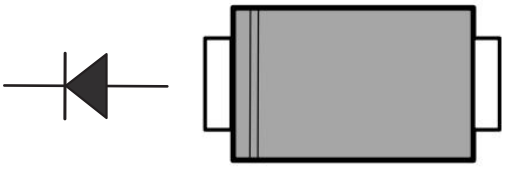
## Surface Mount Superfast Recovery Rectifiers

| Parameter | Value | Unit |
|---|---|---|
| $V_{RRM}$ | 50~600 | V |
| $I_{F(AV)}$ | 2.0 | A |
| $T_{RR}$ | 35 | ns |



DO-214AC/SMA

### Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Super fast reverse recovery time

### Applications

- For use in high-frequency rectification and free-wheeling applications in switching-mode converters and inverters for consumer electronics, computer systems, and telecommunications.

### Absolute Maximum Ratings and Characteristics (at TJ = 25°C unless otherwise specified)

| Parameter | Symbol | ES2A | ES2B | ES2C | ES2D | ES2E | ES2G | ES2J | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 2.0 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load(JEDEC Method) | $I_{FSM}$ | 50 | | | | | | | A |
| Maximum Forward Voltage at 2A | $V_F$ | 1 | | | | 1 .25 | | 1 .70 | V |
| Maximum DC Reverse Current Ta=25℃<br>at Rated DC Blocking Voltage Ta=125℃ | $I_R$ | 5<br>100 | | | | | | | μA |
| Typical Junction Capacitance at VR=4V , f=1MHz | $C_j$ | 15 | | | | | | | pF |
| Maximum Reverse Recovery Time （1） | $t_{rr}$ | 35 | | | | | | | ns |
| Typical Thermal Resistance （2） | $R_{\theta JA}$ | 75 | | | | | | | ℃/W |
| Operating and Storage Temperature Range | $T_j$ , $T_{stg}$ | -55 ~ +150 | | | | | | | ℃ |

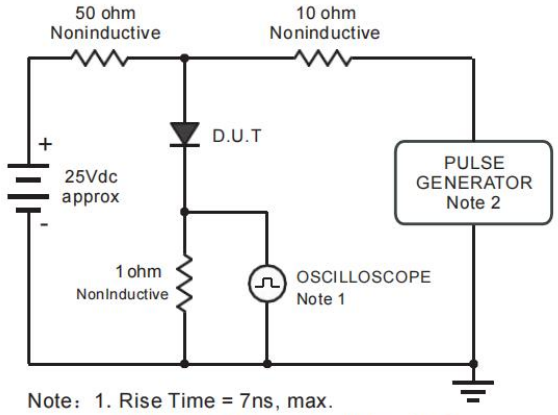
Notes：

（1）Measured with IF = 0.5A, IR = 1A, Irr = 0.25A.

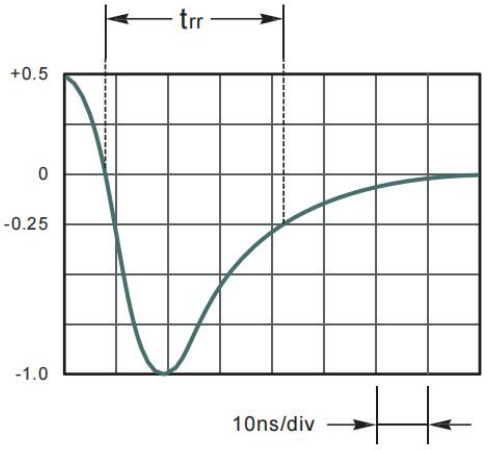
（2）P.C.B. mounted with 2.0" X 2.0" (5 X 5cm) copper pad areas.

## Typical characteristics

**Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram**




Note：1. Rise Time = 7ns, max.
Input Impedance = 1megohm,22pF.
2. Ries Time =10ns, max. Source
Impedance = 50 ohms.




