

200W SMD UNI-DIRECTIONAL TVS FOR ESD PROTECTION DIODE, 24V

| | |
|---|--|
| <p>Dimensions (Inches / Millimeters):</p> <ul style="list-style-type: none"> Top view: 0.035(0.90) x 0.028(0.70) Lead width: 0.051(1.30) / 0.043(1.10) Lead height: 0.014(0.35) / 0.009(0.25) Bottom view: 0.067(1.70) x 0.059(1.50) Lead thickness: 0.007(0.20) / 0.002(0.05) Side view: 0.028(0.70) / 0.020(0.50) | <h3>PRODUCT FEATURES</h3> <ol style="list-style-type: none"> FLAMMABILITY CLASSIFICATION 94V-0 RESPONSE TIME <1ns TYP. ESD (HUMAN BODY MODEL) >16KV IEC COMPATIBILITY: <ul style="list-style-type: none"> IEC61000-4-2 (ESD) ±15KV (AIR), ±8KV (CONTACT) IEC61000-4-4 (EFT) 40A (5/50nS) IEC61000-4-5 (LIGHTNING) 5A (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. ESD5Z24-H: RoHS COMPLIANT/HALOGEN FREE |
|---|--|

ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

| RATING | SYMBOL | VALUE | UNITS |
|--|-----------------|--------------|--------------------|
| PEAK PULSE POWER, $t_p=8/20 \mu\text{S}$ | P_{PP} | 200 | W |
| TYPICAL THERMAL RESISTANCE | $R_{\theta JA}$ | 635 | $^\circ\text{C/W}$ |
| | $R_{\theta JC}$ | 350 | $^\circ\text{C/W}$ |
| STORAGE TEMPERATURE RANGE | T_{STG} | - 55 TO +150 | $^\circ\text{C}$ |
| OPERATING JUNCTION TEMPERATURE RANGE | T_J | - 40 TO +125 | $^\circ\text{C}$ |

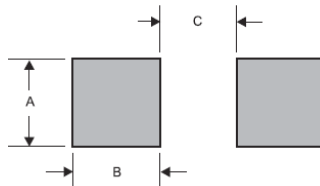
| PART NUMBER | Max. V_{RWM} (V) | Max I_R @ V_{RWM} (μA) | Min V_{BR} @ $I_T=1\text{mA}$ (A) | Max V_C @ $I_{PP}=1\text{A}$ (V) | Max I_{PP} (A) | MAX P_{PK} (W) (NOTE 2) | TYP. C_J (pF) | MARKING |
|-------------|--------------------|---|-------------------------------------|------------------------------------|------------------|---------------------------|-----------------|---------|
| ESD5Z24 | 24 | 1 | 26.7 | 30 | 5 | 160 | 25 | KR |

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

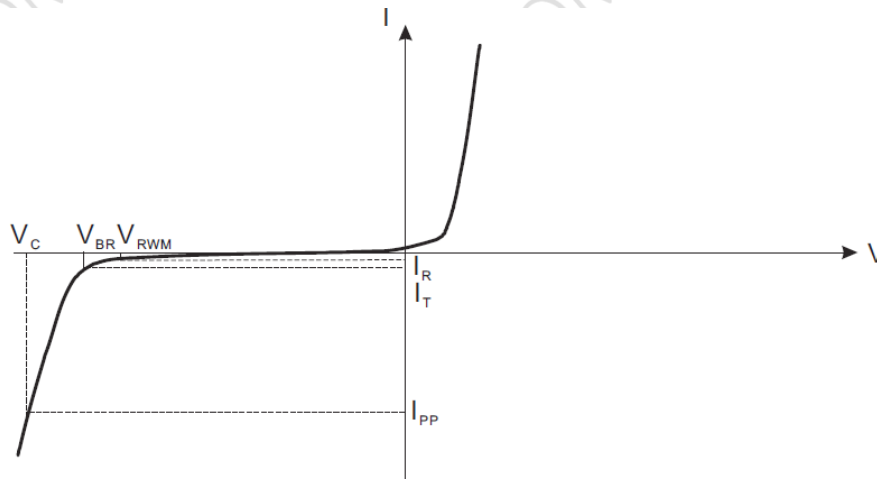
3. UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL TEST IS PERFORMED AT $T_A=25^\circ\text{C}$, $V_F=0.9\text{V}$ @ $I_F=10\text{mA}$

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 $f = 1MHz$

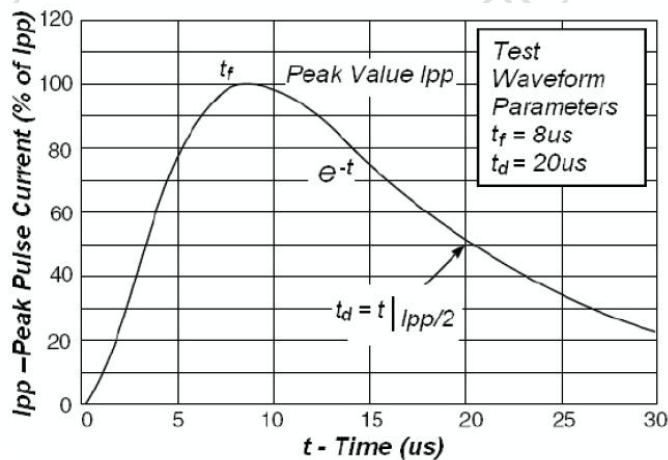


Fig1. Pulse Waveform

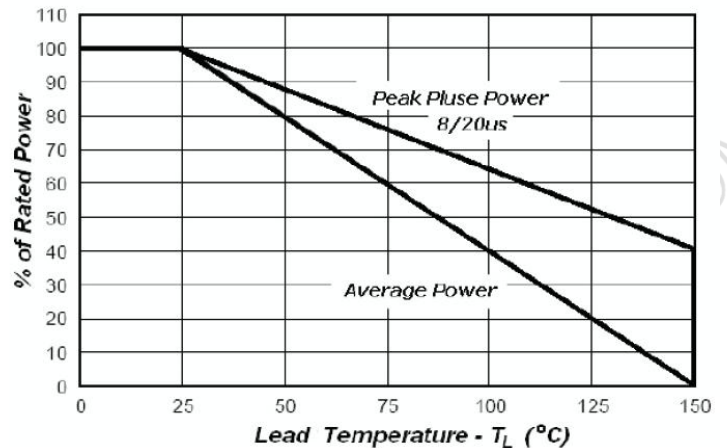


Fig2. Power Derating