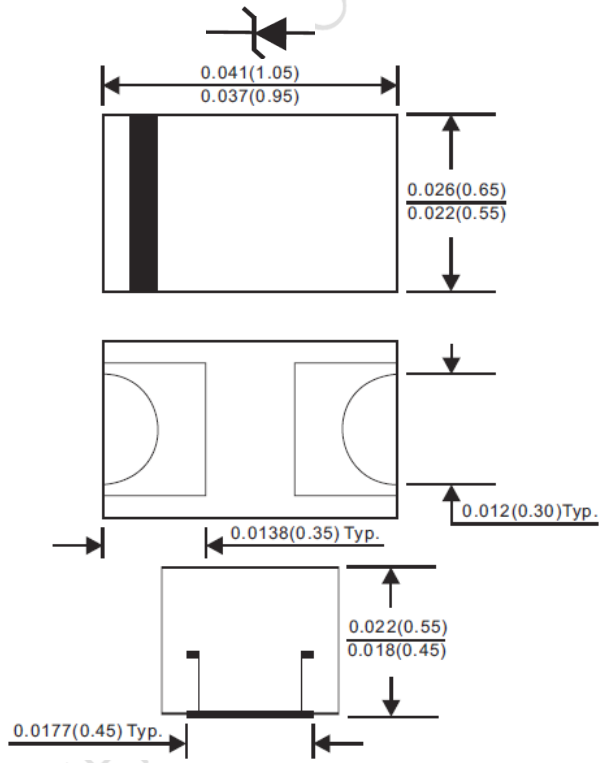
ESD9FN12-A0 SPECIFICATION

Rev. A

60W SMD UNI-DIRECTIONAL TVS FOR ESD PROTECTION DIODE, 12V



PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION 94V-0
2. GOLD PLATED TERMINALS
3. ESD (HUMAN BODY MODEL) >16KV
4. IEC COMPATIBILITY:
   IEC61000-4-2 (ESD) ±16KV (AIR), ±8KV (CONTACT)
   IEC61000-4-4 (EFT) 80A (5/50nS)
   IEC61000-4-5 (LIGHTNING) 3A (8/20μS)
5. LOW LEAKAGE CURRENT
6. CASE: TRANSFER MOLDED, 0402 SIZE
7. DIMENSIONS IN INCHES AND (MILLIMETERS)
8. LEADS: SOLDERABILITY PER MIL-STD-750 METHOD 2026
9. WEIGHT: 0.001 GRAMS
10. RoHS COMPLIANT, ADD SUFFIX "H" FOR HALOGEN FREE
    i.e. ESD9FN12-A0-H: RoHS COMPLIANT/HALOGEN FREE

ELECTRICAL CHARACTERISTICS

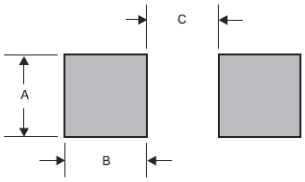
MAXIMUM RATINGS (T_A =25°C UNLESS OTHERWISE NOTED) AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL		UNITS
PEAK PULSE POWER, tp=8/20 μS	P_{PP}	60	W
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO +150	°C
OPERATING JUNCTION TEMPERATURE RANGE	T_J	- 55 TO +125	°C

PART NUMBER	Max. V_{RWM} (V)	Max I_R @V_{RWM} (μA)	Min V_{BR} @ I_T=5mA (A)	Max V_C @ I_{PP}=3A (V)	Max I_{PP} (A)	Max C_J (pF)	MARKING
ESD9FN12-A0	12	2	15.8	20	5	30	E

