

SMD UNI-DIRECTIONAL TVS FOR ESD PROTECTION DIODE, 3.3V-5.0V

Top View Dimensions:
 Total width: 0.035 (0.85) / 0.029 (0.75)
 Lead width: 0.026 (0.65) / 0.022 (0.55)
 Lead thickness: 0.010 (0.25) / 0.006 (0.15)

Side View Dimensions:
 Height: 0.017 (0.43) / 0.014 (0.36)

Bottom View Dimensions:
 Pad width: 0.042 (1.05) / 0.037 (0.95)
 Pad thickness: 0.007 (0.17) / 0.003 (0.07)

PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. RESPONSE TIME <1ns TYP.
3. ESD VOLTAGE (HUMAN BODY MODEL) 16KV
4. IEC COMPATIBILITY:
 IEC61000-4-2 (ESD) ±15KV (AIR), ±8KV (CONTACT)
 IEC61000-4-4 (EFT) 80A (5/50nS)
 IEC61000-4-5 (LIGHTNING) >8A (8/20µS)
5. LOW LEAKAGE CURRENT
6. CASE: TRANSFER MOLDED, SOD-923FL
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
9. WEIGHT: 0.00044 GRAMS
10. RoHS COMPLIANT, ADD SUFFIX "H" FOR HALOGEN FREE
 i.e. ESD9Z3.3-H: RoHS COMPLIANT/HALOGEN FREE

ELECTRICAL CHARACTERISTICS

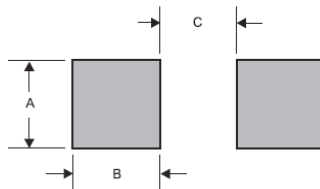
MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL	UNITS
TOTAL POWER DISSIPATION, NOTE 1	P _D	0.15 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} Max (V)	Max I _{PP} (A)	MAX P _{PK} (W) (NOTE 2)	MAX C _J (pF)	MARKING
ESD9Z3.3	3.3	2.5	5	10.4	9.8	102	80	E
ESD9Z5.0	5.0	1	6.2	12.3	8.7	107	65	G

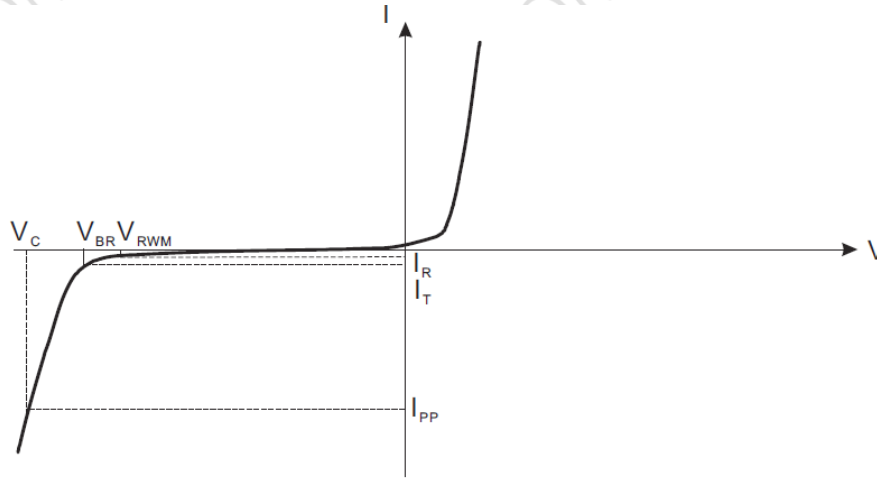
- NOTE : 1. ON 1"x0.75"x0.62" FR-5 PCB
 2. SURGE CURRENT WAVEFORM PER FIG 3.
 3. UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL TEST IS PERFORMED AT T_A=25°C, V_F=0.9V MAX@I_F=10mA

LAYOUT RECOMMENDATION



PACKAGE	A	B	C
SOD-923FL	0.016 (0.40)	0.012 (0.30)	0.024 (0.60)

