

2A, 20V - 150V Surface Mount Schottky Barrier Rectifier

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- Guard ring for over-voltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- Converter

MECHANICAL DATA

- Case: DO-214AA (SMB)
- Molding compound meets UL 94V-0 flammability rating
- Part no. with suffix "H" means AEC-Q101 qualified
- Packing code with suffix "G" means green compound (halogen-free)
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.093 g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	2	A
V_{RRM}	20 - 150	V
I_{FSM}	50	A
Package	DO-214AA (SMB)	
Configuration	Single Die	



DO-214AA (SMB)

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)										
PARAMETER	SYMBOL	SS22	SS23	SS24	SS25	SS26	SS29	SS210	SS215	UNIT
Marking code on the device		SS22	SS23	SS24	SS25	SS26	SS29	SS210	SS215	
Repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	90	100	150	V
Reverse voltage, total rms value	$V_{R(RMS)}$	14	21	28	35	42	63	70	105	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	90	100	150	V
Forward current	$I_{F(AV)}$	2								A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	50								A
Critical rate of rise of off-state voltage	dV/dt	10000								V/ μs
Junction temperature	T_J	- 55 to +125				- 55 to +150				$^\circ\text{C}$
Storage temperature	T_{STG}	- 55 to +150								$^\circ\text{C}$

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	24	$^{\circ}C/W$
Junction-to-ambient thermal resistance	$R_{\theta JA}$	70	$^{\circ}C/W$

ELECTRICAL SPECIFICATIONS ($T_A = 25^{\circ}C$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT	
Forward voltage per diode ⁽¹⁾	SS22 SS23 SS24	$I_F = 2A, T_J = 25^{\circ}C$	V_F	-	0.50	V
	SS25 SS26			-	0.70	V
	SS29 SS210			-	0.85	V
	SS215			-	0.95	V
Forward voltage per diode ⁽¹⁾	SS22 SS23 SS24	$I_F = 2A, T_J = 100^{\circ}C$	V_F	-	0.40	V
	SS25 SS26			-	0.65	V
	SS29 SS210			-	0.70	V
	SS215			-	0.80	V
Reverse current @ rated V_R per diode ⁽²⁾	SS22 SS23 SS24 SS25 SS26	$T_J = 25^{\circ}C$	I_R	-	0.4	mA
	SS29 SS210 SS215			-	0.1	mA
Reverse current @ rated V_R per diode ⁽²⁾	SS22 SS23 SS24	$T_J = 100^{\circ}C$	I_R	-	10	mA
	SS25 SS26			-	5	mA
	SS29 SS210 SS215			-	-	mA

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Reverse current @ rated V_R per diode ⁽²⁾	SS22 SS23 SS24	$T_J = 125^\circ\text{C}$	I_R	-	-	mA
	SS25 SS26			-	-	mA
	SS29 SS210 SS215			-	5	mA

Notes:

1. Pulse test with $PW=0.3$ ms
2. Pulse test with $PW=30$ ms

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX(*)	PACKAGE	PACKING
SS2xx (Note 1)	H	R5	G	SMB	850 / 7" Plastic reel
		R4		SMB	3,000 / 13" Paper reel
		M4		SMB	3,000 / 13" Plastic reel

Note:

1. "x" defines voltage from 20V (SS22) to 150V (SS215)
- *: Optional available

EXAMPLE P/N					
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SS22HR5G	SS22	H	R5	G	AEC-Q101 qualified Green compound

