

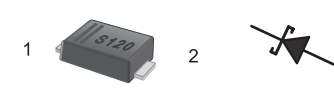
Surface Mount Schottky Barrier Rectifier  
 Reverse Voltage - 20 to 200 V  
 Forward Current - 1.0 A

### 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

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View  
 Marking Code: DS12W ---S12  
 DS14W ---S14  
 DS16W ---S16  
 DS18W ---S18  
 DS110W ---S110  
 DS112W ---S112  
 DS115W ---S115  
 DS120W ---S120

Weight : 17mg , 0.0006 oz  
 Simplified outline SOD-123FL and symbol

### Absolute Maximum Ratings and Electrical characteristics

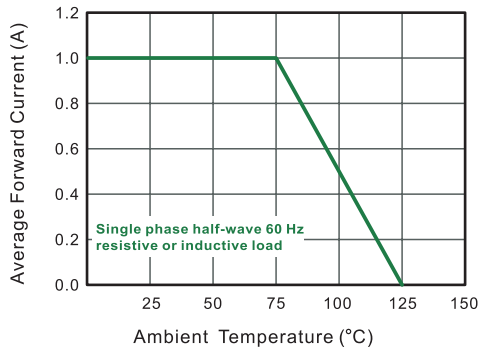
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	DS12W	DS14W	DS16W	DS18W	DS110W	DS112W	DS115W	DS120W	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	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	40				30				A
Max Instantaneous Forward Voltage at 1 A	$V_F$	0.55		0.70		0.85		0.90		V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	$I_R$	0.3 10				0.2 5		0.1 2		mA
Typical Junction Capacitance <sup>1)</sup>	$C_j$	110			80					pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	115								°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +125								°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150								°C

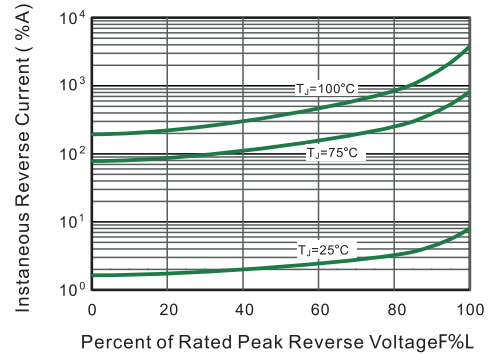
1) Measured at 1MHz and applied reverse voltage of 4 V D.C.

2) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

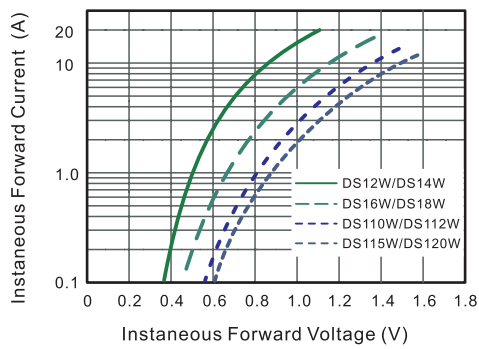
**Fig.1 Forward Current Derating Curve**



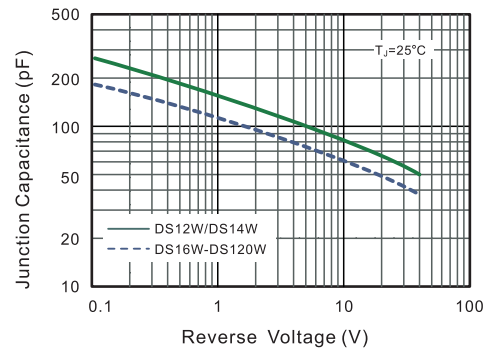
**Fig.2 Typical Reverse Characteristics**



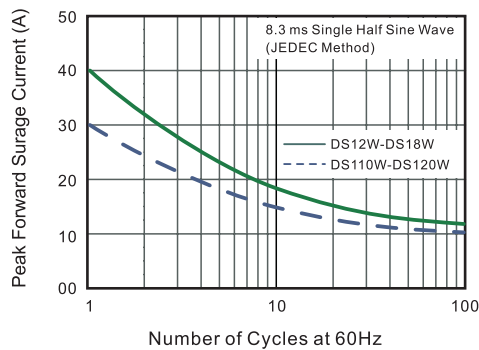
**Fig.3 Typical Forward Characteristic**



