

# DS22W-AT THRU DS220W-AT

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage: 20 to 200 V Forward Current: 2.0A

### Features

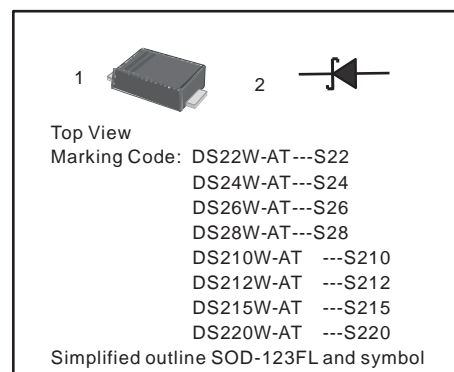
- ◆ Metal silicon junction, majority carrier conduction
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### 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	DS22W-AT	DS24W-AT	DS26W-AT	DS28W-AT	DS210W-AT	DS212W-AT	DS215W-AT	DS220W-AT	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	$I_{F(AV)}$	2.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50				40				A
Max Instantaneous Forward Voltage at 2A	$V_F$	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 5			0.3 3				mA	
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	220		80				pF		
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	85								°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 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Dated: 01/2017  
Rev: 1.0

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## Typical Characteristics Curves

Fig.1 Forward Current Derating Curve

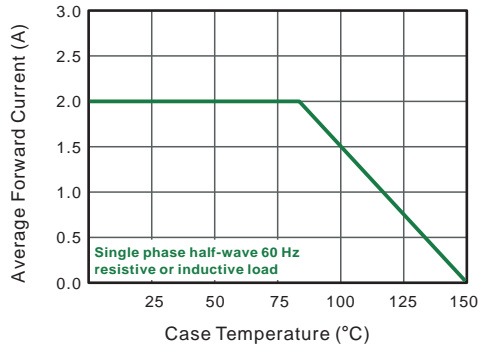


Fig.2 Typical Reverse Characteristics

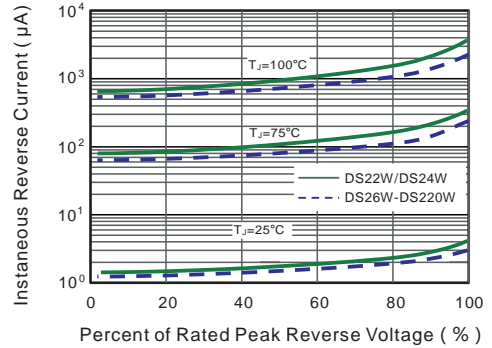


Fig.3 Typical Forward Characteristic

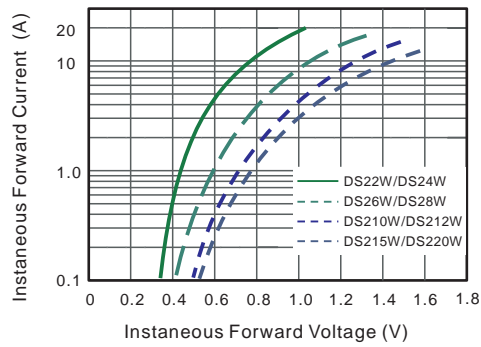


Fig.4 Typical Junction Capacitance

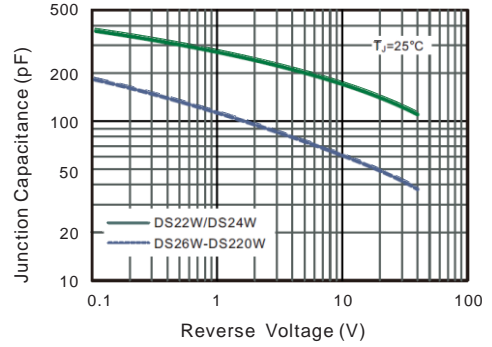


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

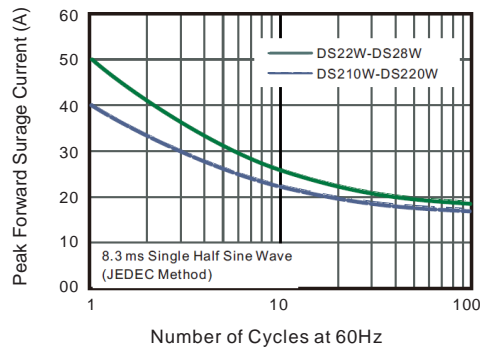
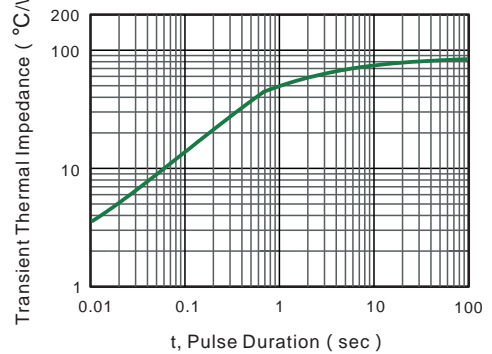


