

Surface Mount Schottky Barrier Rectifier  
 Reverse Voltage - 20 to 200 V  
 Forward Current - 3.0A

## 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

## PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View  
 Marking Code: DS32W ---K32 S32  
 DS34W ---K34 S34  
 DS36W ---K36 S36  
 DS38W ---K38 S38  
 DS310W ---K310 S310  
 DS312W ---K312 S312  
 DS315W ---K315 S315  
 DS320W ---K320 S320  
 Simplified outline SOD-123FL and symbol

## Absolute Maximum Ratings and Electrical characteristics

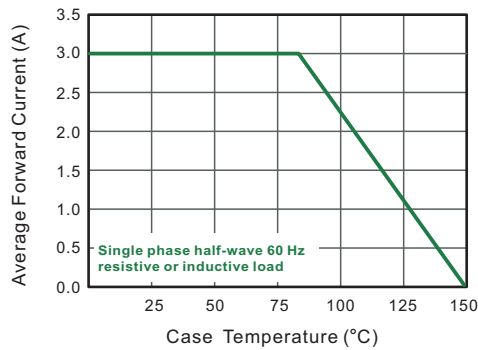
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	DS32W	DS34W	DS36W	DS38W	DS310W	DS312W	DS315W	DS320W	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	$I_{F(AV)}$	3.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	80				70				A
Max Instantaneous Forward Voltage at 3 A	$V_F$	0.55	0.70		0.85		0.95		V	
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	$I_R$	0.5 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								$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_j$	-55 ~ +150								$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ +150								$^\circ\text{C}$

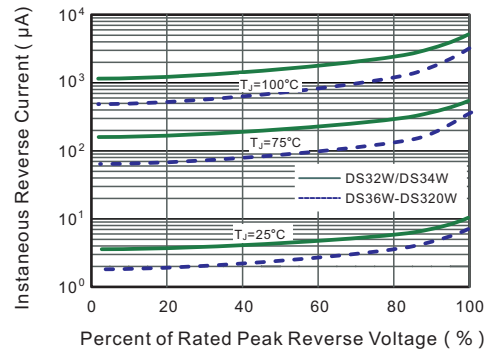
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

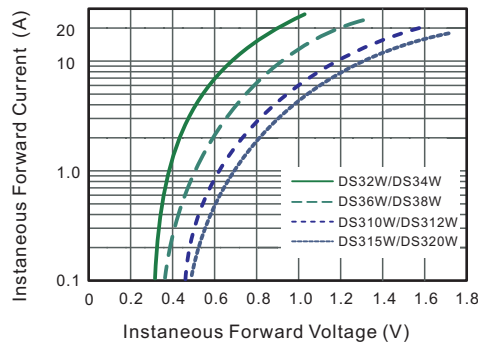
**Fig.1 Forward Current Derating Curve**



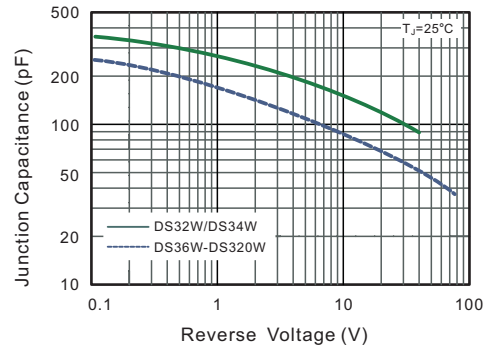
**Fig.2 Typical Reverse Characteristics**



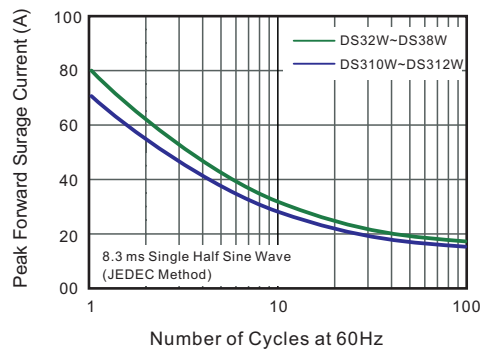
**Fig.3 Typical Forward Characteristic**



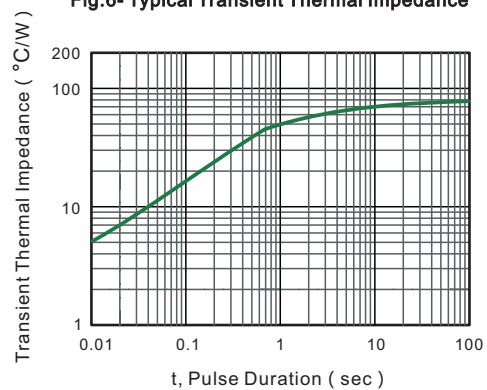
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



