

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

FEATURES

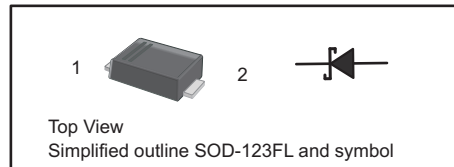
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

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



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								A	
Max Instantaneous Forward Voltage at 3 A	V_F	0.55	0.70	0.85	0.95					V	
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	I_R	0.5 10	0.3 5								mA
Typical Junction Capacitance ⁽¹⁾	C_j	250	160								pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	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

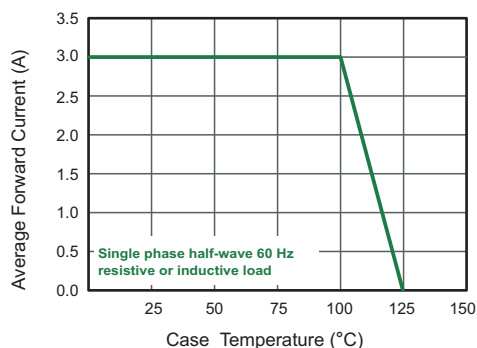


Fig.2 Typical Reverse Characteristics

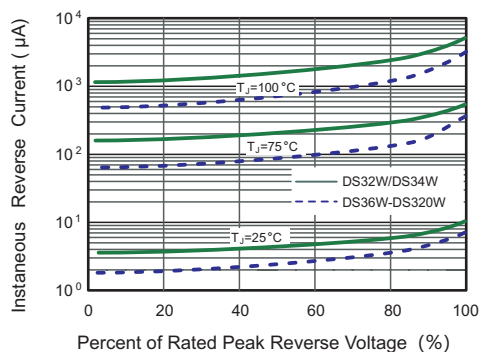


Fig.3 Typical Forward Characteristic

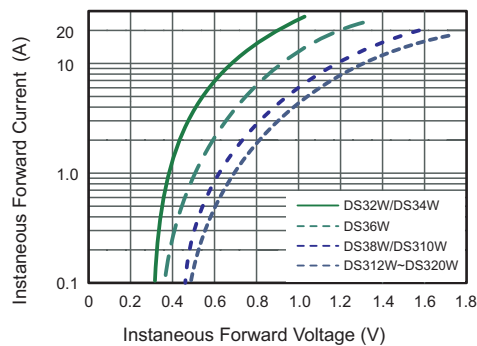


Fig.4 Typical Junction Capacitance

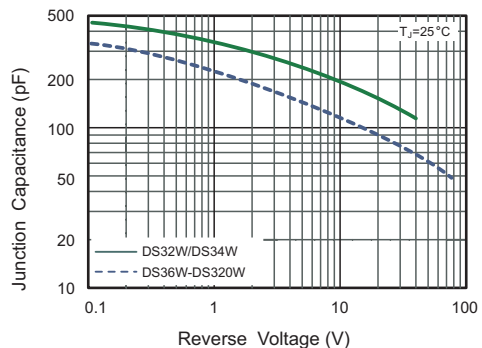
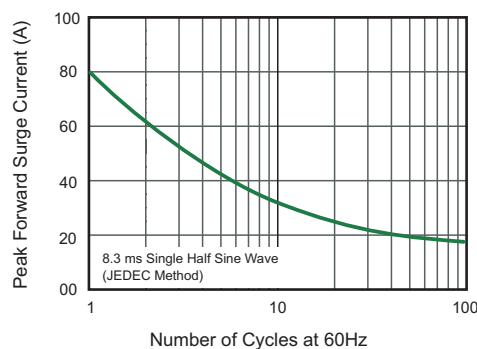


