

5A, 50V - 60V Trench Schottky Rectifiers

FEATURES

- Patented Trench Schottky technology
- Low power loss/ high efficiency
- Ideal for automated placement
- Guardring for overvoltage protection
- High forward surge capability
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


DO-214AC (SMA)


TYPICAL APPLICATIONS

Trench Schottky barrier rectifier is designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.

MECHANICAL DATA

Case: DO-214AC (SMA)

Molding compound meets UL 94 V-0 flammability rating

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 JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.06 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted)								
PARAMETER		SYMBOL	TSSA5U50		TSSA5U60		UNIT	
Marking code			5U50		5U60			
Maximum repetitive peak reverse voltage		V _{RRM}	50		60		V	
Maximum average forward rectified current		I _{F(AV)}	5				A	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load		I _{FSM}	75				A	
			TYP.	MAX.	TYP.	MAX.		
Instantaneous forward voltage (Note 1)	I _F = 5A	V _F	T _J = 25°C	0.44	0.54	0.48	0.56	V
			T _J = 125°C	0.39	0.49	0.44	0.52	
Maximum instantaneous reverse current at rated reverse voltage	T _J = 25°C	I _R	300					μA
			T _J = 125°C	50				
Typical thermal resistance		R _{θJL}	25		28		°C/W	
		R _{θJA}	70					
Operating temperature range		T _J	- 55 to +150				°C	
Storage temperature range		T _{STG}	- 55 to +150				°C	

Note 1: Pulse test with pulse width = 300μs, 1% duty cycle

ORDERING INFORMATION

PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TSSA5UXX (Note 1, 2)	H	E3	G	Clip SMA	1,800 / 7" Plastic reel
		E2		Clip SMA	7,500 / 13" Plastic reel

Note 1: "XX" defines voltage from 50V (TSSA5U50) to 60V (TSSA5U60)

Note 2: Whole series with green compound

EXAMPLE

EXAMPLE PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSSA5U60HE3G	TSSA5U60	H	E3	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

