

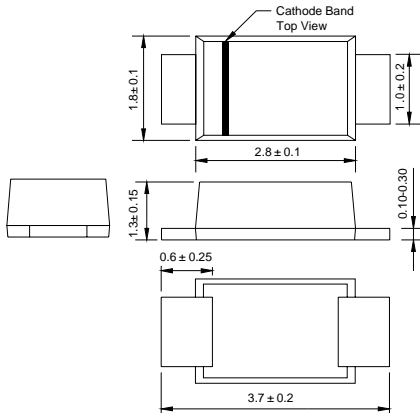


DSR0.5A THRU DSR0.5M

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							μA
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

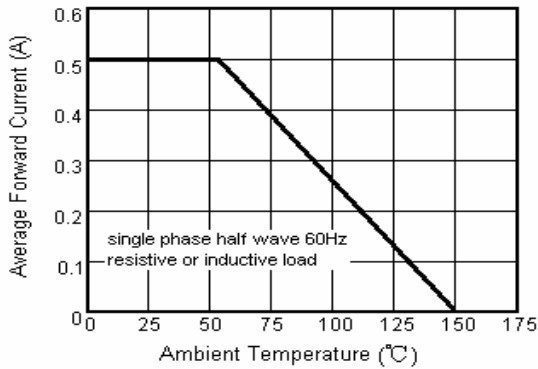


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

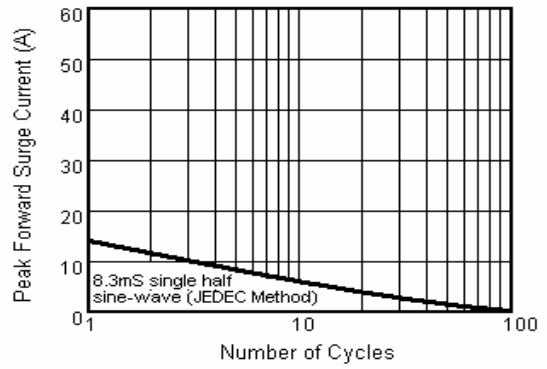


Fig.3 Typical Instantaneous Forward Characteristics

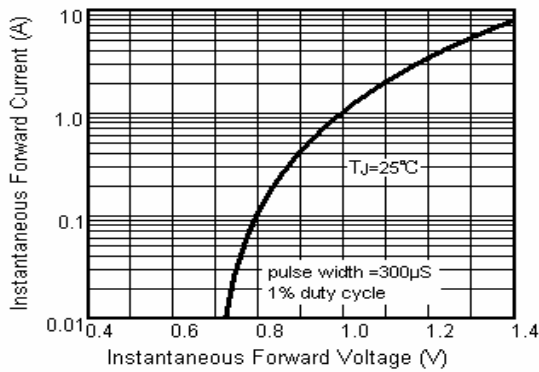


Fig.4 Typical Reverse Characteristics

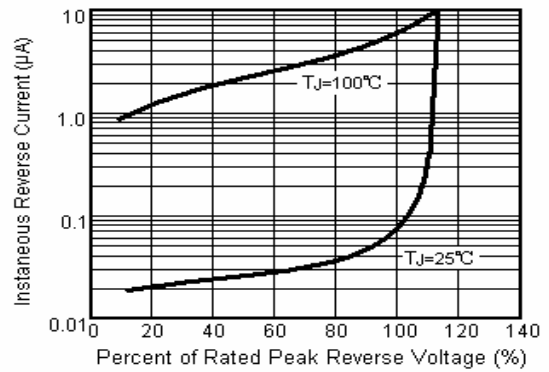


Fig.5 Typical Junction Capacitance

