

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200 V

Forward Current – 2.0 A



### 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
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- ◆Case: SOD-123FL
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 15mg / 0.00048oz

### Pinning

1.Cathode		2.Anode	
1		2	
<b>SOD-123FL</b>			

### Marking Code

<b>DS22W</b>	<b>YFW K22</b>	<b>YFW S22</b>
<b>DS24W</b>	<b>YFW K24</b>	<b>YFW S24</b>
<b>DS26W</b>	<b>YFW K26</b>	<b>YFW S26</b>
<b>DS28W</b>	<b>YFW K28</b>	<b>YFW S28</b>
<b>DS210W</b>	<b>YFW K210</b>	<b>YFW S210</b>
<b>DS212W</b>	<b>YFW K212</b>	<b>YFW S212</b>
<b>DS215W</b>	<b>YFW K215</b>	<b>YFW S215</b>
<b>DS220W</b>	<b>YFW K220</b>	<b>YFW S220</b>

#### Absolute Maximum Ratings and Electrical characteristics

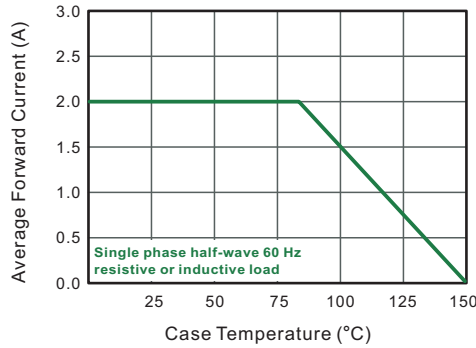
Ratings at 25 ° ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	DS22W	DS24W	DS26W	DS28W	DS210W	DS212W	DS215W	DS220W	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
Maximum Instantaneous Forward Voltage at 2 A	$V_F$	0.55		0.70		0.85		0.90		V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage <small><math>T_A = 25^{\circ}C</math> <math>T_A = 100^{\circ}C</math></small>	$I_R$	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

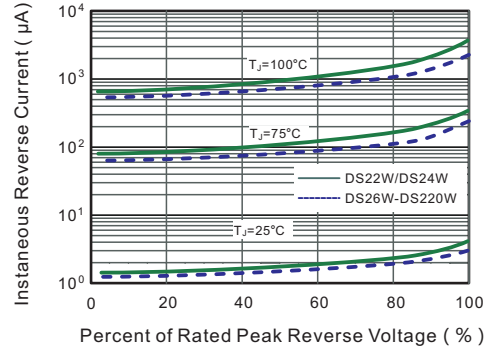
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

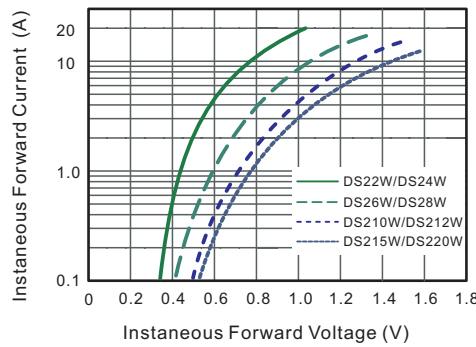
**Fig.1 Forward Current Derating Curve**



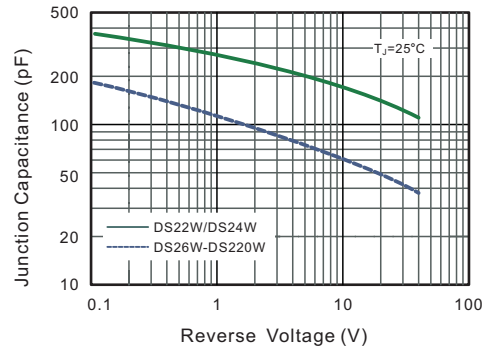
**Fig.2 Typical Reverse Characteristics**



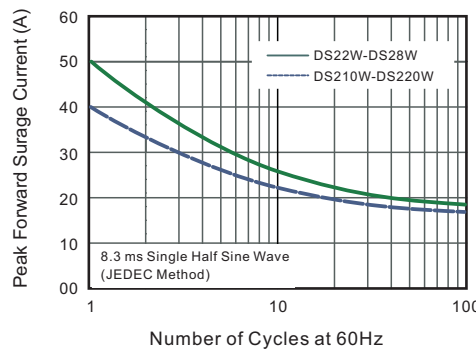
**Fig.3 Typical Forward Characteristic**



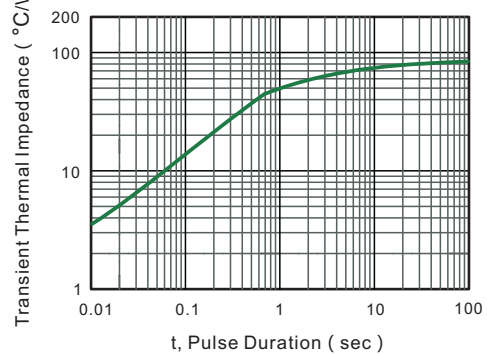
**Fig.4 Typical Junction Capacitance**



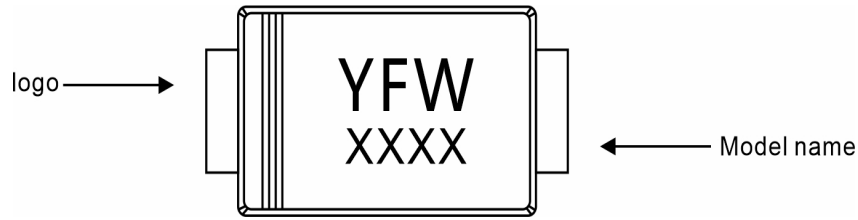
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



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



**Marking Diagram**



**Ordering information**

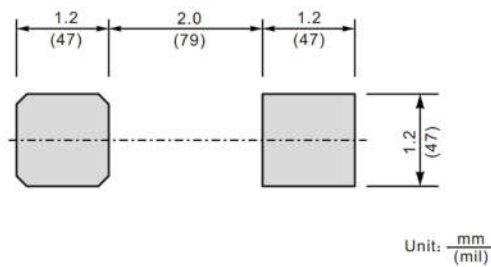
Package	Packing Description	Packing Quantity
SOD-123FL	Tape/Reel, 13" reel	10000PCS/Reel 100000PCS/Carton
	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

**Package Dimensions**

**SOD-123FL**

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.3	35	43
C	0.12	0.20	4.7	7.9
D	2.6	2.9	102	114
E	1.7	1.9	67	75
e	0.8	1.1	31	43
g	0.7	0.9	28	35
HE	3.5	3.8	138	150
∠	7°			

**The recommended mounting pad size**



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