I_R < 0.1\ \mu\text{A}$

Capacitance $C_D < 2\text{ pF}$

Capacitance $C_D < 1\text{ pF}^*$

ESD immunity: 15 kV

* two devices in series according to OPEN Alliance 10Base-T1

This device has significant features in contrast to the competitor device:

V Very low clamping voltage

Very low dynamic resistance (0.4 Ω)

CERTIFICATION



APPLICATIONS



AUTOMOTIVE

www.vishay.com

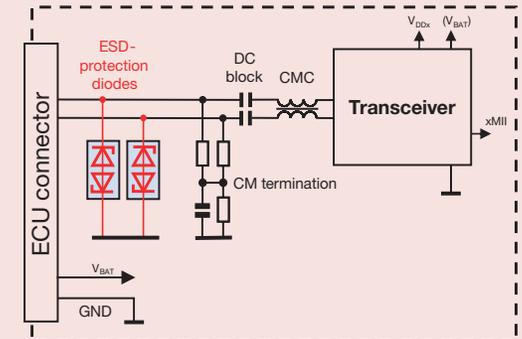


Single Test	Result	Comment / Resulting Class
S-parameter	Pass	
Damage ESD	Pass	
ESD discharge current measurement / CMC saturation class I	Pass ⁽¹⁾	$\pm 3\text{ kV}$: Class III $\pm 5\text{ kV}$: Class III $\pm 6\text{ kV}$: Class III $\pm 7\text{ kV}$: Class III $\pm 15\text{ kV}$: Class III
RF clamping	Pass ⁽¹⁾	Class III

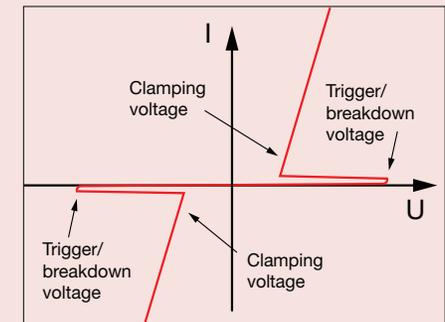
Note: ⁽¹⁾ Result in Pass because of the maximum defined limit class is fulfilled by the ESD suppression device

For technical questions: DiodesAmericas@vishay.com, DiodesEurope@vishay.com, or DiodesAsia@vishay.com

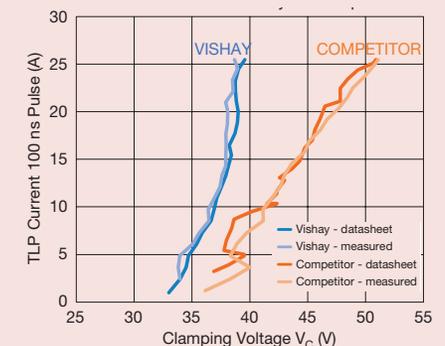
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Snap-Back Behavior



TLP Characteristic, Vishay vs. Competitor



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