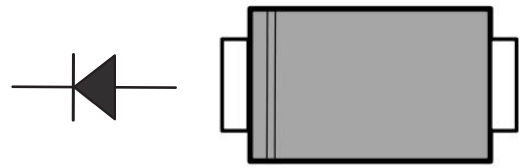


Surface Mount Ultrafast Recovery Rectifier

| Parameter | Value | Unit |
|-------------|---------|------|
| V_{RRM} | 50~1000 | V |
| $I_{F(AV)}$ | 2.0 | A |



DO-214AC/SMA

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency

Applications

- For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication.

Absolute Maximum Ratings and Characteristics (at $T_J = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | US2A | US2B | US2D | US2G | US2J | US2K | US2M | Units |
|---|------------------------------------|------------|------|------|------|------|------|------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at $T_C=125^\circ\text{C}$ | $I_{F(AV)}$ | 2.0 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | I_{FSM} | 50 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 2A | V_F | 1.0 | | 1.3 | | 1.65 | | | V |
| Maximum DC Reverse Current $T_a=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a=125^\circ\text{C}$ | I_R | 5 100 | | | | | | | μA |
| Maximum Reverse Recovery Time (1) | t_{rr} | 50 | | | | 75 | | | ns |
| Typical Thermal Resistance (2) | $R_{\theta JA}$ $R_{\theta JC}$ | 65 20 | | | | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | | | | | | | $^\circ\text{C}$ |

Notes:

- (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 5cm) copper pad areas.

Typical characteristics

Fig.1 Forward Current Derating Curve

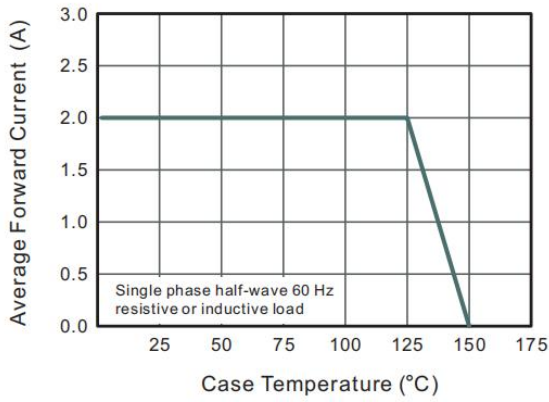


Fig.2 Typical Reverse Characteristics

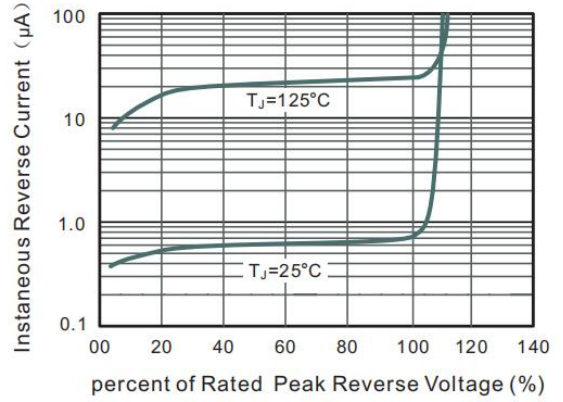


Fig.3 Typical Forward Characteristics

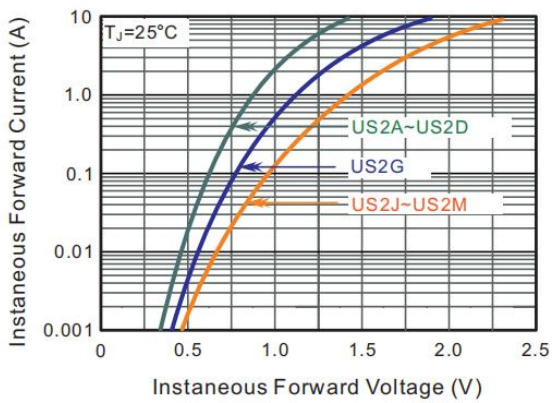
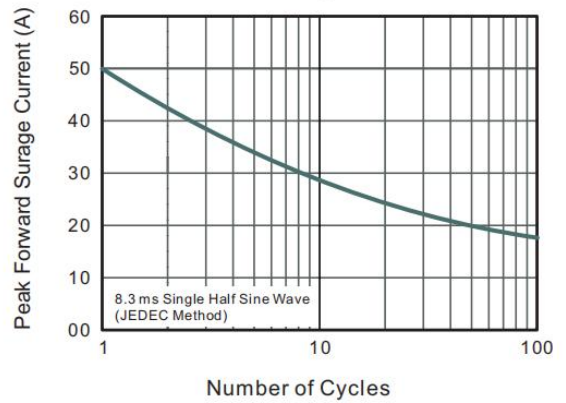


