

RS2A THRU RS2M

SURFACE MOUNT FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 2.0 Ampere

FEATURES

- ◆ Plastic package has underwrites laboratory flammability

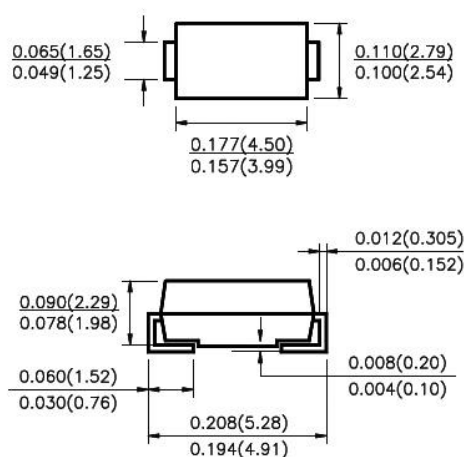
Classification 94V-0

- ◆ Low profile surface mount package
- ◆ Built-in strain relief
- ◆ Fast switching for high efficiency
- ◆ Glass passivated chip junction
- ◆ High temperature soldering guaranteed:
250°C/10 seconds at terminals

Mechanical Data

- ◆ Case: JEDED DO-214AC molded plastic over glass passivated chip
- ◆ Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Weight: 0.002ounce, 0.064 gram

DO-214AC (SMA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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 $T_L = 90^\circ\text{C}$ | $I_{F(AV)}$ | 2.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L = 90^\circ\text{C}$ | I_{FSM} | 50 | | | | | | | Amps |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 105 | | | | | | | °C/W |
| | $R_{\theta JL}$ | 32 | | | | | | | |
| Operating junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | °C |

ELECTRICAL CHARACTERISTICS

| | SYMBOLS | RS2A | RS2B | RS2D | RS2G | RS2J | RS2K | RS2M | UNIT |
|--|---------------------------|------|------|------|------|------|------|------|-------|
| Maximum Instantaneous Forward Voltage at 1.5A | V_F | 1.30 | | | | | | | Volts |
| Maximum DC Reverse Current at rated DC Blocking Voltage | $T_A = 25^\circ\text{C}$ | 5.0 | | | | | | | uA |
| | $T_A = 125^\circ\text{C}$ | 50 | | | | | | | |
| Typical Reverse Recovery Time at $I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{RR} = 0.25\text{A}$ | t_{rr} | 150 | | | | 250 | 500 | | ns |
| Typical junction capacitance at 4.0V, 1MHz | C_J | 30 | | | | | 7.0 | | pF |

Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with $0.3 \times 0.3''$ ($8.0 \times 8.0\text{mm}$) copper pad areas

