

## 3A, 45V - 60V Trench Schottky Rectifiers

### FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Lower power loss/ high efficiency
- High forward surge capability
- Halogen-free according to IEC 61249-2-21
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC


**SOD-123W**


### MECHANICAL DATA

**Case:** SOD-123W

Molding compound: UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per J-STD-002

Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 16 mg (approximately)

<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)							
PARAMETER		SYMBOL	TSSW3U45		TSSW3U60	UNIT	
Marking code			W3U45		W3U60		
Maximum repetitive peak reverse voltage		$V_{RRM}$	45		60	V	
Working Peak Reverse Voltage		$V_{RWM}$					
DC Blocking Voltage		$V_{RM}$					
Maximum RMS voltage		$V_{RMS}$	32	42		V	
Maximum average forward rectified current		$I_{F(AV)}$	3			A	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load		$I_{FSM}$	50			A	
			Typ	Max	Typ	Max	
Instantaneous forward voltage (Note 1)	$I_F = 1\text{A}$	$T_J = 25^\circ\text{C}$	$V_F$	0.33	-	0.39	-
	$I_F = 3\text{A}$			0.40	0.47	0.49	0.58
	$I_F = 1\text{A}$	$T_J = 125^\circ\text{C}$		0.24	-	0.28	-
	$I_F = 3\text{A}$			0.34	0.44	0.43	0.52
Maximum Instantaneous reverse current at rated reverse voltage		$T_J = 25^\circ\text{C}$	1000			$\mu\text{A}$	
		$T_J = 125^\circ\text{C}$	50			mA	
Typical thermal resistance		$R_{\theta JL}$ $R_{\theta JA}$	20 75			$^\circ\text{C/W}$	
Operating junction temperature range		$T_J$	- 55 to +150			$^\circ\text{C}$	
Storage temperature range		$T_{STG}$	- 55 to +150			$^\circ\text{C}$	

Note 1: Pulse test with pulse width=300 $\mu\text{s}$ , 1% duty cycle

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TSSW3Uxx (Note 1, 2)	H	RV	G	SOD-123W	3,000 / 7" Plastic reel
		RQ			10,000 / 13" Paper reel

Note 1: "x" defines voltage from 45V (TSSW3U45) to 60V (TSSW3U60)

Note 2: Whole series with green compound (halogen-free)

EXAMPLE					
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSSW3U45HRVG	TSSW3U45	H	RV	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

