

# ES2AA THRU ES2JA

## Super Fast Recovery Rectifier Diode

### Features

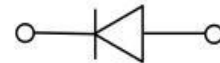
- Ideal for automated placement
- Glass passivated chip junction
- High frequency
- High forward surge capability
- Meets MSL level 1, per J-STD-020,LF maximum peak of 260 °C

### Typical Application

For use in high frequency rectification of power supply, inverters, converters, and freewheeling diodes for consumer and telecommunication.

### Mechanical Data

- Package: DO-214AC(SMA)  
Molding compound meets UL 94 V-0 flammability rating,RoHS-compliant
- Terminals:Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end



### Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                           | Symbol             | Unit | Conditions                                     | ES2        |     |     |     |     |     |     |     |
|-------------------------------------|--------------------|------|--|------------|-----|-----|-----|-----|-----|-----|-----|
|                                     |                    |      |  | AA         | BA  | CA  | DA  | FA  | GA  | HA  | JA  |
| Repetitive Peak Reverse Voltage     | V <sub>RRM</sub>   | V    |  | 50         | 100 | 150 | 200 | 300 | 400 | 500 | 600 |
| Average Forward Current             | I <sub>F(AV)</sub> | A    | 60Hz Half-sine wave, Resistance load, TL=110°C | 2.0        |     |     |     |     |     |     |     |
| Surge(Nonrepetitive)Forward Current | I <sub>FSM</sub>   | A    | 60HZ Half-sine wave, 1 cycle, Ta=25°C          | 50         |     |     |     |     |     |     |     |
| Storage Temperature                 | T <sub>stg</sub>   | °C   |  | -55 ~ +150 |     |     |     |     |     |     |     |
| Junction Temperature                | T <sub>j</sub>     | °C   |  | -55 ~ +150 |     |     |     |     |     |     |     |

### Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER                     | Symbol            | Unit | Conditions   | ES2              |    |    |    |     |    |     |    |
|-------------------------------|-------------------|------|--|------------------|----|----|----|-----|----|-----|----|
|                               |                   |      |  | AA               | BA | CA | DA | FA  | GA | HA  | JA |
| Peak Forward Voltage          | V <sub>FM</sub>   | V    | I <sub>F</sub> =2.0A   | 0.95             |    |    |    | 1.3 |    | 1.7 |    |
| Peak Reverse Current          | I <sub>RRM1</sub> | µA   | V <sub>RM</sub> =V <sub>RRM</sub>                                | 5.0              |    |    |    |     |    |     |    |
|                               | I <sub>RRM2</sub> |      |  | 350              |    |    |    |     |    |     |    |
| Maximum reverse recovery time | T <sub>rr</sub>   | ns   | I <sub>F</sub> =0.5A,I <sub>R</sub> =1.0A,I <sub>rr</sub> =0.25A | 35               |    |    |    |     |    |     |    |
| Thermal Resistance(Typical)   | R <sub>θJ-A</sub> | °C/W | Between junction and ambient                                     | 75 <sup>1)</sup> |    |    |    |     |    |     |    |
|                               | R <sub>θJ-L</sub> |      | Between junction and terminal                                    | 20 <sup>1)</sup> |    |    |    |     |    |     |    |

Notes:

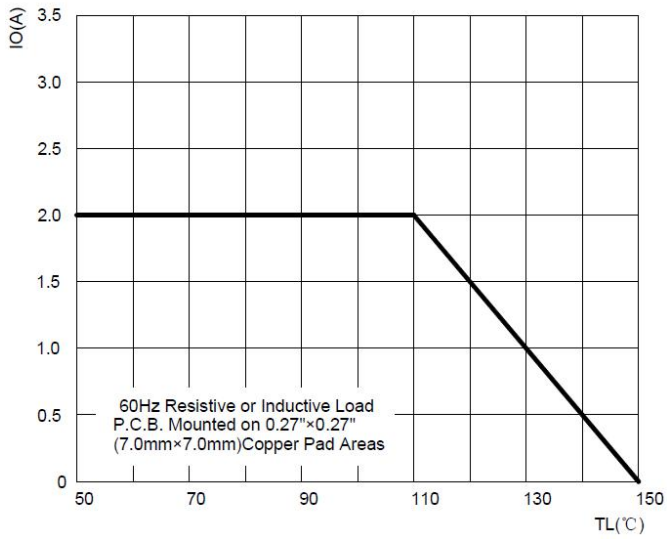
<sup>1)</sup> Thermal resistance from junction to ambientand from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm)copper pad areas