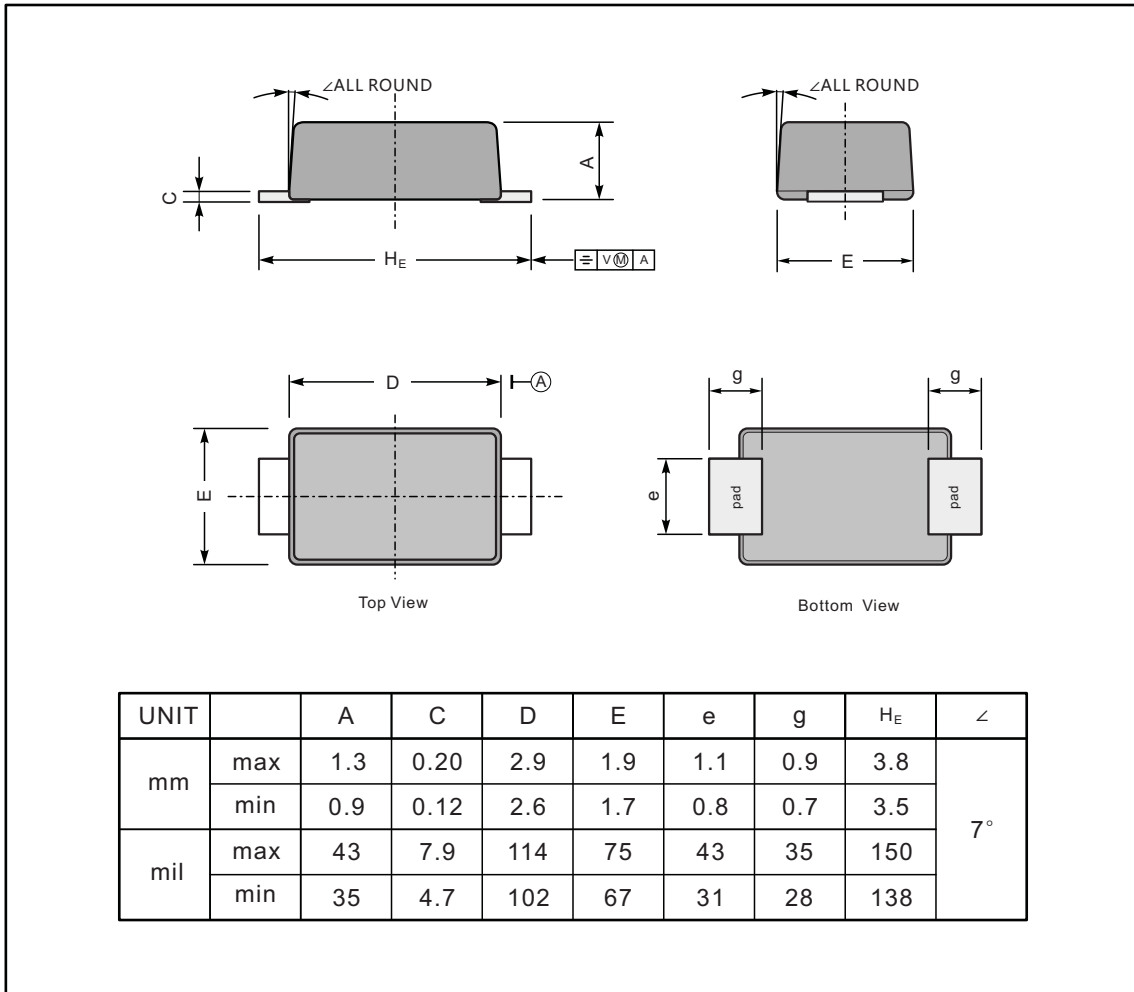
**Fig.6- Typical Transient Thermal Impedance**



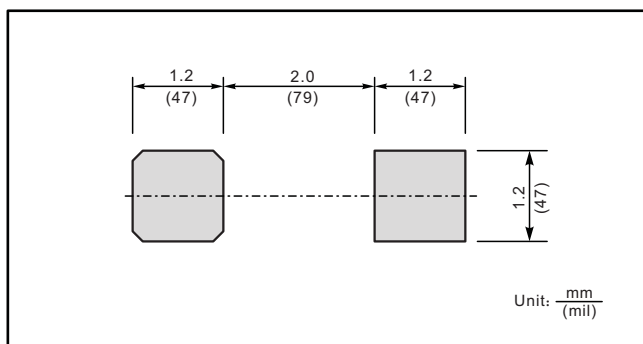
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-123FL



**The recommended mounting pad size**



**Marking**

Type number	Marking code
DS32W	K32 S32
DS34W	K34 S34
DS36W	K36 S36
DS38W	K38 S38
DS310W	K310 S310
DS312W	K312 S312
DS315W	K315 S315
DS320W	K320 S320