

100W SMD BI-DIRECTIONAL TVS FOR ESD PROTECTION DIODES, 3.3V

Dimensions (Inches / Millimeters):

- Top view: 0.035(0.90) / 0.028(0.70), 0.051(1.30) / 0.043(1.10), 0.014(0.35) / 0.009(0.25)
- Bottom view: 0.067(1.70) / 0.059(1.50), 0.007(0.20) / 0.002(0.05)
- Side view: 0.028(0.70) / 0.020(0.50)

PRODUCT FEATURES

- FLAMMABILITY CLASSIFICATION 94V-0
- LOW CLAMPING VOLTAGE
- PROTECT ONE I/O LINE OR POWER LINE
- IEC COMPATIBILITY:
 - IEC61000-4-2 (ESD) ±30KV (AIR), ±30KV (CONTACT)
 - IEC61000-4-4 (EFT) 40A (5/50nS)
 - IEC61000-4-5 (LIGHTNING) 8A (8/20μS)
- LOW LEAKAGE CURRENT
- CASE: TRANSFER MOLDED, SOD-523FL
- DIMENSIONS IN INCHES AND (MILLIMETERS)
- LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
- WEIGHT: 0.002 GRAMS
- RoHS COMPLIANT, ADD SUFFIX "H" FOR HALOGEN FREE
i.e. ESD5Z3.3C-H: RoHS COMPLIANT/HALOGEN FREE

ELECTRICAL CHARACTERISTICS

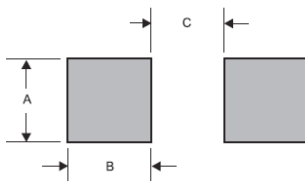
MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL	UNITS
PEAK PULSE POWER, tp=8/20 μS	P _{PP}	100 W
STORAGE TEMPERATURE RANGE	T _{STG}	- 55 TO +150 °C
OPERATING JUNCTION TEMPERATURE RANGE	T _J	- 55 TO +150 °C

PART NUMBER	Max. V _{RWM} (V)	Max I _R @ V _{RWM} (μA)	Min V _{BR} @ I _T =1mA (A)	Max V _C @ I _{PP} =1A (V)	Max I _{PP} (A)	V _C @ Max I _{PP} (V) (NOTE 1)	MAX P _{PK} (W) (NOTE 1)	MAX C _J @ 1MHz, V _R =0V, (pF)	MARKING
ESD5Z3.3C	3.3	1	4	7	8	12	96	10	CT

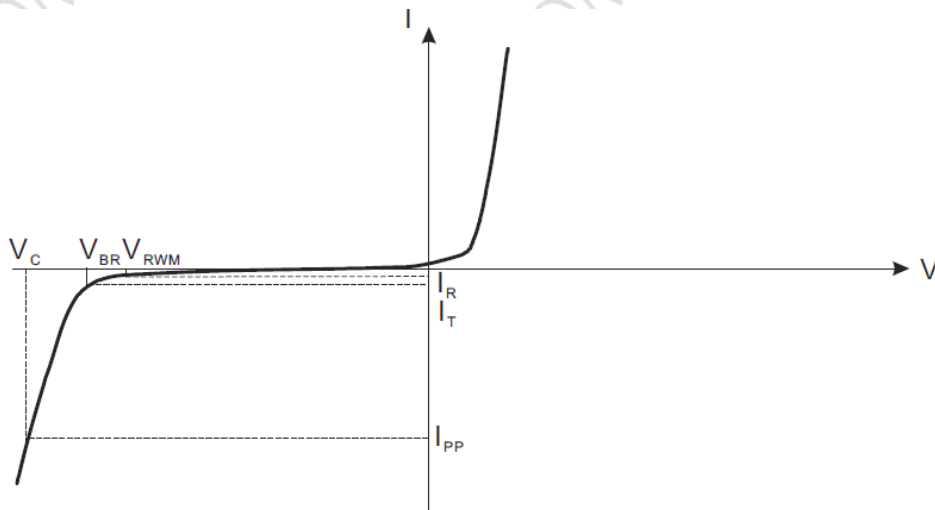
NOTE : 1. SURGE CURRENT WAVEFORM PER FIG 1.
2. V_{BR} IS MEASURED WITH A PULSE TEST CURRENT I_T AT 25°C AMBIENT TEMP

LAYOUT RECOMMENDATION



PACKAGE	A	B	C
SOD-523FL	0.032 (0.80)	0.024 (0.60)	0.044 (1.10)

RATINGS AND CHARACTERISTIC CURVES



Uni-Directional TVS

- V_C : Clamping Voltage @ I_{PP}
- I_{PP} : Maximum Reverse Peak Pulse Current
- V_{RWM} : Maximum Working Peak Reverse voltage
- I_R : Maximum Reverse Leakage Current @ V_{RWM}
- V_{BR} : Breakdown voltage @ I_T
- I_T : Test Current
- P_{PP} : Peak Pulse Power
- C_J : Max. Capacitance @ $V_R = 0V$ and $f = 1MHz$