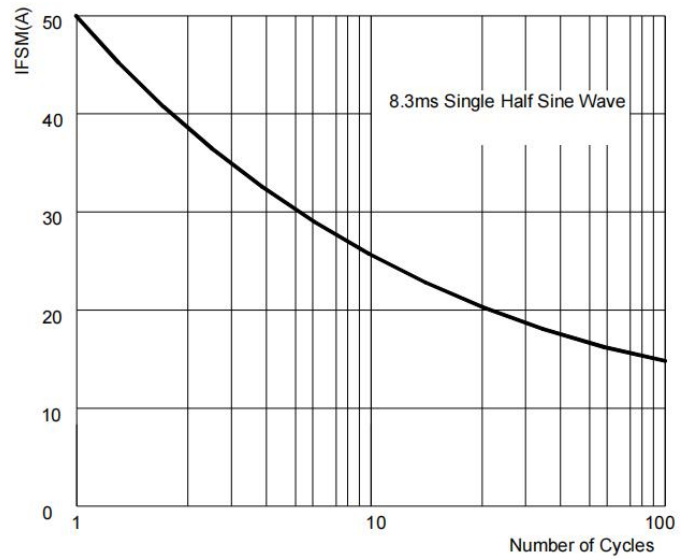
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## ■ Characteristics (Typical)

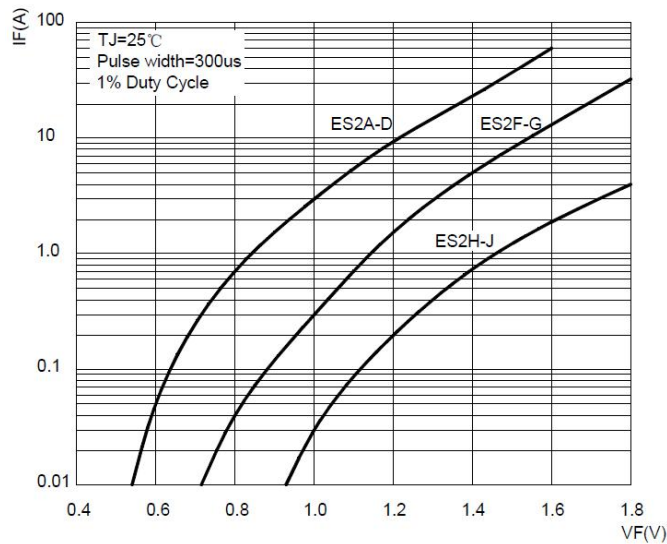
**FIG1: Forward Current Derating Curve**



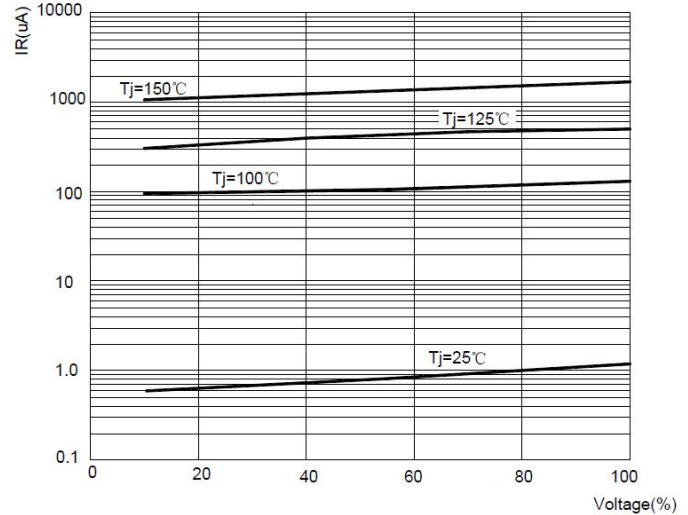
**FIG2: Maximum Non-Repetitive Forward Surge Current**



