

**ELECTRICAL CHARACTERISTICS** ( $T_C = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

| DEVICE TYPE | BREAKDOWN VOLTAGE $V_{BR}$ (V) |      | TEST CURRENT $I_T$ (mA) | STAND-OFF VOLTAGE $V_{WM}$ (V) | MAXIMUM REVERSE LEAKAGE AT $V_{WM}$ $I_D$ ( $\mu\text{A}$ ) | MAXIMUM REVERSE LEAKAGE AT $V_{WM}$ $T_J = 175\text{ }^{\circ}\text{C}$ $I_D$ ( $\mu\text{A}$ ) | MAX. PEAK PULSE CURRENT AT 10/1000 $\mu\text{s}$ WAVEFORM (A) | MAXIMUM CLAMPING VOLTAGE AT $I_{PPM}$ $V_C$ (V) |
|-------------|--------------------------------|------|-------------------------|--------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------|
|             | MIN.                           | MAX. |                         |                                |                                                             |                                                                                                 |                                                               |                                                 |
| SM6S10A     | 11.1                           | 12.3 | 5.0                     | 10.0                           | 15                                                          | 250                                                                                             | 271                                                           | 17.0                                            |
| SM6S11A     | 12.2                           | 13.5 | 5.0                     | 11.0                           | 10                                                          | 150                                                                                             | 253                                                           | 18.2                                            |
| SM6S12A     | 13.3                           | 14.7 | 5.0                     | 12.0                           | 10                                                          | 150                                                                                             | 231                                                           | 19.9                                            |
| SM6S13A     | 14.4                           | 15.9 | 5.0                     | 13.0                           | 10                                                          | 150                                                                                             | 214                                                           | 21.5                                            |
| SM6S14A     | 15.6                           | 17.2 | 5.0                     | 14.0                           | 10                                                          | 150                                                                                             | 198                                                           | 23.2                                            |
| SM6S15A     | 16.7                           | 18.5 | 5.0                     | 15.0                           | 10                                                          | 150                                                                                             | 189                                                           | 24.4                                            |
| SM6S16A     | 17.8                           | 19.7 | 5.0                     | 16.0                           | 10                                                          | 150                                                                                             | 177                                                           | 26.0                                            |
| SM6S17A     | 18.9                           | 20.9 | 5.0                     | 17.0                           | 10                                                          | 150                                                                                             | 167                                                           | 27.6                                            |
| SM6S18A     | 20.0                           | 22.1 | 5.0                     | 18.0                           | 10                                                          | 150                                                                                             | 158                                                           | 29.2                                            |
| SM6S20A     | 22.2                           | 24.5 | 5.0                     | 20.0                           | 10                                                          | 150                                                                                             | 142                                                           | 32.4                                            |
| SM6S22A     | 24.4                           | 26.9 | 5.0                     | 22.0                           | 10                                                          | 150                                                                                             | 130                                                           | 35.5                                            |
| SM6S24A     | 26.7                           | 29.5 | 5.0                     | 24.0                           | 10                                                          | 150                                                                                             | 118                                                           | 38.9                                            |
| SM6S26A     | 28.9                           | 31.9 | 5.0                     | 26.0                           | 10                                                          | 150                                                                                             | 109                                                           | 42.1                                            |
| SM6S28A     | 31.1                           | 34.4 | 5.0                     | 28.0                           | 10                                                          | 150                                                                                             | 101                                                           | 45.4                                            |
| SM6S30A     | 33.3                           | 36.8 | 5.0                     | 30.0                           | 10                                                          | 150                                                                                             | 95                                                            | 48.4                                            |
| SM6S33A     | 36.7                           | 40.6 | 5.0                     | 33.0                           | 10                                                          | 150                                                                                             | 86                                                            | 53.3                                            |
| SM6S36A     | 40.0                           | 44.2 | 5.0                     | 36.0                           | 10                                                          | 150                                                                                             | 79                                                            | 58.1                                            |

**Note**

- For all types maximum  $V_F = 1.9\text{ V}$  at  $I_F = 100\text{ A}$  measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

**THERMAL CHARACTERISTICS** ( $T_C = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

| PARAMETER                                    | SYMBOL          | VALUE | UNIT                 |
|----------------------------------------------|-----------------|-------|----------------------|
| Typical thermal resistance, junction to case | $R_{\theta JC}$ | 0.95  | $^{\circ}\text{C/W}$ |

**ORDERING INFORMATION** (Example)

| PREFERRED P/N                 | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE                                                       |
|-------------------------------|-----------------|------------------------|---------------|---------------------------------------------------------------------|
| SM6S10AHE3_A/I <sup>(1)</sup> | 2.550           | I                      | 750           | 13" diameter plastic tape and reel, anode towards the sprocket hole |