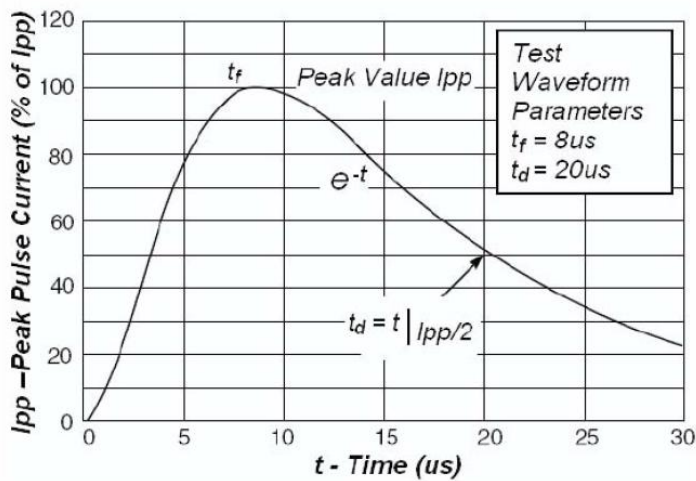


Fig1. Pulse Waveform

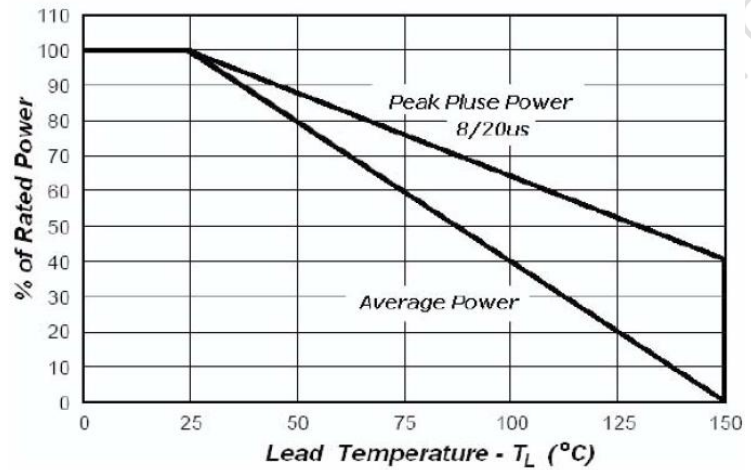


Fig2. Power Derating

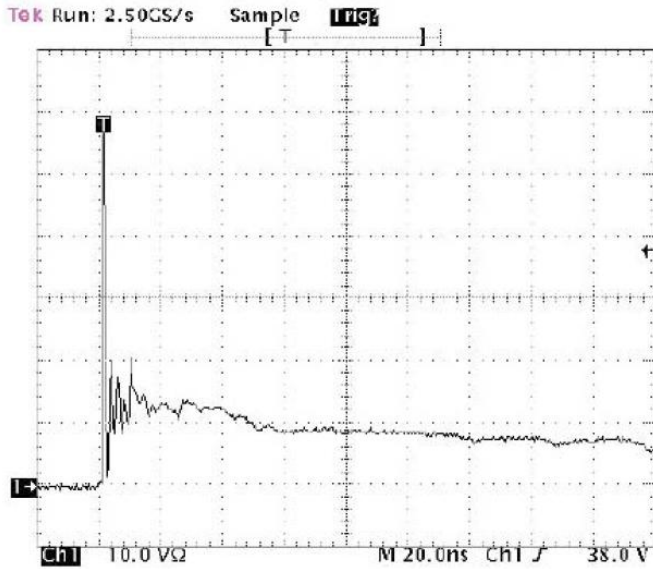


Figure 3. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

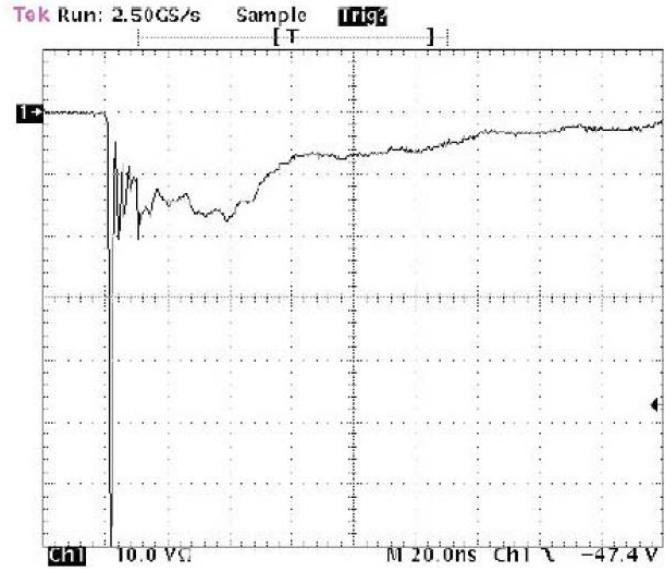


Figure 4. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2