

# **91**

#### E480232

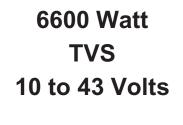
- Features
- AEC-Q101 Qualified
- Meet ISO7637-2 5a Surge Specification
- Low Leakage
- Glass Passivated Junction
- Polarity: Heatsink is Anode
- Excellent Clamping Capability
- Uni-directional Polarity
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

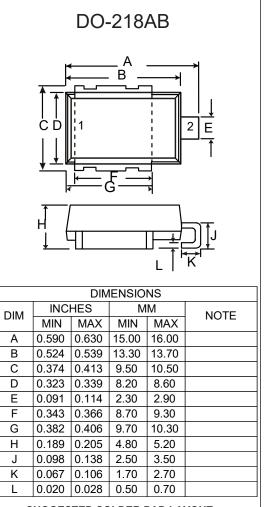
### **Maximum Ratings**

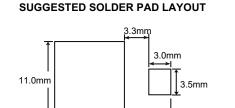
- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

| 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         | Note 2               |
| Peak Pulse Power<br>Dissipation with a<br>10/10000µs<br>Waveform | P <sub>PPM</sub> | 5200W         |                      |
| Power Dissipation On<br>Infinite Heatsink                        | P <sub>D</sub>   | 8.0W          | T <sub>L</sub> =25°C |
| Peak forward surge current                                       | I <sub>FSM</sub> | 700A          |                      |

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a. 2. Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub>=25°C per Fig.4







9.5mm —► 15.8mm



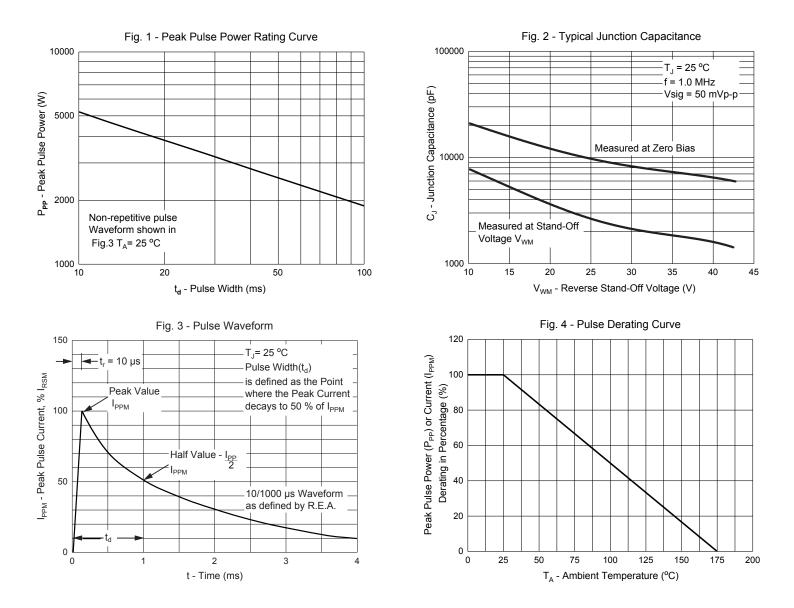
# Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC<br>Part Number | Breako  | lown Voltage | V <sub>BR</sub> @I <sub>T</sub> | Maximum<br>Reverse<br>Leakage I <sub>R</sub> | Maximum<br>IR@VRWM<br>Tյ=175 | Working Peak<br>Reverse<br>Voltage V <sub>RWM</sub> | Maximum<br>Reverse Surge<br>Current IPP | Maximum<br>Clamping<br>Voltage V <sub>C</sub> @I <sub>PP</sub> |
|--------------------|---------|--------------|---------------------------------|--|------------------------------|---|---|--|
| (Uni)              | Min (V) | Max (V)      | I <sub>⊤</sub> (mA)             | @V <sub>RWM</sub> (μΑ)                       | (µA)                         | (V)   | (A) <sup>(1)</sup>                      | (V)  |
| SM8S10A            | 11.1    | 12.3         | 5.0                             | 15   | 250                          | 10  | 388                                     | 17.0   |
| SM8S11A            | 12.2    | 13.5         | 5.0                             | 10   | 150                          | 11  | 363                                     | 18.2   |
| SM8S12A            | 13.3    | 14.7         | 5.0                             | 10   | 150                          | 12  | 332                                     | 19.9   |
| SM8S13A            | 14.4    | 15.9         | 5.0                             | 10   | 150                          | 13  | 307                                     | 21.5   |
| SM8S14A            | 15.6    | 17.2         | 5.0                             | 10   | 150                          | 14  | 284                                     | 23.2   |
| SM8S15A            | 16.7    | 18.5         | 5.0                             | 10   | 150                          | 15  | 270                                     | 24.4   |
| SM8S16A            | 17.8    | 19.7         | 5.0                             | 10   | 150                          | 16  | 254                                     | 26.0   |
| SM8S17A            | 18.9    | 20.9         | 5.0                             | 10   | 150                          | 17  | 239                                     | 27.6   |
| SM8S18A            | 20.0    | 22.1         | 5.0                             | 10   | 150                          | 18  | 226                                     | 29.2   |
| SM8S20A            | 22.2    | 24.5         | 5.0                             | 10   | 150                          | 20  | 204                                     | 32.4   |
| SM8S22A            | 24.4    | 26.9         | 5.0                             | 10   | 150                          | 22  | 186                                     | 35.5   |
| SM8S24A            | 26.7    | 29.5         | 5.0                             | 10   | 150                          | 24  | 170                                     | 38.9   |
| SM8S26A            | 28.9    | 31.9         | 5.0                             | 10   | 150                          | 26  | 157                                     | 42.1   |
| SM8S28A            | 31.1    | 34.4         | 5.0                             | 10   | 150                          | 28  | 145                                     | 45.4   |
| SM8S30A            | 33.3    | 36.8         | 5.0                             | 10   | 150                          | 30  | 136                                     | 48.4   |
| SM8S33A            | 36.7    | 40.6         | 5.0                             | 10   | 150                          | 33  | 124                                     | 53.3   |
| SM8S36A            | 40.0    | 44.2         | 5.0                             | 10   | 150                          | 36  | 114                                     | 58.1   |
| SM8S40A            | 44.4    | 49.1         | 5.0                             | 10   | 150                          | 40  | 102                                     | 64.5   |
| SM8S43A            | 47.8    | 52.8         | 5.0                             | 10   | 150                          | 43  | 95.1                                    | 69.4   |

Note: 1.Surge current waveform is defined at 10/1000us waveform 2.For all types maximum V<sub>F</sub> = 1.9V at I<sub>F</sub> = 100A measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum



# **Curve Characteristics**





## **Ordering Information**

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

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