

## DS32 thru DS320 SOD-123FL

## SCHOTTKY BARRIER DIODE

## Features

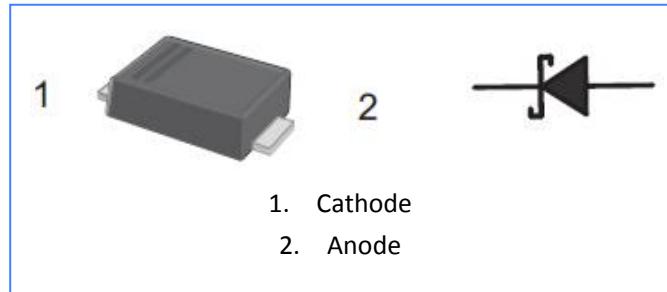
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## Mechanical Data

Case: SOD-123FL

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 15mg/0.00048oz



## Absolute 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, derate by 20 %

Parameter	Symbols	DS32	DS34	DS36	DS38	DS310	DS312	DS315	DS320	Units								
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	80	100	120	150	200	V								
Maximum RMS voltage	$V_{RMS}$	14	28	42	56	70	84	105	140	V								
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	80	100	120	150	200	V								
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3								A								
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50								A								
Max Instantaneous Forward Voltage at 1 A	$V_F$	0.55		0.70		0.85		0.95		V								
Maximum DC Reverse Current $T_a=25^\circ C$ at Rated DC Reverse Voltage $T_a=100^\circ C$	$I_R$	0.5 10		0.3 5						mA								
Typical Junction Capacitance <sup>1</sup>	$C_j$	250		160						pF								
Typical Thermal Resistance <sup>2</sup>	$R_{\theta JA}$	80								°C/W								
Operating Junction Temperature Range	$T_j$	-55 ~ +125								°C								
Storage Temperature Range	$T_{stg}$	-55 ~ +150								°C								

