

3A, 50V - 1000V Surface Mount Rectifier

FEATURES

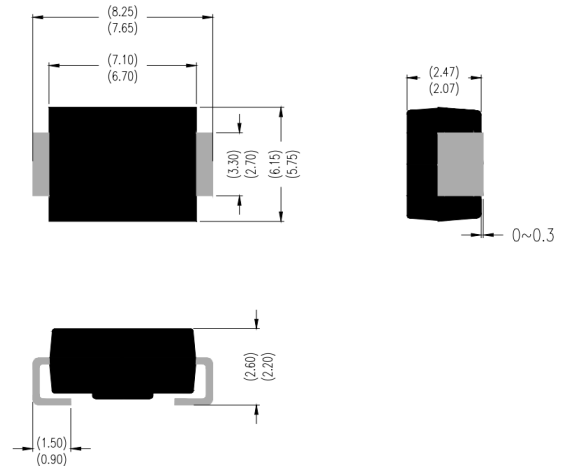
- Glass passivated chip junction
- Ideal for automated placement
- Low forward voltage drop
- High current capability
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

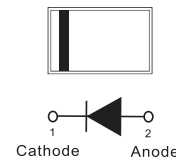
- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- Converter

MECHANICAL DATA

- Case: DO-214AB (SMC)
- Molding compound meets UL 94V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.21 g (approximately)

DO-214AB (SMC)


Unit : inch(mm)



| ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | | | | | |
|---|---------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|
| PARAMETER | SYMBOL | GS3A | GS3B | GS3D | GS3G | GS3J | GS3K | GS3M | UNIT |
| Repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Reverse voltage, total rms value | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Forward current | $I_{F(AV)}$ | 3 | | | | | | | A |
| Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode | I_{FSM} | 100 | | | | | | | A |
| Junction temperature | T_J | - 55 to +150 | | | | | | | $^\circ\text{C}$ |
| Storage temperature | T_{STG} | - 55 to +150 | | | | | | | $^\circ\text{C}$ |

| THERMAL PERFORMANCE | | | |
|--|-----------------|------------|---------------|
| PARAMETER | SYMBOL | TYP | UNIT |
| Junction-to-lead thermal resistance per diode | $R_{\theta JL}$ | 13 | $^{\circ}C/W$ |
| Junction-to-ambient thermal resistance per diode | $R_{\theta JA}$ | 47 | $^{\circ}C/W$ |

| ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}C$ unless otherwise noted) | | | | | |
|--|--|---------------|-------------|-------------|-------------|
| PARAMETER | CONDITIONS | SYMBOL | TYP. | MAX. | UNIT |
| Forward voltage per diode ⁽¹⁾ | $I_F = 3A, T_J = 25^{\circ}C$ | V_F | - | 1.15 | V |
| Reverse current @ rated V_R per diode ⁽²⁾ | $T_J = 25^{\circ}C$ | I_R | - | 10 | μA |
| | $T_J = 125^{\circ}C$ | | - | 250 | μA |
| Junction capacitance | 1 MHz, $V_R = 4.0V$ | C_J | 60 | - | pF |
| Reverse recovery time | $I_F = 0.5A, I_R = 1.0A$ $I_{RR} = 0.25A$ | t_{rr} | 1500 | - | ns |

Notes:

1. Pulse test with $PW = 0.3$ ms
2. Pulse test with $PW = 30$ ms

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

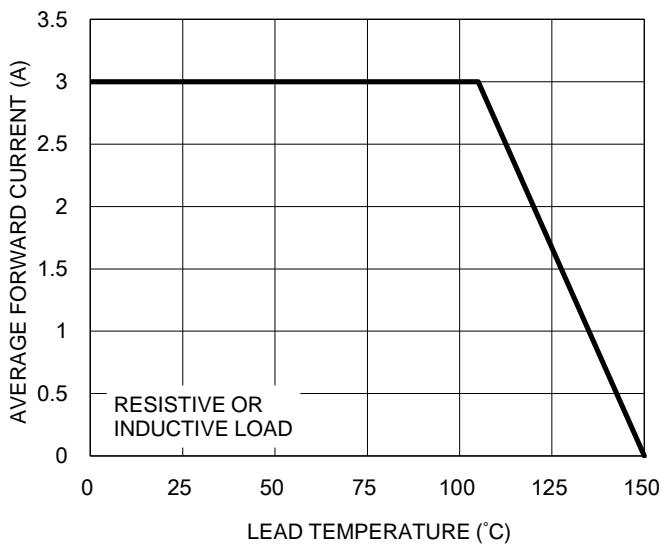
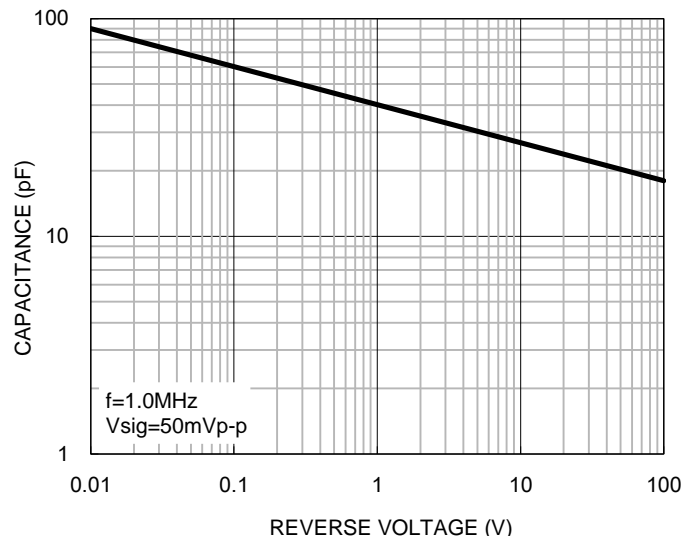
Fig.1 Forward Current Derating Curve