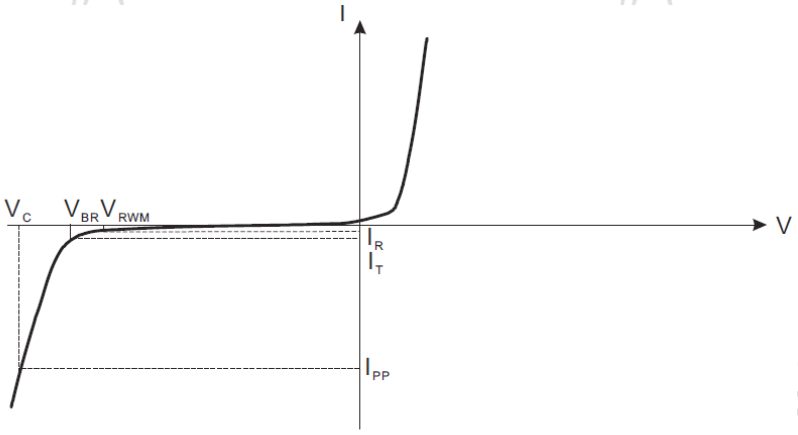
NOTE：1. SURGE CURRENT WAVEFORM PER FIG 1.
2. V_{BR} IS MEASURED WITH A PULSE TEST CURRENT I_T AT 25°C AMBIENT TEMP
3. UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL TEST IS PERFORMED AT T_A=25°C, V_F=0.9V@I_F=10mA

LAYOUT RECOMMENDATION



PACKAGE	A	B	C
0402	0.028 (0.70)	0.020 (0.50)	0.010 (0.25)

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

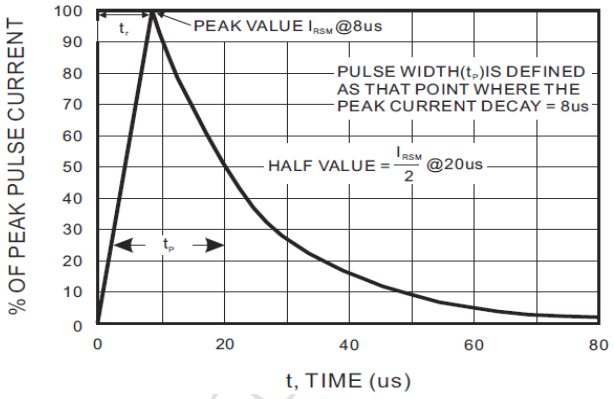


FIG.2- CLAMPING VOLTAGE VS. PEAK PULSE CURRENT

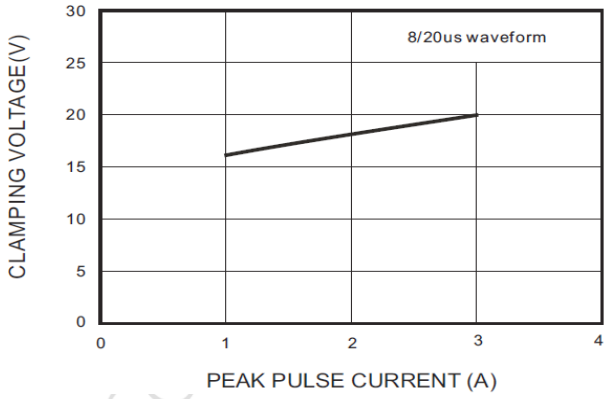


FIG.3- TERMINALS CHARACTERISTICS

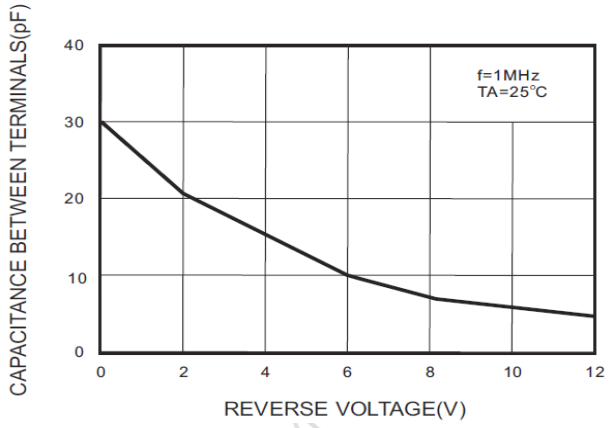


FIG.4- POWER RATING DERATING CURVE