TECH PUBLIC
台舟电子

TPESD1CAN
Can bus Esd Protection Diode

www.sot23.com.tw

Features

- Ultra-Low capacitance (< 14pF)
- Low Clamping Voltage
- Working Voltage: 24V
- Low Leakage Current
- **IEC 61000-4-2 (ESD) ±20kV (air), ±15kV (contact)**
- **IEC 61000-4-4 (EFT) 40A (5/50ns)**

Mechanical Characteristics

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

Applications

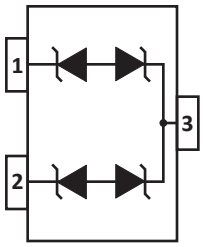
- CAN Bus Protection
- Automotive Appllcatrons

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD1CAN	3000	7″

TECHPUBLIC

Dimensions and Pin Configuration



Download from alldatasheet.com

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power (tp = 8/20μs)	P_{pk}	200	Watts
Peak Pulse Current (tp = 8/20μs)	I_{PP}	3	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±20 ±15	kV
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

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

PART NUMBER	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
	V_{WM} VOLTS	@ 5mA $V_{(BR)}$ VOLTS	@ I_P = 3A V_C VOLTS	@V_{WM} I_D μA	@0V, 1MHz C pF
TPESD1CAN	24	25.4	70	0.05	14

TECHPUBLIC

Download from alldatasheet.com

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig1. 8/20μs Pulse Waveform

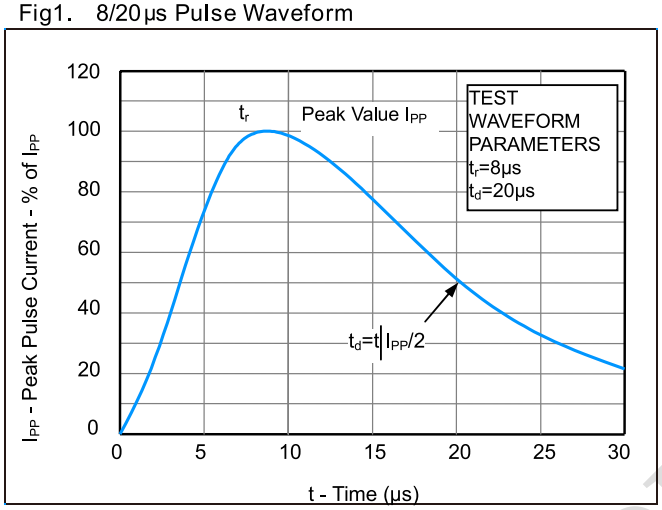


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

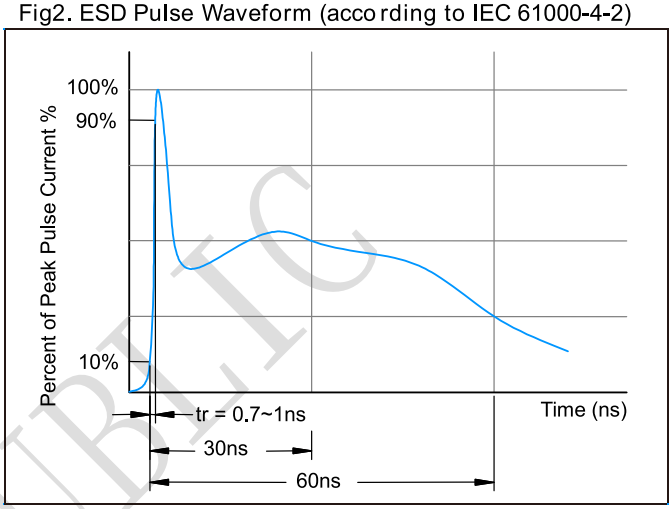


Fig3. Power Derating Curve

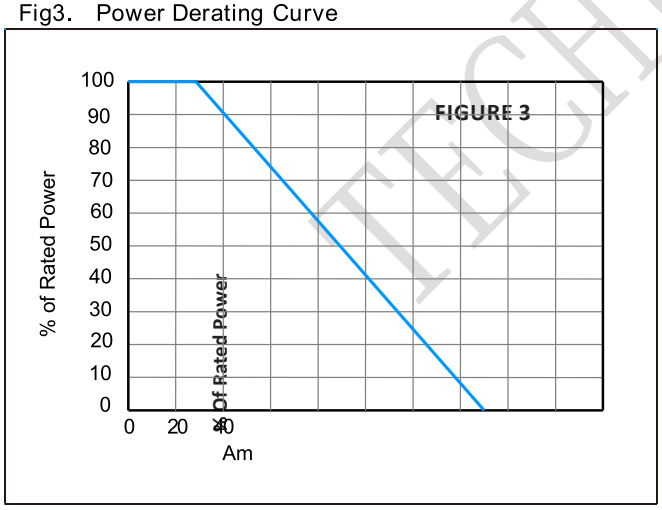
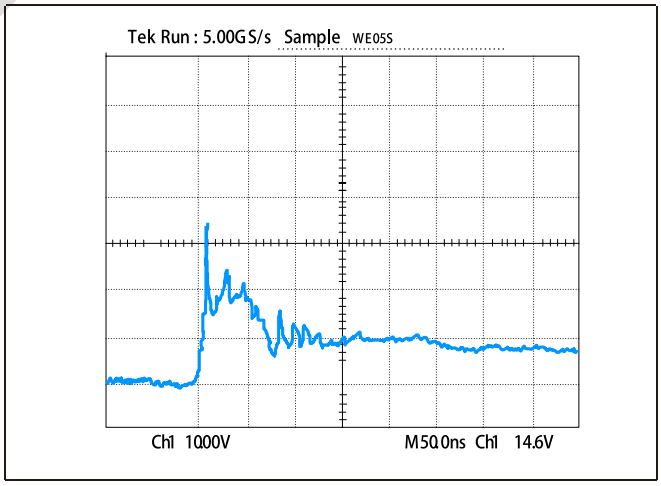


