

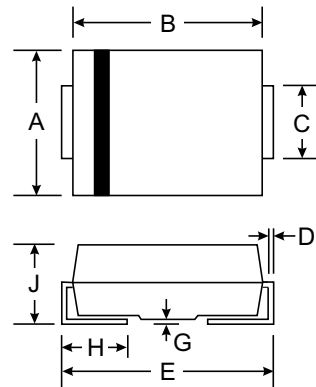
**VOLTAGE RANGE: 50 - 1000V**  
**CURRENT: 1.0 A**

### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

### Mechanical Data

- Case: SMA/DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)



| SMA(DO-214AC)        |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.29 | 2.92 |
| B                    | 4.00 | 4.60 |
| C                    | 1.27 | 1.63 |
| D                    | 0.15 | 0.31 |
| E                    | 4.80 | 5.59 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.01 | 2.62 |
| All Dimensions in mm |      |      |

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic   | Unit                              | FR1A        | FR1B | FR1D | FR1G | FR1J | FR1K | FR1M | Unit |
|--|-----------------------------------|-------------|------|------|------|------|------|------|------|
| Maximum Recurrent 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<br>@ T <sub>A</sub> = 75°C   | I <sub>(AV)</sub>                 | 1.0         |      |      |      |      |      |      | A    |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)              | I <sub>FSM</sub>                  | 30          |      |      |      |      |      |      | A    |
| Maximum Instantaneous Forward Voltage at 1.0 A   | V <sub>F</sub>                    | 1.3         |      |      |      |      |      |      | V    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>@ T <sub>A</sub> = 25°C<br>@ T <sub>A</sub> = 125°C | I <sub>R</sub>                    | 5.0         |      |      |      |      |      |      | μA   |
| Maximum Full Load Reverse Current Full Cycle Average<br>@ T <sub>A</sub> = 75°C                                |                                   | 100         |      |      |      |      |      |      |      |
| Maximum Reverse Recovery Time (See Note 1)   | t <sub>rr</sub>                   | 150         |      |      |      | 250  | 500  |      | ns   |
| Maximum Thermal Resistance (See Note 2)  | R <sub>θJL</sub>                  | 30          |      |      |      |      |      |      | °C/W |
| Typical Junction Capacitance (See Note 3)  | C <sub>J</sub>                    | 15          |      |      |      |      |      |      | pF   |
| Operating and Storage Temperature Rating   | T <sub>J</sub> , T <sub>STG</sub> | -65 to +175 |      |      |      |      |      |      | °C   |

- Notes:
1. Reverse Recovery Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1A, I<sub>RR</sub> = 0.25A
  2. Thermal Resistance from junction to lead with 6.0mm<sup>2</sup> copper pads
  3. Measured at 1.0MHz and applied reverse voltage of 4.0V

## RATINGS AND CHARACTERISTIC CURVES FR1A THRU FR1M

