

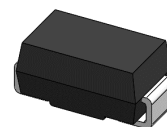
## 2A,50-600V Superfast Rectifiers

### Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



**RoHS**  
COMPLIANT



SMA(DO-214AC)

### Applications

For use in secondary rectification and freewheeling for superfast switching speeds of converters in consumer applications.

| Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)   |                    |             |       |       |       |       |       |       |      |
|--|--------------------|-------------|-------|-------|-------|-------|-------|-------|------|
| Parameter  | Symbol             | ES2AA       | ES2BA | ES2CA | ES2DA | ES2FA | ES2GA | ES2JA | Unit |
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>   | 50          | 100   | 150   | 200   | 300   | 400   | 600   | V    |
| Maximum RMS voltage  | V <sub>RMS</sub>   | 35          | 70    | 105   | 140   | 210   | 280   | 420   | V    |
| Maximum DC blocking voltage  | V <sub>DC</sub>    | 50          | 100   | 150   | 200   | 300   | 400   | 600   | V    |
| Maximum average forward rectified current  | I <sub>F(AV)</sub> | 2           |       |       |       |       |       |       | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode | I <sub>FSM</sub>   | 50          |       |       |       |       |       |       | A    |
| Operating junction temperature range   | T <sub>J</sub>     | -55 to +150 |       |       |       |       |       |       | °C   |
| Storage temperature range  | T <sub>STG</sub>   | -55 to +150 |       |       |       |       |       |       | °C   |

| Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted) |                  |     |       |
|---|------------------|-----|-------|
| Parameter   | Symbol           | Typ | Unit  |
| Thermal Resistance, Junction to Ambient   | R <sub>θJA</sub> | 90  | °C /W |
| Thermal Resistance, Junction to Case  | R <sub>θJC</sub> | 20  | °C /W |
| Thermal Resistance, Junction to Lead  | R <sub>θJL</sub> | 25  | °C /W |

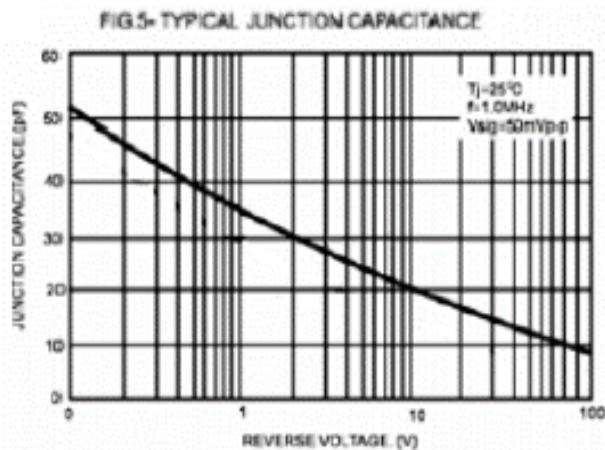
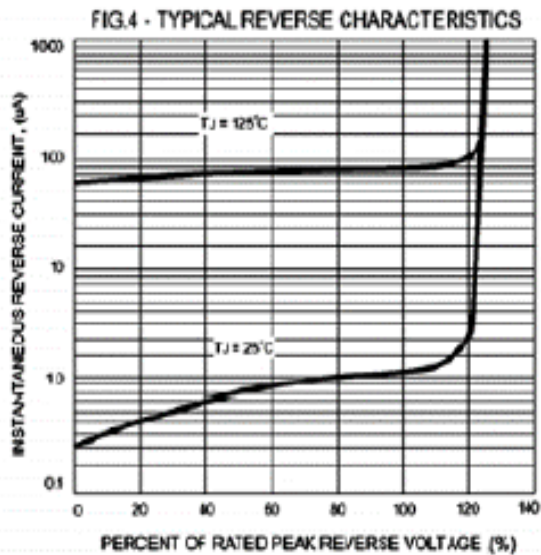
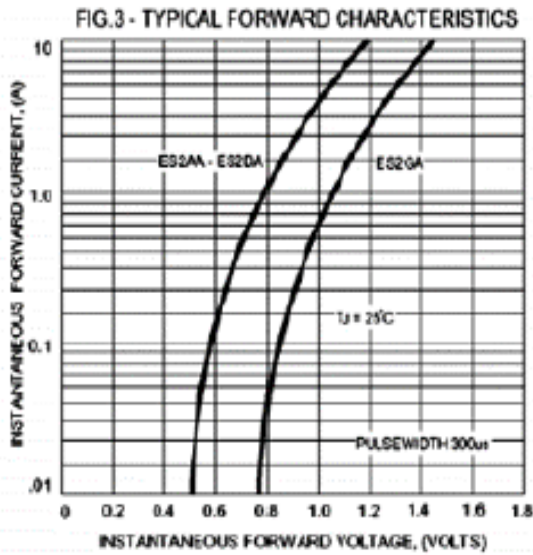
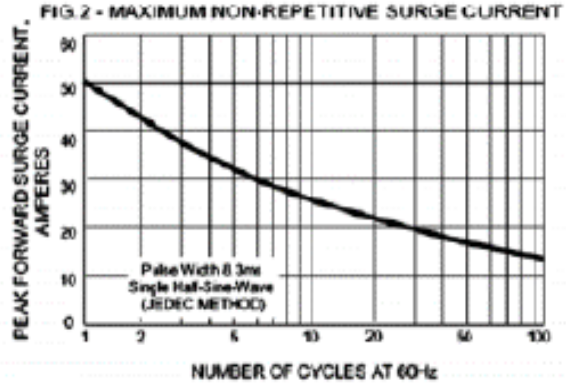
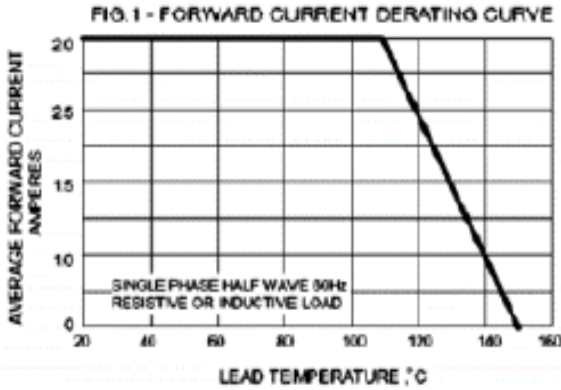
| Electrical Specifications (T <sub>A</sub> =25°C unless otherwise noted) |                |  |       |       |       |       |       |       |       |      |
|---|----------------|--|-------|-------|-------|-------|-------|-------|-------|------|
| Parameter   | Symbol         | Test Conditions  | ES2AA | ES2BA | ES2CA | ES2DA | ES2FA | ES2GA | ES2JA | Unit |
| Forward Drop Voltage  | V <sub>F</sub> | I <sub>F</sub> =1A<br>T <sub>A</sub> =25°C                               | 0.95  |       |       |       | 1.30  |       | 1.70  | V    |
| Reverse leakage current @V <sub>R</sub>                                 | I <sub>R</sub> | T <sub>J</sub> =25°C   | 5     |       |       |       |       |       |       | uA   |
|   |                | T <sub>J</sub> =125°C  | 350   |       |       |       |       |       |       |      |
| Typical junction capacitance  | C <sub>J</sub> | 4.0 V<br>1 MHz   | 25    |       |       |       |       |       |       | pF   |
| Maximum reverse recovery time   | trr            | I <sub>F</sub> =0.5A,<br>I <sub>R</sub> =1.0A,<br>I <sub>RR</sub> =0.25A | 35    |       |       |       |       |       |       | nS   |

