

2A, 50V - 1000V Surface Mount Fast Recovery Rectifiers

FEATURES

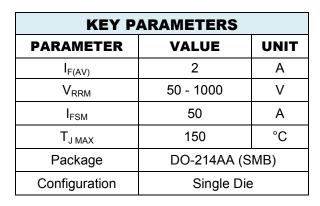
- Low power loss, high efficiency
- Ideal for automated placement
- Glass passivated junction chip
- Fast switching for high efficiency
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

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

MECHANICAL DATA

- Case: DO-214AA (SMB)
- Molding compound meets UL 94V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Packing code with suffix "G" means green compound (halogen-free)
- Part no. with suffix "H" means AEC-Q101 qualified
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.09 g (approximately)







DO-214AA (SMB)

PARAMETER	SYMBOL	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	UNIT
Marking code on the device		RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Forward current	I _{F(AV)}				2		_		Α
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I _{FSM}	50		А					
Junction temperature T _J - 55 to +150			°C						
Storage temperature	T _{STG}	- 55 to +150		°C					

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THERMAL PERFORMANCE							
PARAMETER	SYMBOL	LIMIT	UNIT				
Junction-to-Ambient Thermal Resistance	$R_{\Theta JA}$	55	°C/W				
Junction-to-lead thermal resistance	R _{eJL}	18	°C/W				

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode (1)		$I_F = 2A, T_J = 25^{\circ}C$	V _F	-	1.3	V
		T _J = 25°C		-	5	μA
Reverse current @ rated V _R	per diode (=)	T _J = 125°C	I _R	-	50	μA
Junction capacitance		1 MHz, V _R =4.0V	CJ	50	-	pF
	RS2A	I _F =0.5A ,I _R =1.0A I _{RR} =0.25A		-	150	ns
	RS2B					ns
	RS2D					ns
Reverse recovery time	RS2G		t _{rr}			ns
	RS2J			-	250	ns
	RS2K			-		ns
	RS2M				500	ns

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		
		R5		SMB	850 / 7" Plastic reel		
RS2x (Note 1)	Н	R4	G	SMB	3,000 / 13" Paper reel		
(.1313-1)		M4		SMB	3,000 / 13" Plastic reel		

Note:

- 1. "x" defines voltage from 50V (RS2A) to 1000V (RS2M)
- *: Optional available

EXAMPLE P/N						
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION	
RS2JHR5G	RS2J	Н	R5	G	AEC-Q101 qualified Green compound	



CHARACTERISTICS CURVES

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

Fig1. Forward Current Derating Curve

2.5 AVERAGE FORWARD CURRENT (A) 2 1.5 1 0.5 RESISTIVE OR INDUCTIVE LOAD 0 0 25 100 125 150 50 75 LEAD TEMPERATURE (°C)

Fig2. Typical Junction Capacitance

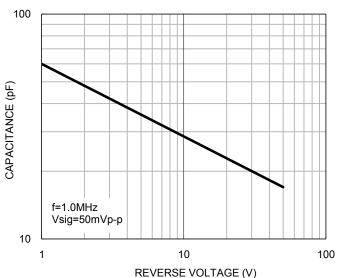


Fig3. Typical Reverse Characteristics

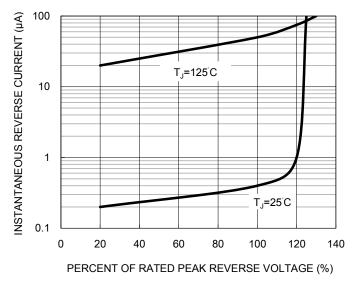
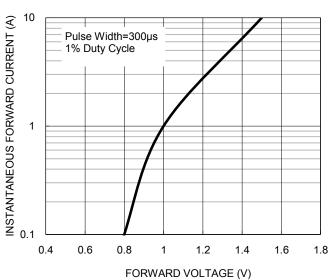


Fig4. Typical Forward Characteristics



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Fig5. Maximum Non-repetitive Forward Surge Current

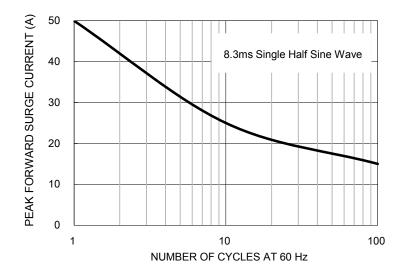
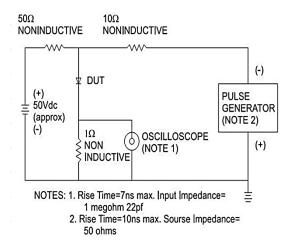
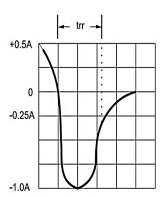


Fig6. Reverse Recovery Time Characteristic And Test Circuit Diagram

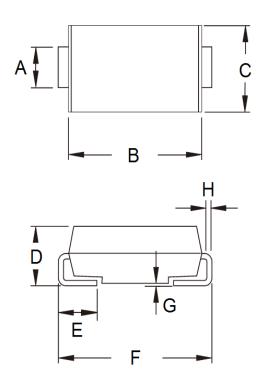






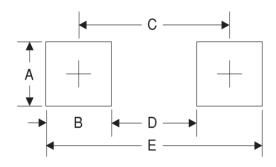
PACKAGE OUTLINE DIMENSIONS

DO-214AA (SMB)



DIM.	Unit	(mm)	Unit (inch)	
DIW.	Min	Max	Min	Max
Α	1.95	2.20	0.077	0.087
В	4.05	4.60	0.159	0.181
С	3.30	3.95	0.130	0.156
D	1.95	2.65	0.077	0.104
Е	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
Н	0.15	0.31	0.006	0.012

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
В	2.5	0.098
С	4.3	0.169
D	1.8	0.071
Е	6.8	0.268

MARKING DIAGRAM



P/N = Marking Code
G = Green Compound
YW = Date Code
F = Factory Code

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