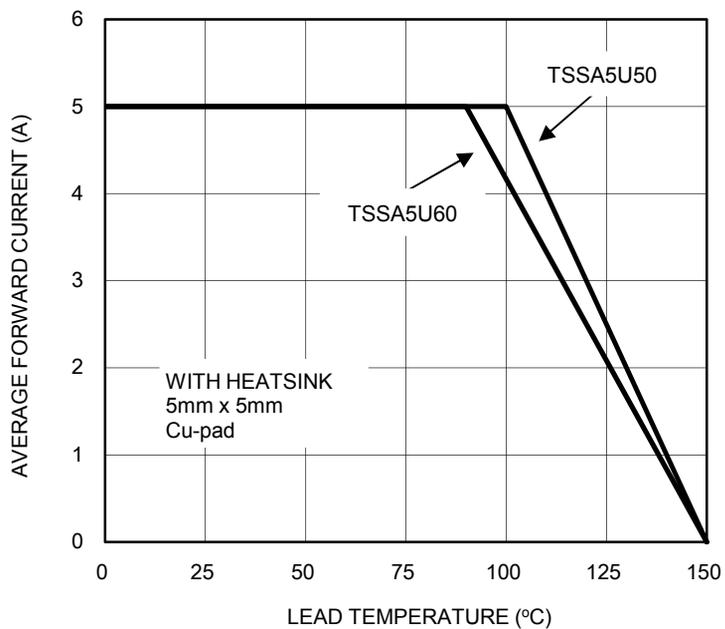


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

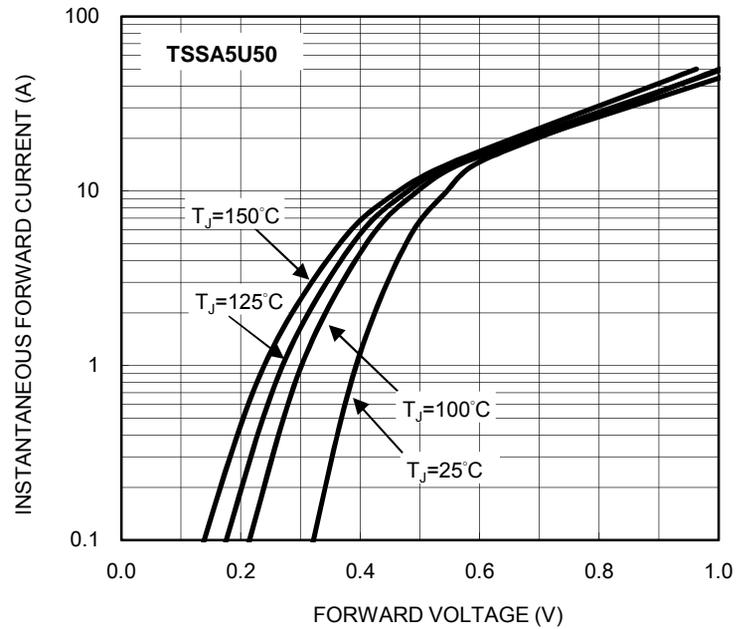


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

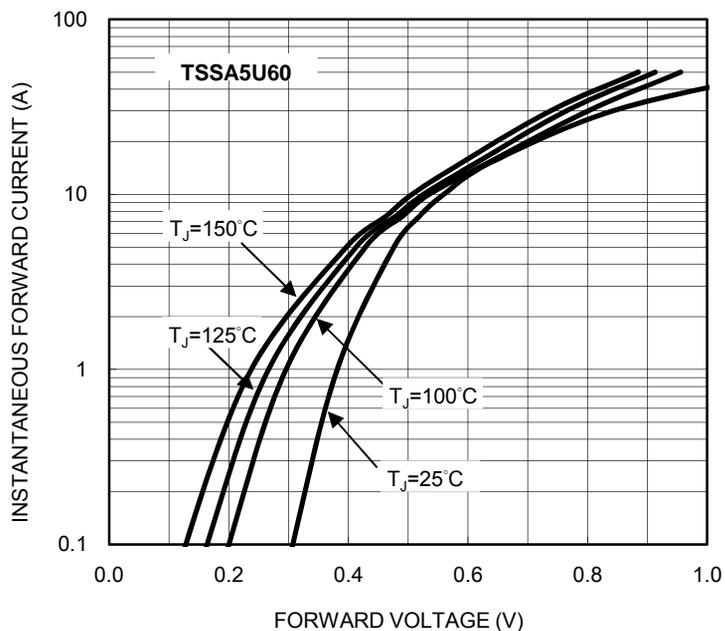


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

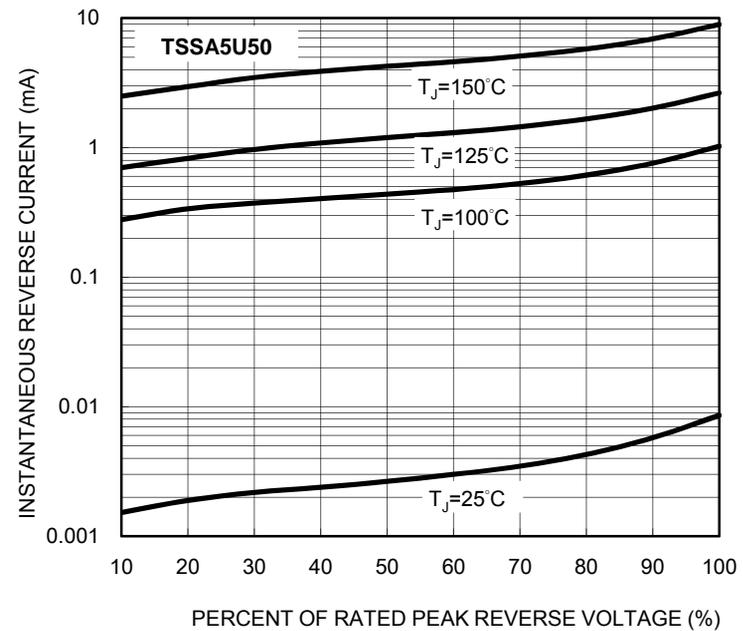


FIG. 5 TYPICAL REVERSE CHARACTERISTICS

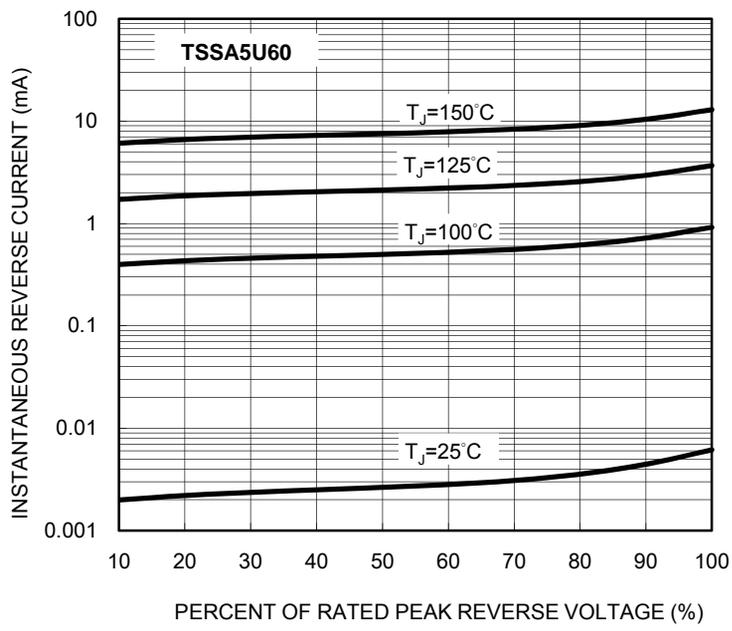


FIG. 6 TYPICAL JUNCTION CAPACITANCE

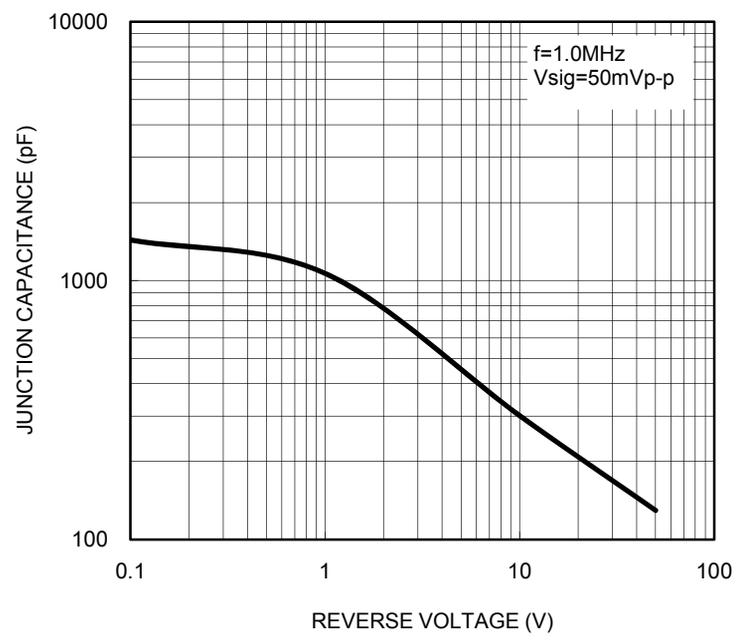
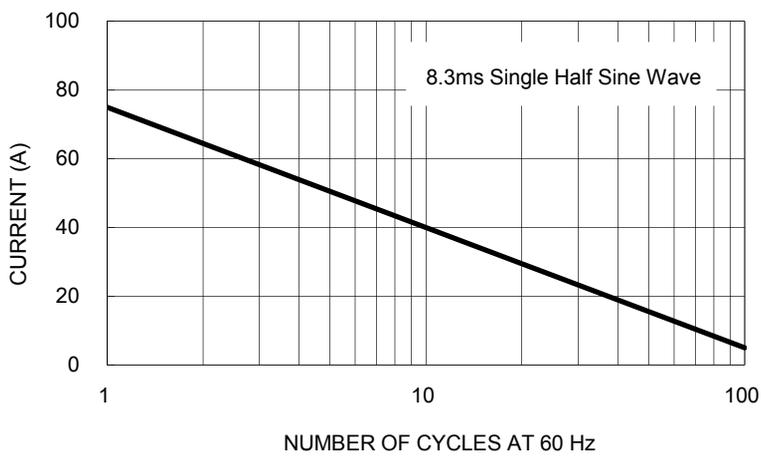
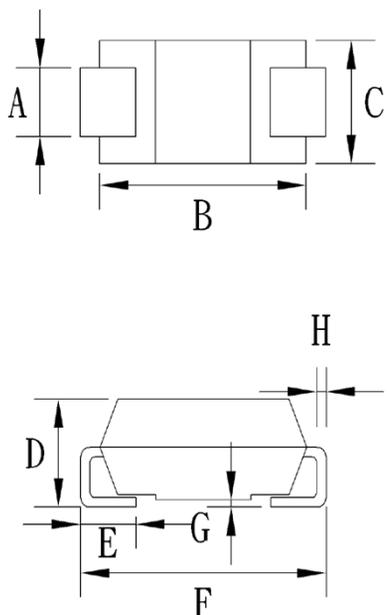


FIG. 7 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



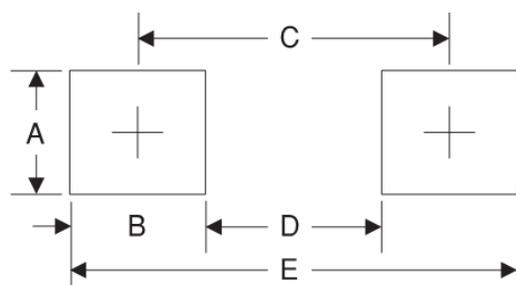
PACKAGE OUTLINE DIMENSIONS

DO-214AC (SMA)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.27	1.58	0.050	0.062
B	4.06	4.60	0.160	0.181
C	2.29	2.83	0.090	0.111
D	1.99	2.50	0.078	0.098
E	0.90	1.41	0.035	0.056
F	4.95	5.33	0.195	0.210
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.93	0.155
D	2.41	0.095
E	5.45	0.215

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- 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](#) [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](#)
[NTE6081](#)