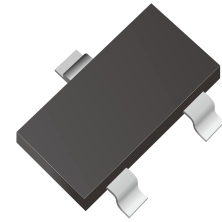


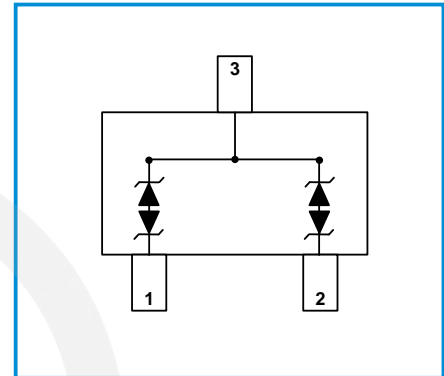
## Dual Line CAN Bus Protector

### Features

- IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lighting) 3A (8/20 $\mu\text{s}$ )
- 200 Watts Peak Pulse Power per (tp=8/20 $\mu\text{s}$ )
- Working voltages : 24V
- Low clamping voltage
- Low leakage current



Functional Diagram



### Mechanical Data

- SOT-23 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed: 260 $^{\circ}\text{C}$ /10s
- Reel size: 7 inch
- Marking: C24

### Applications

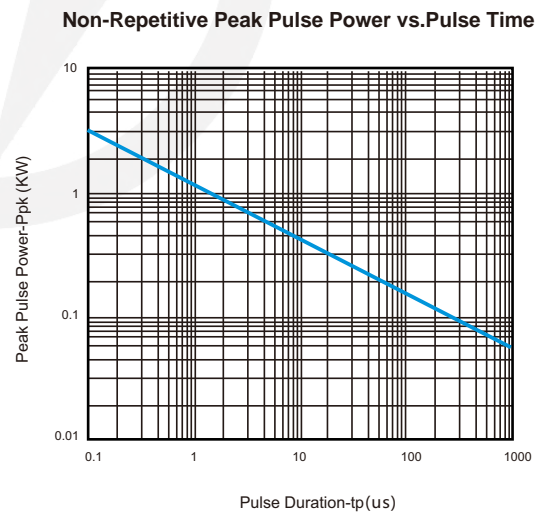
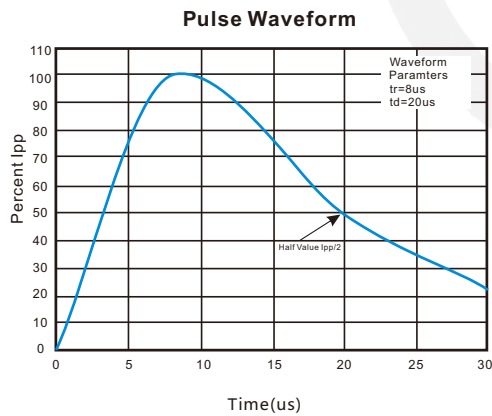
- Industrial Control Networks
- Smart Distribution Systems
- Automotive Networks
- Low and High-Speed CAN
- Fault Tolerant CAN

### Absolute Maximum Ratings

Symbol	Parameter	Value	Units
$V_{\text{ESD}}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 30$ $\pm 20$	kV
$P_{\text{PP}}$	Peak Pulse Power (8/20 $\mu\text{s}$ )	200	W
$T_{\text{OPT}}$	Operating Temperature	-55/+150	$^{\circ}\text{C}$
$T_{\text{STG}}$	Storage Temperature	-55/+150	$^{\circ}\text{C}$
$T_{\text{L}}$	Lead Soldering Temperature	260 (10 sec.)	$^{\circ}\text{C}$

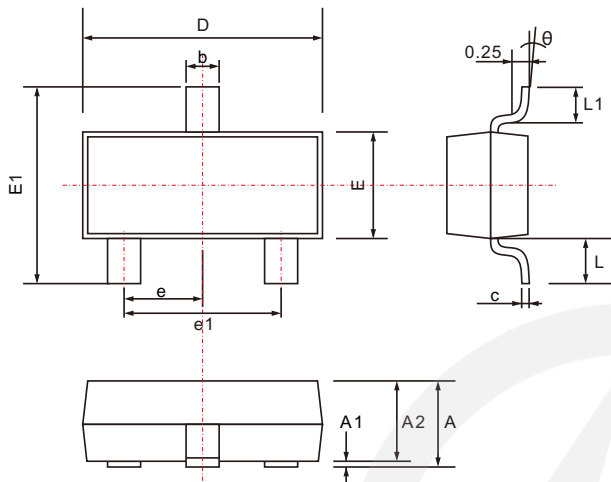
**Electrical Characteristics** (TA=25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage	Pin 1,2 to Pin3			24	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA Pin 1,2 to Pin3	26		32	V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 24V Pin 1,2 to Pin3			1	μA
V <sub>C1</sub>	Clamping Voltage 1	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs Pin 1,2 to Pin3			36	V
V <sub>C2</sub>	Clamping Voltage 2	I <sub>PP</sub> = 3A, t <sub>p</sub> = 8/20μs Pin 1,2 to Pin3			50	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz Pin 1,2 to Pin3		13	17	pF

