

## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| TYPE    | Breakdown Voltage @ I <sub>T</sub> |      |                | Reverse Stand off Voltage | Maximum Reverse Leakage @ V <sub>RWM</sub> | Maximum Reverse Leakage @ V <sub>RM</sub> | Maximum Peak Pulse Current at 10/1000µs | Maximum Clamping Voltage @ I <sub>PPM</sub> |
|---------|------------------------------------|------|----------------|---------------------------|--------------------------------------------|-------------------------------------------|-----------------------------------------|---------------------------------------------|
|         | V <sub>BR</sub> (V)                |      | I <sub>T</sub> | V <sub>RWM</sub>          | I <sub>D</sub>                             | I <sub>D</sub> (T <sub>C</sub> =175°C)    | I <sub>PPM</sub>                        | V <sub>C</sub>                              |
|         | Min.                               | Max. | (mA)           | (V)                       | (µA)                                       | (µA)                                      | (A)                                     | (V)                                         |
| SM8S10  | 11.1                               | 13.6 | 5.0            | 10                        | 15                                         | 250                                       | 351                                     | 18.8                                        |
| SM8S10A | 11.1                               | 12.3 | 5.0            | 10                        | 15                                         | 250                                       | 388                                     | 17.0                                        |
| SM8S11  | 12.2                               | 14.9 | 5.0            | 11                        | 10                                         | 150                                       | 328                                     | 20.1                                        |
| SM8S11A | 12.2                               | 13.5 | 5.0            | 11                        | 10                                         | 150                                       | 363                                     | 18.2                                        |
| SM8S12  | 13.3                               | 16.3 | 5.0            | 12                        | 10                                         | 150                                       | 300                                     | 22.0                                        |
| SM8S12A | 13.3                               | 14.7 | 5.0            | 12                        | 10                                         | 150                                       | 332                                     | 19.9                                        |
| SM8S13  | 14.4                               | 17.6 | 5.0            | 13                        | 10                                         | 150                                       | 277                                     | 23.8                                        |
| SM8S13A | 14.4                               | 15.9 | 5.0            | 13                        | 10                                         | 150                                       | 307                                     | 21.5                                        |
| SM8S14  | 15.6                               | 19.1 | 5.0            | 14                        | 10                                         | 150                                       | 256                                     | 25.8                                        |
| SM8S14A | 15.6                               | 17.2 | 5.0            | 14                        | 10                                         | 150                                       | 284                                     | 23.2                                        |
| SM8S15  | 16.7                               | 20.4 | 5.0            | 15                        | 10                                         | 150                                       | 245                                     | 26.9                                        |
| SM8S15A | 16.7                               | 18.5 | 5.0            | 15                        | 10                                         | 150                                       | 270                                     | 24.4                                        |
| SM8S16  | 17.8                               | 21.8 | 5.0            | 16                        | 10                                         | 150                                       | 229                                     | 28.8                                        |
| SM8S16A | 17.8                               | 19.7 | 5.0            | 16                        | 10                                         | 150                                       | 254                                     | 26.0                                        |
| SM8S17  | 18.9                               | 23.1 | 5.0            | 17                        | 10                                         | 150                                       | 216                                     | 30.5                                        |
| SM8S17A | 18.9                               | 20.9 | 5.0            | 17                        | 10                                         | 150                                       | 239                                     | 27.6                                        |
| SM8S18  | 20.0                               | 24.4 | 5.0            | 18                        | 10                                         | 150                                       | 205                                     | 32.2                                        |
| SM8S18A | 20.0                               | 22.1 | 5.0            | 18                        | 10                                         | 150                                       | 226                                     | 29.2                                        |
| SM8S20  | 22.2                               | 27.1 | 5.0            | 20                        | 10                                         | 150                                       | 184                                     | 35.8                                        |
| SM8S20A | 22.2                               | 24.5 | 5.0            | 20                        | 10                                         | 150                                       | 204                                     | 32.4                                        |
| SM8S22  | 24.4                               | 29.8 | 5.0            | 22                        | 10                                         | 150                                       | 168                                     | 39.4                                        |
| SM8S22A | 24.4                               | 26.9 | 5.0            | 22                        | 10                                         | 150                                       | 168                                     | 35.5                                        |
| SM8S24  | 26.7                               | 32.6 | 5.0            | 24                        | 10                                         | 150                                       | 153                                     | 43.0                                        |
| SM8S24A | 26.7                               | 29.5 | 5.0            | 24                        | 10                                         | 150                                       | 170                                     | 38.9                                        |
| SM8S26  | 28.9                               | 35.3 | 5.0            | 26                        | 10                                         | 150                                       | 142                                     | 46.6                                        |
| SM8S26A | 28.9                               | 31.9 | 5.0            | 26                        | 10                                         | 150                                       | 157                                     | 42.1                                        |
| SM8S28  | 31.1                               | 38.0 | 5.0            | 28                        | 10                                         | 150                                       | 132                                     | 50.1                                        |
| SM8S28A | 31.1                               | 34.4 | 5.0            | 28                        | 10                                         | 150                                       | 145                                     | 45.4                                        |
| SM8S30  | 33.3                               | 40.7 | 5.0            | 30                        | 10                                         | 150                                       | 123                                     | 53.5                                        |
| SM8S30A | 33.3                               | 36.8 | 5.0            | 30                        | 10                                         | 150                                       | 136                                     | 48.4                                        |
| SM8S33  | 36.7                               | 44.9 | 5.0            | 33                        | 10                                         | 150                                       | 112                                     | 59.0                                        |
| SM8S33A | 36.7                               | 40.6 | 5.0            | 33                        | 10                                         | 150                                       | 124                                     | 53.3                                        |
| SM8S36  | 40.0                               | 48.9 | 5.0            | 36                        | 10                                         | 150                                       | 103                                     | 64.3                                        |
| SM8S36A | 40.0                               | 44.2 | 5.0            | 36                        | 10                                         | 150                                       | 114                                     | 58.1                                        |
| SM8S40  | 44.4                               | 54.3 | 5.0            | 40                        | 10                                         | 150                                       | 92                                      | 71.4                                        |
| SM8S40A | 44.4                               | 49.1 | 5.0            | 40                        | 10                                         | 150                                       | 102                                     | 64.5                                        |
| SM8S43  | 47.8                               | 58.4 | 5.0            | 43                        | 10                                         | 150                                       | 86                                      | 76.7                                        |
| SM8S43A | 47.8                               | 52.8 | 5.0            | 43                        | 10                                         | 150                                       | 95                                      | 69.4                                        |