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

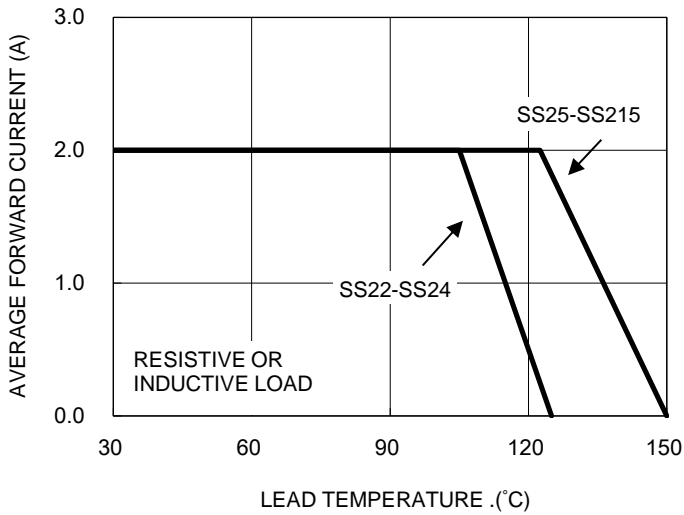


Fig.2 Typical Junction Capacitance

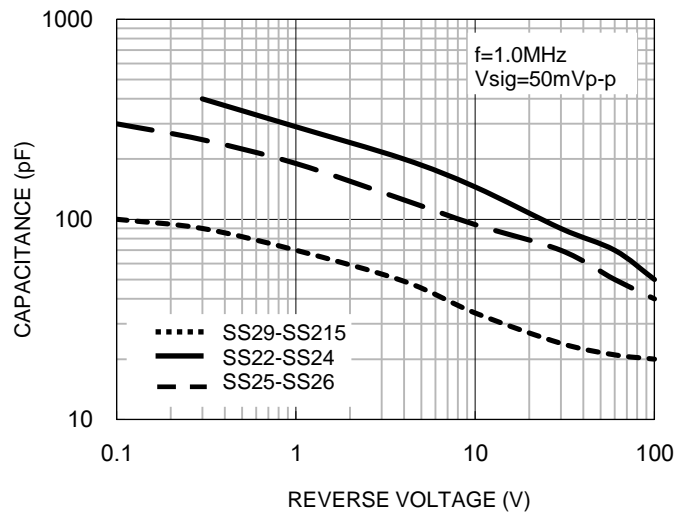


Fig.3 Typical Reverse Characteristics

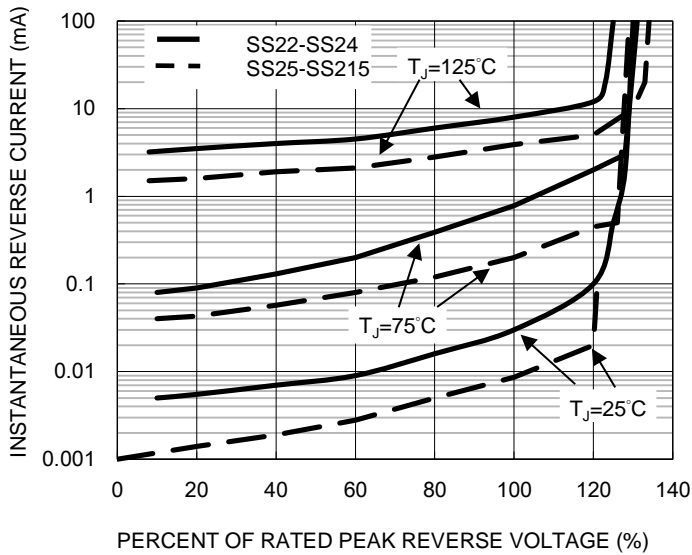


Fig.4 Typical Forward Characteristics

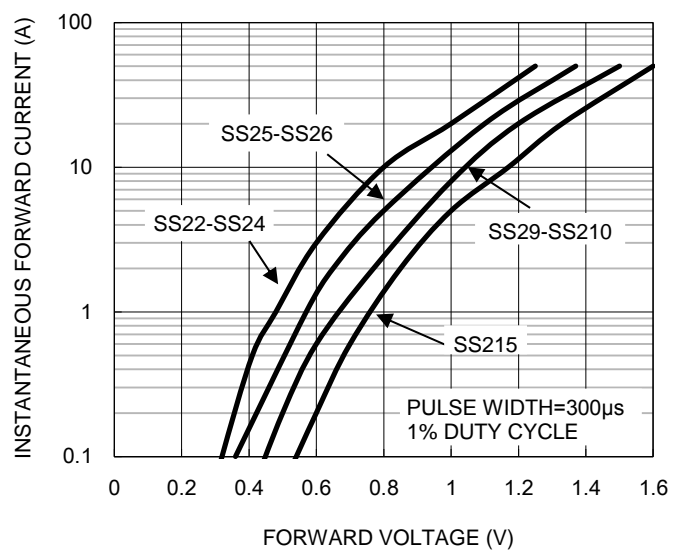
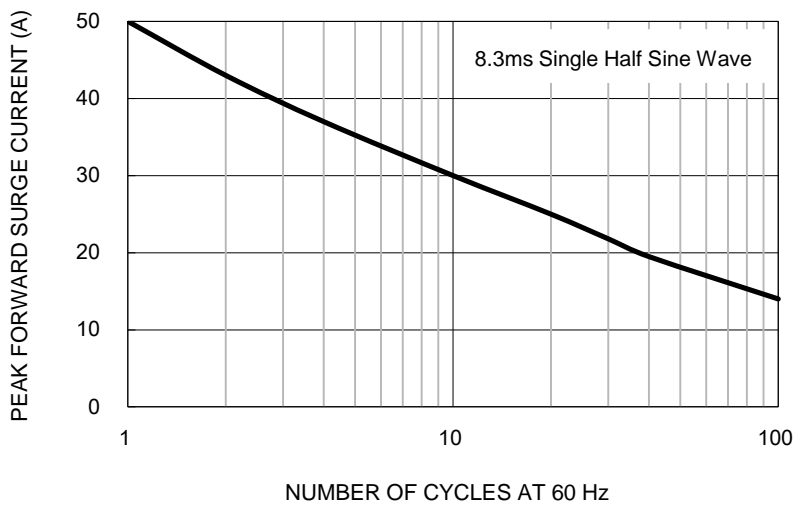


Fig.5 Maximum Non-repetitive Forward Surge Current



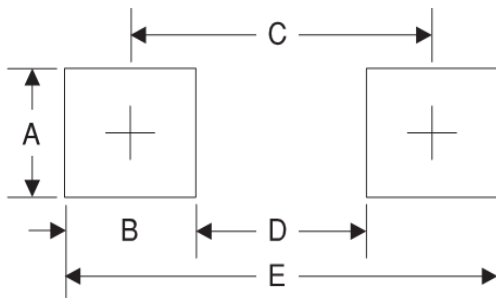
PACKAGE OUTLINE DIMENSIONS

DO-214AA (SMB)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.95	2.20	0.077	0.087
B	4.05	4.60	0.159	0.181
C	3.30	3.95	0.130	0.156
D	1.95	2.65	0.077	0.104
E	0.75	1.60	0.030	0.063
F	5.10	5.60	0.201	0.220
G	0.05	0.20	0.002	0.008
H	0.15	0.31	0.006	0.012

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
B	2.5	0.098
C	4.3	0.169
D	1.8	0.071
E	6.8	0.268

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 :