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

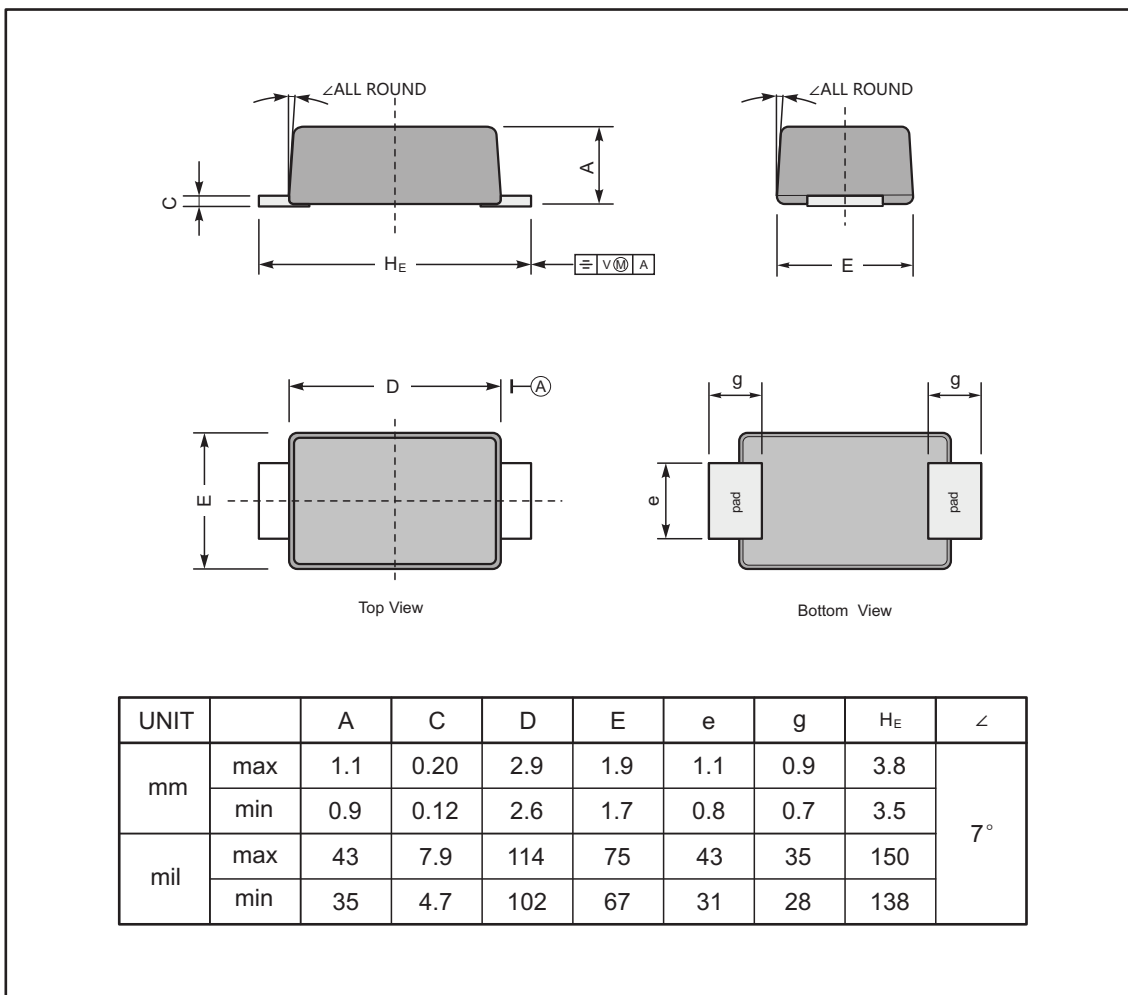




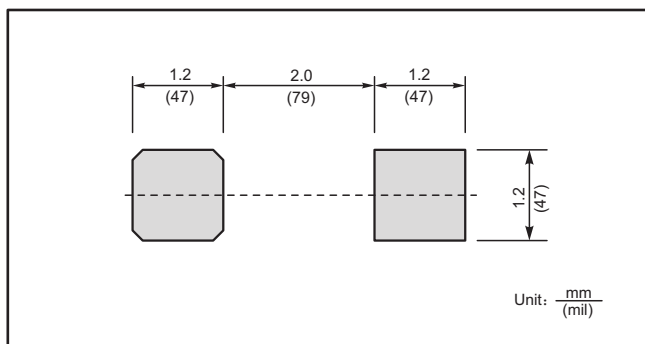
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



The recommended mounting pad size



Marking

Type number	Marking code
DS32W	S32
DS34W	S34
DS36W	S36
DS38W	S38
DS310W	S310
DS312W	S312
DS315W	S315
DS320W	S320



文件履历表

序号	制/修订日期	生效日期	版次	修订内容	变更原因	制/修订人	备注
01	2020. 11. 6	2020. 11. 8	Rev 1. 1	初版制定	/	张阁	
02	2023. 11. 27	2023. 11. 29	Rev 1. 2	修改120V产品VF	市场需求	郭金铮	



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