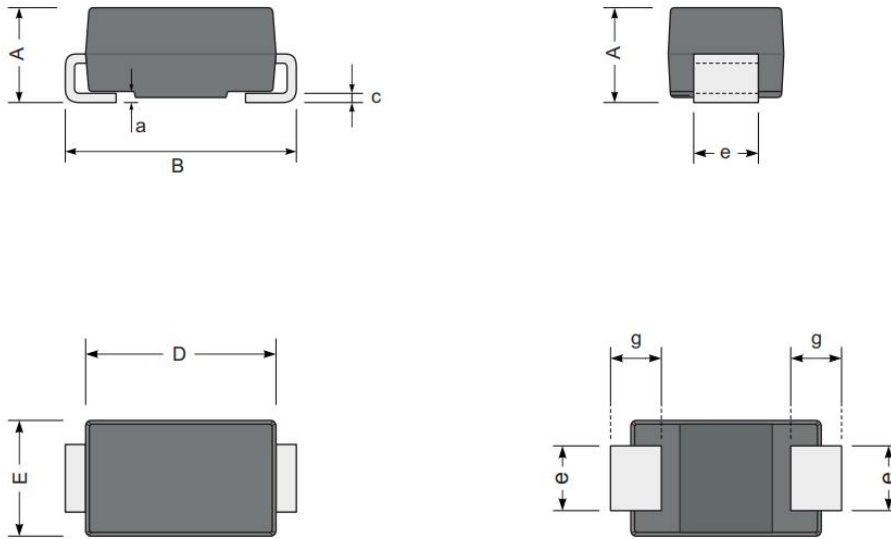
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Package outlines

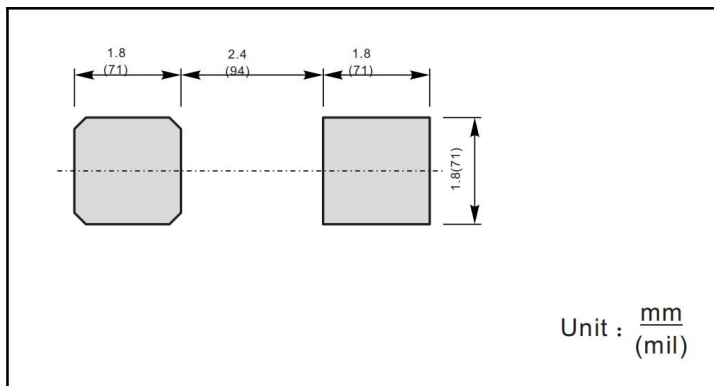
Plastic surface mounted package; 2 leads

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| UNIT | | A | D | E | B | c | e | g | a |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|
| mm | max | 2.2 | 4.5 | 2.8 | 5.3 | 0.31 | 1.6 | 1.5 | 0.3 |
| | min | 1.9 | 4.0 | 2.4 | 4.8 | 0.15 | 1.3 | 0.9 | |
| mil | max | 87 | 181 | 110 | 209 | 12 | 63 | 59 | 12 |
| | min | 75 | 157 | 94 | 189 | 6 | 51 | 35 | |

The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| US2A | US2A |
| US2B | US2B |
| US2D | US2D |
| US2G | US2G |
| US2J | US2J |
| US2K | US2K |
| US2M | US2M |

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