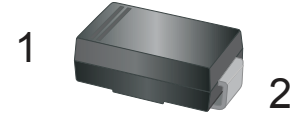


### ■ Features

- For surface mounted applications
- Ultra fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed  
250°C/10 seconds at terminals



SMA



### ■ Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

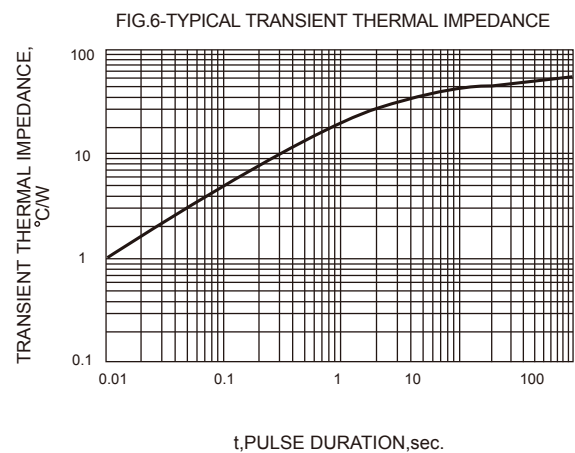
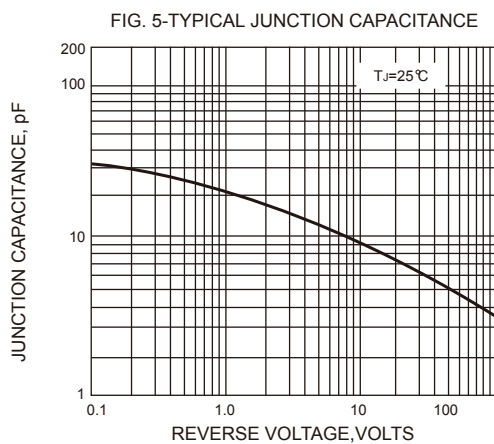
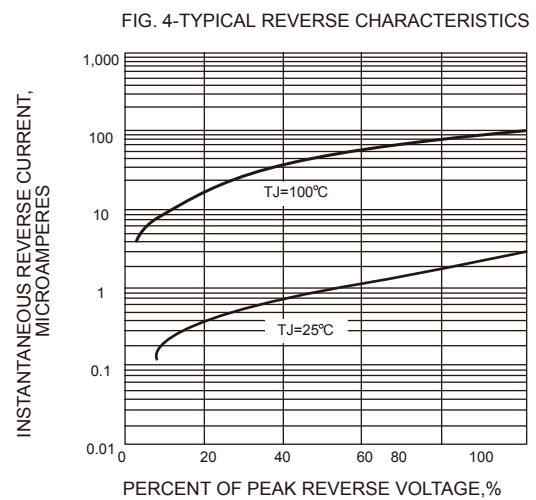
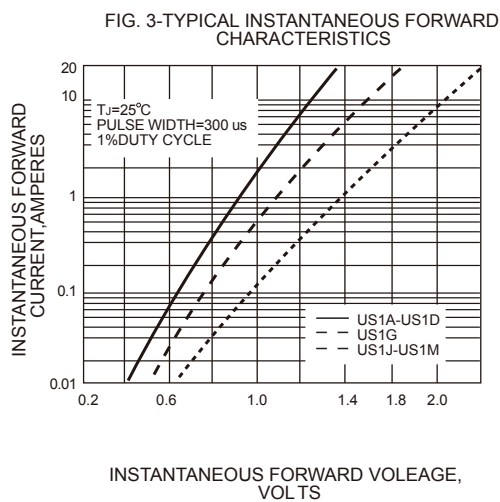
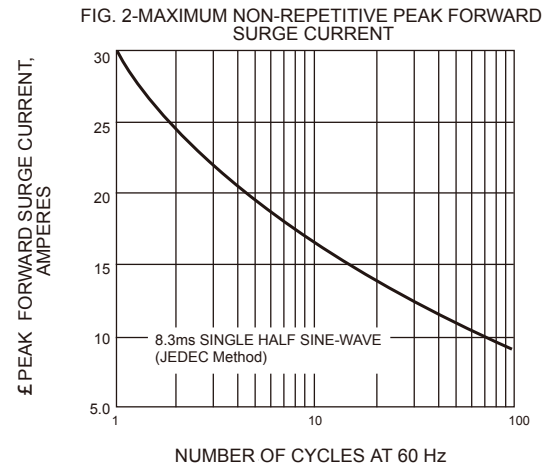
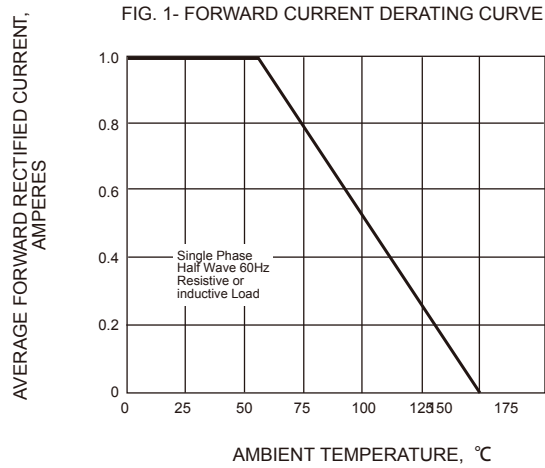
| Parameter                                                                                             | Symbol             | US1A       | US1B | US1D | US1G | US1J | US1K | US1M | Unit |
|-------------------------------------------------------------------------------------------------------|--------------------|------------|------|------|------|------|------|------|------|
| Repetitive Peak Reverse Voltage                                                                       | V <sub>RRM</sub>   | 50         | 100  | 200  | 400  | 600  | 800  | 1000 | V    |
| Maximum RMS Voltage                                                                                   | V <sub>RMS</sub>   | 35         | 70   | 140  | 280  | 420  | 560  | 700  |      |
| Maximum DC Blocking Voltage                                                                           | V <sub>DC</sub>    | 50         | 100  | 200  | 400  | 600  | 800  | 1000 |      |
| Instantaneous Forward Voltage at I <sub>F</sub> =1.0A                                                 | V <sub>F</sub>     | 1.0        |      |      | 1.3  | 1.7  |      |      |      |
| Maximum Average Forward Rectified Current @T <sub>A</sub> = 55°C                                      | I <sub>F(AV)</sub> | 1.0        |      |      |      |      |      |      | A    |
| Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load                    | I <sub>FSM</sub>   | 30         |      |      |      |      |      |      |      |
| Maximum DC Reverse Current T <sub>A</sub> =25°C<br>at rated DC blocking voltage T <sub>A</sub> =100°C | I <sub>R</sub>     | 5          |      |      |      |      |      |      | μA   |
|                                                                                                       |                    | 50         |      |      |      |      |      |      |      |
| Reverse Recovery Time *1                                                                              | t <sub>rr</sub>    | 50         |      |      |      | 75   |      |      | ns   |
| Typical Junction Capacitance *2                                                                       | C <sub>j</sub>     | 15         |      |      |      |      |      |      | pF   |
| Typical Thermal Resistance *3                                                                         | R <sub>θJA</sub>   | 50         |      |      |      |      |      |      | °C/W |
| Junction Temperature                                                                                  | T <sub>j</sub>     | 150        |      |      |      |      |      |      | °C   |
| Storage Temperature                                                                                   | T <sub>stg</sub>   | -55 to 150 |      |      |      |      |      |      |      |

