

**Surface Mount Schottky Barrier Rectifiers**  
**Reverse Voltage 20 to 200 Volts Forward Current 3.0 Amperes**

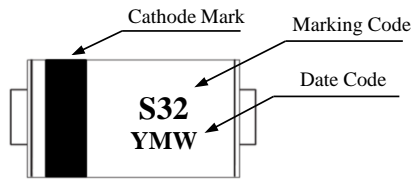
**Features**

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

**Mechanical Data**

- Case : SOD-123FL
- Terminals : Solderable per MIL-STD-750, Method 2026
- Weight : 0.015gram

**Marking**



**SOD-123FL**

DIM	Unit :mm		Unit:inch	
	MIN	MAX	MIN	MAX
A	0.8	1.2	0.031	0.047
A1	0	0.1	0.000	0.004
B	0.6	1.05	0.024	0.041
C	0.05	0.25	0.002	0.010
D	1.55	2	0.061	0.079
E	2.5	3.1	0.098	0.122
L	0.43	1.1	0.017	0.043
HE	3.5	3.9	0.138	0.154

**Maximum Ratings & Electrical Characteristics**

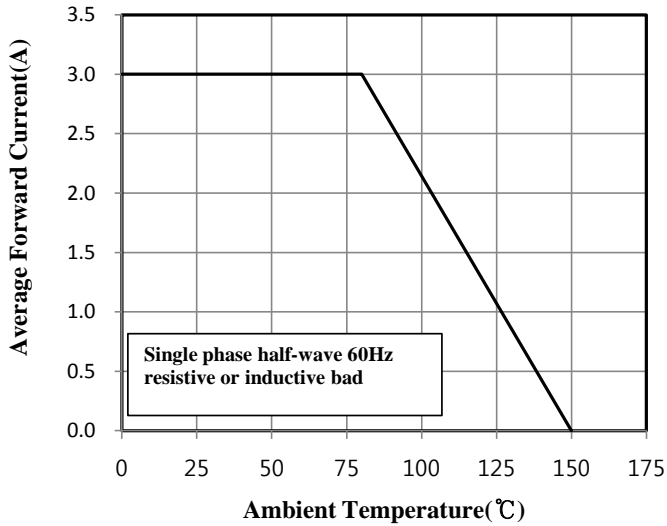
Ratings at 25°C ambient temperature unless otherwise specified  
 Single phase half wave 60 Hz, resistive or inductive load  
 For capacitive load, derate current by 20%

Parameter	Symbol	DS 32W	DS 34W	DS 36W	DS 38W	DS 310W	DS 312W	DS 315W	DS 320W	Unit	Remark
Marking Code		S32	S34	S36	S38	S310	S312	S315	S320		
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 at $T_L$ (See Fig.1)	$I_F(AV)$	3.0								A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	80								A	
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	0.55	0.70		0.85		0.95		V	$T_a=25^\circ C$	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.5		0.3				mA	$T_a=25^\circ C$		
		10		5				mA	$T_a=100^\circ C$		
Typical Junction Capacitance	$C_j$	250		160				pF	Note 1		
Typical Thermal Resistance	$R_{th(j-a)}$	80								$^\circ C /W$	Note 2
Operation Junction Temperature Range	$T_J$	-55 to +150								$^\circ C$	
Storage Temperature Range	$T_{STG}$	-55 to +150								$^\circ C$	

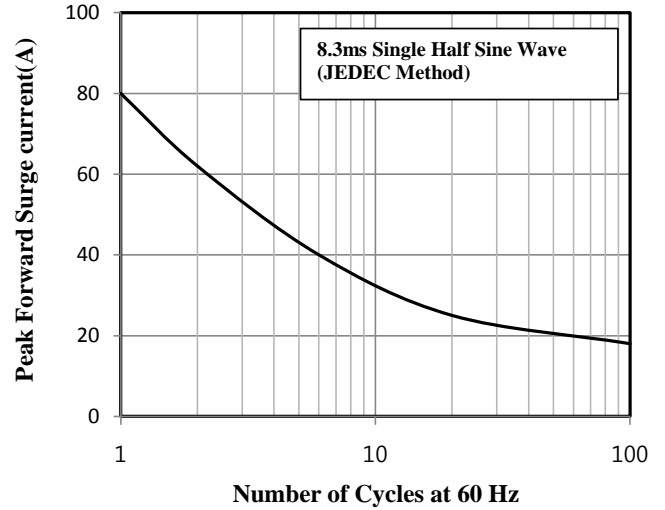
Note 1. Measured at 1MHz and applied reverse voltage of 4V D.C  
 Note 2. P.C.B. mounted with 2.0"×2.0" (5mm×5mm ) Copper Pad Areas.

