DSK12~DSK120
Schottky rectifier

Features

- Low profile package
- Ideal for automated placement
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering：
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC

SOD-123FL

Mechanical Date

- **Case:** SOD-123FL molded plastic
- **Terminals:** Solder plated, solderable per JESD22-B102D
- **Polarity:** Laser band denotes cathode end

Major Ratings and Characteristics

$I_{F(AV)}$	**1.0A**
V_{RRM}	**20 V to 200 V**
I_{FSM}	**25A**
V_F	**0.50V, 0.55V, 0.70V, 0.85V，0.95V**
T_j **max.**	**125 °C**

Maximum Ratings & Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Items	Symbol	DSK 12	DSK 13	DSK 14	DSK 15	DSK 16	DSK 18	DSK 110	DSK 115	DSK 120	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	1									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	25									A
Thermal resistance from junction to lead (1)	$R_{\theta JL}$	20									℃/W
Operating junction and storage temperature range	T_J, T_{STG}	–65 to +125									℃

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 °C unless otherwise noted)

Items	Test conditions		Symbol	DSK 12	DSK 13~14	DSK 15~16	DSK 18~110	DSK 115~120	UNIT
Instantaneous forward voltage	I_F=1.0A(2)		V_F	0.50	0.55	0.70	0.85	0.95	V
Reverse current	V_R=V_{DC}	T_j=25℃	I_R	0.5					mA
		T_j=100℃		5.0					

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

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

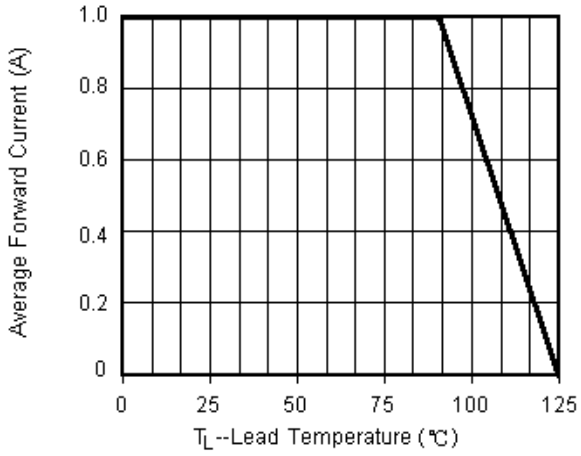


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

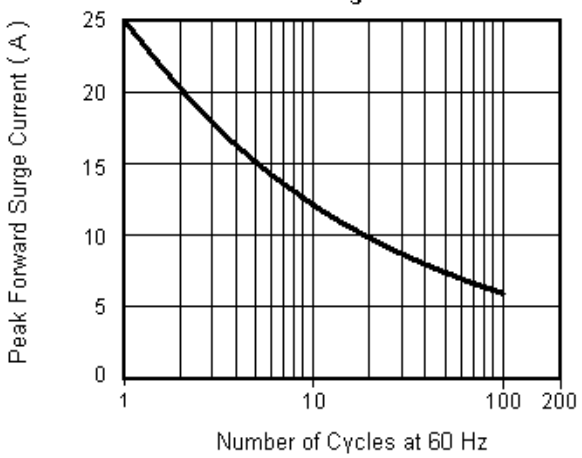


Fig.3 Typical Instantaneous Forward Characteristics

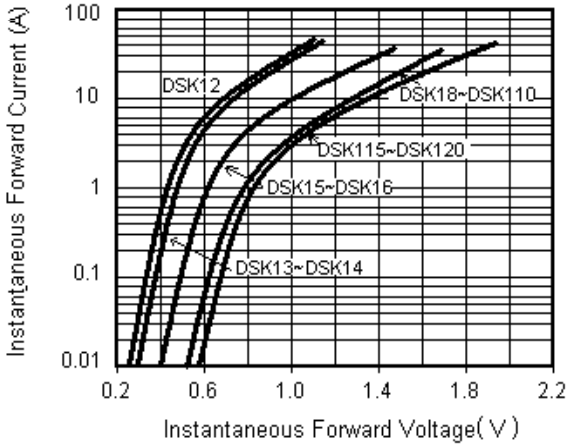
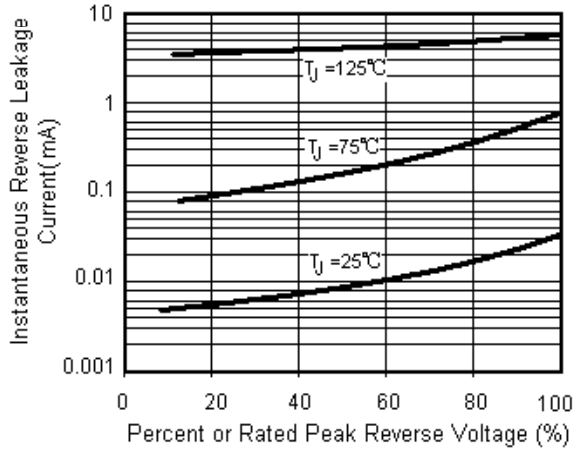
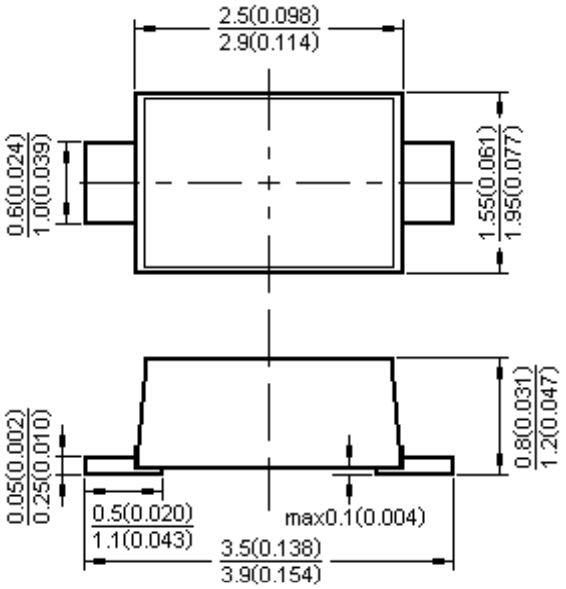


Fig.4 Typical Reverse Leakage Characteristics



Package Outline

SOD-123FL



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% .
  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 100°C.