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RATING AND CHARACTERISTIC CURVES RS2A THRU RS2M

FIG.1-FORWARD CURRENT DERATING CURVE

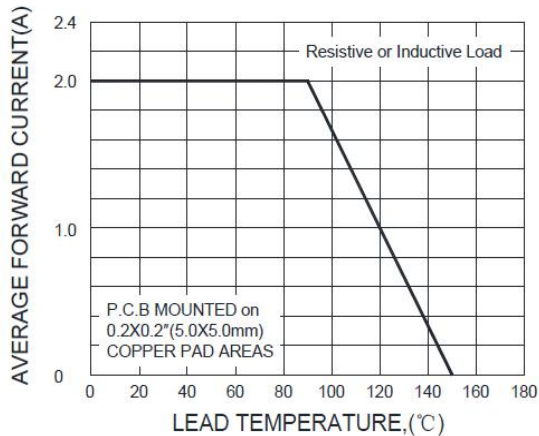


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

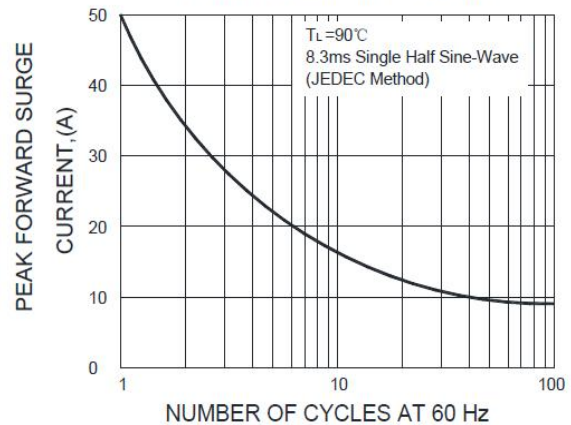


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

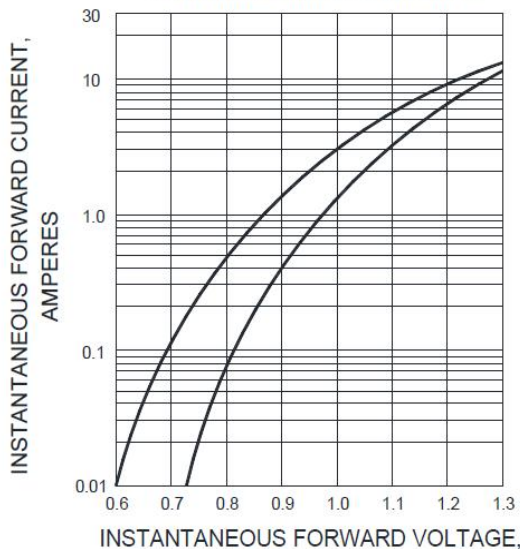


FIG.4-TYPICAL REVERSE CHARACTERISTICS

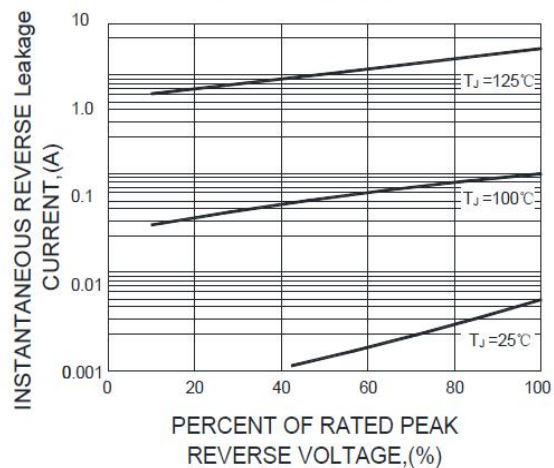


FIG.5-TYPICAL JUNCTION CAPACITANCE

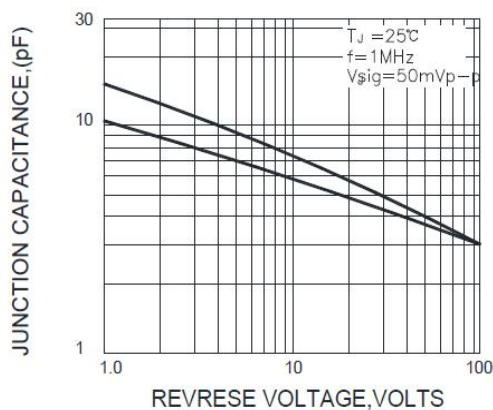
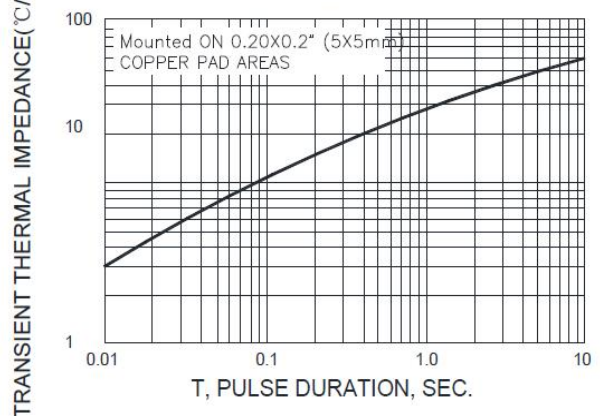


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.