[CUS06\(TE85L,Q,M\)](#) [MA4E2039](#) [D1FH3-5063](#) [MBR0530L-TP](#) [MBR10100CT-BP](#) [MBR30H100MFST1G](#) [MMBD301M3T5G](#) [PMAD1103-LF](#) [PMAD1108-LF](#) [RB160M-50TR](#) [RB520S-30](#) [RB551V-30](#) [DD350N18K](#) [DZ435N40K](#) [DZ600N16K](#) [BAS16E6433HTMA1](#) [BAS 3010S-02LRH E6327](#) [BAT 54-02LRH E6327](#) [IDL02G65C5XUMA1](#) [NSR05F40QNXT5G](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SBAT54CWT1G](#) [SK32A-LTP](#) [SK33A-TP](#) [SK34A-TP](#) [SK34B-TP](#) [SMD1200PL-TP](#) [ACDBN160-HF](#) [SS3003CH-TL-E](#) [STPS30S45CW](#) [PDS3100Q-7](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM\)](#) [MA4E2501L-1290](#) [MBR1240MFST1G](#) [MBRB30H30CT-1G](#) [BAS28E6433HTMA1](#) [BAS 70-02L E6327](#) [HSB123JTR-E](#) [JANTX1N5712-1](#) [VS-STPS40L45CW-N3](#) [DD350N12K](#) [SB007-03C-TB-E](#) [SK110-LTP](#) [SK154-TP](#) [SK32A-TP](#) [SK33B-TP](#) [SK35A-TP](#)