Fig.2 Typical Junction Capacitance


Fig.3 Typical Reverse Characteristics

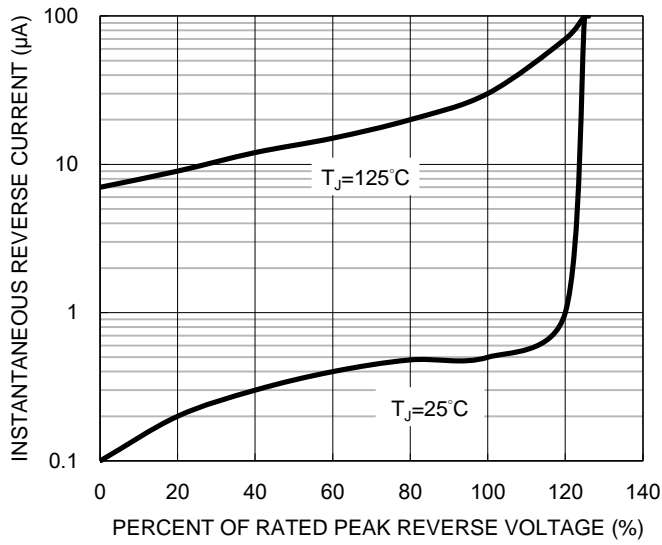


Fig.4 Typical Forward Characteristics

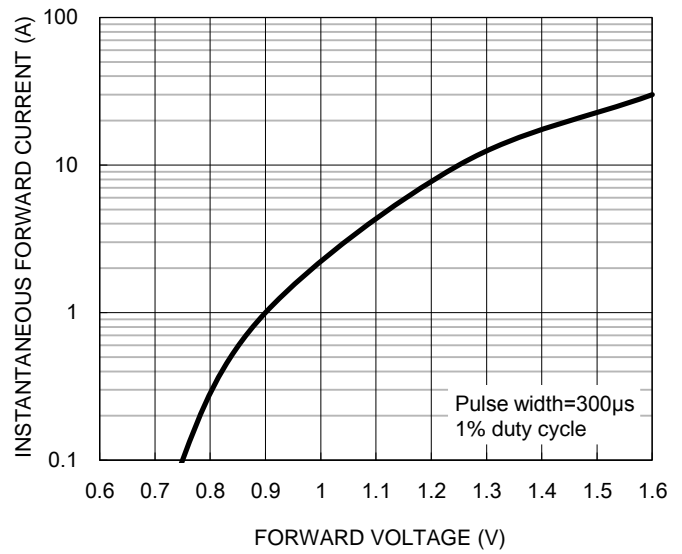


Fig.5 Maximum Non-repetitive Forward Surge Current

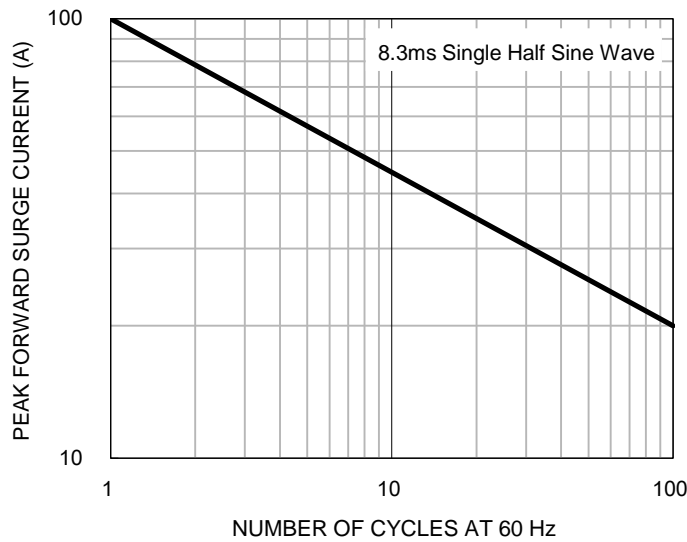


Fig.6 Reverse Recovery Time Characteristic And Test Circuit Diagram

