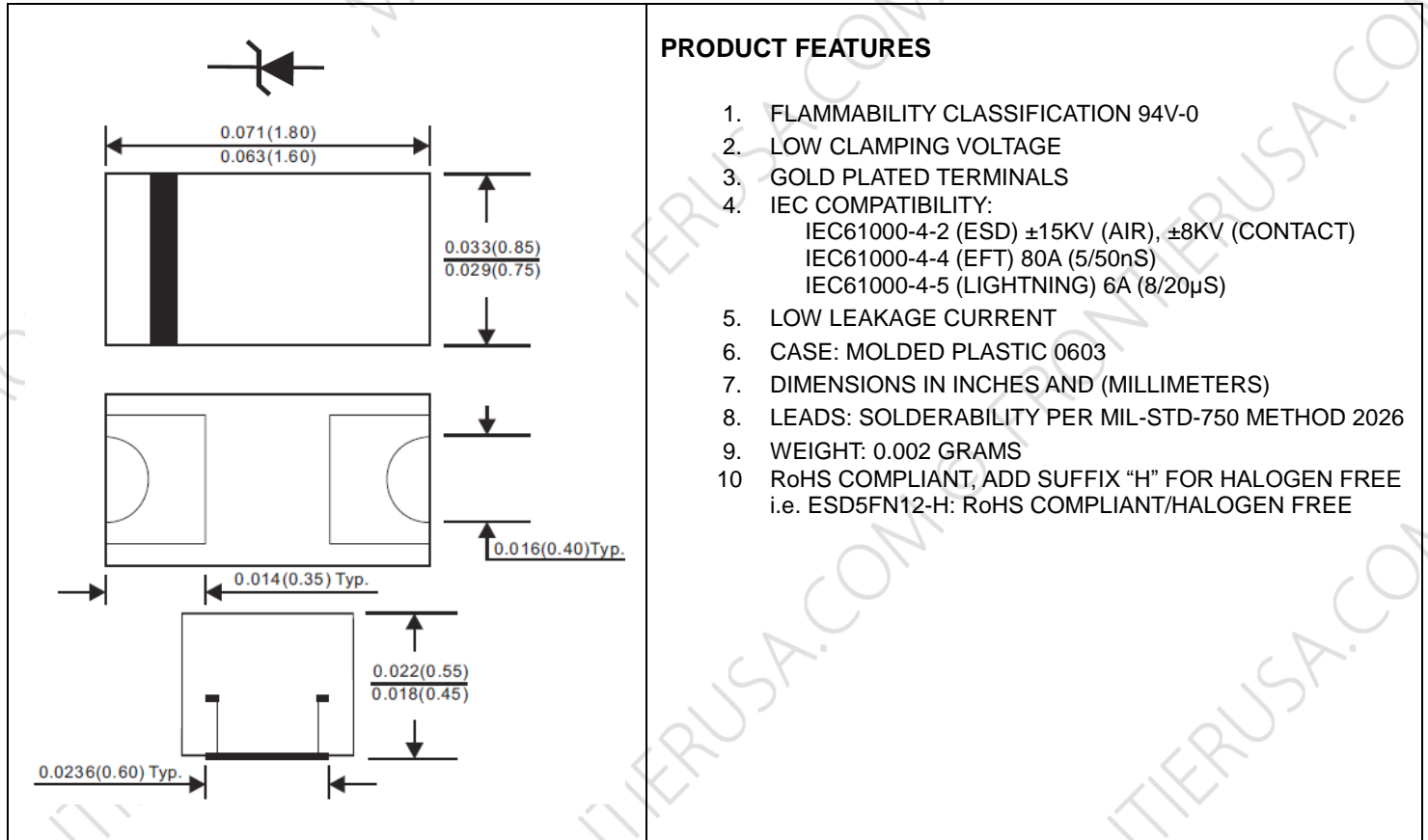


## 150W SMD UNI-DIRECTIONAL TVS FOR ESD PROTECTION DIODES, 12V



## ELECTRICAL CHARACTERISTICS

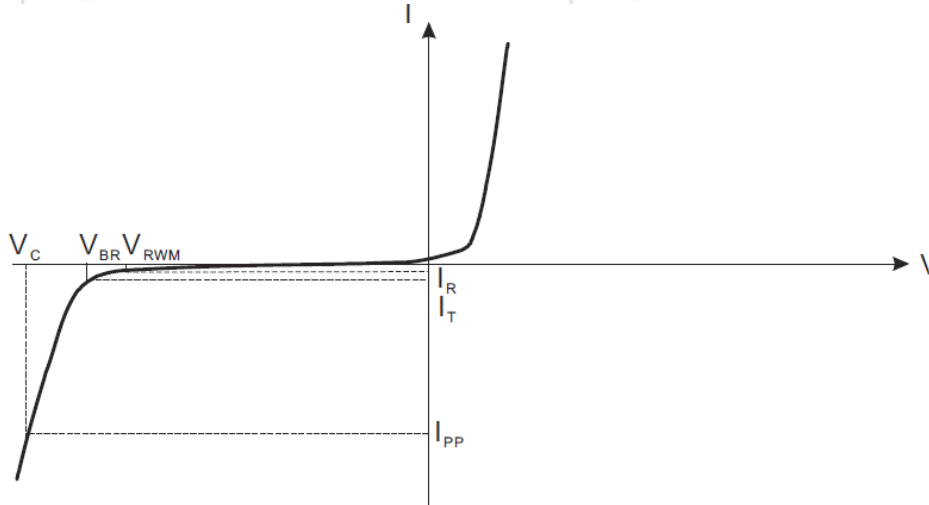
### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL	UNITS
PEAK PULSE POWER, $t_p=8/20 \mu\text{s}$	$P_{PP}$	150 W
STORAGE TEMPERATURE RANGE	$T_{STG}$	- 55 TO +150 $^\circ\text{C}$
OPERATING JUNCTION TEMPERATURE RANGE	$T_J$	- 55 TO +125 $^\circ\text{C}$

PART NUMBER	Max. $V_{RWM}$ (V)	Max $I_R$ @ $V_{RWM}$ ( $\mu\text{A}$ )	Min $V_{BR}$ @ $I_T=1\text{mA}$ (A)	Max $V_C$ @ $I_{PP}=6\text{A}$ (V)	Max $I_{PP}$ (A)	MAX $C_J$ (pF)	MARKING
ESD5FN12	12	2	13.5	25	6	150	E

- NOTE : 1. SURGE CURRENT WAVEFORM PER FIG 1.  
2.  $V_{BR}$  IS MEASURED AT AMBIENT TEMPERATURE OF  $25^\circ\text{C}$ .  
3. UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL TEST IS PERFORMED AT  $T_A=25^\circ\text{C}$ ,  $V_F=1.2\text{V}$  @  $I_F=10\text{mA}$