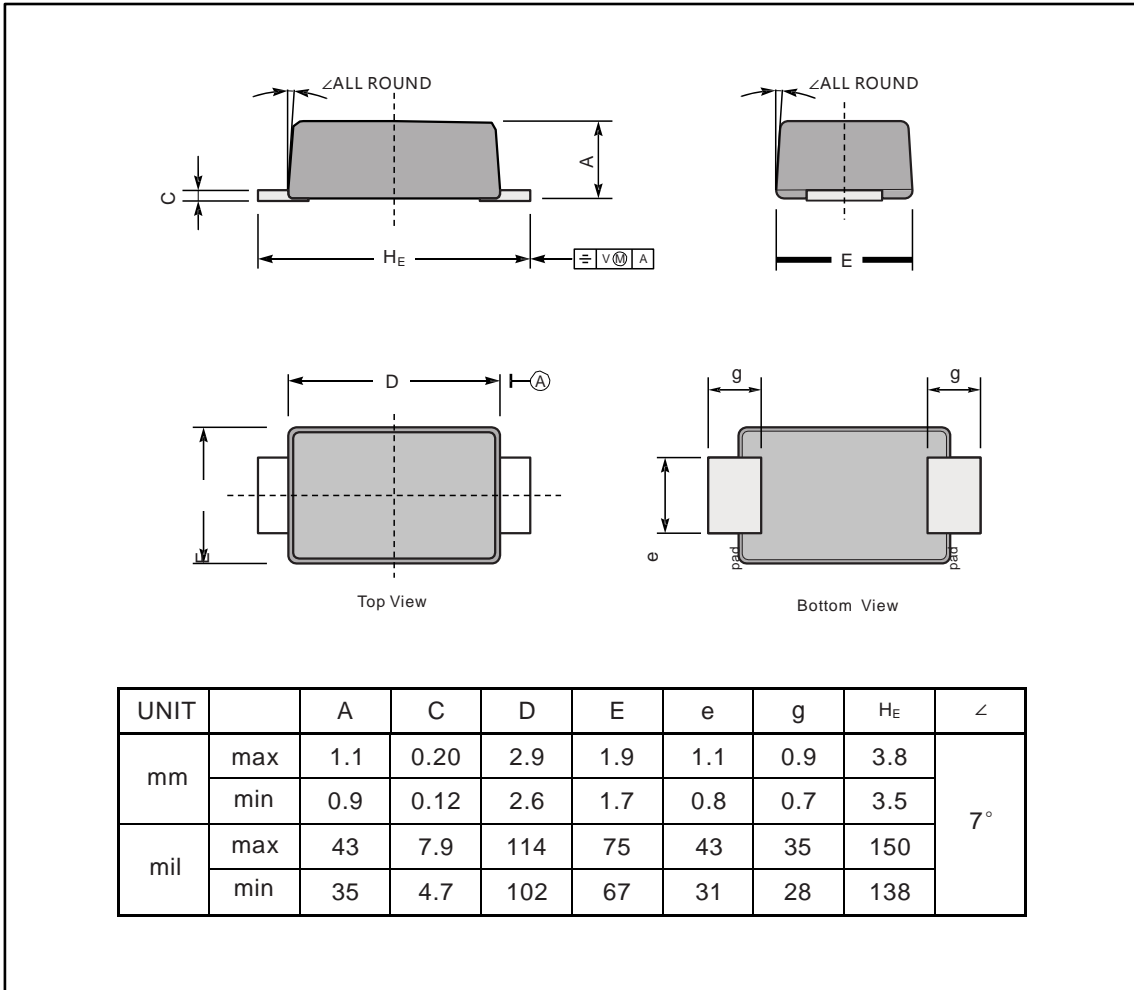
Fig.6- Typical Transient Thermal Impedance



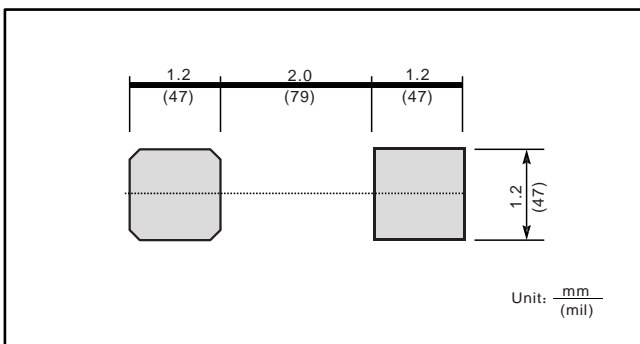
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## Package Outline

SOD-123FL



### The recommended mounting pad size



### Marking

Type number	Marking code
DS22W-AT	S22
DS24W-AT	S24
DS26W-AT	S26
DS28W-AT	S28
DS210W-AT	S210
DS212W-AT	S212
DS215W-AT	S215
DS220W-AT	S220