

SMD UNI-DIRECTIONAL TVS FOR ESD PROTECTION DIODES, 3.3V-5V

Dimensions (Inches / Millimeters):

- Top view: 0.026(0.65) / 0.022(0.55), 0.041(1.05) / 0.037(0.95), 0.012(0.30) / 0.009(0.24)
- Side view: 0.022(0.55) / 0.018(0.45)
- Bottom view: 0.057(1.45) / 0.053(1.35), 0.006(0.16) / 0.004(0.10)

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. RESPONSE TIME <1ns TYP.
3. PROTECT ONE I/O LINE OR POWER LINE
4. IEC COMPATIBILITY:
 - IEC61000-4-2 (ESD) ±15KV (AIR), ±8KV (CONTACT)
 - IEC61000-4-4 (EFT) 40A (5/50nS)
 - IEC61000-4-5 (LIGHTNING) >8A (8/20µS)
5. LOW LEAKAGE CURRENT
6. CASE: TRANSFER MOLDED, SOD-723FL
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
9. WEIGHT: 0.0008 GRAMS
10. RoHS COMPLIANT, ADD SUFFIX "H" FOR HALOGEN FREE
i.e. ESD7Z3.3-H: RoHS COMPLIANT/HALOGEN FREE

ELECTRICAL CHARACTERISTICS

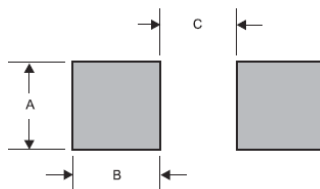
MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL		UNITS
TOTAL POWER DISSIPATION, ON FR-5 BOARD SIZE 1"x0.75"x0.62" @25°C	P _D	0.15	W
ESD VOLTAGE, HUMAN BODY MODEL	E _{SD}	16	KV
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)	Typ. I _{PP} (A)	Max V _C @ Max I _{PP} (V) (NOTE 1)	MAX P _{PK} (W) (NOTE 1)	MAX C _J (pF)	MARKING
ESD7Z3.3	3.3	2.5	5	9.8	10.4	102	80	A
ESD7Z5.0	5.0	1	6.2	8.7	12.3	107	65	F

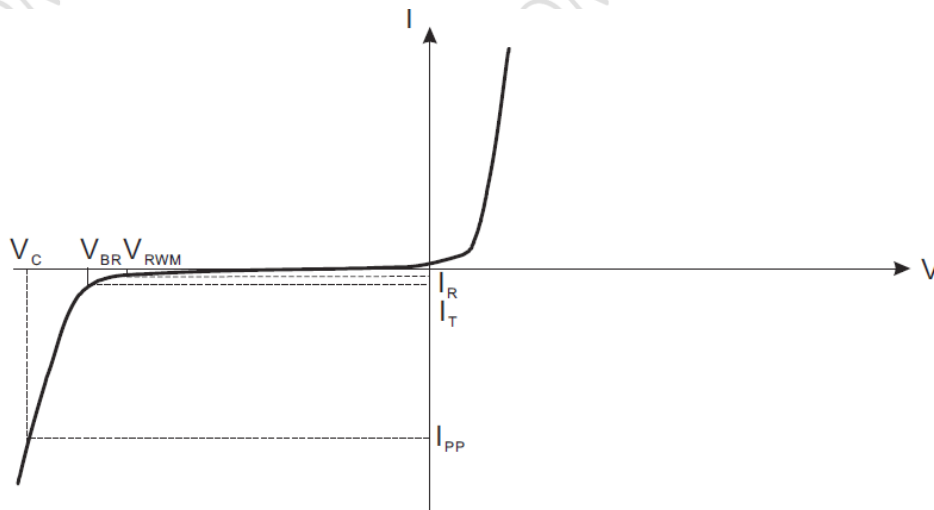
NOTE : 1. SURGE CURRENT WAVEFORM PER FIG 2.
2. UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL TEST IS PERFORMED AT T_A=25°C, V_F=0.9V @ I_F=10mA

LAYOUT RECOMMENDATION



PACKAGE	A	B	C
SOD-723FL	0.018 (0.45)	0.020 (0.50)	0.035 (0.90)

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 $f = 1MHz$

Fig.1- TYPICAL BREAKDOWN VOLTAGE VERSUS TEMPERATURE

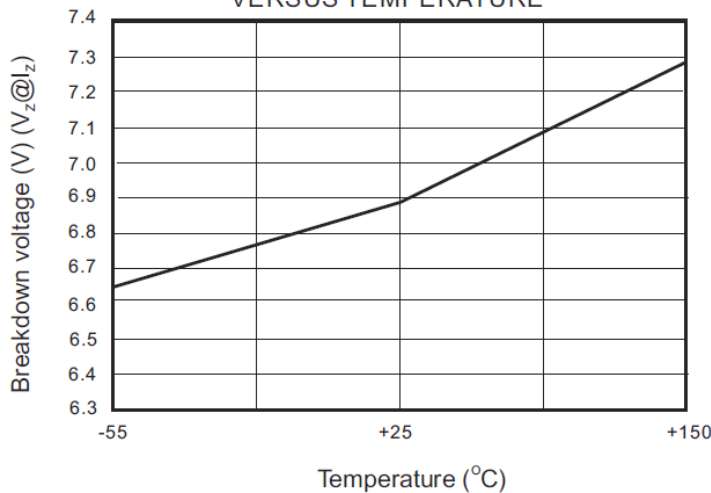


FIG.2-8 X 20us PULSE WAVEFORM

