

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200 V

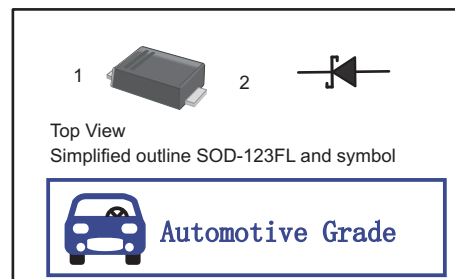
Forward Current - 2.0A

#### 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
- Hireliability application and automotive grade AEC-Q101 qualified

#### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



#### 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	AT-DS22 WM	AT-DS24 WM	AT-DS26 WM	AT-DS28 WM	AT-DS210 WM	AT-DS212 WM	AT-DS215 WM	AT-DS220 WM	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 @ Fig.1	$I_{F(AV)}$	2.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50								A
Peak Forward Surge Current, 1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	100								A
$I^2t$ Rating for fusing ( $3ms \leq t \leq 8.3ms$ )	$I^2t$	10.3								A <sup>2</sup> S
Max Instantaneous Forward Voltage at 2 A	$V_F$	0.55	0.65	0.85	0.95				V	
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ C$ $T_a = 100^\circ C$	$I_R$	0.1 5			0.1 3				mA	
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	130	86	73	40		35		pF	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	105 25 32								°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +150								°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 0.2" X 0.2" (5 X 5 mm) copper pad areas.



Fig.1 Forward Current Derating Curve

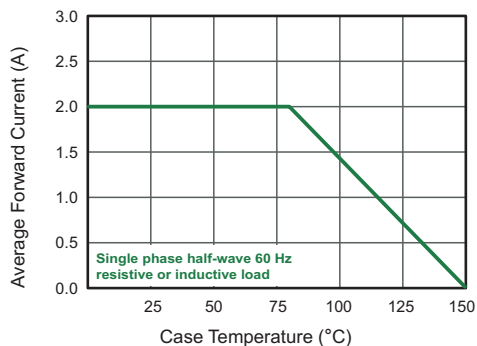


Fig.2 Typical Reverse Characteristics

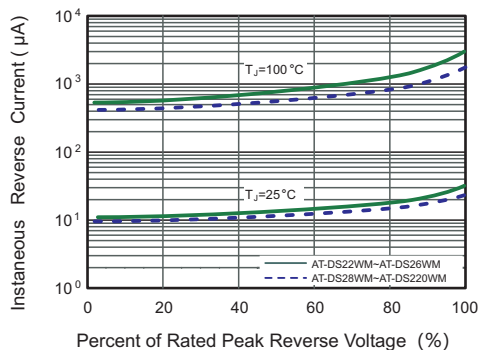


Fig.3 Typical Forward Characteristic

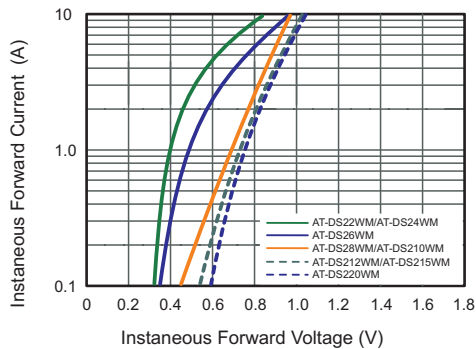


Fig.4 Typical Junction Capacitance

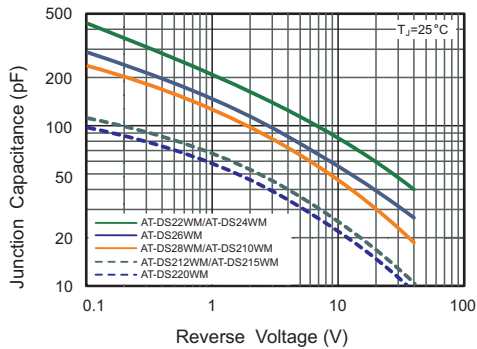
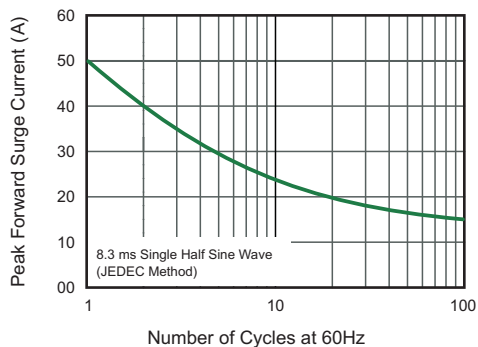


