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TPESD3Z5.0T1G

1-Line Unl-directional TVS Diode

www.sot23.com.tw

Features

* 350W peak pulse power (8/20μs)
* Protects one data or power line
* Ultra low leakage：nA level
* Operating voltage：5V
* Ultra low clamping voltage
* Complies with following standards:
  – IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±30kV
  Contact discharge: ±30kV
  –IEC61000-4-5 (Lightning) 25A (8/20μs)
  – IEC61000-4-4 (EFT) 40A (5/50ns)
* RoHS Compliant

Mechanical Characteristics

* Package: SOD-323
* Lead Finish: Matte Tin
* Case Material: “Green” Molding Compound.
* UL Flammability Classification Rating 94V-0
* Moisture Sensitivity: Level 3 per J-STD-020
* Terminal Connections: See Diagram Below

Applications

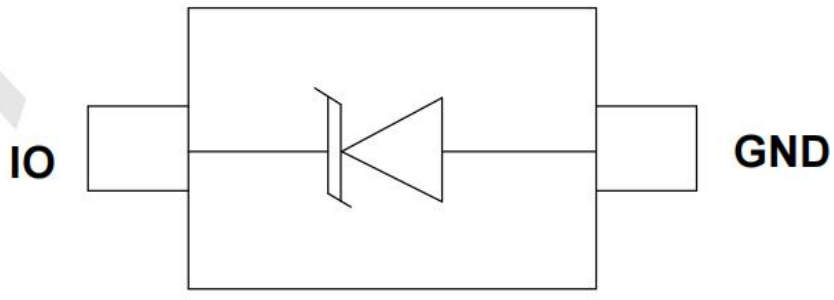
* Cellular Handsets and Accessories
* Personal Digital Assistants
* Notebooks and Handhelds
* Portable Instrumentation
* Peripherals
* Pagers Peripherals
* Desktop and Servers

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD3Z5.0T1G	3000	7″

Dimensions and Pin Configuration

SOD-323



Marking: 05W

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	350	W
Peak Pulse Current (8/20μs)	I_{PP}	25	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±30 ±30	kV
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			5	V	
Breakdown Voltage	V_{BR}	6			V	I_T = 1mA
Reverse Leakage Current	I_R			0.5	μA	V_{RWM} = 5V
Forward Voltage	V_F		0.8	1.2	V	I_F=10mA
Clamping Voltage	V_C		7		V	I_{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V_C		11	20	V	I_{PP} = 25A (8 x 20μs pulse)
Junction Capacitance	C_J			160	pF	VR = 0V, f = 1MHz

Typical Performance Characteristics (T_A=25℃ unless otherwise Specified)

