



SURFACE MOUNT FAST RECOVERY RECTIFIER

RS2A THRU RS2M

**VOLTAGE RANGE
CURRENT**

**50 to 1000 Volts
1.5 Ampere**

FEATURES

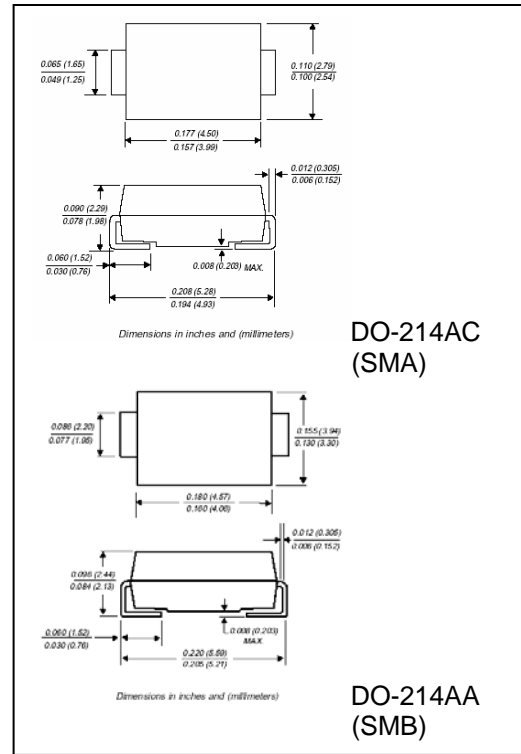
- Glass passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature soldering guaranteed:
250°C / 10 seconds at terminals
- Also available in the SMA package, add suffix “A”,
i.e. RS2AA

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: 0.002 ounce, 0.064 gram – DO-214AC (SMA)
0.003 ounce, 0.093 gram – DO-214AA (SMB)

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 $T_L = 100^\circ\text{C}$ | $I_{(AV)}$ | 1.5 | | | | | | | Amps |
| Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method) | I_{FSM} | 50 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage @ 1.5A | V_F | 1.3 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | I_R | 5.0 | | | | | | | μA |
| Test conditions $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ | | 200 | | | | | | | |
| 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 | 50 | | | | | | | pF |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 105 (SMA) 55 (SMB) | | | | | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 32 (SMA) 18 (SMB) | | | | | | | |
| 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 with 0.27" x 0.27" (7.0mm x 7.0mm) copper pad areas for SMB or 0.2" x 0.2" (5.0mm x 5.0mm) copper pad areas for SMA



RATINGS AND CHARACTERISTIC CURVES RS2A THRU RS2M

FIG. 1 - FORWARD CURRENT DERATING CURVE

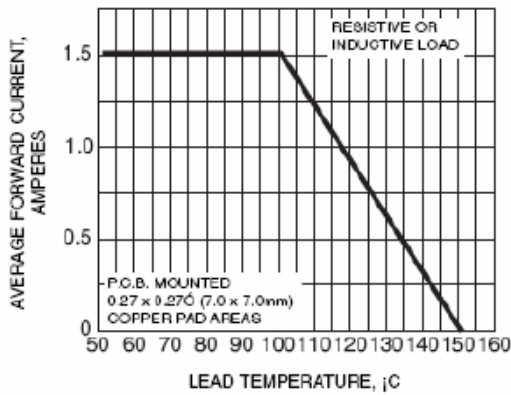


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

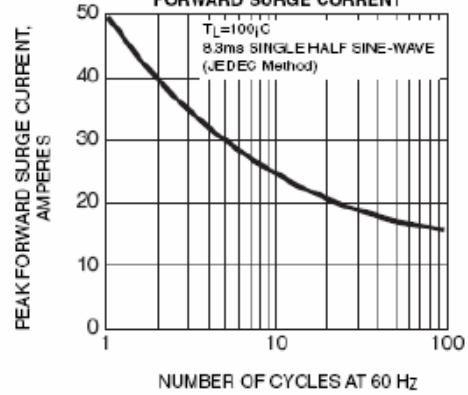


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

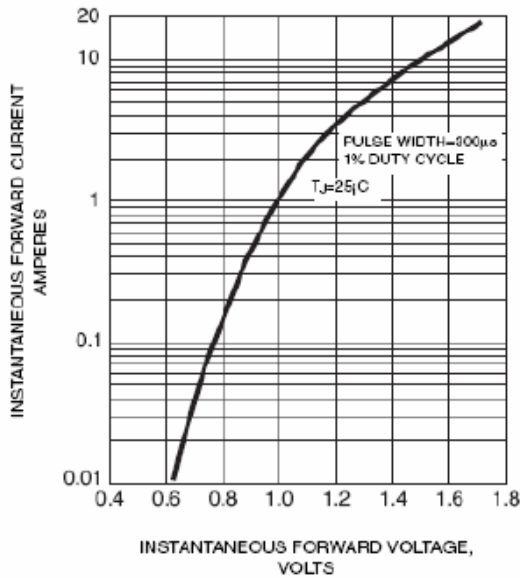


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

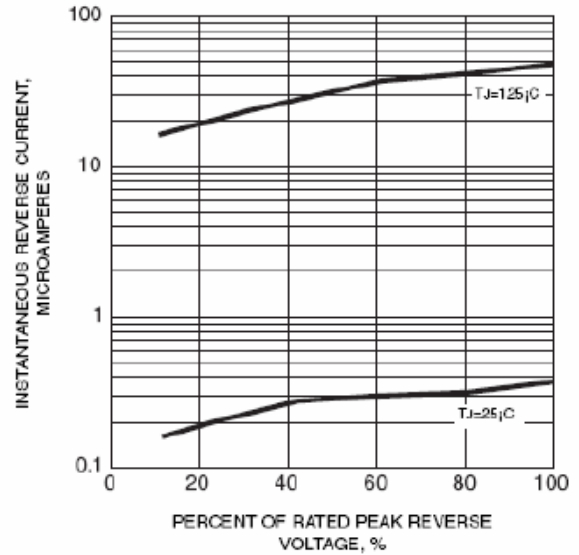


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

