



SURFACE MOUNT FAST RECOVERY RECTIFIER

RS3A THRU RS3M

VOLTAGE RANGE
CURRENT

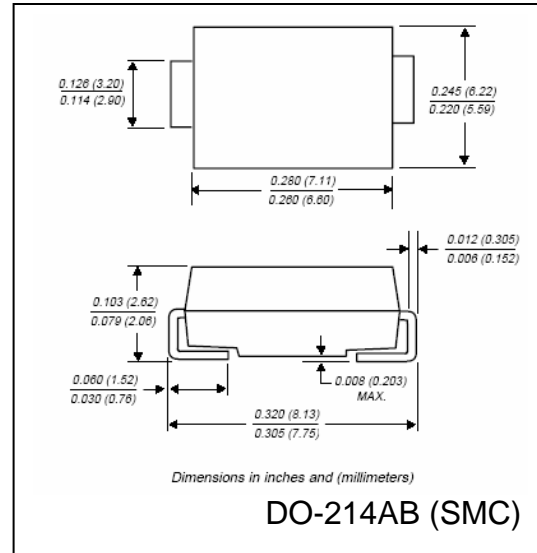
50 to 1000 Volts
3.0 Ampere

FEATURES

- Glass passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature soldering guaranteed:
250°C / 10 seconds at terminals

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounce, 0.25 gram – DO-214AB (SMC)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

| | SYMBOLS | RS2A | RS2B | RS2D | RS2G | RS2J | RS2K | RS2M | UNIT |
|--|-----------------|---------------|------|------|------|------|------|------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current, At $T_L = 75^\circ\text{C}$ | $I_{(AV)}$ | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method) | I_{FSM} | 100 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage @ 3.0A | V_F | 1.3 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | I_R | 10 | | | | | | | μA |
| $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ | | 25 | | | | | | | |
| Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$ | t_{rr} | 150 | | | | 250 | 500 | | nS |
| Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V) | C_J | 60 | | | | | | | pF |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 50 | | | | | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 15 | | | | | | | |
| Operating Junction Temperature Range | T_J | (-55 to +150) | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | (-55 to +150) | | | | | | | $^\circ\text{C}$ |

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on PCB



RATINGS AND CHARACTERISTIC CURVES RS2A THRU RS2M

Fig. 1 – Forward Current Derating Curve

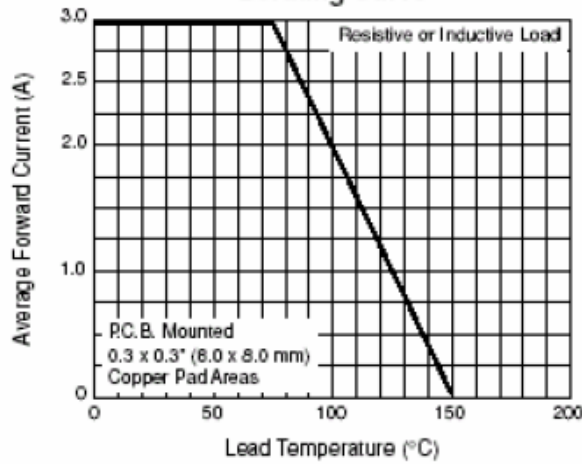


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

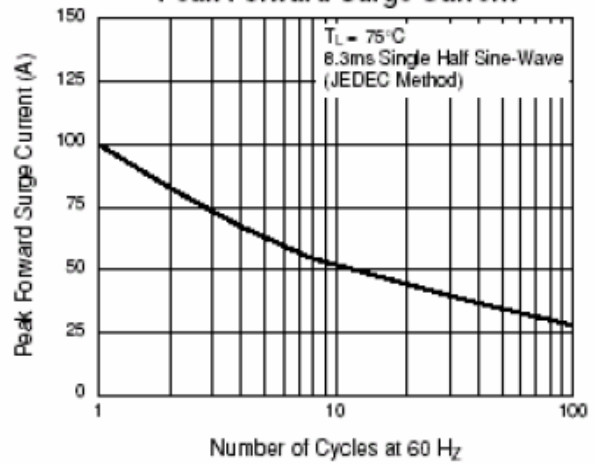


Fig. 3 – Typical Instantaneous Forward Characteristics

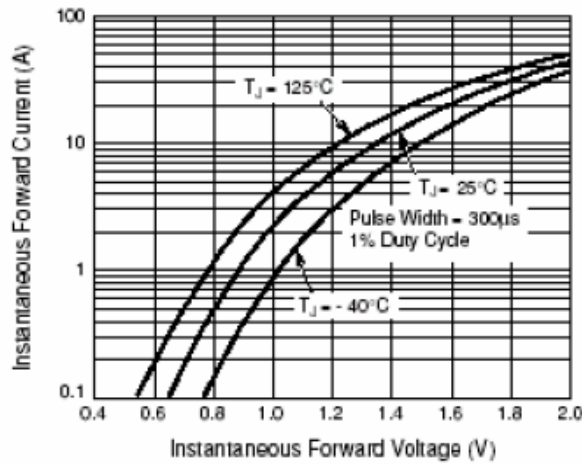


Fig. 4 – Typical Reverse Characteristics

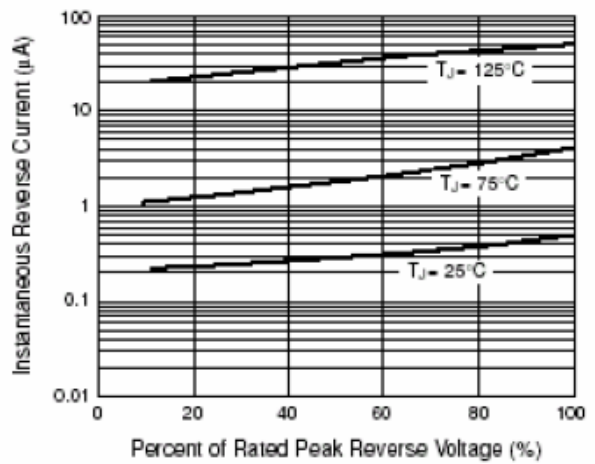


Fig. 5 – Typical Junction Capacitance

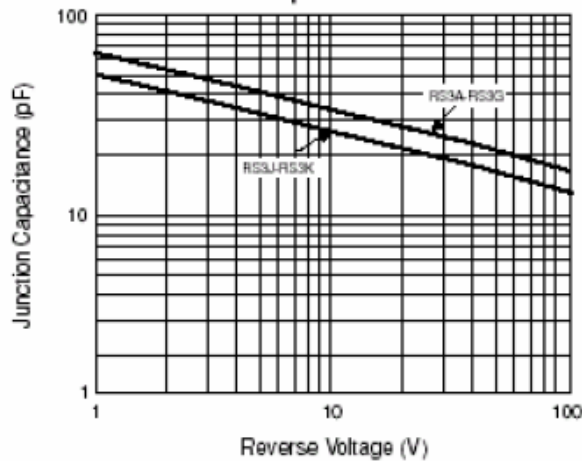


Fig. 6 – Typical Transient Thermal Impedance