Fig1. 8/20μs Pulse Waveform

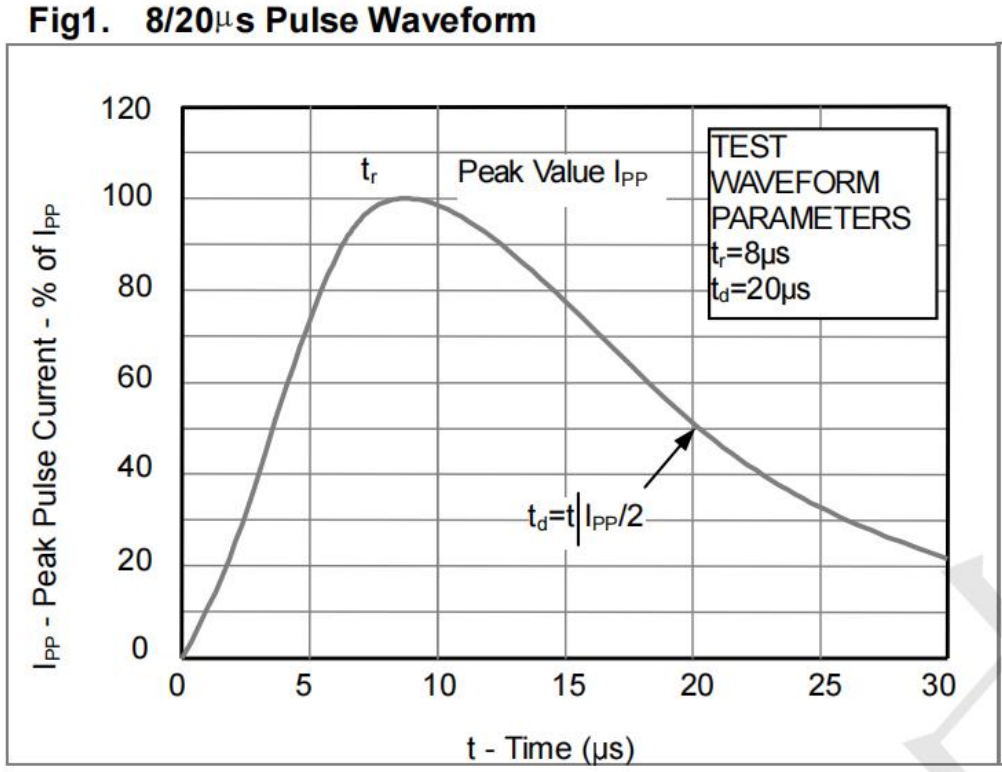


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

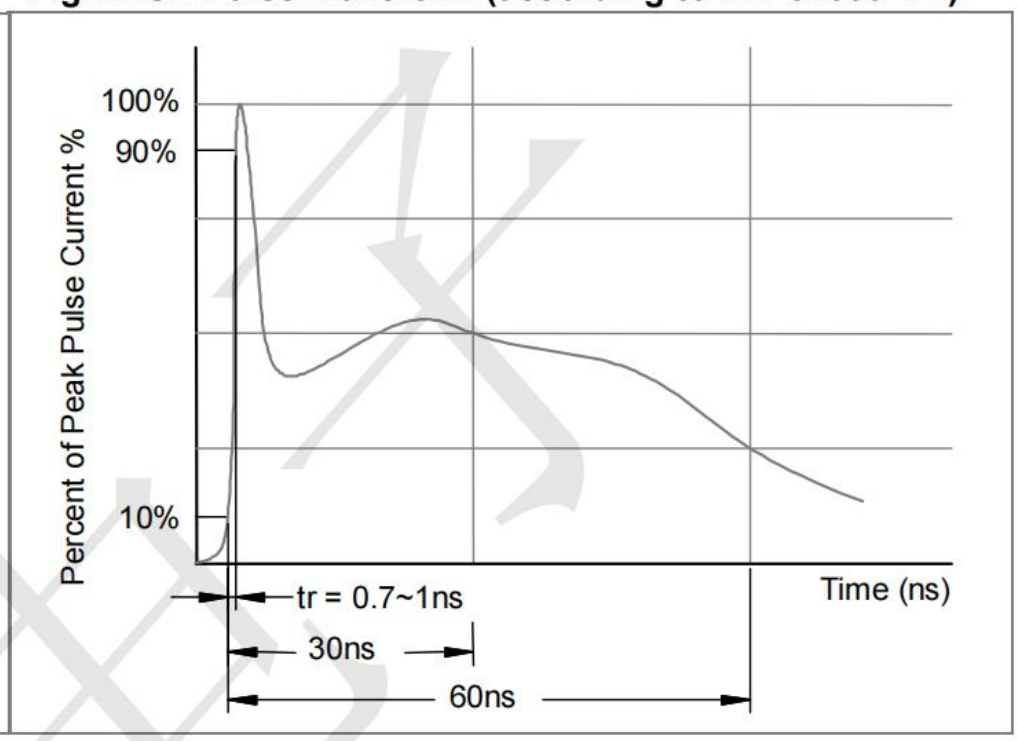
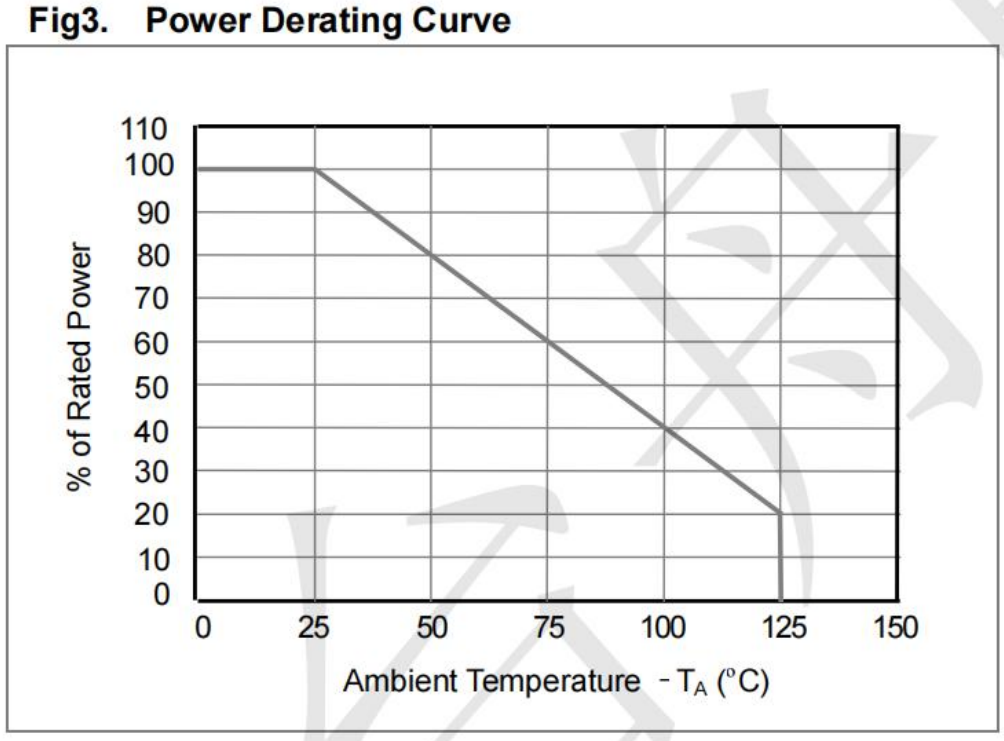