**Ratings and Characteristics Curves** ( $T_a=25^\circ\text{C}$  unless otherwise noted)

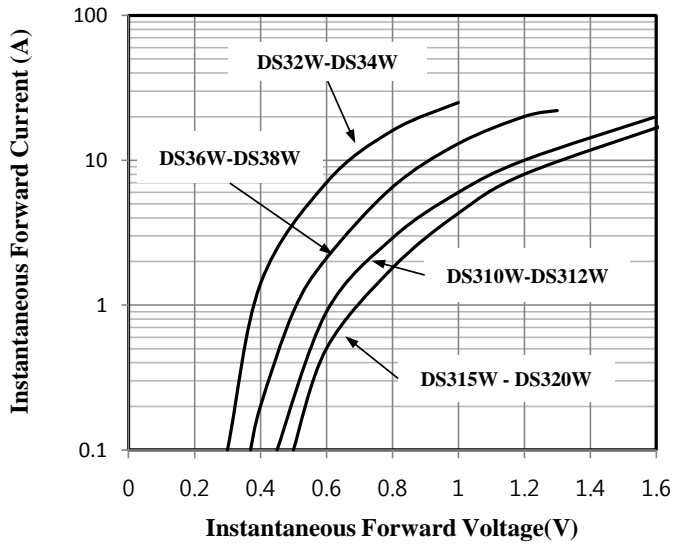
**Fig.1 Forward Current Derating Curve**



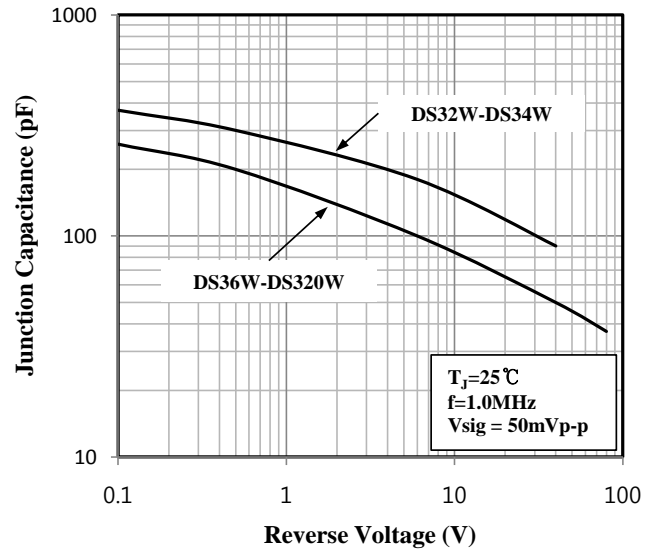
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



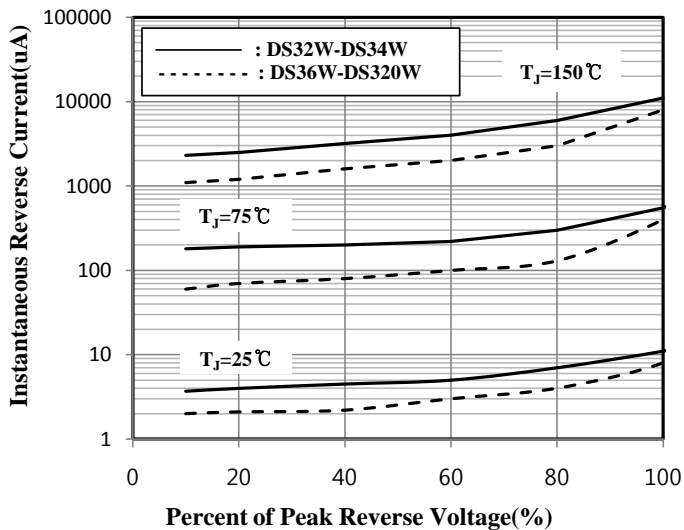
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Typical Reverse Characteristics**



**Fig.6 Typical Transient Thermal Impedance**