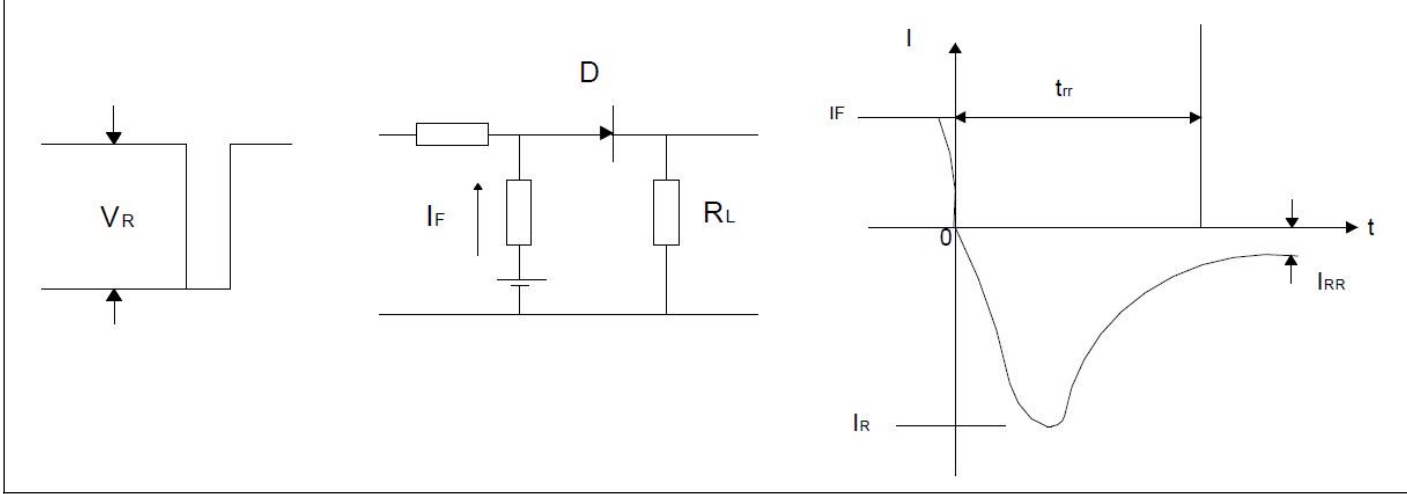
**FIG3: Typical Forward Characteristics**



**FIG4: Typical Reverse Characteristics**



**FIG5: Diagram of circuit and Testing wave form of reverse recovery time**

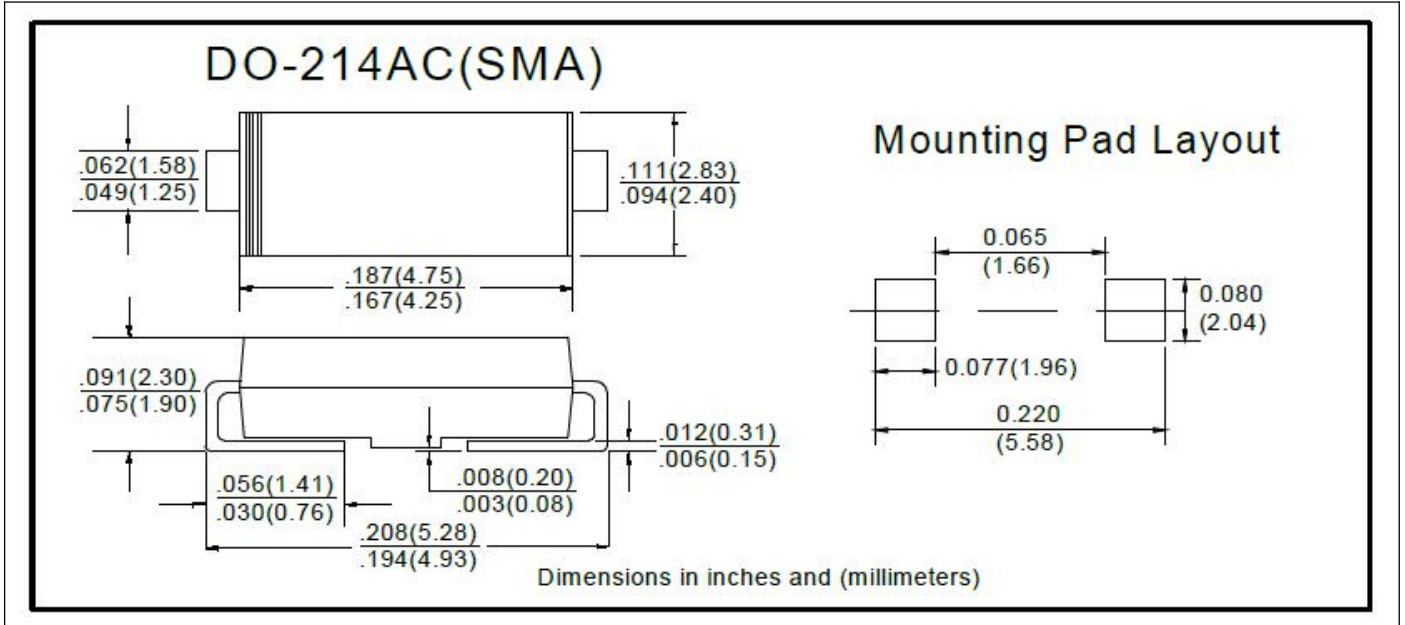


## ES2AA THRU ES2JA

### Ordering Information (Example)

| PREFERED    | PACKAGE CODE  | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-------------|---------------|----------------------|-------------------------|----------------------------|---------------|
| ES2AA~ES2JA | DO-214AC(SMA) | 5000                 | 10000                   | 80000                      | 13" reel      |
| ES2AA~ES2JA | DO-214AC(SMA) | 7500                 | 15000                   | 120000                     | 13" reel      |

### Outline Dimensions



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