



Discription

The ESD5B5.0ST1G protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD. It gives designer the flexibility to protect one bi-directional line in applications where arrays are not practical.



SOD-523

FEATURES

- ★ We declare that the material of product compliance with RoHS requirements and Halogen Free.
- ★ S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- ★ Peak power up to 174 Watts @ 8 x 20 us Pulse
- ★ ESD rating of Class 3 per Human Body Model
- ★ Small body outline dimensions
- ★ Low leakage
- ★ Response time is typically < 1.0 ns
- ★ IEC61000-4-2 level 4 ESD protection
- ★ IEC61000-4-4 Level 4 EFT protection



Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
ESD5B5.0ST1G	SOD-523	3000

Absolute Ratings (T_{amb}=25°C)

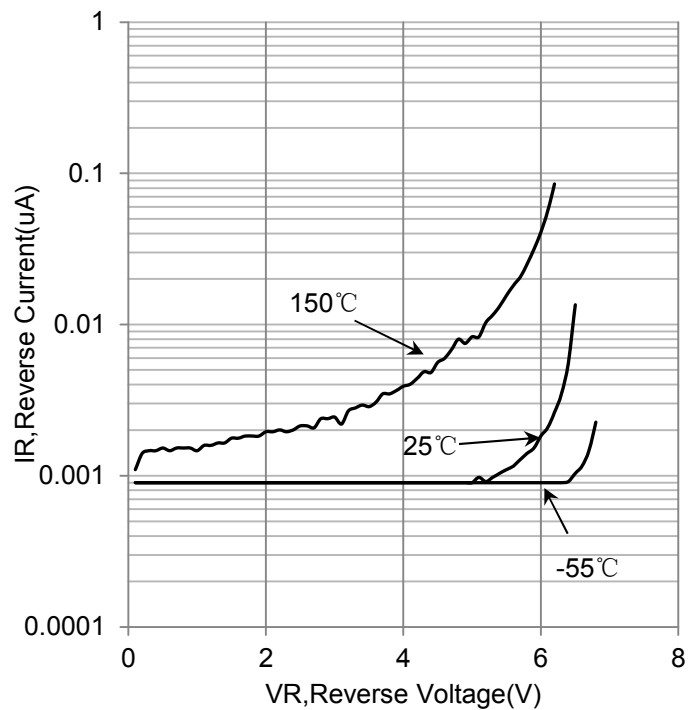
Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (t _p = 8/20μs)	100	W
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _{op}	Operating Temperature Range	-40 to +125	°C
T _j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 15 ± 8 KV



Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified. $V_F = 0.9V$ at $I_F = 10mA$

DEVICE	VRWM (V)	IR (μA) @VRWM	VBR (V) @IT (Note 1)		IT (mA)	VC (V) @Max.IPP	IPP(A)	PPK(W)	C (pF)
	Max.	Max.	Min.	Max.		Max.	Max.	Max.	Typ.
ESD5B5.0ST1G	5	1	5.6	7.8	1	9	11	100	20

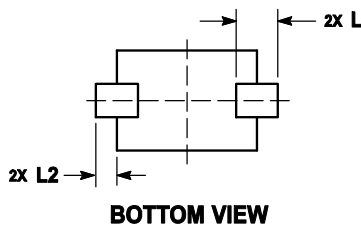
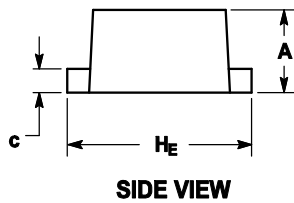
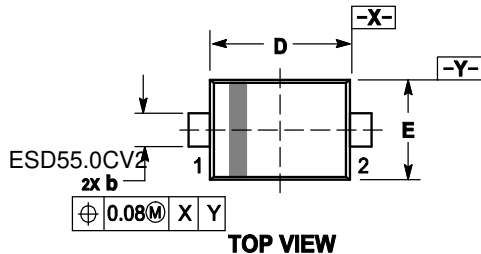
1. VBR is measured with a pluse test current IT at an ambient temperature of 25°C.



IR vs. VR



OUTLINE AND DIMENSIONS

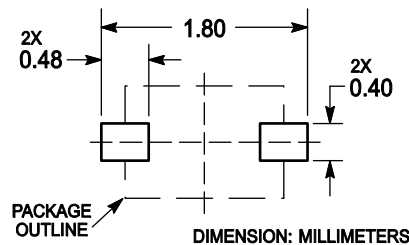


Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.50	0.60	0.70	0.020	0.024	0.028
b	0.25	0.30	0.35	0.010	0.012	0.014
c	0.07	0.14	0.20	0.003	0.006	0.008
D	1.10	1.20	1.30	0.043	0.047	0.051
E	0.70	0.80	0.90	0.028	0.031	0.035
H _E	1.50	1.60	1.70	0.059	0.063	0.067
L	0.30 REF			0.012 REF		
L ₂	0.15	0.20	0.25	0.006	0.008	0.010

SOLDERING FOOTPRINT





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