

### 3 Amp. Surface Mounted Glass Passivated Fast Recovery Rectifier

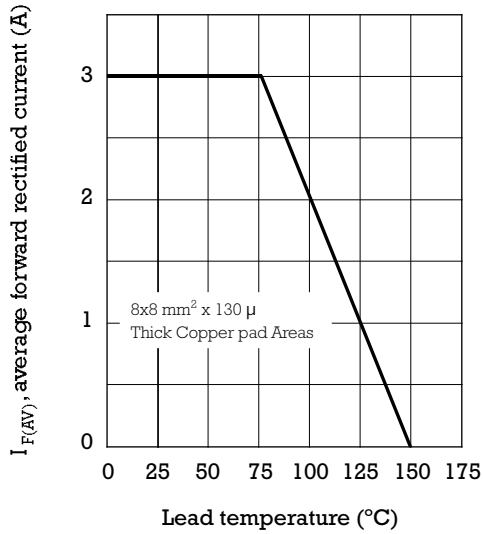
|  |   |
|--|---|
| <p>Dimensions in mm.</p> <p>Week code</p> <p>Year code</p> <p>Type No. Cross</p> <p>Standard soldering pad</p> | <p>CASE:<br/>SMC/DO-214AB</p> <p>Voltage<br/>50 to 1000 V</p> <p>Current<br/>3.0 A</p>  |
|  | <ul style="list-style-type: none"> <li>• Glass passivated junction</li> <li>• High current capability</li> <li>• The plastic material carries U/L 94 V-0</li> <li>• Low profile package</li> <li>• Easy pick and place</li> <li>• High temperature soldering 260 °C 10 sec</li> </ul> |
|  | <p><b>MECHANICAL DATA</b></p> <p>Terminals: Solder plated, solderable per IEC 68-2-20.<br/>Standard Packaging: 8 mm. tape (EIA-RS-481).<br/>Weight: 1.12 g.</p>   |

#### Maximum Ratings and Electrical Characteristics at 25 °C

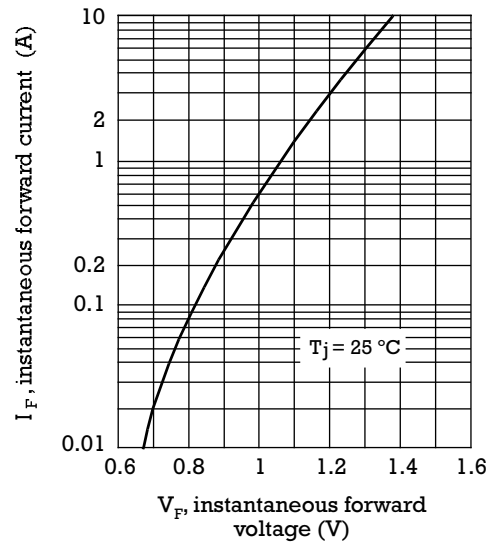
|                                |   | FRS3A                | FRS3B | FRS3D | FRS3G                 | FRS3J       | FRS3K  | FRS3M |  |
|--------------------------------|---|----------------------|-------|-------|-----------------------|-------------|--------|-------|--|
| Marking Code                   |   | J1                   | J2    | J3    | J4                    | J5          | J6     | J7    |  |
| $V_{RRM}$                      | Maximum Recurrent Peak Reverse Voltage                                      | 50                   | 100   | 200   | 400                   | 600         | 800    | 1000  |  |
| $V_{RMS}$                      | Maximum RMS Voltage   | 35                   | 70    | 140   | 280                   | 420         | 560    | 700   |  |
| $V_{DC}$                       | Maximum DC Blocking Voltage   | 50                   | 100   | 200   | 400                   | 600         | 800    | 1000  |  |
| $I_{F(AV)}$                    | Forward current at $T_L = 75\text{ °C}$                                     | 3 A                  |       |       |                       |             |        |       |  |
| $I_{FSM}$                      | 8.3 ms. peak forward surge current<br>(Jedec Method)                        | 100 A                |       |       |                       |             |        |       |  |
| $V_F$                          | Maximum Instantaneous Forward Voltage at 3.0 A                              | 1.3 V                |       |       |                       |             |        |       |  |
| $I_R$                          | Maximum DC Reverse Current<br>at Rated DC Blocking Voltage                  | $T_a = 25\text{ °C}$ |       |       | $T_a = 125\text{ °C}$ |             |        |       |  |
|                                |   | 10 $\mu$ A           |       |       |                       | 250 $\mu$ A |        |       |  |
| $t_{rr}$                       | Maximum Reverse Recovery Time (0.5/1/0.25A)                                 | 150 ns               |       |       |                       | 250 ns      | 300 ns |       |  |
| $C_j$                          | Typical Junction Capacitance (1MHz; -4V)                                    | 60 pF                |       |       |                       |             |        |       |  |
| $R_{th(j-l)}$<br>$R_{th(j-a)}$ | Typical Thermal Resistance<br>(5x5 mm <sup>2</sup> x 130 $\mu$ Copper Area) | 15 °C/W              |       |       |                       | 50 °C/W     |        |       |  |
| $T_j - T_{stg}$                | Operating Junction and Storage Temperature Range                            | -55 to + 150 °C      |       |       |                       |             |        |       |  |

Rating And Characteristic Curves

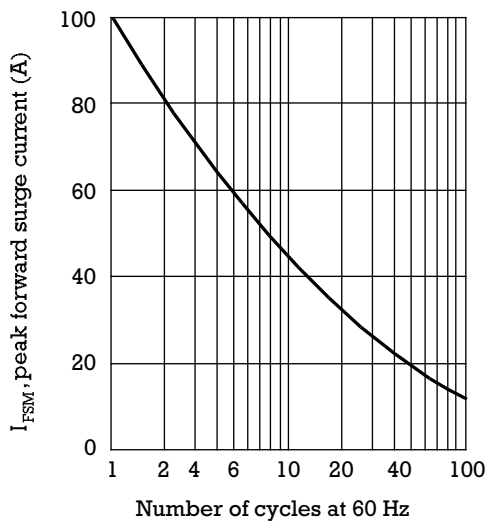
FORWARD CURRENT DERATING CURVE



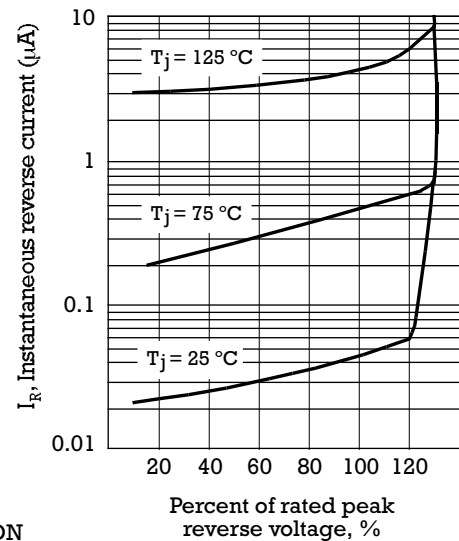
TYPICAL FORWARD CHARACTERISTIC



MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT



TYPICAL REVERSE CHARACTERISTIC



TYPICAL JUNCTION CAPACITANCE

