

#### **Features**

- · AEC-Q101 Qualified
- Meet ISO 7637-2 5a/5b and ISO 16750 Load Dump Test (Varied by Test Condition)
- Low Leakage Current
- · Glass Passivated Junction
- · Excellent Clamping Capability
- Bi-directional Polarity
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

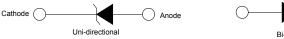
## **Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

| Peak Pulse Power<br>Surge Current with a<br>10/1000µs Waveform   | I <sub>PPM</sub> | See the Table | Note 2                       |
|--|------------------|---------------|------------------------------|
| Peak Pulse Power<br>Dissipation with a<br>10/1000µs Waveform     | P <sub>PPM</sub> | 6600W         |                              |
| Peak Pulse Power<br>Dissipation with a<br>10/10000µs<br>Waveform | P <sub>PPM</sub> | 5200W         |                              |
| Peak forward surge current                                       | I <sub>FSM</sub> | 700A          | 8.3 ms single half sine-wave |
| Power Dissipation On Infinite Heatsink                           | $P_{D}$          | 8.0W          | T <sub>L</sub> =25°C         |

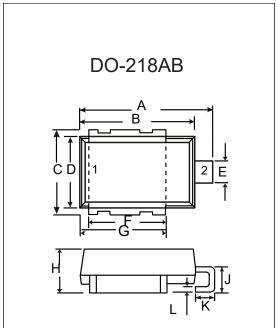
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a. 2. Non-repetitive current pulse, per Fig.2 and derated above T<sub>A</sub>=25°C per Fig.3

#### Pin Configuration:





# 6600 Watt TVS 10 to 43 Volts



| DIMENSIONS |        |       |       |       |       |  |
|------------|--------|-------|-------|-------|-------|--|
| DIM        | INCHES |       | MM    |       | NOTE  |  |
|            | MIN    | MAX   | MIN   | MAX   | INOIL |  |
| Α          | 0.590  | 0.630 | 15.00 | 16.00 |       |  |
| В          | 0.524  | 0.539 | 13.30 | 13.70 |       |  |
| С          | 0.374  | 0.413 | 9.50  | 10.50 |       |  |
| D          | 0.323  | 0.339 | 8.20  | 8.70  |       |  |
| Е          | 0.091  | 0.114 | 2.30  | 3.00  |       |  |
| F          | 0.343  | 0.366 | 8.70  | 9.50  |       |  |
| G          | 0.382  | 0.406 | 9.70  | 10.50 |       |  |
| Н          | 0.189  | 0.205 | 4.70  | 5.20  |       |  |
| J          | 0.098  | 0.138 | 2.50  | 3.50  |       |  |
| K          | 0.067  | 0.106 | 1.70  | 2.80  |       |  |
| L          | 0.020  | 0.028 | 0.50  | 0.70  |       |  |



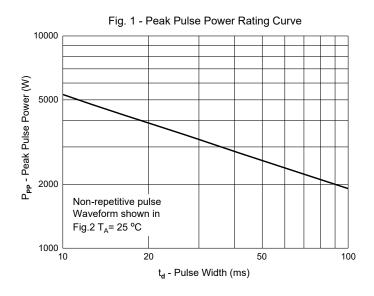
## Electrical Characteristics @ 25°C Unless Otherwise Specified