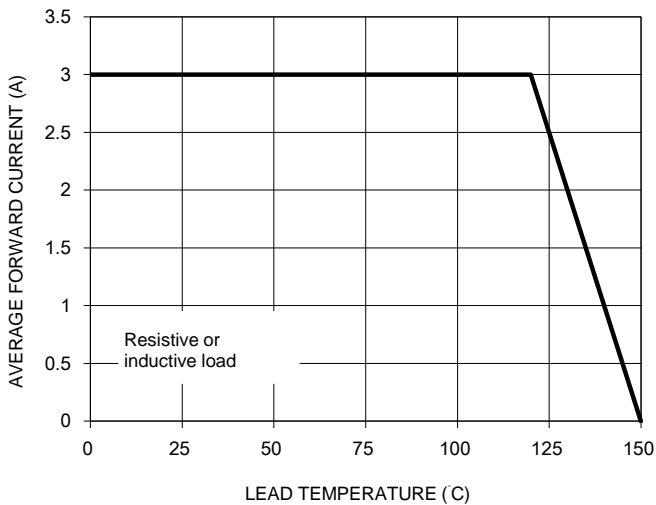


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

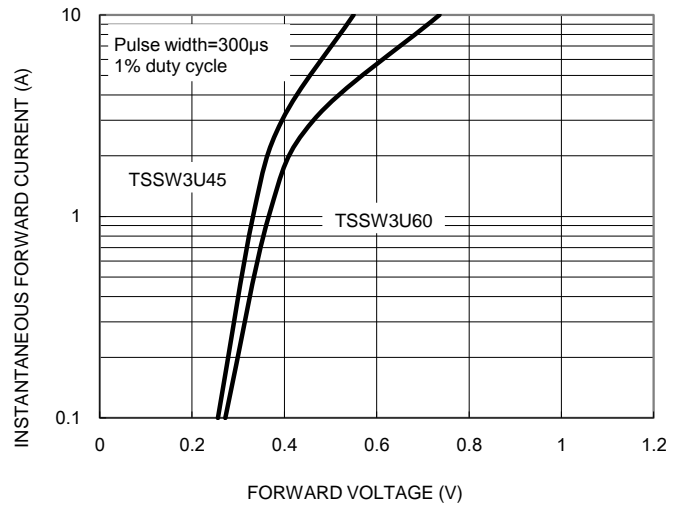


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

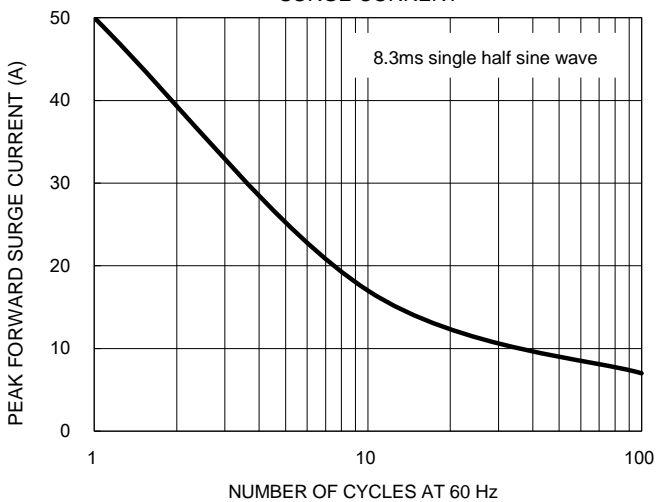


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

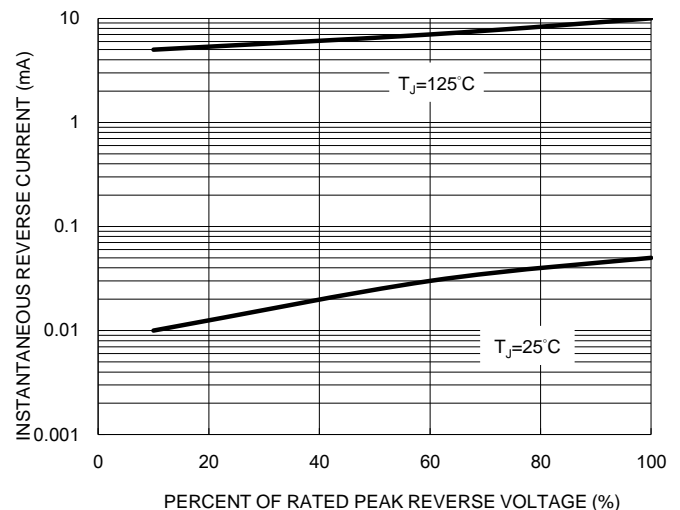
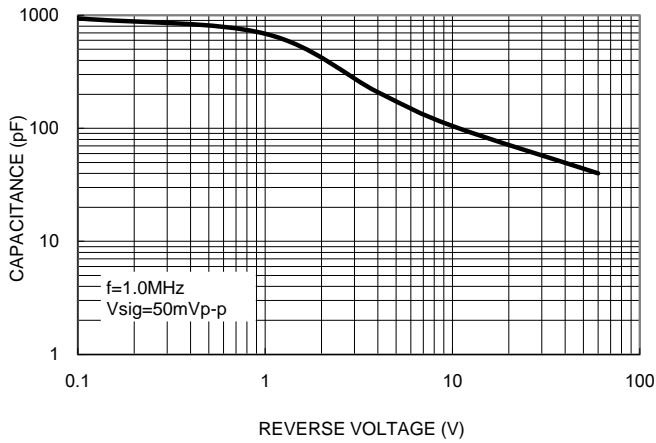
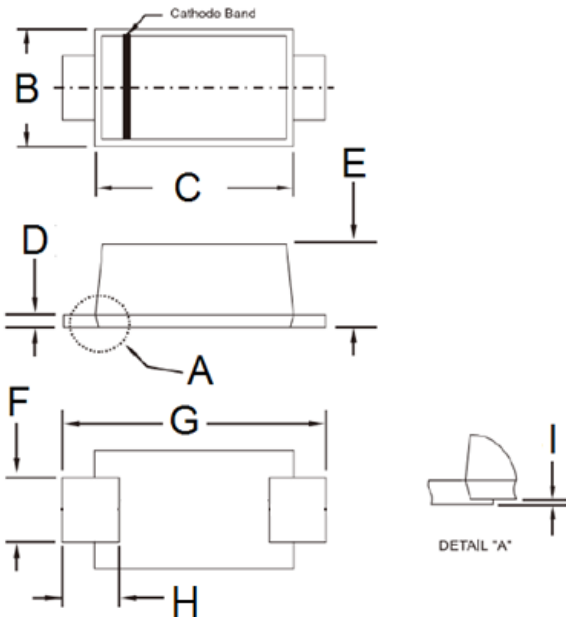


