

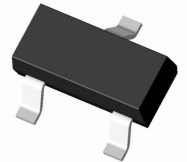
## CAN bus ESD protection diode

### Features

- Due to the integrated diode structure only one small SOT-23 package is needed to protect two CAN bus lines
- Max. peak pulse power:  $P_{pp} = 200 \text{ W}$  at  $t_p = 8/20 \text{ u s}$
- Low clamping voltage:  $V_{(CL)R} = 40\text{V}$  at  $I_{pp}=1\text{A}$
- Ultra low leakage current:  $I_{RM} < 1 \text{ nA}$
- ESD protection of up to 23 kV
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

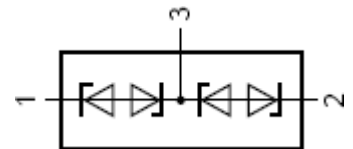


RoHS  
COMPLIAN



Marking : AN

SOT-23



### Applications

- CAN bus protection
- Automotive applications

Absolute Maximum Ratings ( $T_A = 25 \text{ }^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Value	Units
Peak Pulse Power( $t_p=8/20\text{us}$ )	$P_{PP}$	200	W
peak pulse current ( $t_p=8/20\text{us}$ )	$I_{PP}$	3	A
electrostatic discharge capability IEC 61000-4-2(contact discharge) HBM MIL-STD883	ESD	23 10	KV
junction temperature	$T_J$	150	$^\circ\text{C}$
ambient temperature	$T_{AMB}$	-65 to +125	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-65 to +150	$^\circ\text{C}$

Electrical Characteristics ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	$V_{RWM}$				24	V
Reverse Breakdown Voltage	$V_{BR}$	$I_t=1\text{mA}$	25.4	27.8	30.3	V
Reverse Leakage Current	$I_R$	$V_{RWM}=24\text{V}$			50	nA
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}$ $I_{PP}=3\text{A}$			40 70	V
Junction Capacitance	$C_d$	$V_R=0\text{V}, f=1\text{MHz}$		11		pF
differential resistance	$rdif$	$I_R=1\text{mA}$			300	$\Omega$

## Typical Characteristic $T_a=25\text{ }^\circ\text{C}$ unless otherwise specified

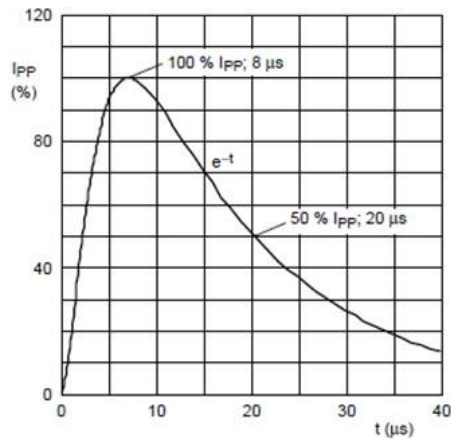


Fig1. 8/20us pulse waveform according to IEC61000-4-5

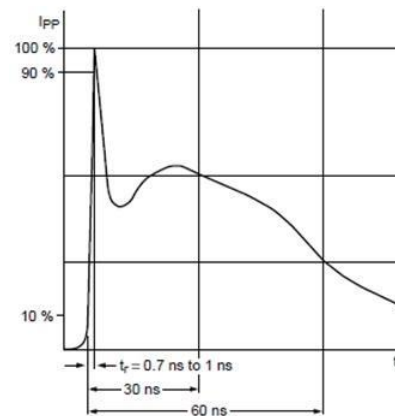


Fig2. ESD pulse waveform according to IEC61000-4-2

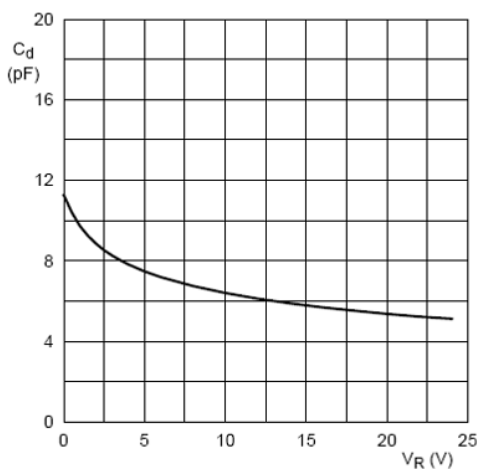


Fig3. Cd vs Vr Cure

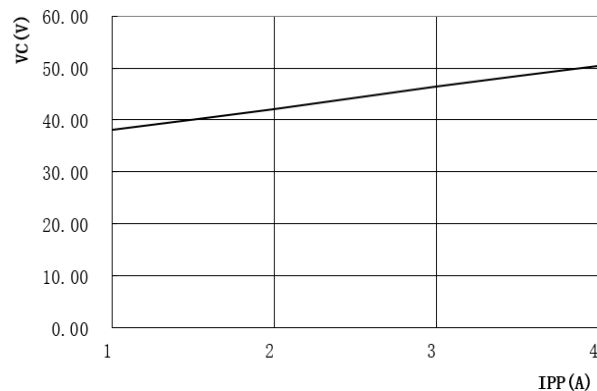
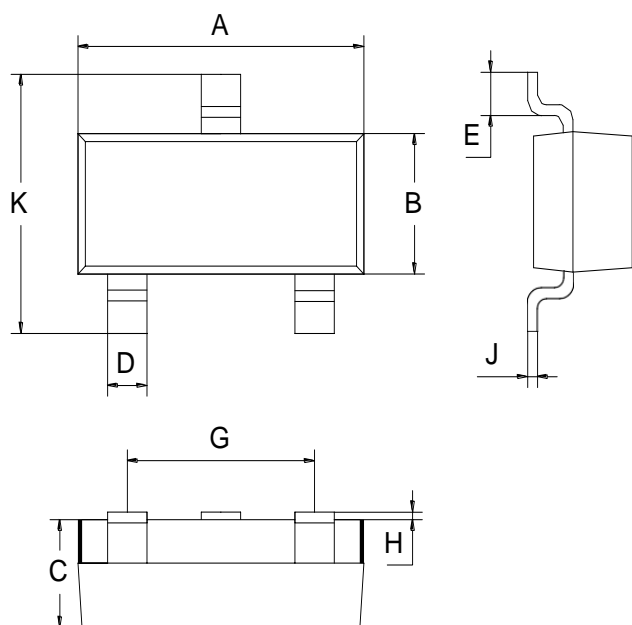


Fig4. VC vs IPP Cure

## Package Outline Dimensions

in inches (millimeters)



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

## Revision History

Document Version	Date of release	Discription of changes
Rev.A	2020.03.04	First issue

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