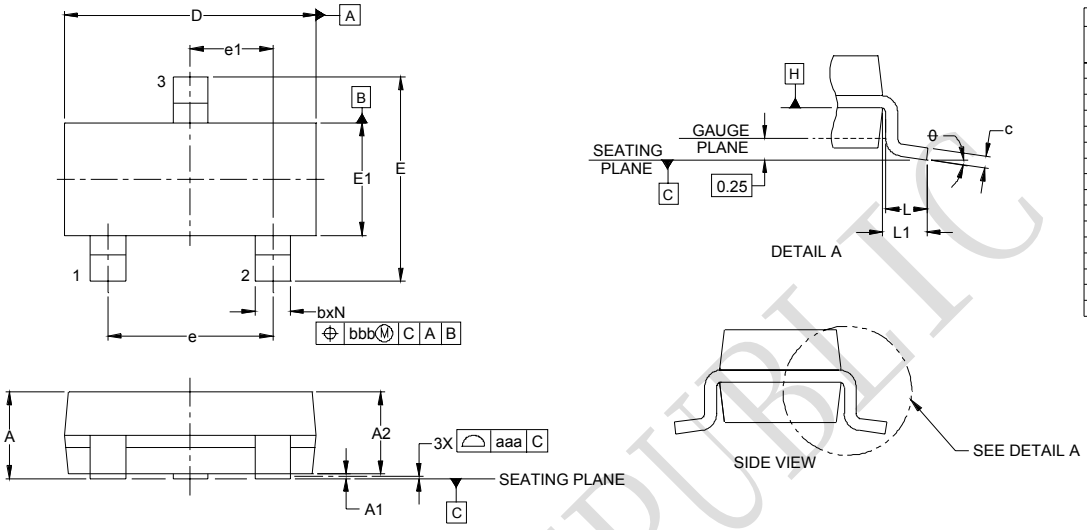
Figure 4: ESD Clamping(8kV Contact per IEC 61000-4-2)



TECHPUBLIC

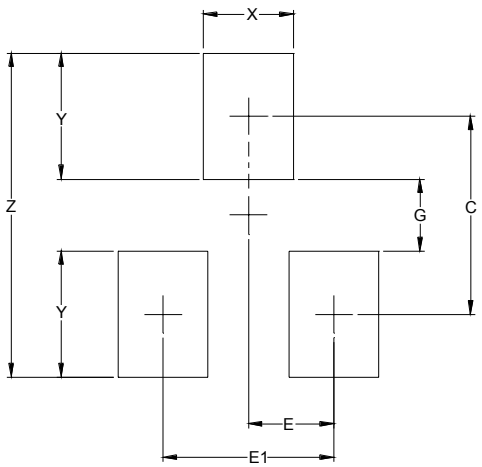
Download from alldatasheet.com

Outline Drawing - SOT23



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.035	-	.044	0.89	-	1.12
A1	.000	-	.004	0.01	-	0.10
A2	.035	.037	.040	0.88	0.95	1.02
b	.012	-	.020	0.30	-	0.51
c	.003	-	.007	0.08	-	0.18
D	.110	.114	.120	2.80	2.90	3.04
E	.082	.093	.104	2.10	2.37	2.64
E1	.047	.051	.055	1.20	1.30	1.40
e	.075			1.90 BSC		
e1	.037			0.95 BSC		
L	.015	.020	.024	0.40	0.50	0.60
L1	.022			(0.55)		
N	3			3		
θ	0°	-	8°	0°	-	8°
aaa	.004			0.10		
bbb	.008			0.20		

Land Pattern - SOT23



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.087)	(2.20)
E	.037	0.95
E1	.075	1.90
G	.031	0.80
X	.039	1.00
Y	.055	1.40
Z	.141	3.60

TECHPUBLIC

Download from alldatasheet.com