1. Measured at 1 MHz and applied reverse voltage of 4 V D.C.

2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

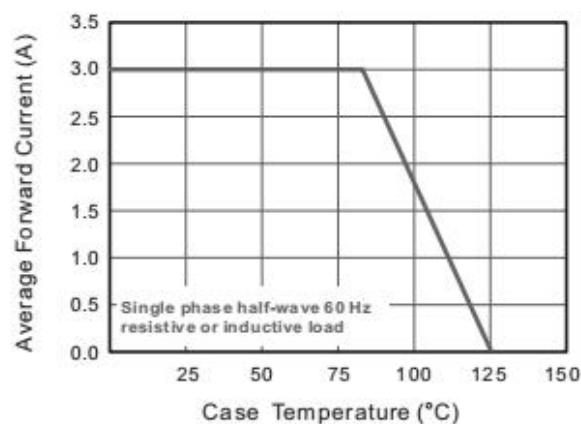


Fig.2 Typical Reverse Characteristics

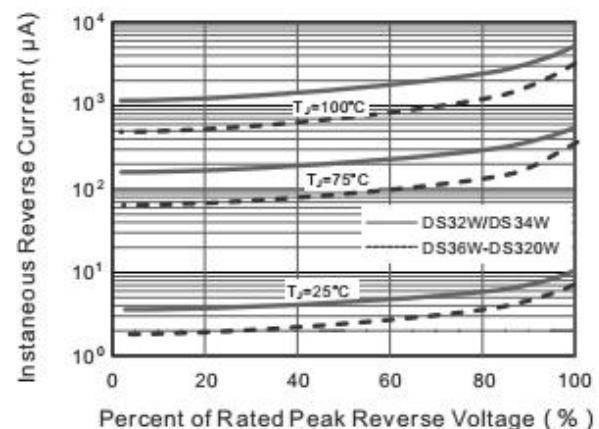


Fig.3 Typical Forward Characteristic

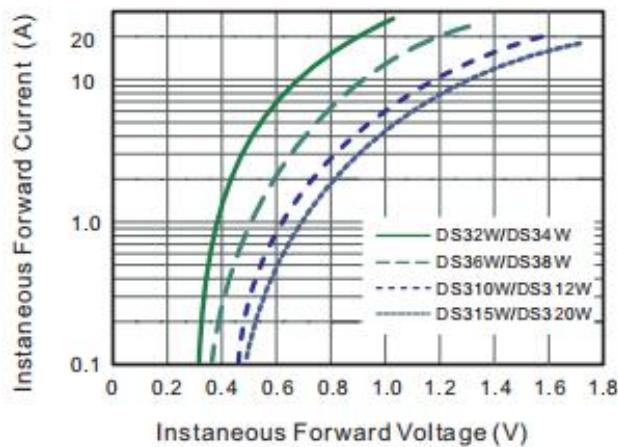


Fig.4 Typical Junction Capacitance

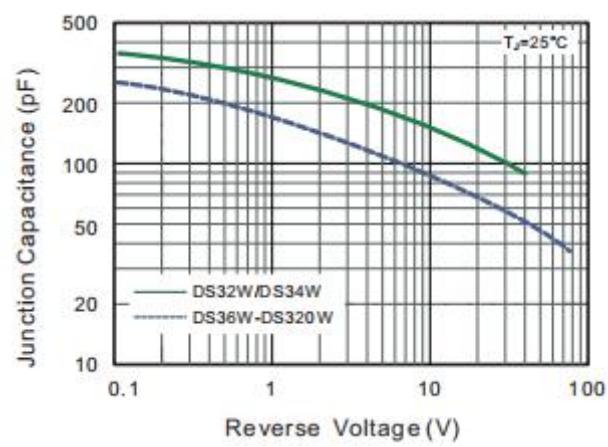


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

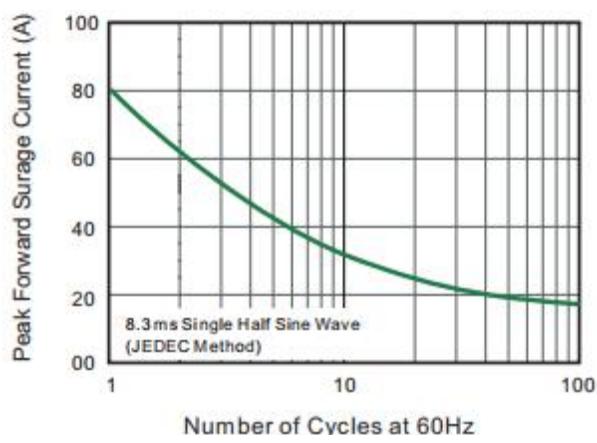
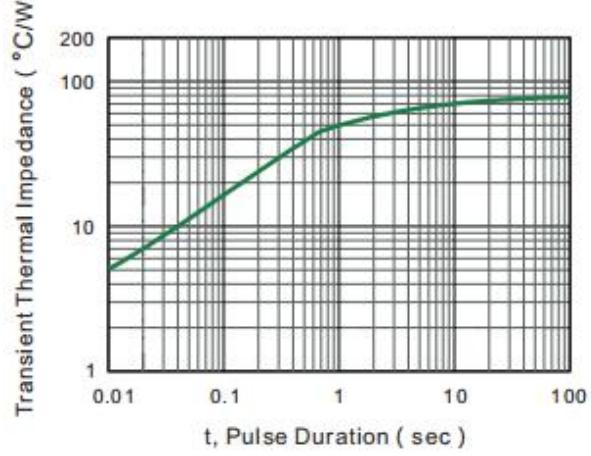
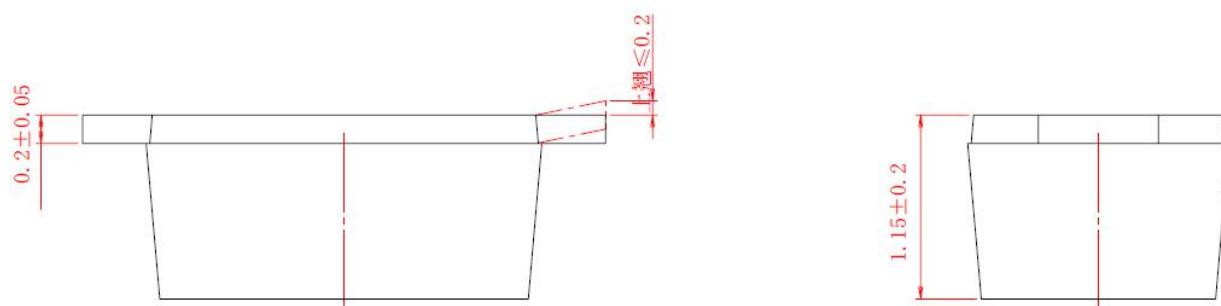


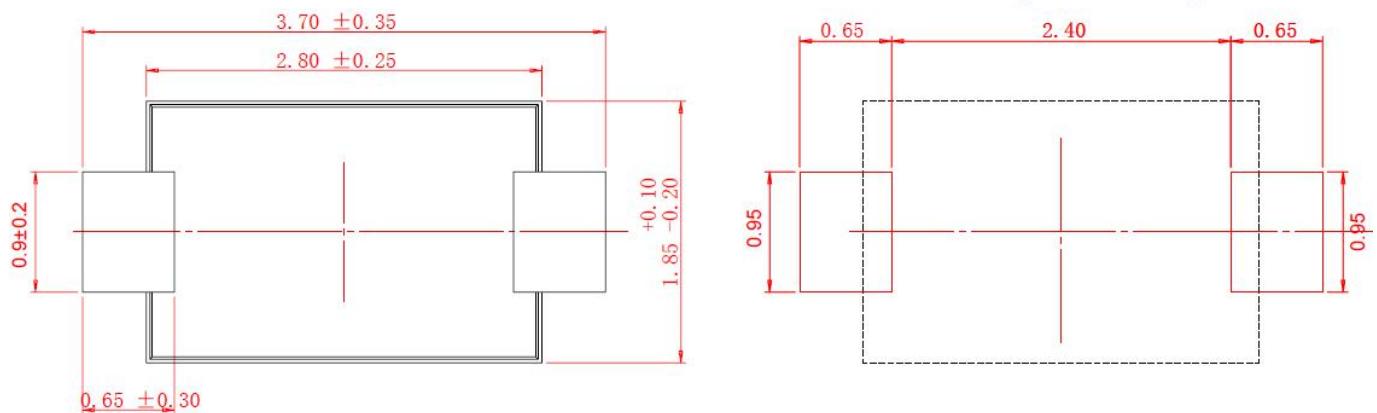
Fig.1 Forward Current Derating Curve



## Package Outline SOD-123FL



## Mounting Pad Layout



## Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.