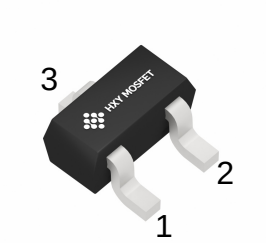
SZESDR0502BT1G
ESD PROTECTION DIODE

Discription

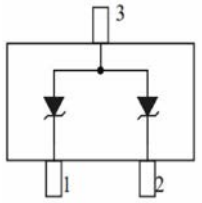
The SZESDR0502BT1G protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.
It gives designer the flexibility to protect 2 unidirectional line in applications where arrays are not practical.



SOT-523

Features

★ We declare that the material of product compliance with RoHS requirements and Halogen Free.
★ 2 unidirectional transil functions
★ Low leakage current:IR max< 20 μA at VRM
★ 300W peak pulse power(8/20μs)
★ Transient protection for data lines as per
★ IEC61000-4-2(ESD) 15KV(air) 8KV(contact)
★ IEC61000-4-5(Lightning) see IPPM below



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
SZESDR0502BT1G	SOT-523	3000

Absolute Ratings (Tamb=25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (tp = 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. VF = 0.9V at IF = 10mA

Device	V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_C (V) @ Max I_{PP}*	IPP (A)*	C (pF)
	Max	Max	Min	mA	Max	Max	Typ
SZESDR0502BT1G	5	0.5	6	1	25	4	0.5

*Surge current waveform per Figure 1.

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

Typical Characteristics

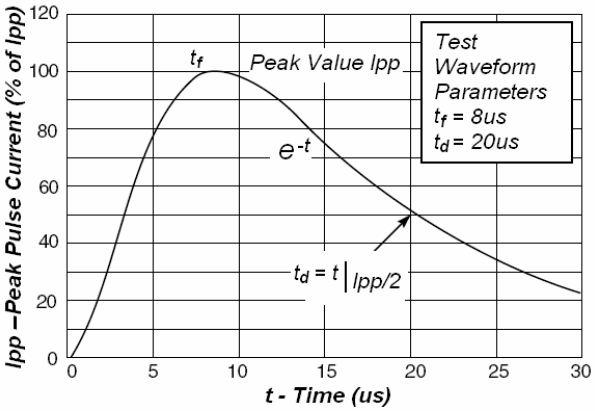


Fig 1. Pulse Waveform

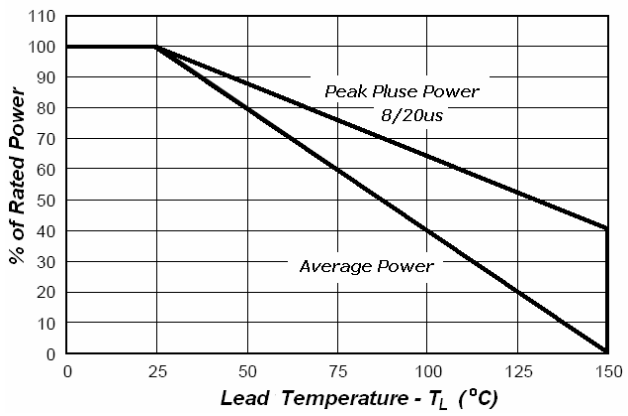
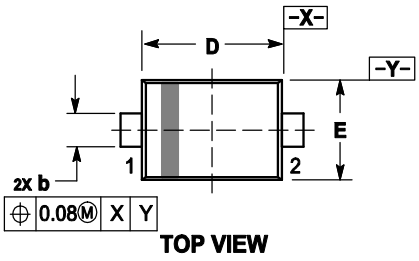
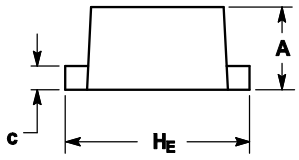


Fig 2.Power Derating

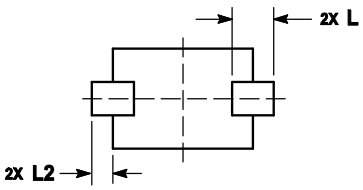
OUTLINE AND DIMENSIONS



TOP VIEW



SIDE VIEW



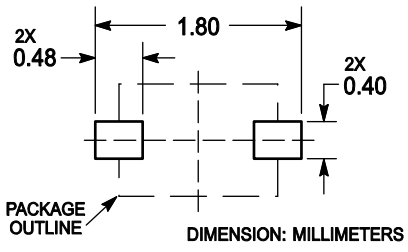
BOTTOM VIEW

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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