

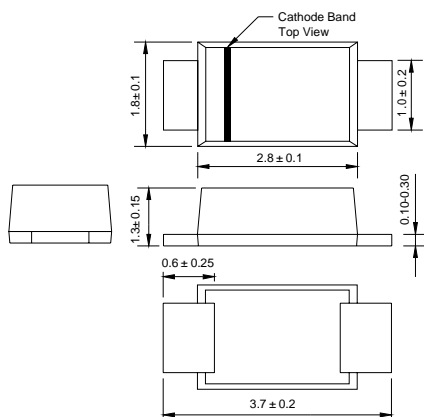


# DSR0.5A THRU DSR0.5M

## Surface Mount Standard Rectifiers

Reverse Voltage - 50 to 1000 Volts Forward Current - 0.5 Ampere

### SOD-123FL



Dimensions in millimeters

### Features

- ◆ Low profile space
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junctions
- ◆ Low forward voltage drop
- ◆ Low leakage current
- ◆ High forward surge capability
- ◆ High temperature soldering:  
260°C/10 seconds at terminals
- ◆ Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC

### Mechanical Data

**Case:** JEDEC SOD-123FL molded plastic body over glass passivated chip

**Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D

**Polarity:** Laser band denotes cathode end

**Weight:** 0.017gram

## 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%.

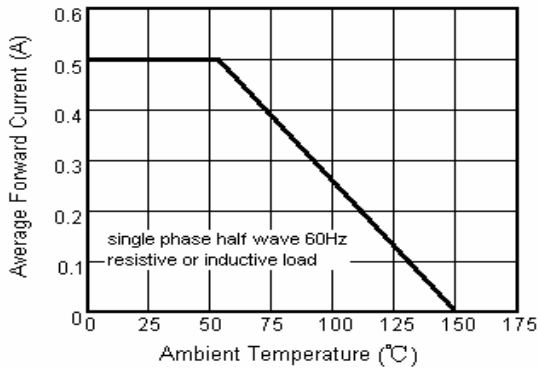
MDD Catalog Number	SYMBOLS	S05A	S05B	S05D	S05G	S05J	S05K	S05M	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_A=65^\circ\text{C}$ (NOTE 1)	$I_{(AV)}$	0.5							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=25^\circ\text{C}$	$I_{FSM}$	15.0							Amps
Maximum instantaneous forward voltage at 0.5A	$V_F$	1.1							Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Typical junction capacitance (NOTE 2)	$C_J$	4							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	220							K/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

Note1: Mounted on FR-4 P.C.B. With 0.9x1.5 mm copper pad areas ( $\approx 35 \mu\text{m}$  thick)

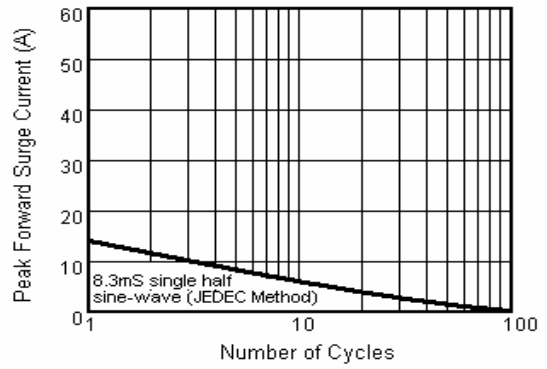
# RATINGS AND CHARACTERISTIC CURVES DSR0.5A THRU DSR0.5M

## Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

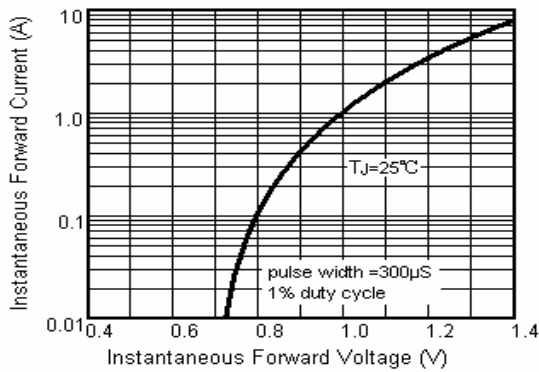
**Fig.1 Forward Current Derating Curve**



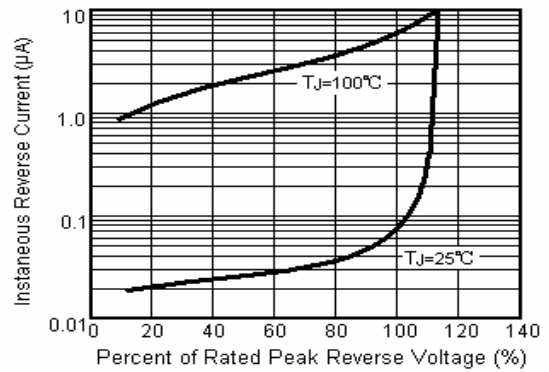
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Junction Capacitance**