### Notes:

- (1) For all types maximum V<sub>F</sub> = 1.8V at I<sub>F</sub> = 100A measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum
- (2) " SM S " will be omitted in marking on the diode.

## RATING AND CHARACTERISTIC CURVES ( SM8S SERIES )

FIG. 1 - POWER DERATING CURVE

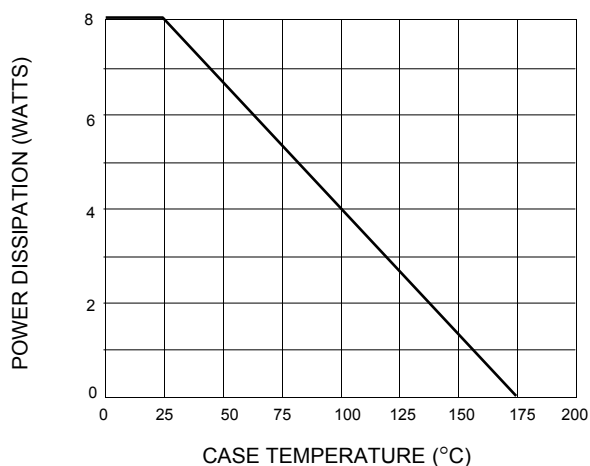


FIG. 2 - LOAD DUMP POWER CHARACTERISTICS

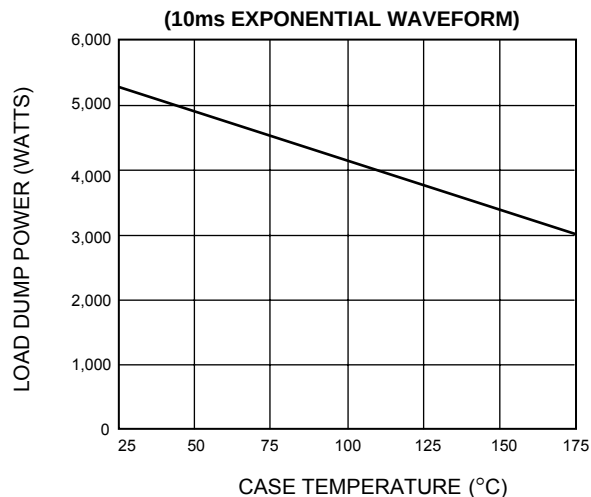


FIG. 3 - PULSE WAVEFORM

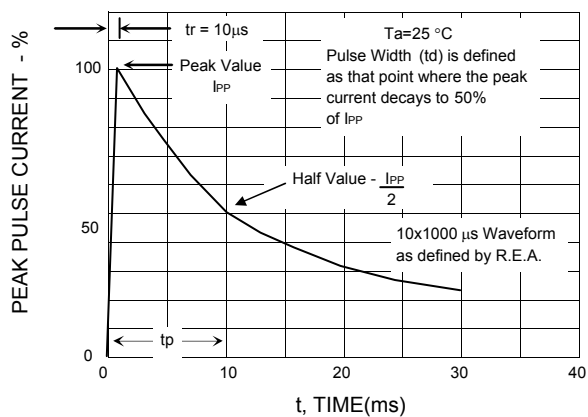


FIG. 4 - REVERSE POWER CAPABILITY

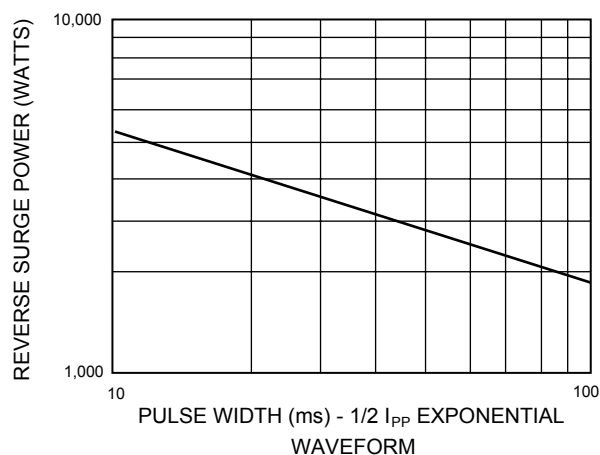


FIG. 5 - TYPICAL TRANSIENT THERMAL IMPEDANCE