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

## Ratings and Characteristics Curves

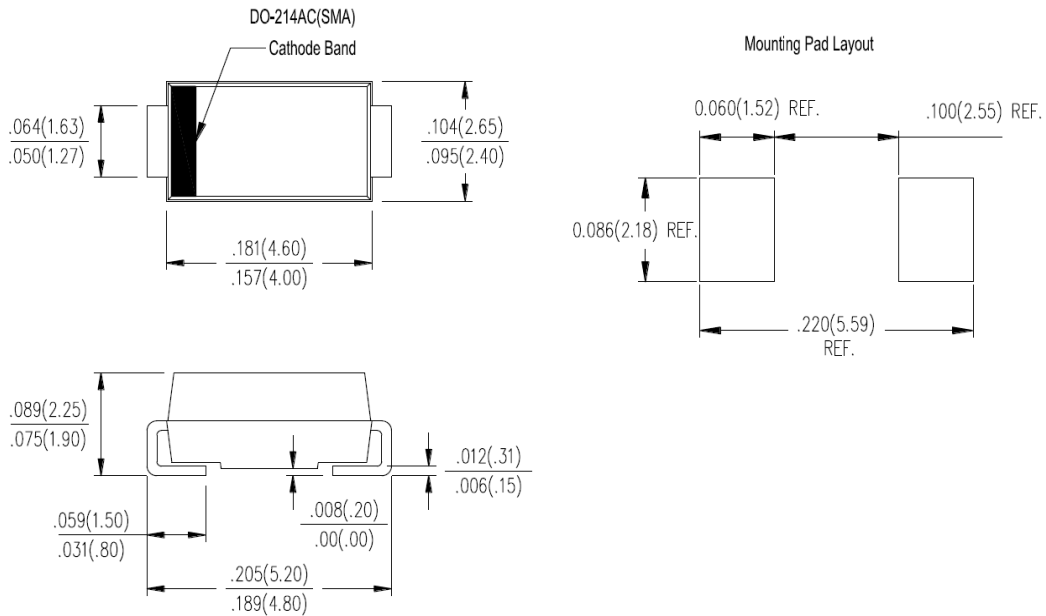
( $T_A = 25^\circ\text{C}$  unless otherwise noted)



## Package Outline Dimensions

in inches (millimeters)

### SMA (DO-214AC)



## Revision History

| Document Version | Date of release | Description of changes |
|------------------|-----------------|------------------------|
| Rev.A            | 2021.06.01      | Released Datasheet     |
| Rev.B            | 2023.10.18      | Modify document format |

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