ESD9B3.3ST5G
ESD PROTECTION DIODE

Discription

The ESD9B3.3ST5G 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-923

Features

★ Small Body Outline Dimensions
★ Low Body Height
★ Peak Power up to 40 Watts @ 8 x 20 μs Pulse
★ Low Leakage current
★ Response Time is Typically < 1 ns
★ ESD Rating of Class 3 per Human Body Model
★ IEC61000−4−2 Level 4 ESD Protection



Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
ESD9B3.3ST5G	SOD-923	8000

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	40	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°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 ±15	KV

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Device	V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_C (V) @ Max I_{PP}*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
	Max	Max	Min	mA	Max	Max	Max	Typ
ESD9B3.3ST5G	3.3	1	5.0	1.0	10	9	90	15

*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25℃.

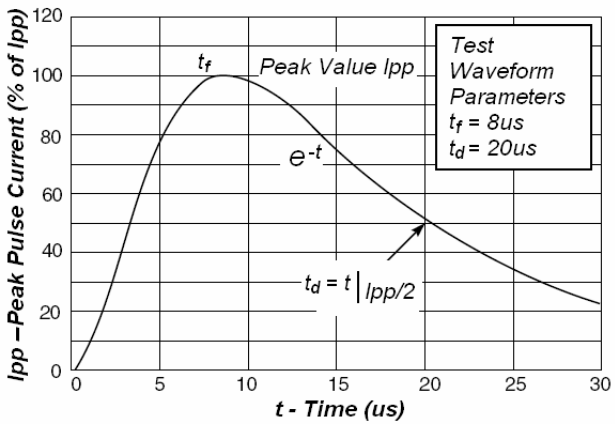


Fig1. Pulse Waveform

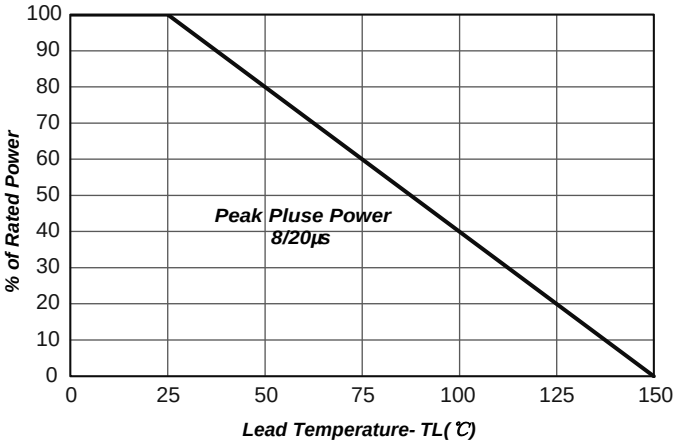
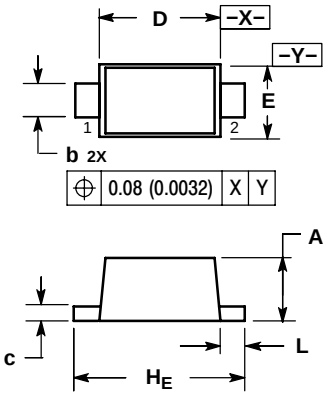


Fig2.Power Derating Curve

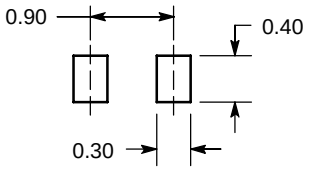
SOD−923



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
H_E	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

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