**Note**

- <sup>(1)</sup> AEC-Q101 qualified



## RATINGS AND CHARACTERISTICS CURVES ( $T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

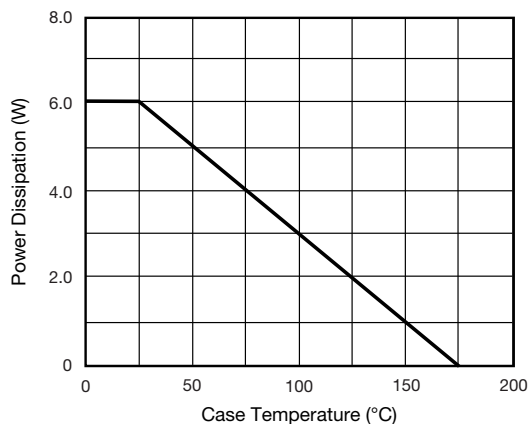


Fig. 1 - Power Derating Curve

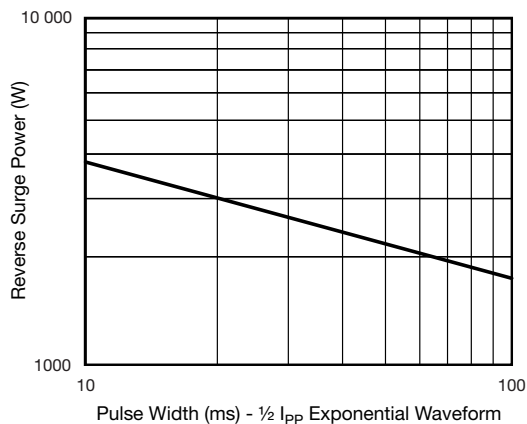


Fig. 4 - Reverse Power Capability

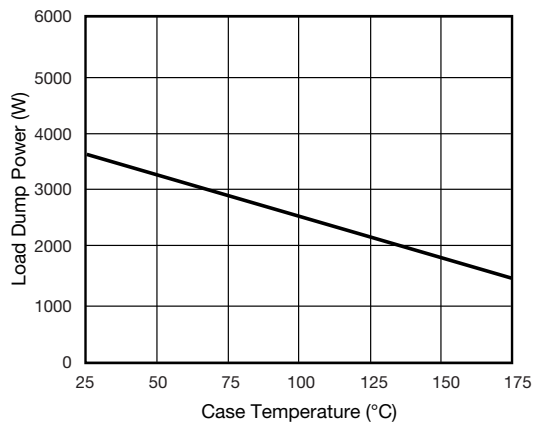


Fig. 2 - Load Dump Power Characteristics (10 ms Exponential Waveform)

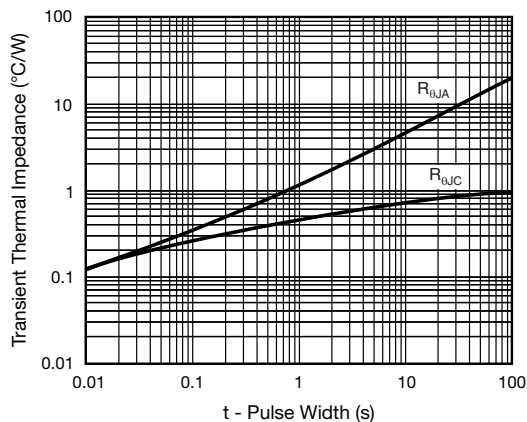


Fig. 5 - Typical Transient Thermal Impedance

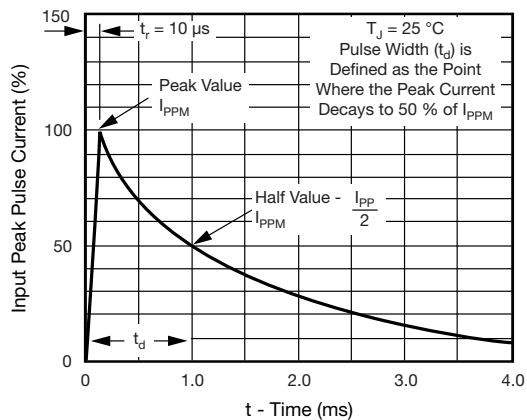
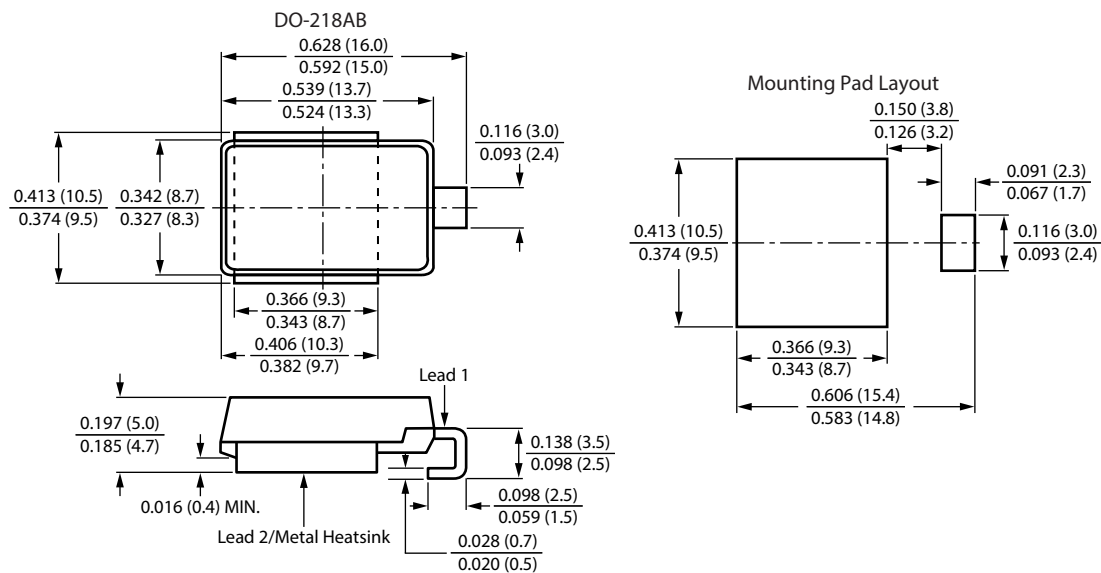


Fig. 3 - Pulse Waveform



## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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