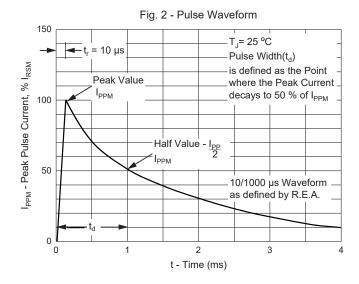
|                 | ICC<br>Number  | Breakdow | n Voltage | V <sub>BR</sub> @I <sub>T</sub> | Maximum<br>Reverse<br>Leakage I <sub>R</sub> | Maximum<br>IR@VRWM<br>T <sub>J</sub> =175 | Working Peak<br>Reverse<br>Voltage V <sub>RWM</sub> | Maximum<br>Reverse Surge<br>Current IPP | Maximum<br>Clamping<br>Voltage      |
|-----------------|----------------|----------|-----------|---------------------------------|--|---|---|---|-------------------------------------|
| Uni-directional | Bi-directional | Min (V)  | Max (V)   | I <sub>T</sub> (mA)             | @V <sub>RWM</sub> (μA)                       | (µA)                                      | (V)   | (A) <sup>(1)</sup>                      | V <sub>C</sub> @I <sub>PP</sub> (V) |
| SM8S10AHE3      |                | 11.10    | 12.30     | 5                               | 15   | 250                                       | 10  | 388.0                                   | 17.0                                |
| SM8S11AHE3      |                | 12.20    | 13.50     | 5                               | 10   | 150                                       | 11  | 363.0                                   | 18.2                                |
| SM8S12AHE3      |                | 13.30    | 14.70     | 5                               | 10   | 150                                       | 12  | 332.0                                   | 19.9                                |
| SM8S13AHE3      |                | 14.40    | 15.90     | 5                               | 10   | 150                                       | 13  | 307.0                                   | 21.5                                |
| SM8S14AHE3      | SM8S14CAHE3    | 15.60    | 17.20     | 5                               | 10   | 150                                       | 14  | 284.0                                   | 23.2                                |
| SM8S15AHE3      | SM8S15CAHE3    | 16.70    | 18.50     | 5                               | 10   | 150                                       | 15  | 270.0                                   | 24.4                                |
| SM8S16AHE3      | SM8S16CAHE3    | 17.80    | 19.70     | 5                               | 10   | 150                                       | 16  | 254.0                                   | 26.0                                |
| SM8S17AHE3      | SM8S17CAHE3    | 18.90    | 20.90     | 5                               | 10   | 150                                       | 17  | 239.0                                   | 27.6                                |
| SM8S18AHE3      | SM8S18CAHE3    | 20.00    | 22.10     | 5                               | 10   | 150                                       | 18  | 226.0                                   | 29.2                                |
| SM8S20AHE3      | SM8S20CAHE3    | 22.20    | 24.50     | 5                               | 10   | 150                                       | 20  | 204.0                                   | 32.4                                |
| SM8S22AHE3      | SM8S22CAHE3    | 24.40    | 26.90     | 5                               | 10   | 150                                       | 22  | 186.0                                   | 35.5                                |
| SM8S24AHE3      | SM8S24CAHE3    | 26.70    | 29.50     | 5                               | 10   | 150                                       | 24  | 170.0                                   | 38.9                                |
| SM8S26AHE3      | SM8S26CAHE3    | 28.90    | 31.90     | 5                               | 10   | 150                                       | 26  | 157.0                                   | 42.1                                |
| SM8S28AHE3      | SM8S28CAHE3    | 31.10    | 34.40     | 5                               | 10   | 150                                       | 28  | 145.0                                   | 45.4                                |
| SM8S30AHE3      | SM8S30CAHE3    | 33.30    | 36.80     | 5                               | 10   | 150                                       | 30  | 136.0                                   | 48.4                                |
| SM8S33AHE3      | SM8S33CAHE3    | 36.70    | 40.60     | 5                               | 10   | 150                                       | 33  | 124.0                                   | 53.3                                |
| SM8S36AHE3      | SM8S36CAHE3    | 40.00    | 44.20     | 5                               | 10   | 150                                       | 36  | 114.0                                   | 58.1                                |
| SM8S40AHE3      | SM8S40CAHE3    | 44.40    | 49.10     | 5                               | 10   | 150                                       | 40  | 102.0                                   | 64.5                                |
| SM8S43AHE3      | SM8S43CAHE3    | 47.80    | 52.80     | 5                               | 10   | 150                                       | 43  | 95.1                                    | 69.4                                |

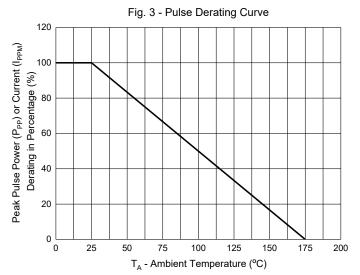
Note: 1.Surge current waveform is defined at 10/1000us waveform



### **Curve Characteristics**









#### **Ordering Information**

| Device         | Packing               |  |
|----------------|-----------------------|--|
| Part Number-TP | Tape&Reel:750pcs/Reel |  |

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