FIG. 5 TYPICAL JUNCTION CAPACITANCE



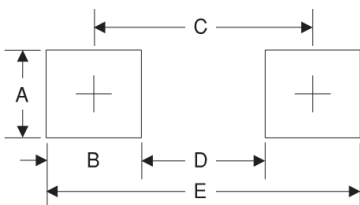
**PACKAGE OUTLINE DIMENSIONS**

**SOD-123W**



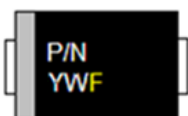
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
B	1.70	1.90	0.067	0.075
C	2.60	2.90	0.102	0.114
D	0.10	0.22	0.004	0.009
E	0.90	1.02	0.035	0.040
F	0.90	1.05	0.035	0.041
G	3.60	3.80	0.142	0.150
H	0.50	0.85	0.020	0.033
I	0.00	0.10	0.000	0.004

**SUGGESTED PAD LAYOUT**



Symbol	Unit (mm)	Unit (inch)
A	1.4	0.055
B	1.2	0.047
C	3.1	0.122
D	1.9	0.075
E	4.3	0.169

**MARKING DIAGRAM**



- P/N = Marking Code
- YW = Date Code
- F = Factory Code

### **Notice**

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

## 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 [Taiwan Semiconductor](#) manufacturer:*

Other Similar products are found below :

[MA4E2039](#) [D1FH3-5063](#) [MBR0530L-TP](#) [MBR10100CT-BP](#) [MBR1545CT](#) [MMBD301M3T5G](#) [RB160M-50TR](#) [RB551V-30](#)  
[BAS16E6433HTMA1](#) [BAT 54-02LRH E6327](#) [NSR05F40QNXT5G](#) [NTE555](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SK310-T](#)  
[SK32A-LTP](#) [SK33A-TP](#) [SK34B-TP](#) [SS3003CH-TL-E](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM](#) [MA4E2501L-1290](#) [MBRB30H30CT-1G](#)  
[SB007-03C-TB-E](#) [SK32A-TP](#) [SK33B-TP](#) [SK35A-TP](#) [SK38B-TP](#) [NRVBM120LT1G](#) [NTE505](#) [NTSB30U100CT-1G](#) [SS15E-TP](#) [VS-](#)  
[6CWQ10FNHM3](#) [ACDBA1100LR-HF](#) [ACDBA1200-HF](#) [ACDBA140-HF](#) [ACDBA2100-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#)  
[CDBQC0240LR-HF](#) [ACDBA340-HF](#) [ACDBA260LR-HF](#) [ACDBA1100-HF](#) [SK310B-TP](#) [MA4E2502L-1246](#) [MA4E2502H-1246](#)  
[NRVBM120ET1G](#) [NSR01L30MXT5G](#) [NTE573](#)