\* 1 Reverse recovery test condition:  $I_F = 0.5 A$ ,  $I_R = 1 A$ ,  $I_{rr} = 0.25 A$

\* 2 Measured at 1MHz and applied reverse voltage of 4V D.C

\* 3 P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas.

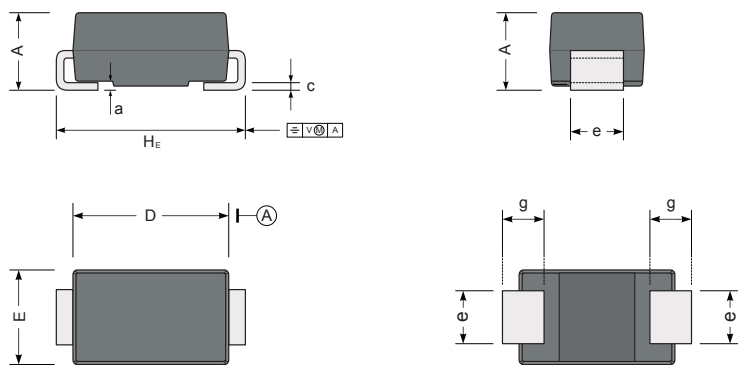
## ■ Typical Characteristics



■ Package Outline Dimensions

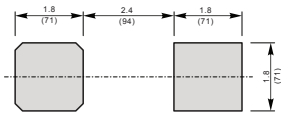
Plastic surface mounted package; 2 leads

SMA



| UNIT |     | A   | D   | E   | H <sub>E</sub> | c    | e   | g   | a   |
|------|-----|-----|-----|-----|----------------|------|-----|-----|-----|
| mm   | max | 2.2 | 4.5 | 2.7 | 5.2            | 0.31 | 1.6 | 1.5 | 0.3 |
|      | min | 1.9 | 4.0 | 2.3 | 4.7            | 0.15 | 1.3 | 0.9 |     |
| mil  | max | 87  | 181 | 106 | 205            | 12   | 63  | 59  | 12  |
|      | min | 75  | 157 | 91  | 185            | 6    | 51  | 35  |     |

■ The recommended mounting pad size



Unit :  $\frac{\text{mm}}{(\text{mil})}$