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

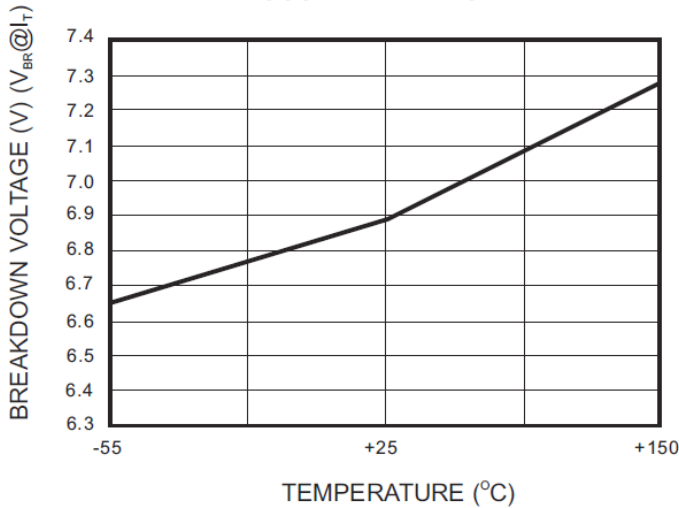


FIG.2-TYPICAL LEAKAGE CURRENT VERSUS TEMPERATURE

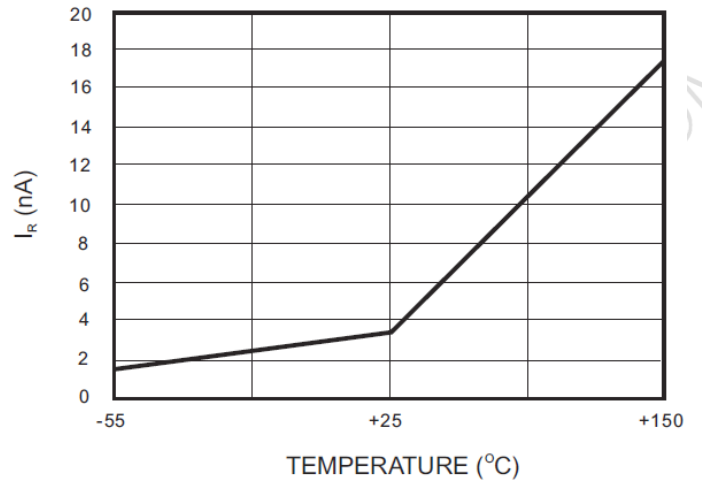


FIG.3- 8/20us PULSE WAVEFORM

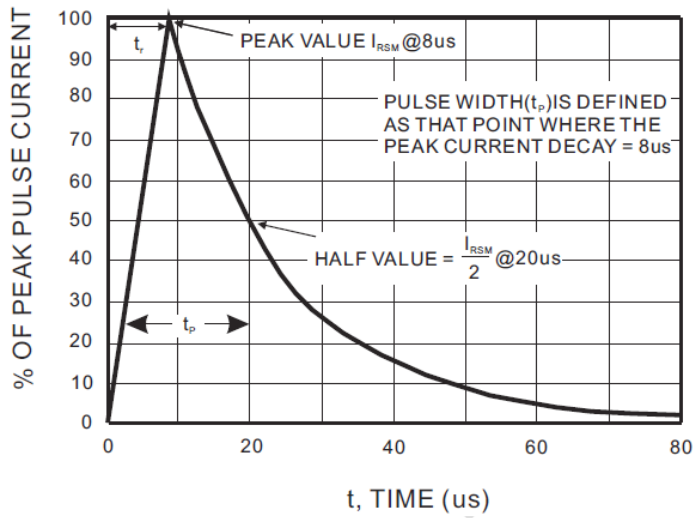


FIG.4- POSITIVE 8kV CONTACT PER IEC 61000-4-2-ESD9Z5.0

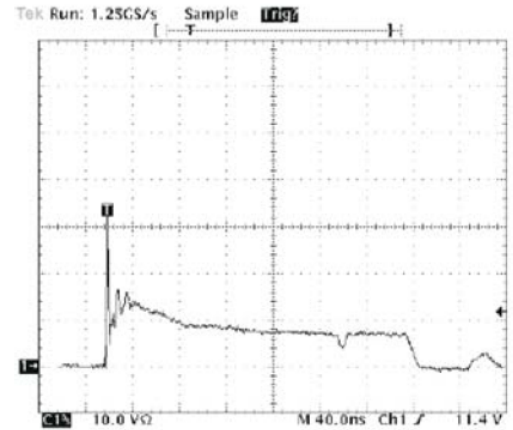


FIG.5- NEGATIVE 8kV CONTACT PER IEC 61000-4-2-ESD9Z5.0