**Characteristic Curves**


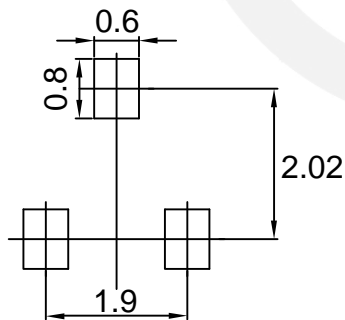
## SOT-23 Package Outline

Unit: mm



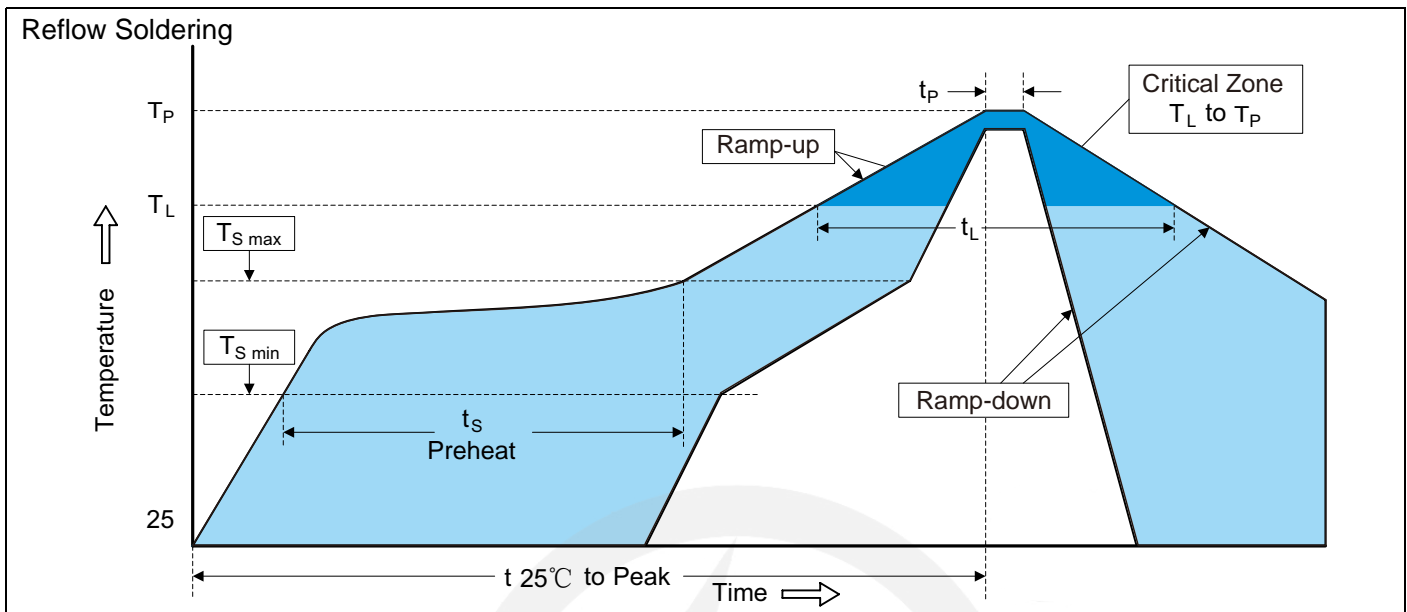
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.200
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.200
D	2.700	3.100
E	1.200	1.400
E1	2.200	3.000
e	0.950 TYP.	
e1	1.750	2.050
L	0.550 TYP.	
L1	0.300	0.500
θ	0°	8°

## SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm
3. The pad layout is for reference purpose only.

**Recommended Soldering Conditions**

**Recommended Conditions**

Profile Feature	Pb-Free Assembly
Average ramp-up rate ( $T_L$ to $T_P$ )	3°C/second max.
Preheat -Temperature Min ( $T_{S\ min}$ ) -Temperature Max ( $T_{S\ max}$ ) -Time (min to max) ( $t_s$ )	150°C 200°C 60-180 seconds
$T_{S\ max}$ to $T_L$ -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature ( $T_L$ ) -Time ( $t_L$ )	217°C 60-150 seconds
Peak Temperature ( $T_P$ )	260°C
Time within 5°C of actual Peak Temperature ( $t_P$ )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

**7" Reel**


D2	$\Phi 178.0 \pm 2.0$
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D3	$\Phi 50.0 \text{ Min.}$
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D4	$\Phi 13.0 \pm 0.5$
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W1	$16.0 \pm 2.0$
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Quantity: 3000PCS