

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

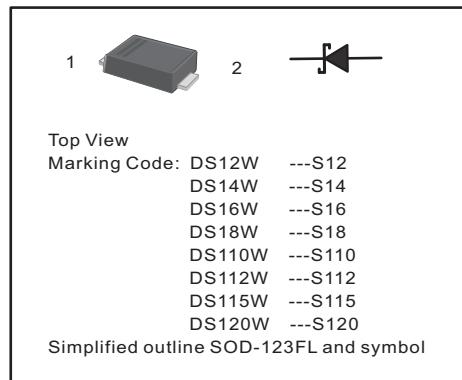
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

**MECHANICAL DATA**

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

**DS12W---DS120W**
**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	DS12W	DS14W	DS16W	DS18W	DS110W	DS112W	DS115W	DS120W	Units													
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	40	60	80	100	120	150	200	V													
Maximum RMS voltage	V <sub>RMS</sub>	14	28	42	56	70	84	105	140	V													
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	40	60	80	100	120	150	200	V													
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	1.0								A													
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	40				30				A													
Max Instantaneous Forward Voltage at 1A	V <sub>F</sub>	0.55		0.70		0.85		0.90		V													
Maximum DC Reverse Current T <sub>a</sub> = 25°C at Rated DC Reverse Voltage T <sub>a</sub> = 100°C	I <sub>R</sub>	0.3 10			0.2 5			0.1 2		mA													
Typical Junction Capacitance <sup>(1)</sup>	C <sub>j</sub>	110		80						pF													
Typical Thermal Resistance <sup>(2)</sup>	R <sub>θJA</sub>	85								°C/W													
Operating Junction Temperature Range	T <sub>j</sub>	-55 ~ +125								°C													
Storage Temperature Range	T <sub>stg</sub>	-55 ~ +150								°C													

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

(2) P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas.

## DS12W---DS120W

Fig.1 Forward Current Derating Curve

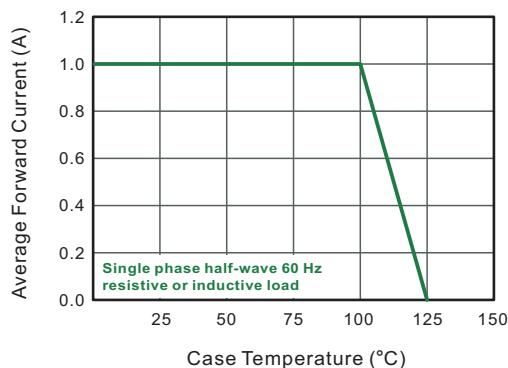


Fig.2 Typical Reverse Characteristics

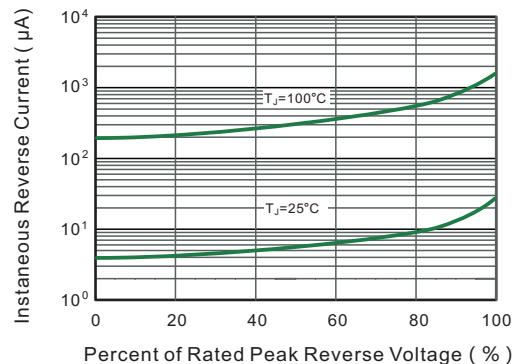


Fig.3 Typical Forward Characteristic

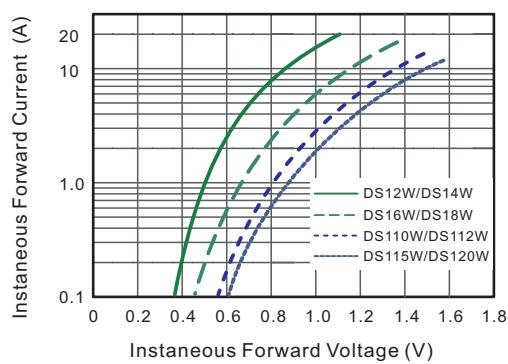


Fig.4 Typical Junction Capacitance

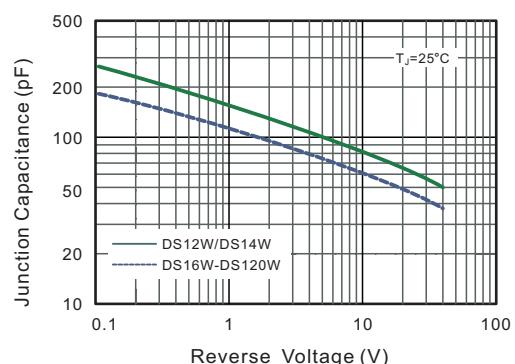


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

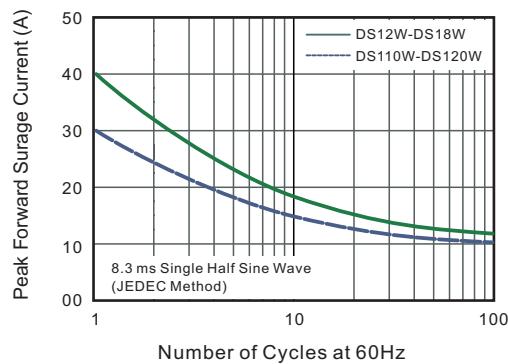


Fig.6- Typical Transient Thermal Impedance

