

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200 V

Forward Current - 1 A

### FEATURES

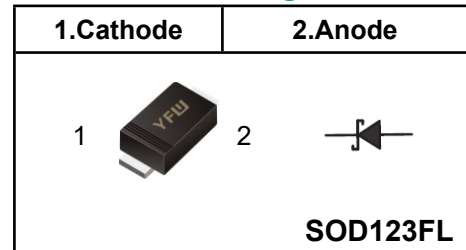
- ◆Metal silicon junction, majority carrier conduction
- ◆For surface mounted applications
- ◆Low power loss, high efficiency
- ◆High forward surge current capability
- ◆For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



### MECHANICAL DATA

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

### Pinning



### Marking Code

DS12W	K12	S12
DS14W	K14	S14
DS16W	K16	S16
DS18W	K18	S18
DS110W	K110	S110
DS112W	K112	S112
DS115W	K115	S115
DS120W	K120	S120

#### Absolute Maximum Ratings and Electrical characteristics

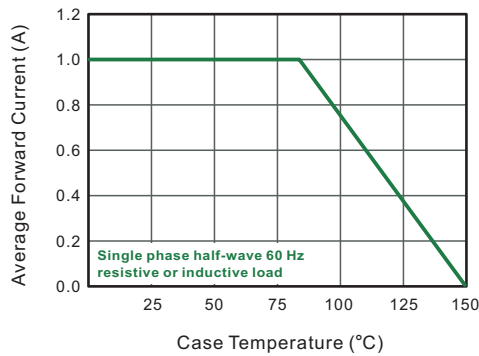
Ratings at 25 ° ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	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
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	0.55		0.70		0.85		0.90		V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage	$I_R$		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>	$R_{\theta JA}$	100								°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +150								°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150								°C

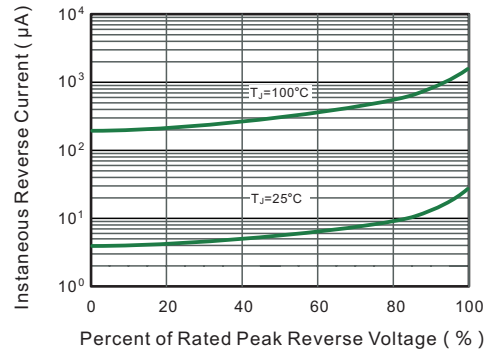
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

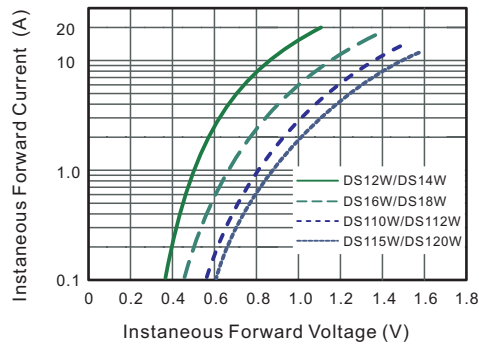
**Fig.1 Forward Current Derating Curve**



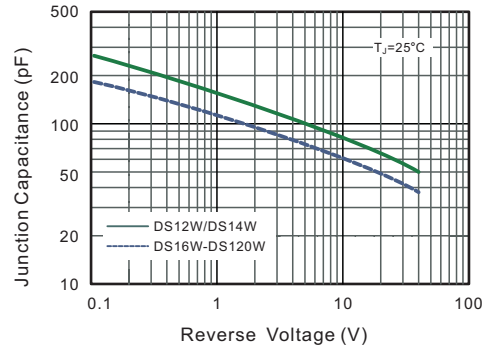
**Fig.2 Typical Reverse Characteristics**



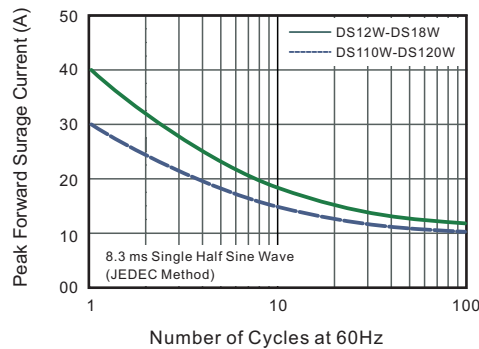
**Fig.3 Typical Forward Characteristic**



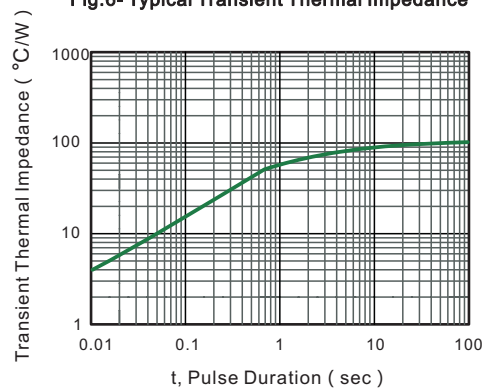
**Fig.4 Typical Junction Capacitance**



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



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



**Package Outline SOD-123FL**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	H <sub>E</sub>	$\angle$
mm	max	1.3	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

**The recommended mounting pad size**



Unit:  $\frac{\text{mm}}{\text{mil}}$

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOD-123FL	Tape/Reel, 13" reel	10000	EIA-481-1
	Tape/Reel, 7" reel	3000	EIA-481-1

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Schottky Diodes & Rectifiers](#) category:*

*Click to view products by [YFW Electronics](#) manufacturer:*

Other Similar products are found below :

[MA4E2039](#) [MA4E2508M-1112](#) [MBR1545CT](#) [MMBD301M3T5G](#) [RB160M-50TR](#) [D83C](#) [BAS16E6433HTMA1](#) [BAT 54-02LRH E6327](#)  
[NRVBAF360T3G](#) [NSR05F40QNXT5G](#) [NTE555](#) [JANS1N6640](#) [SK310-T](#) [SK34B-TP](#) [SS3003CH-TL-E](#) [GA01SHT18](#)  
[CRS10I30A\(TE85L,QM](#) [MA4E2501L-1290](#) [MBRA140TRPBF](#) [MBRB30H30CT-1G](#) [BAT 15-04R E6152](#) [JANTX1N5712-1](#) [DMJ3940-000](#)  
[SB007-03C-TB-E](#) [SK33B-TP](#) [NRVBB20100CTT4G](#) [NRVBM120LT1G](#) [NTSB30U100CT-1G](#) [VS-6CWQ10FNHM3](#) [CRG04\(T5L,TEMQ\)](#)  
[ACDBA1100LR-HF](#) [ACDBA1200-HF](#) [ACDBA240-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#) [CDBQC0240LR-HF](#) [ACDBA260LR-HF](#)  
[ACDBA1100-HF](#) [MA4E2502L-1246](#) [10BQ015-M3/5BT](#) [NRVBM120ET1G](#) [CRS08TE85LQM](#) [PMAD1108-LF](#) [B120Q-13-F](#) [1N5819T-G](#)  
[B0530WSQ-7-F](#) [PDS1040Q-13](#) [B160BQ-13-F](#) [SDM05U20CSP-7](#) [B140S1F-7](#)