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

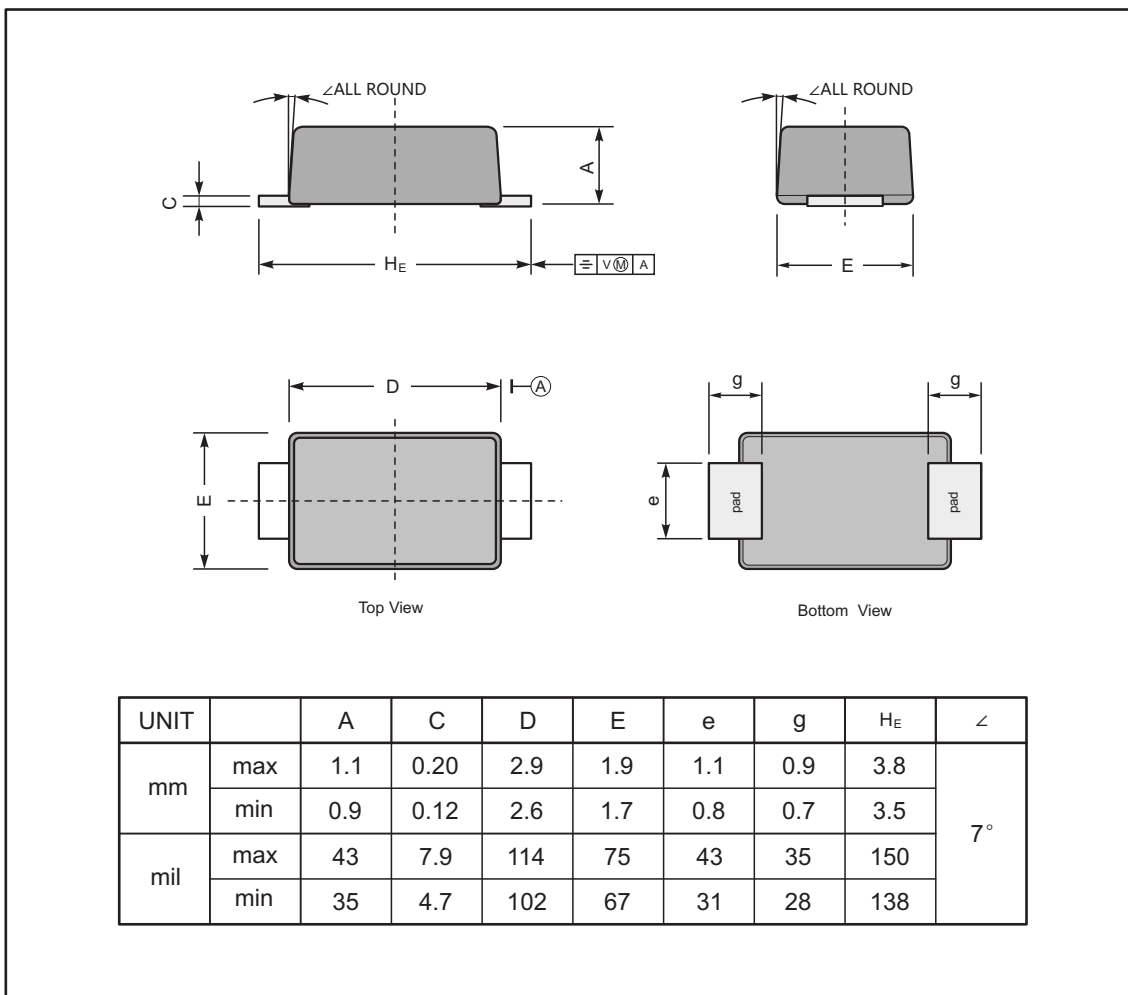




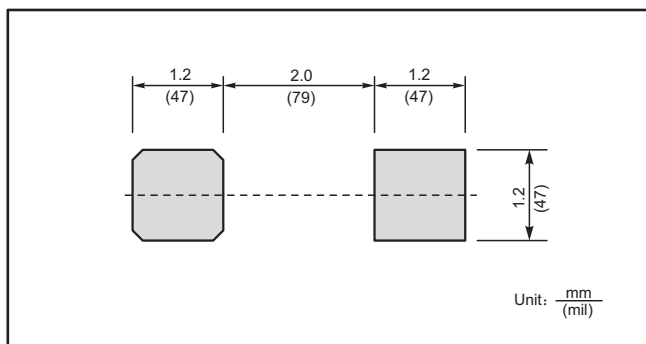
## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



### The recommended mounting pad size



### Marking

Type number	Marking code
AT-DS22WM	S22
AT-DS24WM	S24
AT-DS26WM	S26
AT-DS28WM	S28
AT-DS210WM	S210
AT-DS212WM	S212
AT-DS215WM	S215
AT-DS220WM	S220



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