Fig3. Power Derating Curve



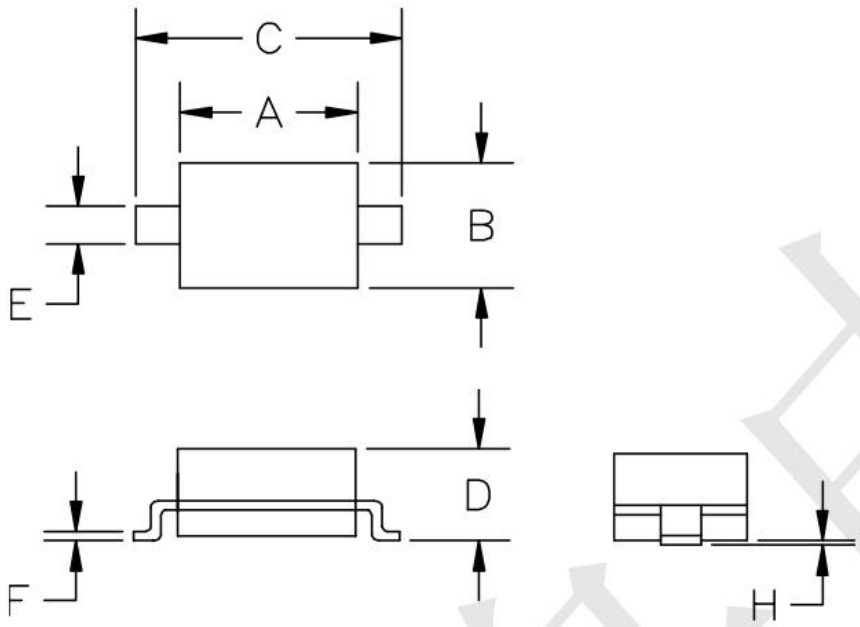
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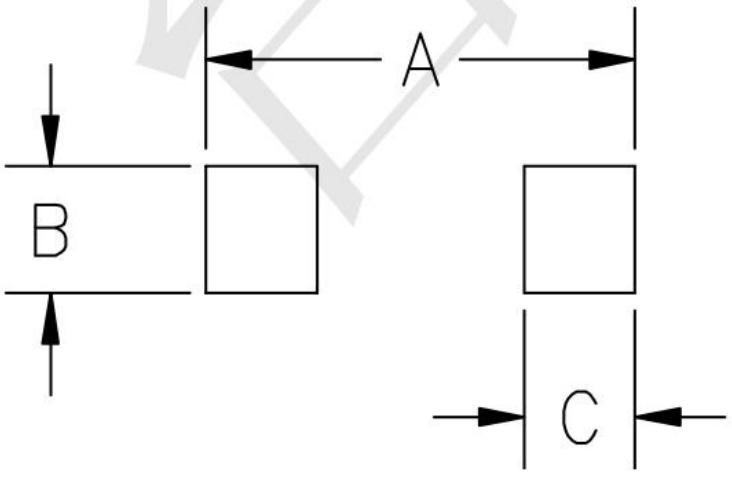
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Outline Drawing - SOD-323



SYM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.50	1.80	0.060	0.071
B	1.20	1.40	0.045	0.054
C	2.30	2.70	0.090	0.107
D	-	1.10	-	0.043
E	0.30	0.40	0.012	0.016
F	0.10	0.25	0.004	0.010
H	-	0.10	-	0.004

Land Pattern - SOD-323



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
A	3.15	0.120
B	0.80	0.031
C	0.80	0.031

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Global Electronic Components Distributor

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TPADM809SAKSZ TPESD0402G08V TPESD0504S6-A TPZXMP3A13FTA QM3003J-TP TPB1A30-123 TPDMG6602SVT TPSPX3819M5-L-3-3 TPAPX809S-31SA TPZVN3320FTA TPGC12C-1 TPWSB5557Z ESD5B5.0ST1G-P FDMS7670AS-TP SN7002W TPB05A40-323 TPESD5311N IRFR2405TRPBF-TP FDC6301N-TP SI3932DV TPS3809L30DBVR-TP TPS7B6950DBVR-TP BSN20W BV15C LTH7 TPADM809LAKSZ TPD1213A-02SM DDTA143ZCA DMP6350S TPFMMT493