



## US2A-US2M

## Features:

- ☐ For surface mounted applications
- ☐ Low profile package
- ☐ Glass Passivated Chip Junction
- ☐ Easy to pick and place
- ☐ Fast reverse recovery time
- ☐ Lead free in comply with EU RoHS 2011/65/EU directives

DO-214AC  
(SMA)

1. Cathode 2. Anode

**Absolute Maximum Ratings** ( $T_a=25^\circ\text{C}$  unless otherwise noted)

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Parameter                                                                                                | Symbols                              | US2A       | US2B | US2D | US2G | US2J | US2K | US2M | Units |
|----------------------------------------------------------------------------------------------------------|--------------------------------------|------------|------|------|------|------|------|------|-------|
| Maximum 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  | V     |
| Maximum DC Blocking Voltage                                                                              | V <sub>DC</sub>                      | 50         | 100  | 200  | 400  | 600  | 800  | 1000 | V     |
| Maximum Average Forward Rectified Current at T <sub>c</sub> = 125 °C                                     | I <sub>F(AV)</sub>                   | 2          |      |      |      |      |      |      | A     |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                       | I <sub>FSM</sub>                     | 50         |      |      |      |      |      |      | A     |
| Maximum Instantaneous Forward Voltage at 2 A                                                             | V <sub>F</sub>                       | 1.0        |      |      | 1.3  | 1.65 |      |      | V     |
| Maximum DC Reverse Current T <sub>a</sub> = 25 °C<br>at Rated DC Blocking Voltage T <sub>a</sub> =125 °C | I <sub>R</sub>                       | 5<br>100   |      |      |      |      |      |      | μA    |
| Maximum Reverse Recovery Time <sup>(1)</sup>                                                             | t <sub>rr</sub>                      | 50         |      |      |      | 75   |      |      | ns    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                | R <sub>θJA</sub><br>R <sub>θJC</sub> | 65<br>20   |      |      |      |      |      |      | °C/W  |
| Operating and Storage Temperature Range                                                                  | T <sub>j</sub> , T <sub>stg</sub>    | -55 ~ +150 |      |      |      |      |      |      | °C    |

(1) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

## Typical Characteristics

Fig.1 Forward Current Derating Curve

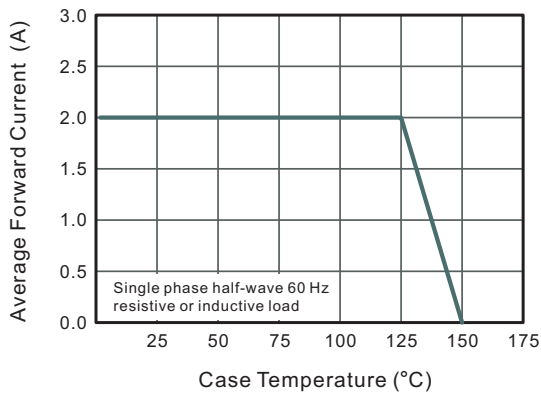


Fig.2 Typical Reverse Characteristics

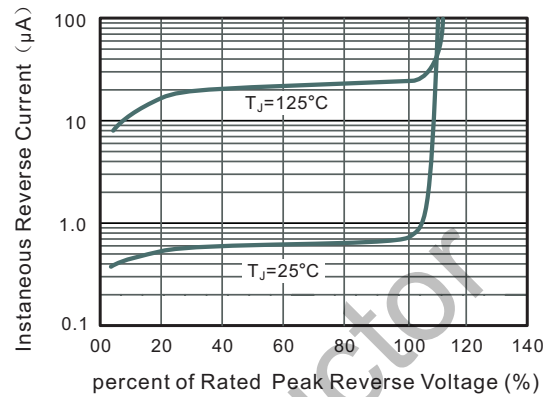


Fig.3 Typical Forward Characteristics

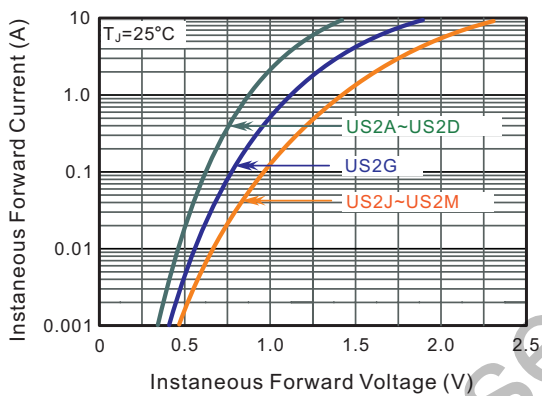
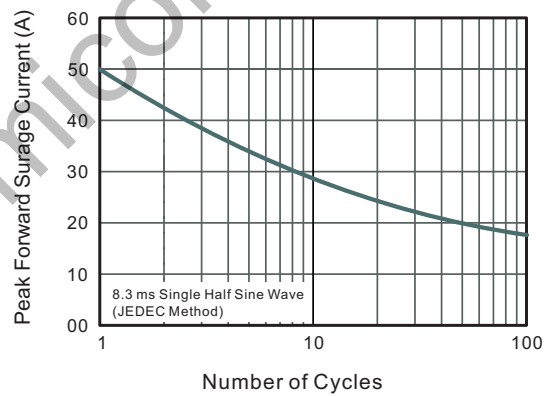
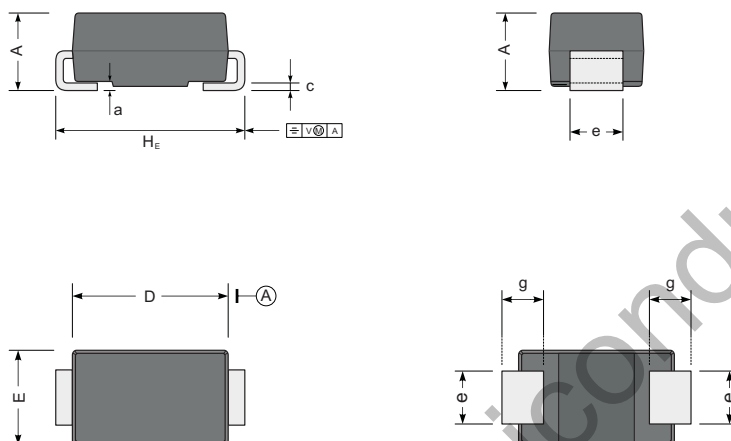


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



**Package Dimension****SMA**

Unit: mm



| 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**