

DFR0.5A-DFR0.5M

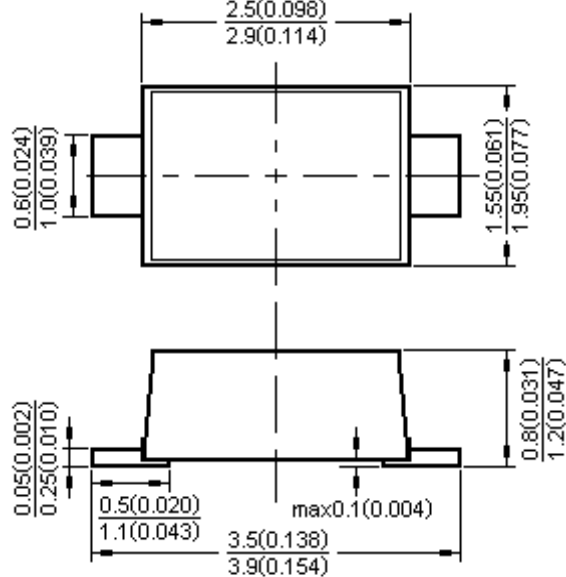
Surface Mount Fast Recovery Rectifiers

Major Ratings and Characteristics

$I_{F(AV)}$	0.5 A
V_{RRM}	50 V to 1000 V
I_{FSM}	15 A
I_R	5 μ A
V_F	1.3V
T_j max.	150 °C



SOD-123FL



Dimensions in millimeters and (inches)

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 Date

- **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 & Thermal Characteristics & Electrical Characteristics

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

	DFR-	Symbol	0.5A	0.5B	0.5D	0.5G	0.5J	0.5K	0.5M	UNIT
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		$I_{F(AV)}$	0.5							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load		I_{FSM}	15							A
Maximum instantaneous forward voltage at 0.5A		V_F	1.3							V
Maximum DC reverse current $T_A = 25\text{ }^\circ\text{C}$ at Rated DC blocking voltage $T_A = 100\text{ }^\circ\text{C}$		I_R	5.0 50							μ A
Maximum reverse recovery time at $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $t_{rr} = 0.25\text{ A}$		t_{rr}	150				250	500		nS
Typical junction capacitance at 4.0 V ,1MHz		C_J	15							p F
Operating junction and storage temperature range		T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

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

Fig.1 Forward Current Derating Curve

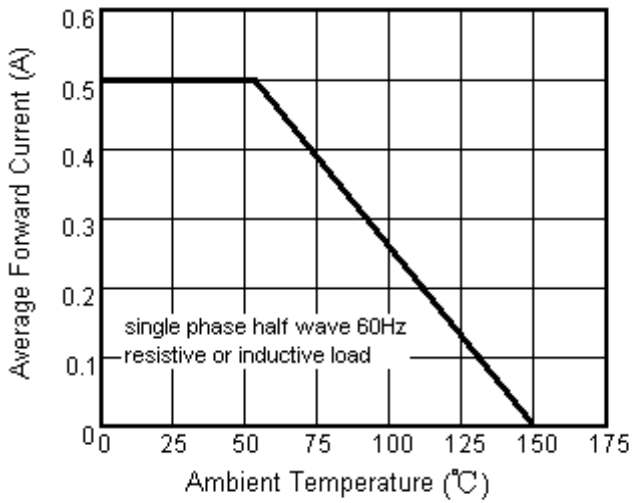


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

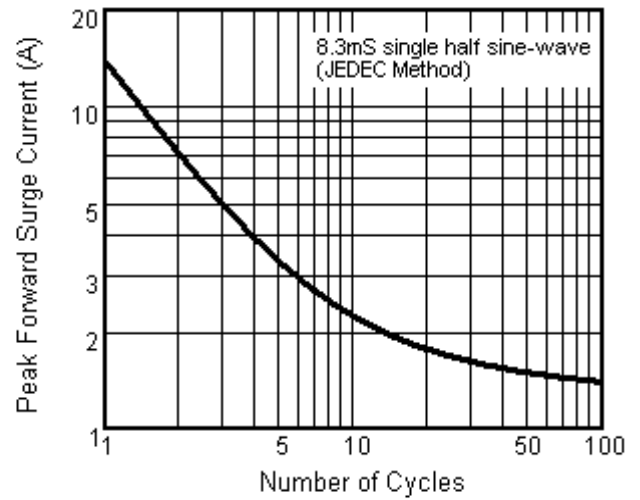


Fig.3 Typical Instantaneous Forward Characteristics

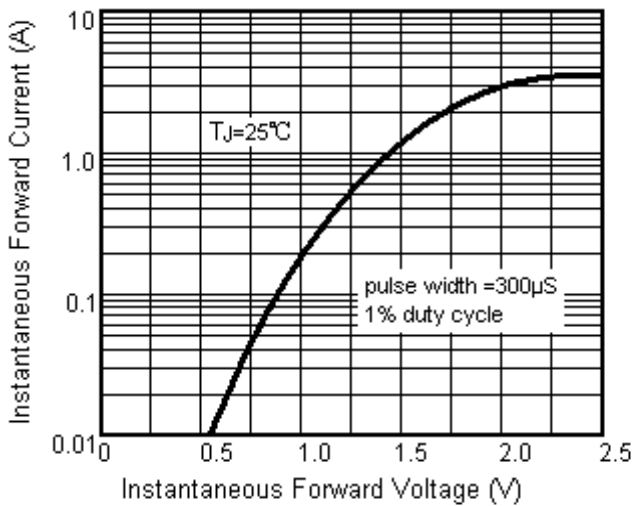


Fig.4 Typical Reverse Characteristics

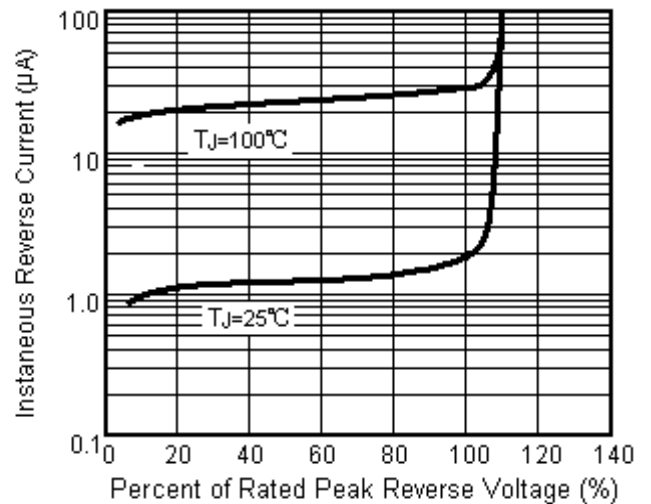


Fig.5 Typical Junction Capacitance