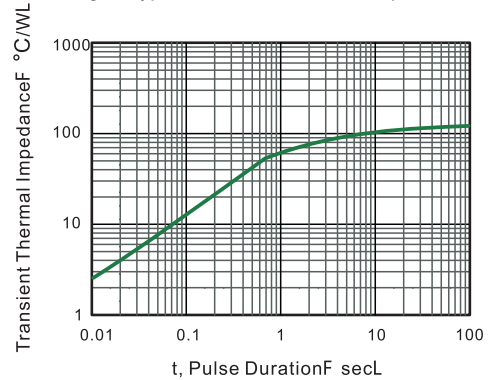
**Fig.4 Typical Junction Capacitance**



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



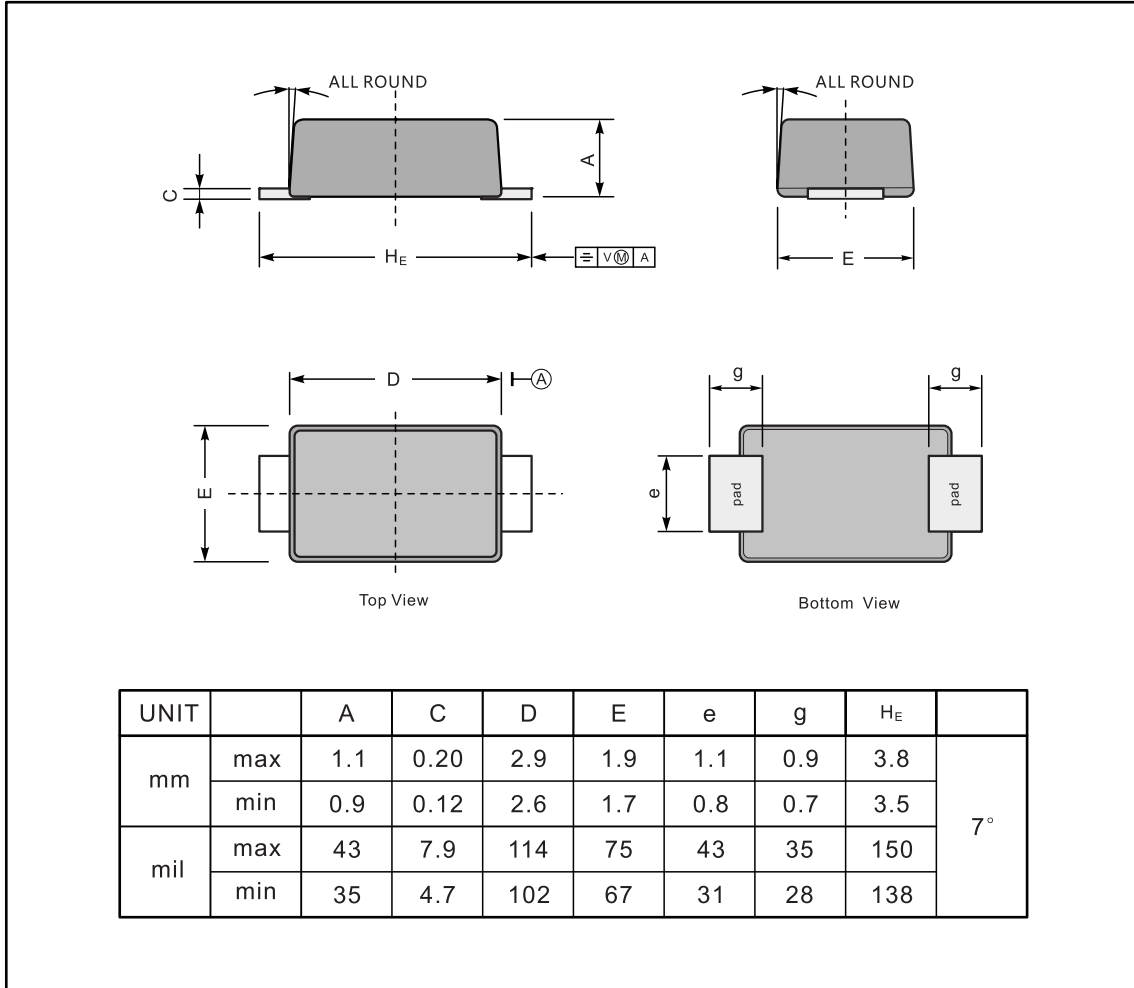
**Fig.6 Typical Transient Thermal Impedance**



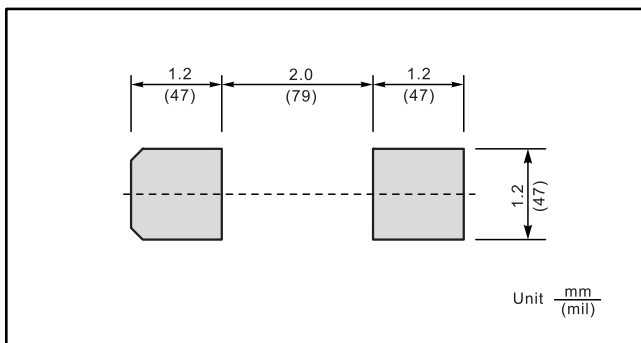
### PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD123FL



### The recommended mounting pad size



### Marking

Type number	Marking code
DS12W	S12
DS14W	S14
DS16W	S16
DS18W	S18
DS110W	S110
DS112W	S112
DS115W	S115
DS120W	S120