

Automotive-grade ESD for CAN transceivers



ESDCAN automotive-grade solution simplifies qualification and speeds time-to-market

CAN interfaces need dual-channel, bidirectional, 24 V protection devices. After a first generation housed in SOT23-3L, STMicroelectronics has developed a family extension packaged in SOT323-3L. The new family range provides improvements with regards to dimensions (40% smaller), line capacitance (3.5 pF vs 30 pF) and voltage range. Indeed, the new series includes also 37 V (VBR) products compatible with 24 V systems. ESDCANxxY series is working up to 175 °C and sustains up to 30 kV ISO 10605 as well as ISO 7637 surges.

KEY FEATURES

- Dual-line ESD and EOS protection
- Bidirectional devices
- Max pulse power: up to 250 W (8/20 μ s)
- Stand-off voltage: from 24 V up to 36 V
- Low clamping factor VCL/VBR (VCL < 40 V)
- Low leakage current: 100 nA max
- Compliant with:
 - ISO 7637 3a and 3b
 - ISO 10605/IEC 61000-4-2: >25 kV air and contact

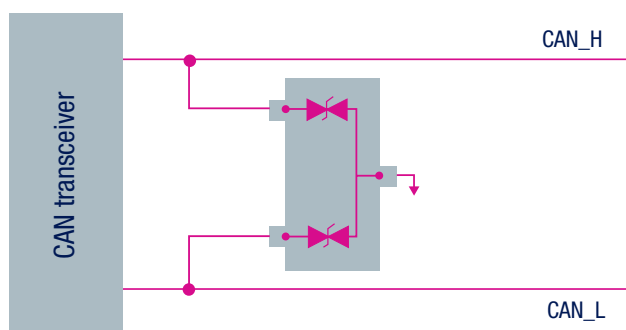
KEY BENEFITS

- Robust and safe circuit at first design loop:
- CAN transceiver protected against ESD and EOS
- Enables high-density PCB thanks to the small package (SOT23-3L and SOT323-3L)
- Transparency in the application lowering the design effort with
- Capacitance compliant with CAN datarate

ELECTRICAL PARAMETERS (AT $T_{AMB} = 25\text{ }^{\circ}\text{C}$)

Order code	I_{RM}	V_{RM}	VBR	IPP (8/20)	ISO 10605 ($R=330\ \Omega$, $C=330\text{pF}$)	C		ΔC	Package
	(μA)	(V)	min. (V)	max. (A)	(kV)	typ. pF	max. pF	(pF)	
ESDCAN24-2BLY	0.1	24	27	5.5	30	-	30	2	SOT23-3L
ESDCAN01-2BLY	0.1	24	25	5.5	30	-	30	2	SOT23-3L
ESDCAN02-2BWY	0.1	26.5	27	3.7	30	3	3.5	0.01	SOT323-3L
ESDCAN03-2BWY	0.1	24	25	3.7	30	3	3.5	0.01	SOT323-3L
ESDCAN04-2BWY	0.1	25.5	26	3.7	30	17	20	2	SOT323-3L
ESDCAN05-2BWY	0.1	36	37	3	30	3	3.5	0.01	SOT323-3L
ESDCAN06-2BWY	0.1	35	36	3	30	17	20	2	SOT323-3L

WIRING



CAN PROTECTION FAMILY

