



RS07A THRU RS07M

SURFACE MOUNT FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 0.7 Ampere

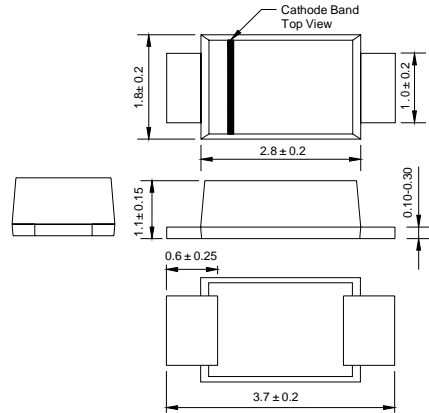
FEATURES

Glass passivated device
 Ideal for surface mouted applications
 Low reverse leakage
 Metallurgically bonded construction
 High temperature soldering guaranteed:
 260°C/10 seconds,0.375"(9.5mm) lead length,
 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC SOD-123FL molded plastic body over passivated chip
Terminals: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight:0.0007 ounce, 0.02 grams

SOD-123FL



Dimensions in millimeters

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 current derate by 20%.

| | SYMBOLS | RS07A | RS07B | RS07D | RS07G | RS07J | RS07K | RS07M | UNITS |
|--|-----------------|--------------|-------|-------|-------|-------|-------|-------|------------------|
| | | RA | RB | RD | RG | RJ | RK | RM | |
| 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 $T_A=100^\circ\text{C}$ (NOTE 1) | I_{AV} | 0.7 | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=25^\circ\text{C}$ | I_{FSM} | 25.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 0.7A | V_F | 1.30 | | | | | | | Volts |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$ | I_R | 5.0 100.0 | | | | | | | μA |
| Maximum reverse recovery time (NOTE 2) | t_{rr} | 150 | | | | 250 | 500 | | ns |
| Typical junction capacitance (NOTE 3) | C_J | 4 | | | | | | | pF |
| Typical thermal resistance (NOTE 4) | $R_{\theta JA}$ | 180 | | | | | | | K/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

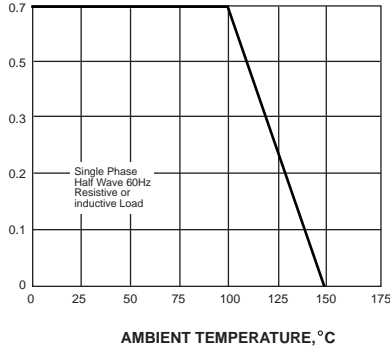
- Note:**
- 1.Averaged over any 20ms period.
 - 2.Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
 - 3.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 - 4.Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.



RATINGS AND CHARACTERISTIC CURVES RS07A THRU RS07M

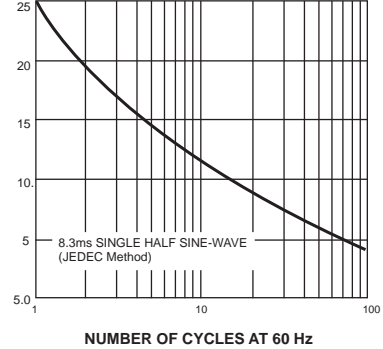
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



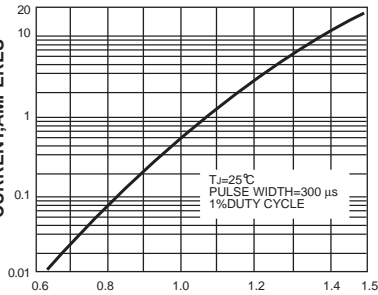
PEAK FORWARD SURGE CURRENT, AMPERES

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



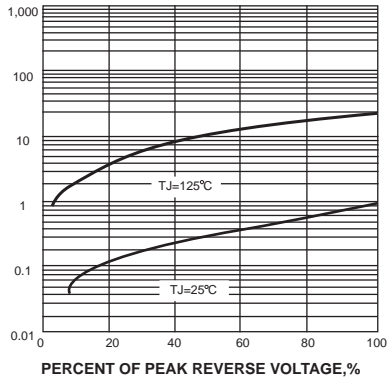
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



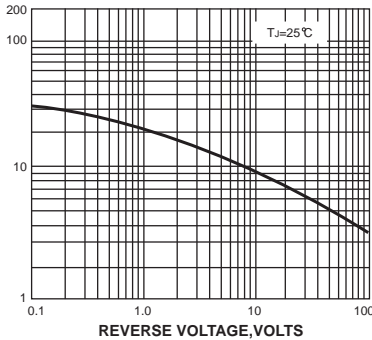
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

