

Features

- Low profile package
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low power losses, high efficiency
- Low forward voltage drop
- High 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:** SOD-123FL molded plastic
- **Terminals:** Solder plated, solderable per
J-STD-002B and JEDEC-22-B102D
- **Polarity:** Laser band denotes cathode end

Major Ratings and Characteristics

$I_{F(AV)}$	2.0A
V_{RRM}	20 V to 60 V
I_{FSM}	50A
V_F	0.40V, 0.48V, 0.65V
$T_J \text{ max.}$	125 °C

Maximum Ratings & Thermal Characteristics

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

Items	Symbol	DSL22	DSL23	DSL24	DSL26	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	60	V
Maximum RMS voltage	V_{RMS}	14	21	28	42	V
Maximum DC blocking voltage	V_{DC}	20	30	40	60	V
Maximum average forward rectified current	$I_{F(AV)}$	2.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	50				A
Voltage rate of change (rated V_R)	dv/dt	10000				V/ μs
Thermal resistance from junction to lead ⁽¹⁾	$R_{\theta JL}$	20				°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +125				°C

Note 1: Mounted on P.C.B. with 0.036 x 0.06" (0.9 x 1.5mm) copper pad areas.

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

Items	Test conditions	Symbol	DSL22~23	DSL24	DSL26	UNIT
Instantaneous forward voltage	$I_F=2.0A^{(2)}$	V_F	0.40	0.48	0.65	V
Reverse current	$V_R=V_{DC}$	I_R	1.0			mA
	$T_j=100^{\circ}C$		10.0			

Note 2: Pulse test: 300 μs pulse width, 1% duty cycle.

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

Fig.1 Forward Current Derating Curve

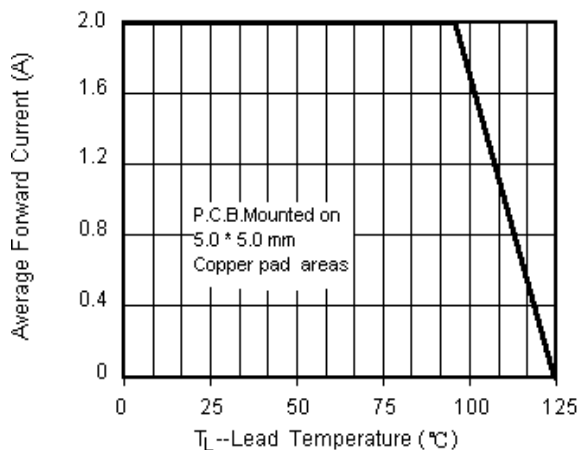


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

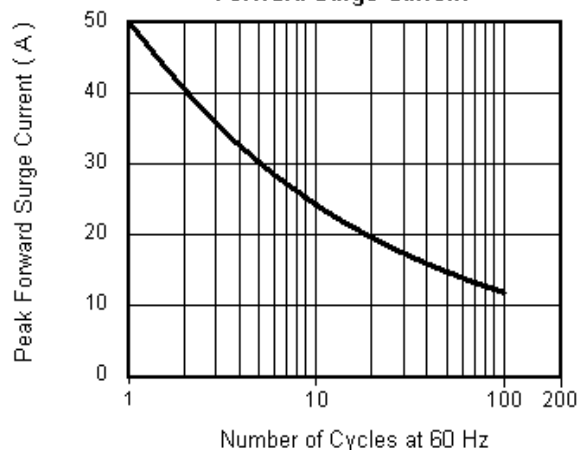


Fig.3 Typical Instantaneous Forward Characteristics

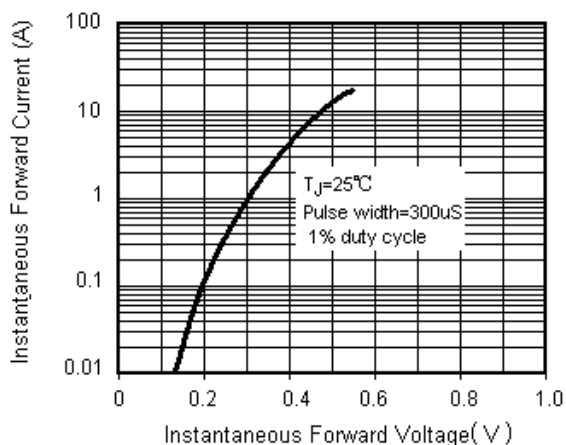
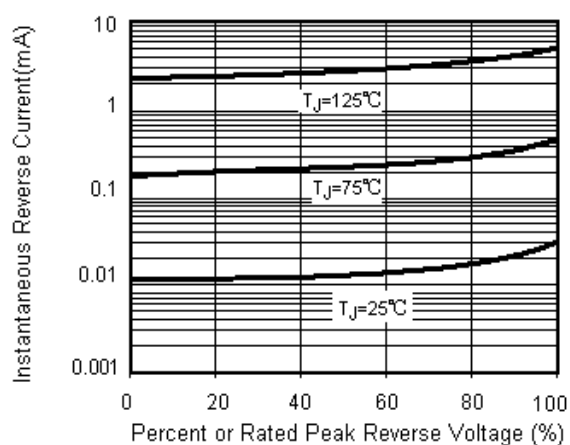
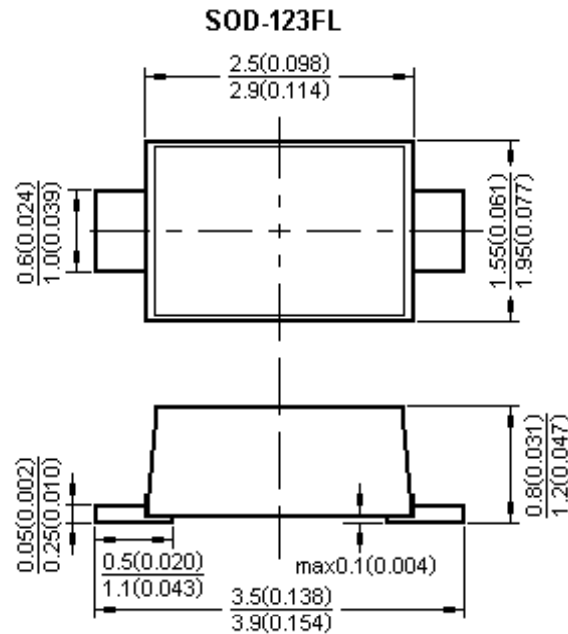


Fig.4 Typical Reverse Leakage Characteristics



Package Outline



Dimensions in millimeters and (inches)

Notice

- Product is intended for use in general electronics applications.
- Product should be worked less than the ratings; if exceeded, may cause permanent damage or introduce latent failure mechanisms.
- The absolute maximum ratings are rated values and must not be exceeded during operation. The following are the general derating methods you design a circuit with a device.
 - $I_{F(AV)}$: We recommend that the worst case current be no greater than 80% .
 - I_{FSM} : This rating specifies the non-repetitive peak current. This is only applied for an abnormal operation, which the general during the lifespan of the device.
 - T_J : Derate this rating when using a device in order to ensure high reliability. We recommend that the device be used at a T_J of below 125°C.

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