Set time Base for 10ns/div

**Fig.2 Maximum Average Forward Current Rating**

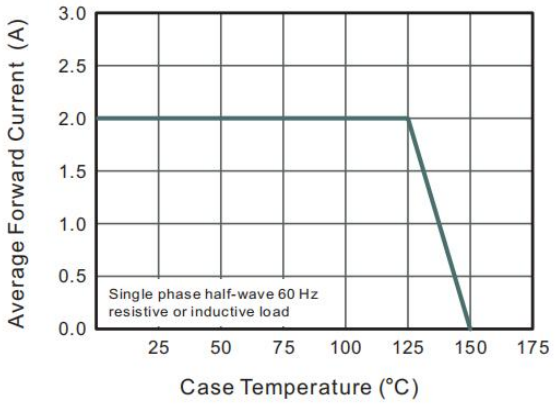



**Fig.3 Typical Reverse Characteristics**

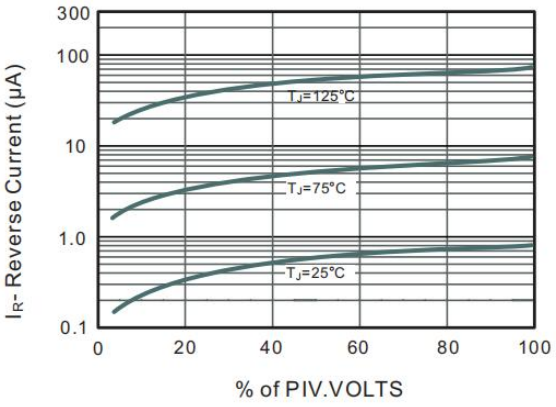



**Fig.4 Typical Forward Characteristics**

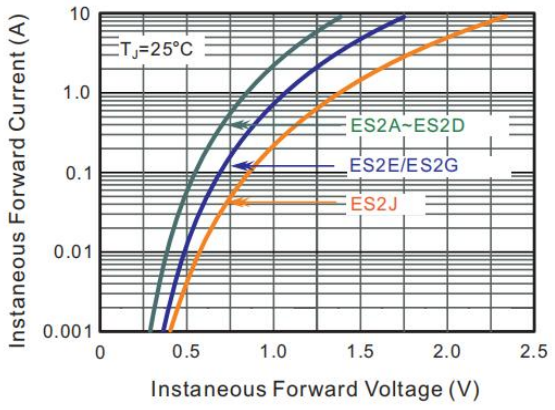



**Fig.5 Typical Junction Capacitance**

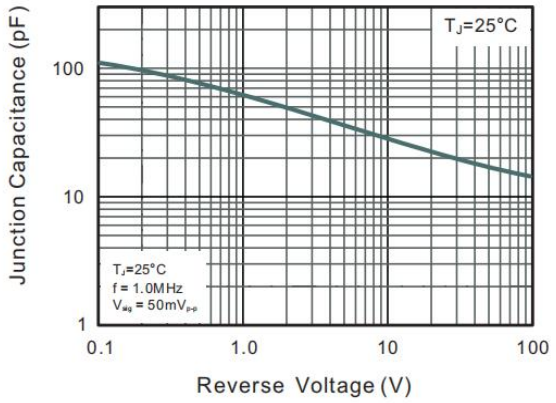
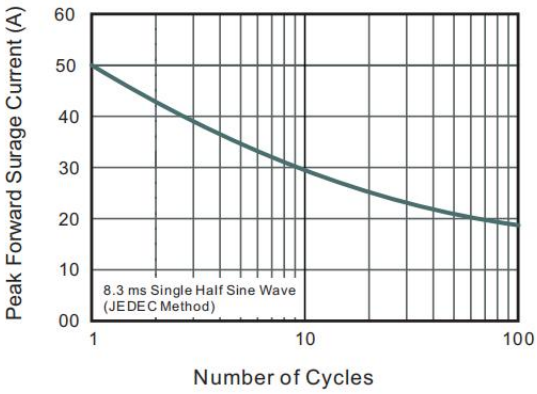


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current




## Package outlines

Plastic surface mounted package; 2 leads

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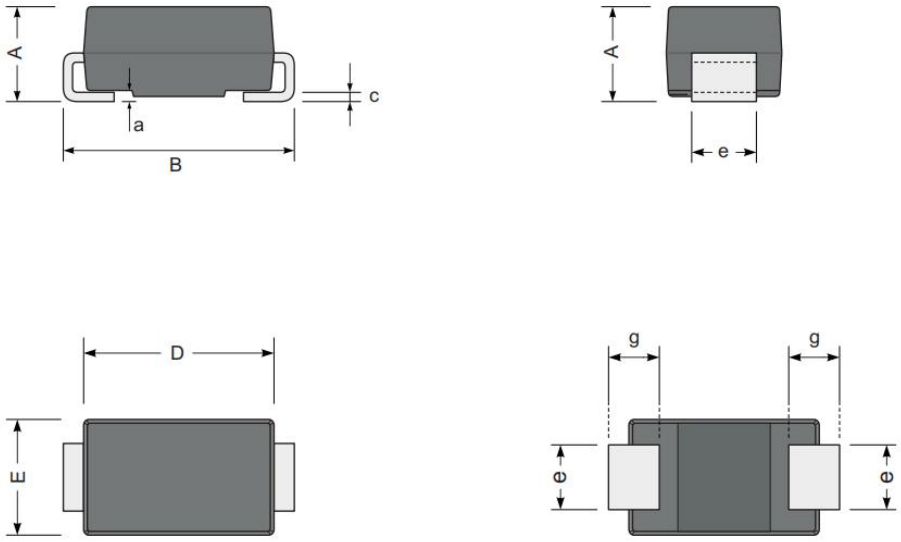
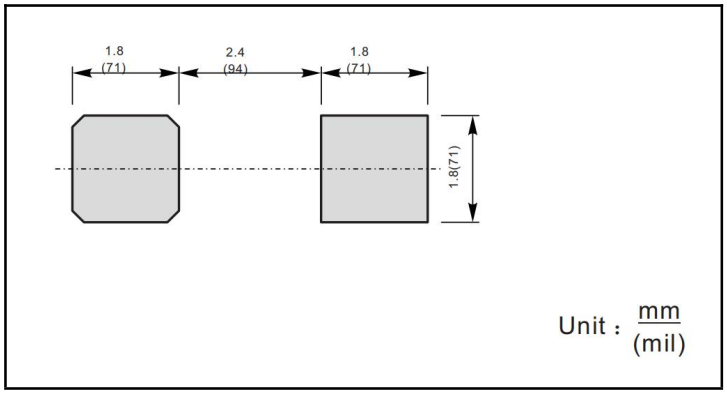



| UNIT | | A | D | E | B | c | e | g | a |
|---|---|---|---|---|---|---|---|---|---|
| mm | max | 2.2 | 4.5 | 2.8 | 5.3 | 0.31 | 1.6 | 1.5 | 0.3 |
| | min | 1.9 | 4.0 | 2.4 | 4.8 | 0.15 | 1.3 | 0.9 | |
| mil | max | 87 | 181 | 110 | 209 | 12 | 63 | 59 | 12 |
| | min | 75 | 157 | 94 | 189 | 6 | 51 | 35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

### The recommended mounting pad size




### Marking

| Type number | Marking code |
|---|---|
| ES2A | ES2A |
| ES2B | ES2B |
| ES2C | ES2C |
| ES2D | ES2D |
| ES2E | ES2E |
| ES2G | ES2G |
| ES2J | ES2J |

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