

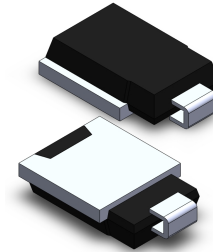
VOLTAGE RANGE: 10 - 36V
POWER: 4600Watts

Features

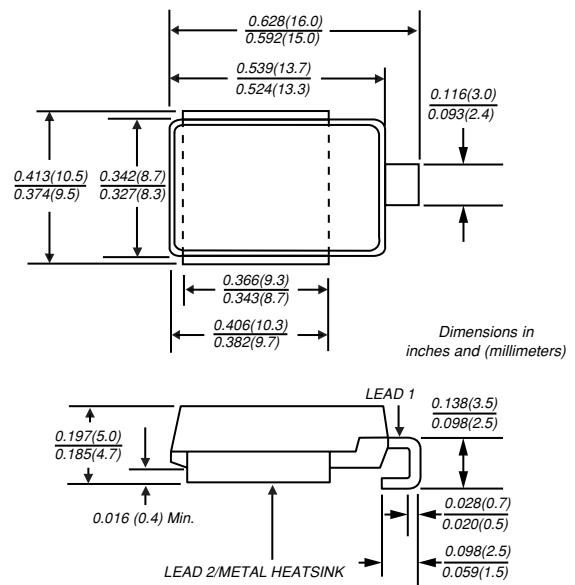
- Ideally suited for load dump protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Integrally molded heatsink provides a very low thermal resistance for maximum heat dissipation
- Low leakage current at $T_J = 175^\circ\text{C}$
- High temperature soldering guaranteed: 260°C for 10 seconds at terminals

Mechanical Data

- Case: DO-218AB
- Mounting Position: Any
- Weight: 0.091 oz., 2.58 g



DO-218AB



Maximum Ratings and Thermal Characteristics (T_C = 25°C unless otherwise noted)

| Characteristic | Symbol | Value | Unit |
|--|-----------------------------------|--------------|------|
| Peak pulse power dissipation with 10/1000μs waveform 10/10,000μs waveform | P _{PPM} | 4600 3600 | W |
| Steady state power dissipation | P _D | 6.0 | W |
| Peak pulse current with a 10/1000μs waveform (NOTE 1) | I _{PPM} | See Table 1 | A |
| Peak forward surge current, 8.3ms single half sine-wave | I _{FSM} | 600 | A |
| Typical thermal resistance junction to case | R _{θJC} | 0.95 | °C/W |
| Operating junction and storage temperature range | T _J , T _{STG} | -55 to +175 | °C |

Notes: (1) Non-repetitive current pulse derated above T_A=25°C



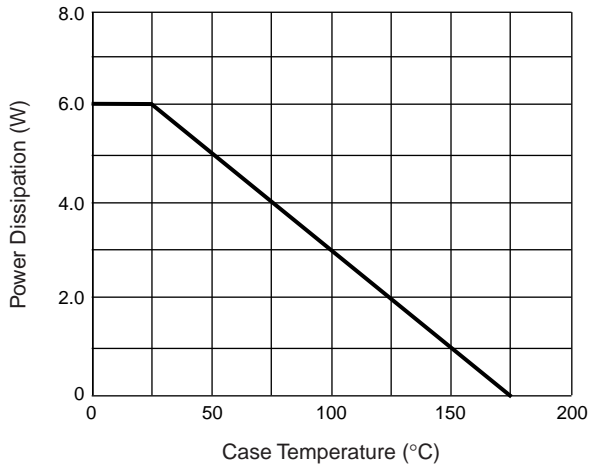
Electrical Characteristics (T_C = 25°C unless otherwise noted)

