

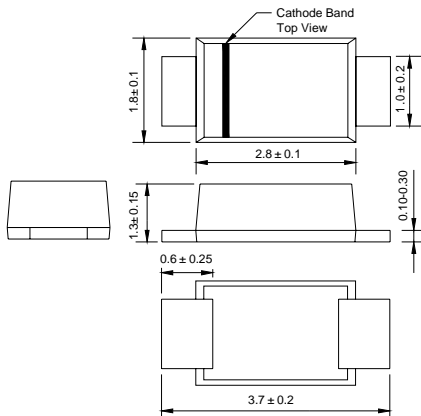


# S07A THRU S07M

## SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIER

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

### SOD-123FL



### FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mounted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:  
250°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

## 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%.

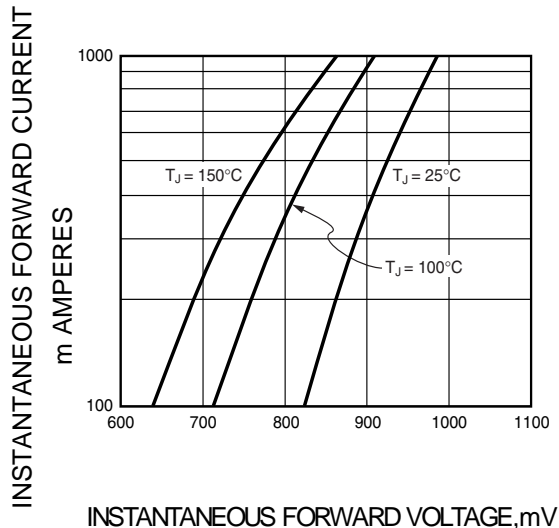
|  | SYMBOLS         | S07A         | S07B | S07D | S07G | S07J | S07K | S07M | UNITS            |
|--|-----------------|--------------|------|------|------|------|------|------|------------------|
| MDD Catalog Number   |                 | SA           | SB   | SD   | SG   | SJ   | SK   | SM   |                  |
| 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 $T_A=65^\circ\text{C}$ (NOTE 1)   | $I_{(AV)}$      | 0.7          |      |      |      |      |      |      | Amp              |
| Peak forward surge current<br>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 1.0A  | $V_F$           | 1.1          |      |      |      |      |      |      | Volts            |
| Maximum DC reverse current<br>$T_A=25^\circ\text{C}$<br>at rated DC blocking voltage<br>$T_A=125^\circ\text{C}$            | $I_R$           | 10.0<br>50.0 |      |      |      |      |      |      | $\mu\text{A}$    |
| Typical junction capacitance (NOTE 2)  | $C_J$           | 4            |      |      |      |      |      |      | pF               |
| Typical thermal resistance (NOTE 3)  | $R_{\theta JA}$ | 180          |      |      |      |      |      |      | K/W              |
| Operating junction and storage temperature range   | $T_J, T_{STG}$  | -50 to +150  |      |      |      |      |      |      | $^\circ\text{C}$ |

- Note:** 1. Averaged over any 20ms period.  
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

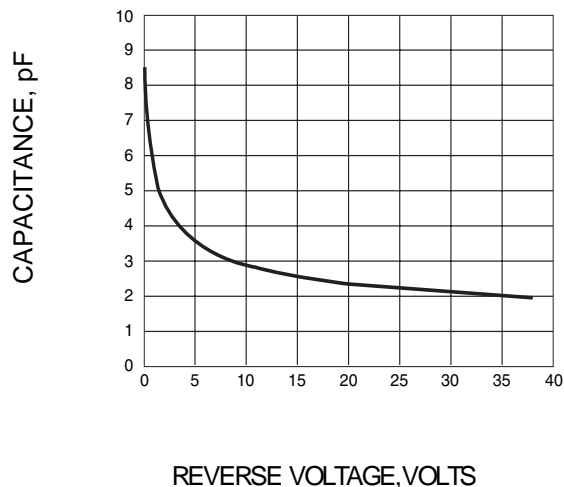
MDD ELECTRONIC

# RATINGS AND CHARACTERISTIC CURVES S07A THRU S07M

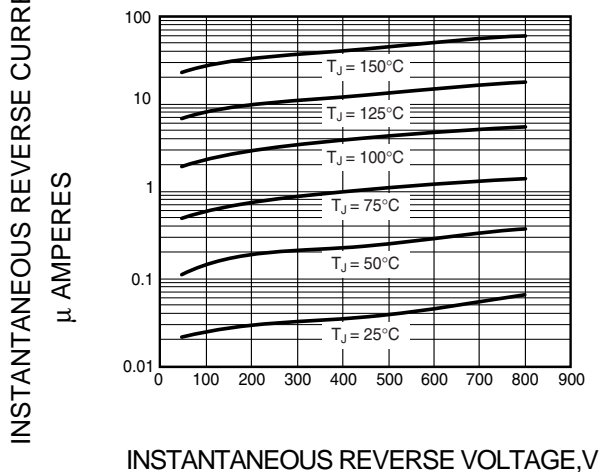
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



**FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS**



**FIG.4 – FORWARD DERATING CURVE**

