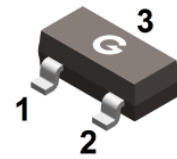
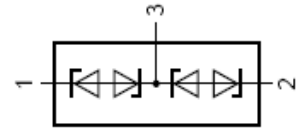


Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- Working voltage: $V_{\text{RWM}} = 24\text{V}$
- Low reverse clamping voltage
- Ultra low leakage current
- Due to the integrated diode structure only one small package is needed to protect two CAN bus lines
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



Typical Applications

- Automotive applications
- CAN bus protection

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TPESD1CANL	SOT-23	3000 pcs / Tape & Reel	ANL

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	$V_{\text{ESD-A}}$	± 30	kV
IEC 61000-4-2; ESD (Contact)	$V_{\text{ESD-C}}$	± 30	kV
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	280	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	7	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Junction Temperature	T_J	$-55 \sim +125$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	24	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1\text{mA}$	25.8	28	32	V
Reverse Leakage Current	I_R	$V_{RWM} = 24\text{V}$	-	-	50	nA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	30	35	V
		$I_{PP} = 7\text{A}, t_p = 8/20\mu\text{s}$	-	40	50	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	19	40	pF

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

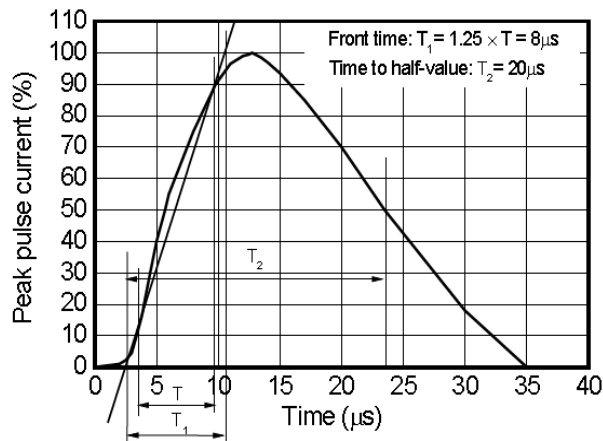


Fig 1 8/20 μs waveform per IEC61000-4-5

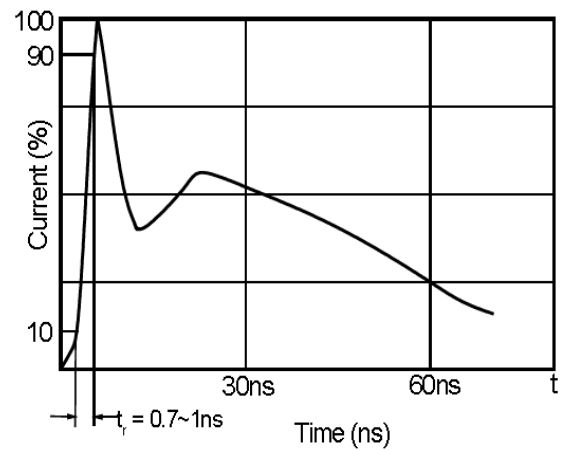


Fig 2 ESD pulse waveform according to IEC61000-4-2

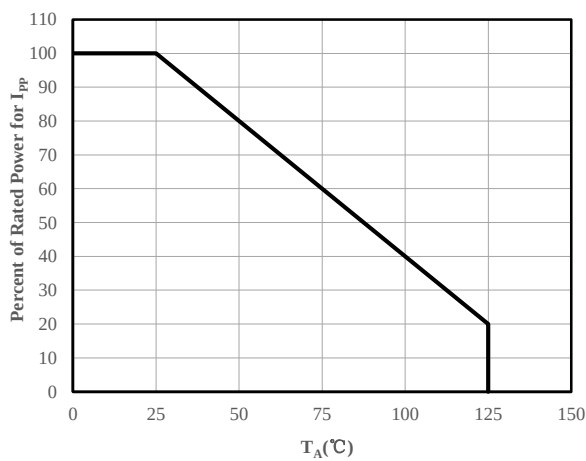


Fig 3 Power Derating Curve

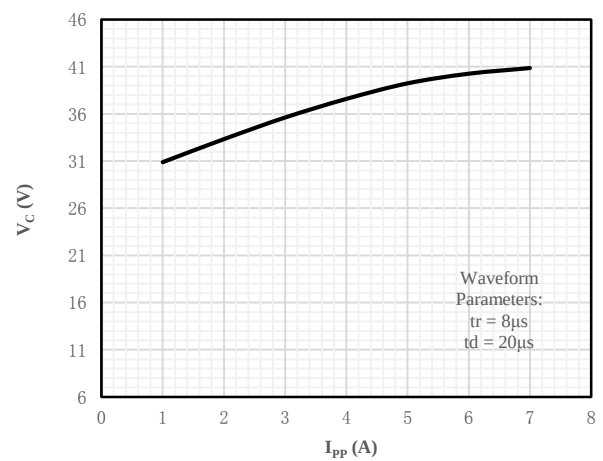


Fig 4 Clamping Voltage vs. Peak Pulse Current

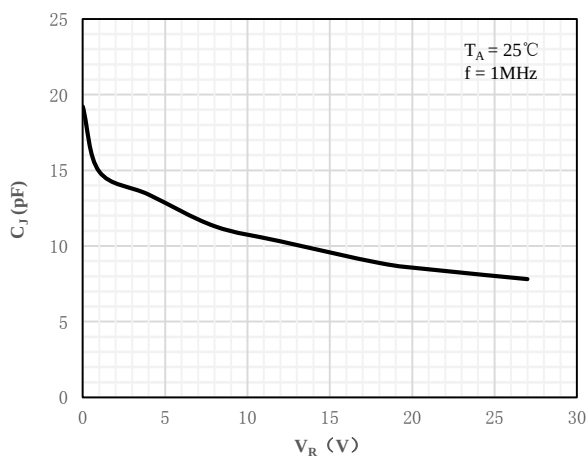
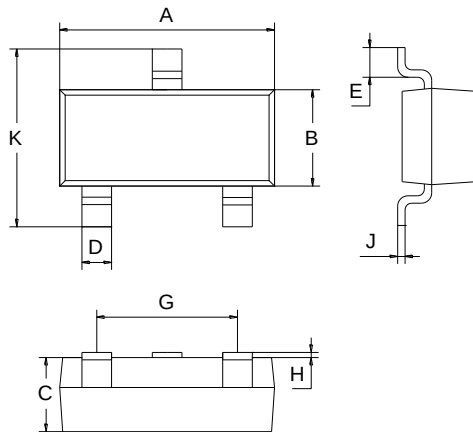


Fig 5 Junction Capacitance vs. Reverse Voltage

Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.9	1.1
D	0.3	0.5
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23

