

## DS12 thru DS120 SOD-123FL

### SCHOTTKY BARRIER DIODE

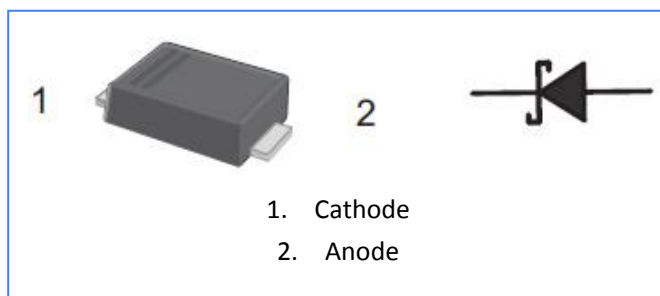
#### Features

- 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



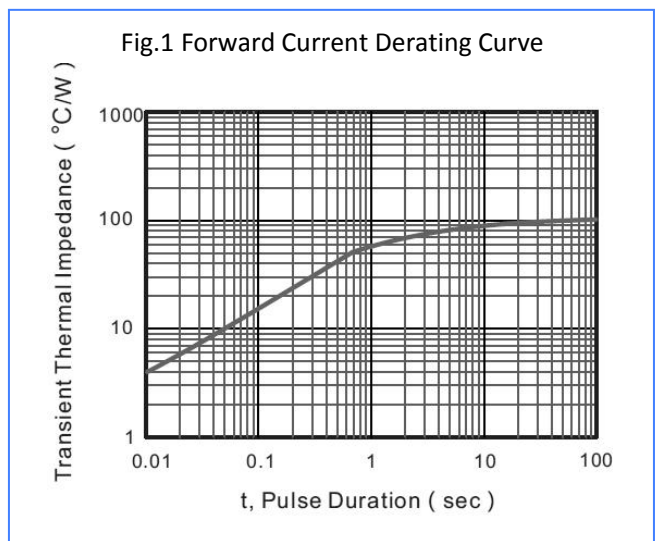
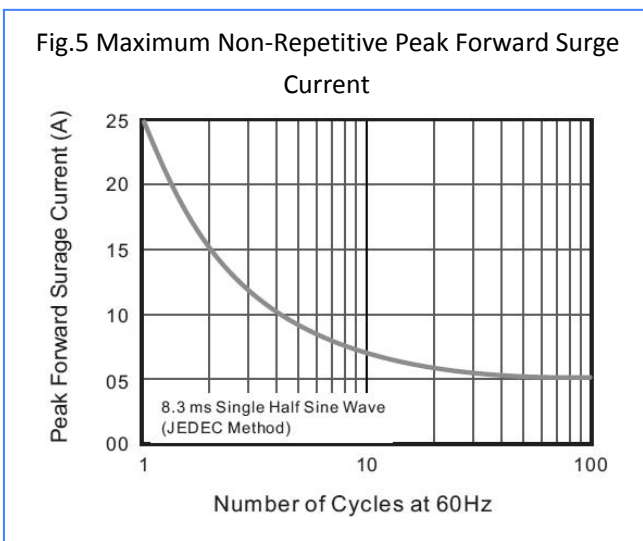
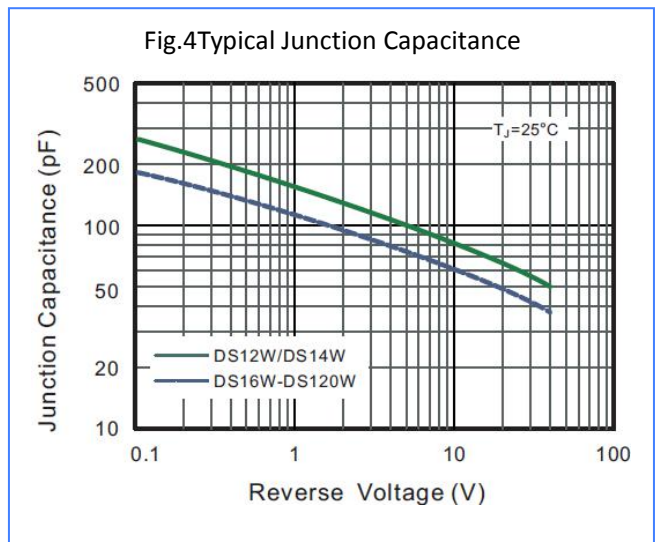
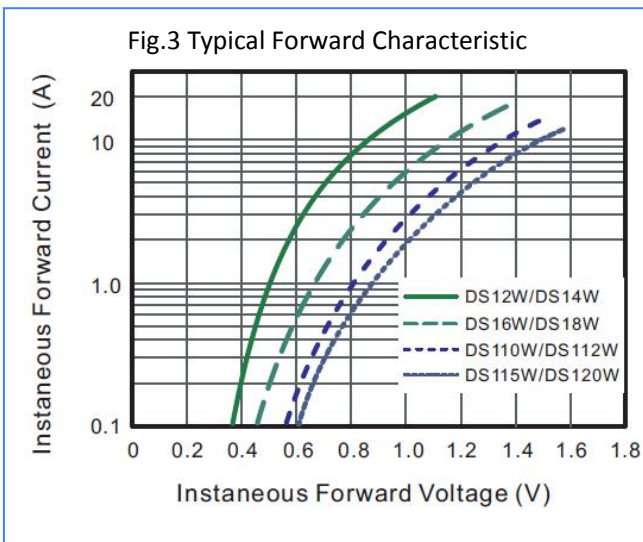
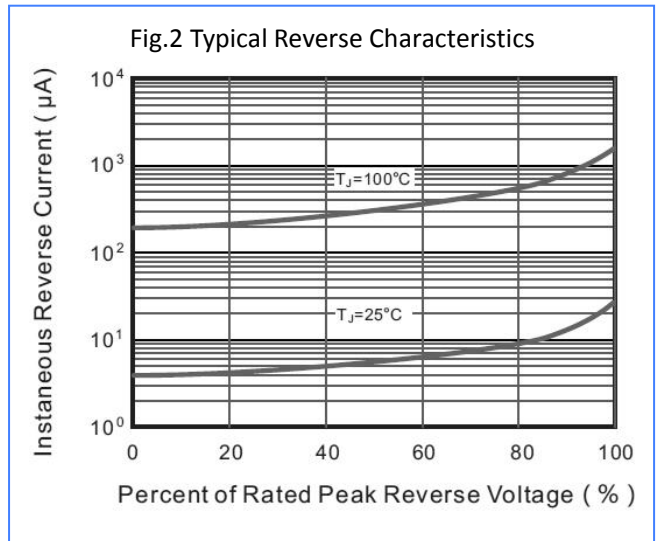
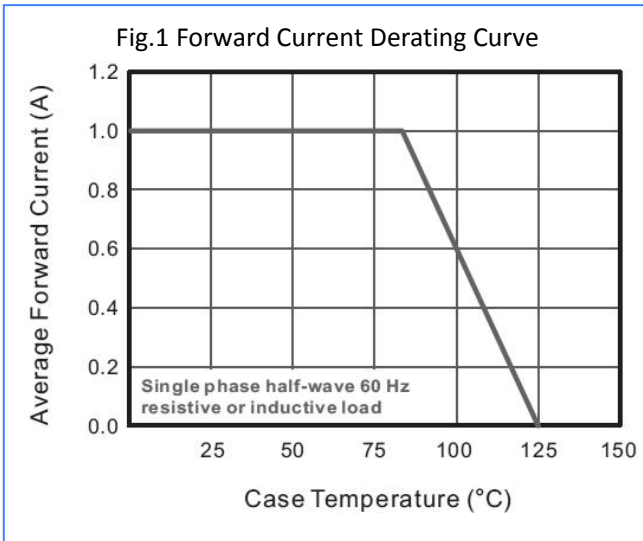
#### Absolute Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