| Type | Breakdown Voltage V _(BR) (V) | | Test Current I _T | Stand-off Voltage V _{WM} | Maximum Reverse Leakage at V _{WM} I _D | Maximum Reverse Leakage at V _{WM} T _C =175°C I _D (μA) | Max. Peak Pulse Current at 10/1000μs Waveform (A) | Maximum Clamping Voltage at I _{PPM} V _C (V) |
|----------|---|------|--------------------------------|---|---|---|--|--|
| | Min. | Max. | (mA) | (V) | (μA) | I _D (μA) | (A) | (V) |
| SM6S10CA | 11.1 | 13.6 | 5.0 | 10.0 | 15 | 250 | 245 | 18.8 |
| SM6S10A | 11.1 | 12.3 | 5.0 | 10.0 | 15 | 250 | 271 | 17.0 |
| SM6S11CA | 12.2 | 14.9 | 5.0 | 11.0 | 10 | 150 | 229 | 20.1 |
| SM6S11A | 12.2 | 13.5 | 5.0 | 11.0 | 10 | 150 | 253 | 18.2 |
| SM6S12CA | 13.3 | 16.3 | 5.0 | 12.0 | 10 | 150 | 209 | 22.0 |
| SM6S12A | 13.3 | 14.7 | 5.0 | 12.0 | 10 | 150 | 231 | 19.9 |
| SM6S13CA | 14.4 | 17.6 | 5.0 | 13.0 | 10 | 150 | 193 | 23.8 |
| SM6S13A | 14.4 | 15.9 | 5.0 | 13.0 | 10 | 150 | 214 | 21.5 |
| SM6S14CA | 15.6 | 19.1 | 5.0 | 14.0 | 10 | 150 | 178 | 25.8 |
| SM6S14A | 15.6 | 17.2 | 5.0 | 14.0 | 10 | 150 | 198 | 23.2 |
| SM6S15CA | 16.7 | 20.4 | 5.0 | 15.0 | 10 | 150 | 171 | 26.9 |
| SM6S15A | 16.7 | 18.5 | 5.0 | 15.0 | 10 | 150 | 189 | 24.4 |
| SM6S16CA | 17.8 | 21.8 | 5.0 | 16.0 | 10 | 150 | 160 | 28.8 |
| SM6S16A | 17.8 | 19.7 | 5.0 | 16.0 | 10 | 150 | 177 | 26.0 |
| SM6S17CA | 18.9 | 23.1 | 5.0 | 17.0 | 10 | 150 | 151 | 30.5 |
| SM6S17A | 18.9 | 20.9 | 5.0 | 17.0 | 10 | 150 | 167 | 27.6 |
| SM6S18CA | 20.0 | 24.4 | 5.0 | 18.0 | 10 | 150 | 143 | 32.2 |
| SM6S18A | 20.0 | 22.1 | 5.0 | 18.0 | 10 | 150 | 158 | 29.2 |
| SM6S20CA | 22.2 | 27.1 | 5.0 | 20.0 | 10 | 150 | 128 | 35.8 |
| SM6S20A | 22.2 | 24.5 | 5.0 | 20.0 | 10 | 150 | 142 | 32.4 |
| SM6S22CA | 24.4 | 29.8 | 5.0 | 22.0 | 10 | 150 | 117 | 39.4 |
| SM6S22A | 24.4 | 26.9 | 5.0 | 22.0 | 10 | 150 | 130 | 35.5 |
| SM6S24CA | 26.7 | 32.6 | 5.0 | 24.0 | 10 | 150 | 107 | 43.0 |
| SM6S24A | 26.7 | 29.5 | 5.0 | 24.0 | 10 | 150 | 118 | 38.9 |
| SM6S26CA | 28.9 | 35.3 | 5.0 | 26.0 | 10 | 150 | 99 | 46.6 |
| SM6S26A | 28.9 | 31.9 | 5.0 | 26.0 | 10 | 150 | 109 | 42.1 |
| SM6S28CA | 31.1 | 38.0 | 5.0 | 28.0 | 10 | 150 | 92 | 50.1 |
| SM6S28A | 31.1 | 34.4 | 5.0 | 28.0 | 10 | 150 | 101 | 45.4 |
| SM6S30CA | 33.3 | 40.7 | 5.0 | 30.0 | 10 | 150 | 86 | 53.5 |
| SM6S30A | 33.3 | 36.8 | 5.0 | 30.0 | 10 | 150 | 95 | 48.4 |
| SM6S33CA | 36.7 | 44.9 | 5.0 | 33.0 | 10 | 150 | 78 | 59.0 |
| SM6S33A | 36.7 | 40.6 | 5.0 | 33.0 | 10 | 150 | 86 | 53.3 |
| SM6S36CA | 40.0 | 48.9 | 5.0 | 36.0 | 10 | 150 | 72 | 64.3 |
| SM6S36A | 40.0 | 44.2 | 5.0 | 36.0 | 10 | 150 | 79 | 58.1 |

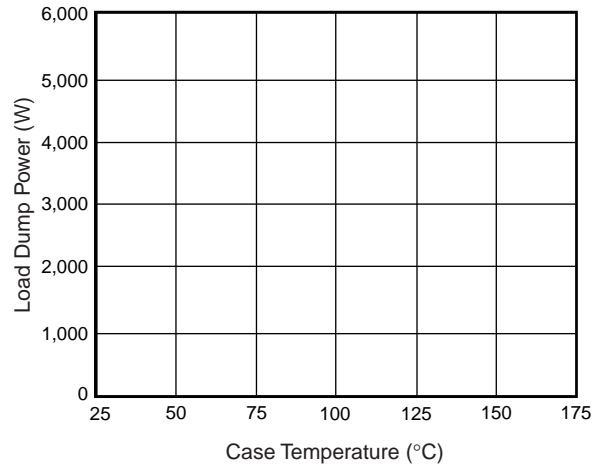
Note: For all types maximum V_F = 1.9V at I_F = 100A measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum



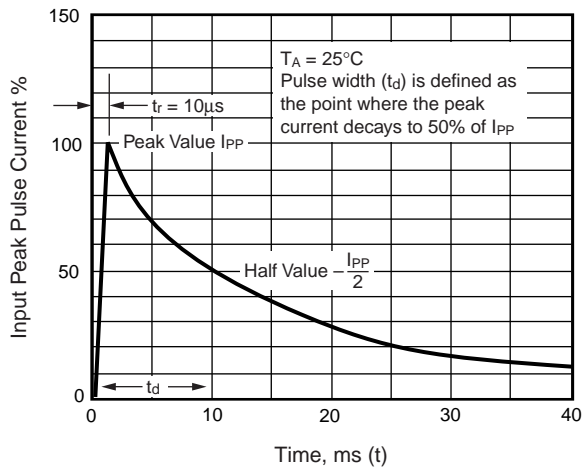
Power Derating Curve



Load Dump Power Characteristics (10ms Exponential Waveform)



Pulse Waveform



Reverse Power Capability

