

RS1A THRU RS1M

SURFACE MOUNT FAST SWITCHING RECTIFIER

VOLTAGE RANGE CURRENT 50 to 1000 Volts 1.0 Ampere

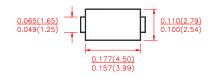
FEATURES

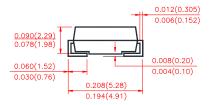
- Plastic package has underwrites laboratory flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Fast switching for high efficiency
- Glass passivated chip junction
- High temperature soldering 250°C/10 second at terminals

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

DO-214AC(SMA)





Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

• Ratings at 25°C ambient temperature unless otherwise specified

MAXIMUM RATINGS & THERMAL CHARACTERISTICS

| | SYMBOLS | RS1A | RS1B | RS1D | RS1G | RS1J | RS1K | RS1M | 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 T_L =90°C | $I_{F(AV)}$ | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) T_L =90°C | I_{FSM} | 30 | | | | | Amps | | |
| Tourisal Thousand Desistance (New 1) | $R_{\theta JA}$ | 105 | | | | | | | |
| Typical Thermal Resistance (Note 1) | $R_{\theta JL}$ | 32 | | | | | | | |
| Operating junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | $^{\circ}$ C | |

ELECTRICAL CHARACTERISTICS

| | SYMBOLS | RS1A | RS1B | RS1D | RS1G | RS1J | RS1K | RS1M | UNIT | |
|--|---------------------------------|------------------|-----------|------|------|------|------|------|------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A | | V_{F} | 1.30 | | | | | | | Volts |
| Maximum DC Reverse Current at rated DC Blocking Voltage | $T_A = 25$ °C $T_A = 125$ °C | I_R | 5.0 50 | | | | | | μΑ | |
| Typical Reverse Recovery Time at I_F =0.5A, I_R =1.0A, I_{RR} =0.25A | | t _{rr} | 150 | | | 250 | 50 | 00 | ns | |
| Typical junction capacitance at 4.0V, 1MHz | | C_{J} | 30 7.0 | | | | .0 | pF | | |

Notes:

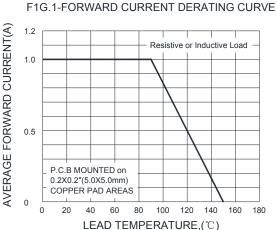
1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with $0.2 \times 0.2''$ (5.0 × 5.0mm) copper pad areas.

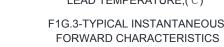
MARKING

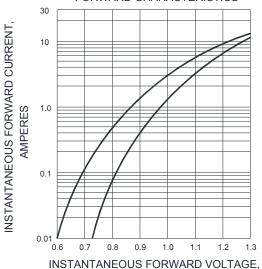
| Symbol | RS1A | RS1B | RS1D | RS1G | RS1J | RS1K | RS1M |
|---------|------|------|------|------|------|------|------|
| Marking | RS1A | RS1B | RS1D | RS1G | RS1J | RS1K | RS1M |

SURFACE MOUNT FAST SWITCHING RECTIFIER

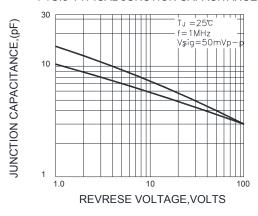
RATINGS AND CHARACTERISTIC CURVES



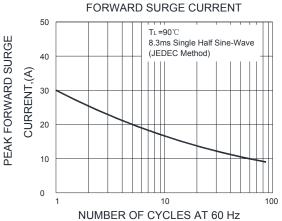




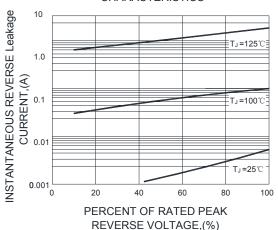
F1G.5-TYPICAL JUNCTION CAPACITANCE



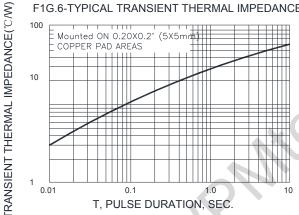
F1G.2-MAXIMUM NON-REPETITIVE PEAK



F1G.4-TYPICAL REVERSE **CHARACTERISTICS**



F1G.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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