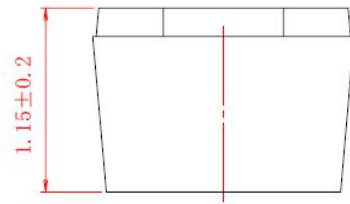
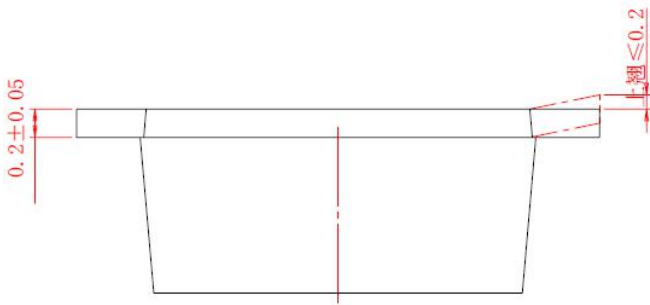
Parameter	Symbols	DS12	DS14	DS16	DS18	DS110	DS112	DS115	DS120	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	$V_{RMS}$	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	25								A
Max Instantaneous Forward Voltage at 1 A	$V_F$	0.55	0.70		0.85		0.90		V	
Maximum DC Reverse Current $T_a=25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a=100^\circ\text{C}$	$I_R$	0.3 10			0.2 5		0.1 2		mA	
Typical Junction Capacitance <sup>1</sup>	$C_j$	110	80							pF
Typical Thermal Resistance <sup>2</sup>	$R_{\theta JA}$	100								°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

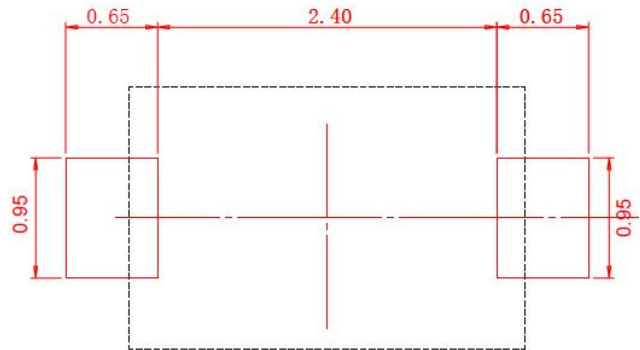
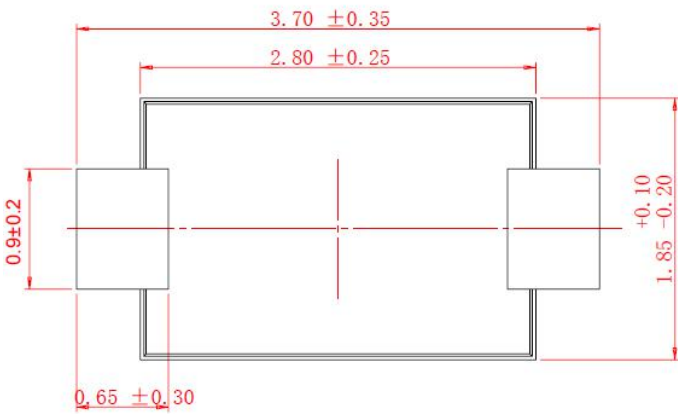
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



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.

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