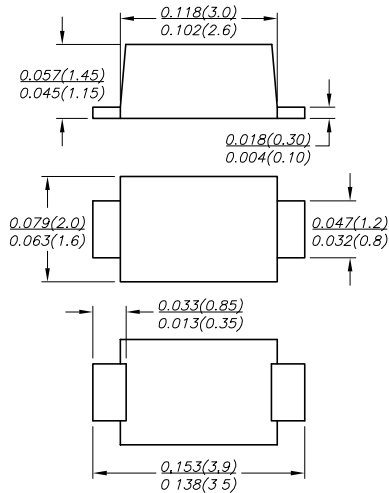


# DSR1A THRU DSR1M

## SURFACE MOUNT GENERAL PURPOSE SILICON RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

### SOD-123FL



### FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mounted 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:** 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	DSR1A	DSR1B	DSR1D	DSR1G	DSR1J	DSR1K	DSR1M	UNITS
		S1A	S1B	S1D	S1G	S1J	S1K	S1M	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$ (NOTE 1)	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	25.0							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.1							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	10.0 50.0							$\mu\text{A}$
Typical junction capacitance (NOTE 2)	$C_J$	4							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	95							$^\circ\text{C/W}$
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 at 1MHz and applied reverse voltage of 4.0V D.C.
  3. PCB mounted on 0.2\*0.2" (5.0\*5.0mm) copper pad area.

# RATINGS AND CHARACTERISTIC CURVES DSR1A THRU DSR1M

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

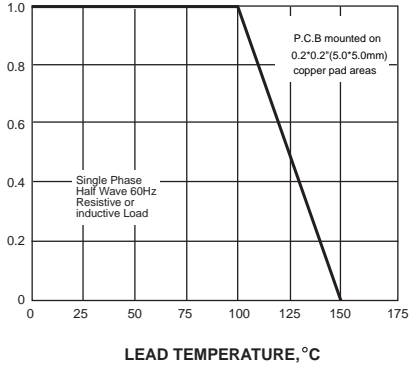


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

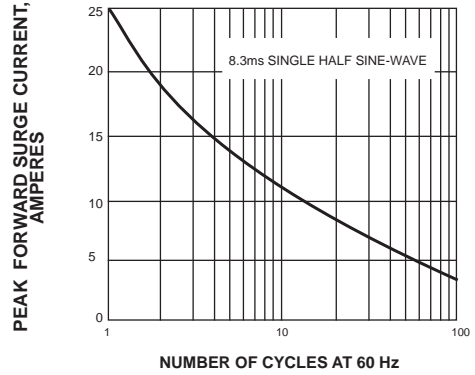


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

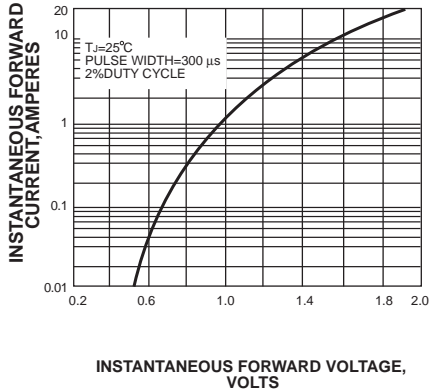


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

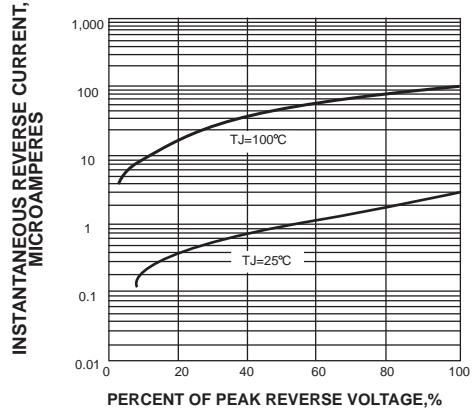
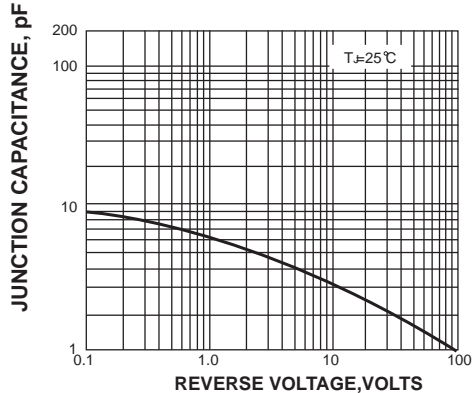


FIG. 5-TYPICAL JUNCTION CAPACITANCE



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