## 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- 8 X 20us PULSE WAVEFORM

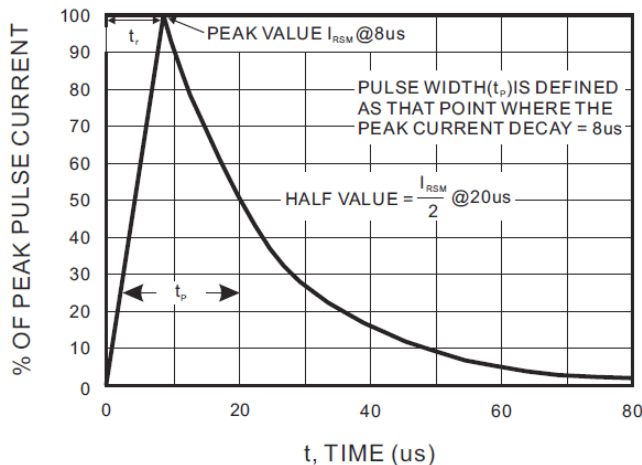


FIG.2- CLAMPING VOLTAGE VS. PEAK PULSE CURRENT

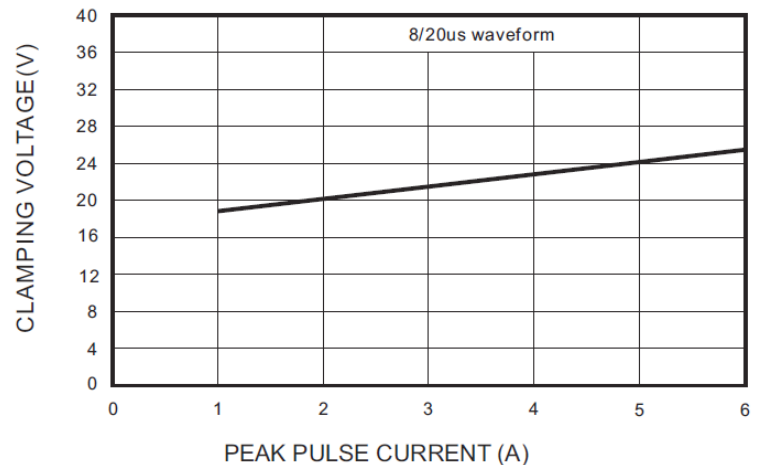


FIG.3- TERMINALS CHARACTERISTICS

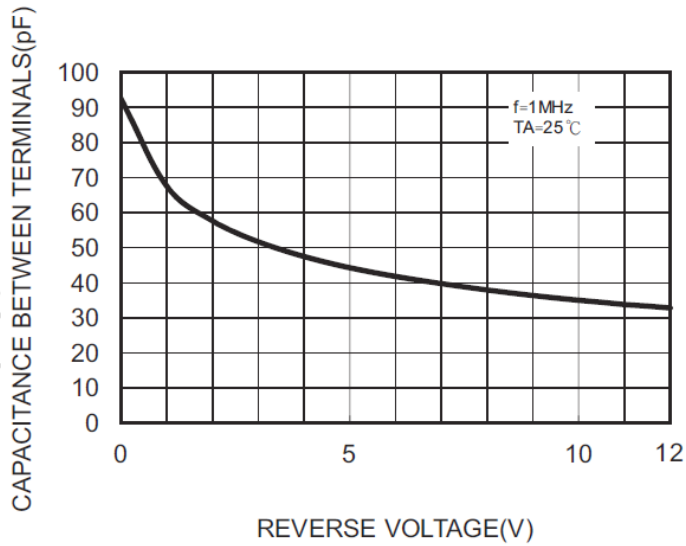
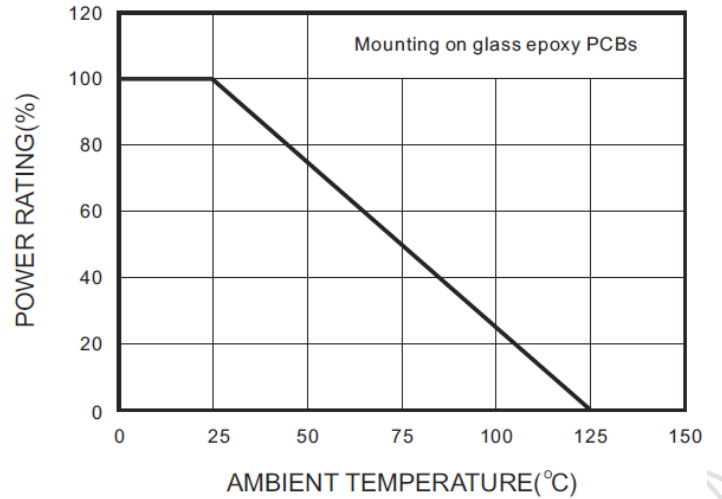
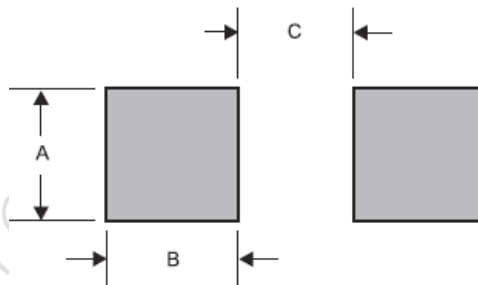


FIG.4- POWER RATING DERATING CURVE



## LAYOUT RECOMMENDATION



PACKAGE	A	B	C
0603	0.032 (0.80)	0.028 (0.70)	0.036 (0.90)