

## 2A, 50V - 1000V Standard Rectifier

### FEATURES

- AEC-Q101 qualified available
- Glass passivated chip junction
- High efficiency, Low  $V_F$
- High current capability
- High surge current capability
- Low power loss
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

### APPLICATIONS

- DC to DC converter
- Switching mode converters and inverters
- General purpose

### MECHANICAL DATA

- Case: DO-204AC (DO-15)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: Indicated by cathode band
- Weight: 0.400g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_F$	2	A
$V_{RRM}$	50 - 1000	V
$I_{FSM}$	70	A
$T_{JMAX}$	150	°C
Package	DO-204AC (DO-15)	
Configuration	Single die	



DO-204AC (DO-15)



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	2A01G	2A02G	2A03G	2A04G	2A05G	2A06G	2A07G	UNIT
Marking code on the device		2A01G	2A02G	2A03G	2A04G	2A05G	2A06G	2A07G	
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
Forward current	$I_F$	2							A
Surge peak forward current, 8.3ms single half sine wave superimposed on rated load	$I_{FSM}$	70							A
Junction temperature	$T_J$	-55 to +150							°C
Storage temperature	$T_{STG}$	-55 to +150							°C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>UNIT</b>
Junction-to-lead thermal resistance	$R_{\theta JL}$	25	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	60	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	22	°C/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
<b>PARAMETER</b>		<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage <sup>(1)</sup>	2A01G 2A02G	$I_F = 2\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.1	V
	2A03G 2A04G 2A05G 2A06G 2A07G			-	1.0	V
Reverse current @ rated $V_R$ <sup>(2)</sup>		$T_J = 25^\circ\text{C}$	$I_R$	-	5	$\mu\text{A}$
		$T_J = 125^\circ\text{C}$		-	100	$\mu\text{A}$
Junction capacitance		1MHz, $V_R = 4.0\text{V}$	$C_J$	15	-	pF

**Notes:**

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

<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE</b> <sup>(1)(2)</sup>	<b>PACKAGE</b>	<b>PACKING</b>
2A0xG	DO-204AC (DO-15)	3,500 / Tape & Reel
2A0xG A0G	DO-204AC (DO-15)	1,500 / Ammo box
2A0xGH	DO-204AC (DO-15)	3,500 / Tape & Reel
2A0xGHA0G	DO-204AC (DO-15)	1,500 / Ammo box

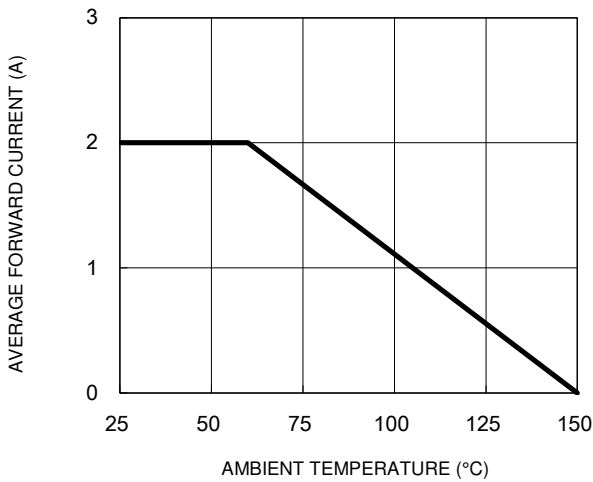
**Notes:**

1. "x" defines voltage from 50V (2A01G) to 1000V (2A07G)
2. "H" means AEC-Q101 qualified

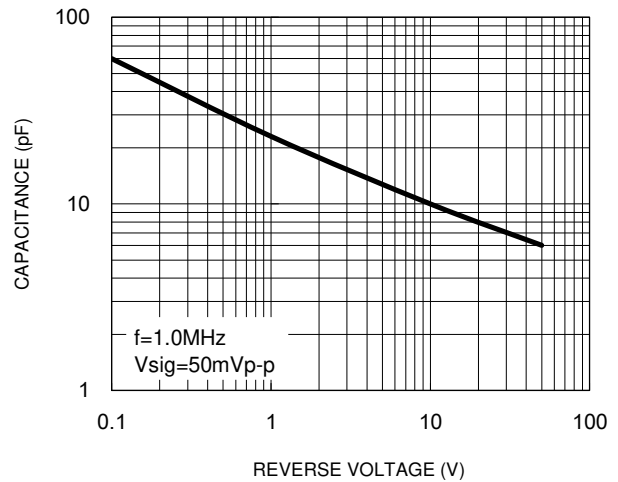
**CHARACTERISTICS CURVES**

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

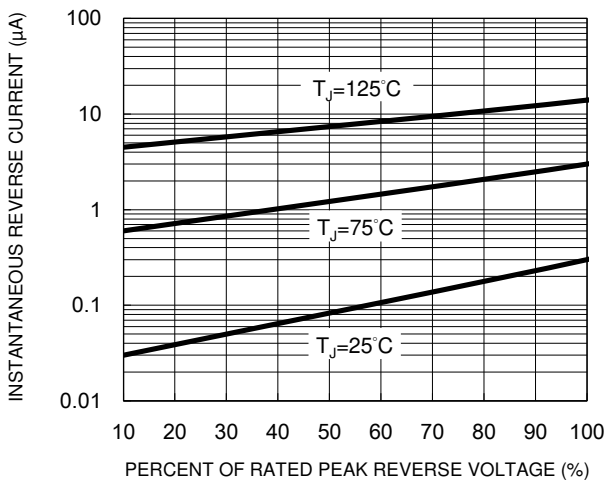
**Fig.1 Forward Current Derating Curve**



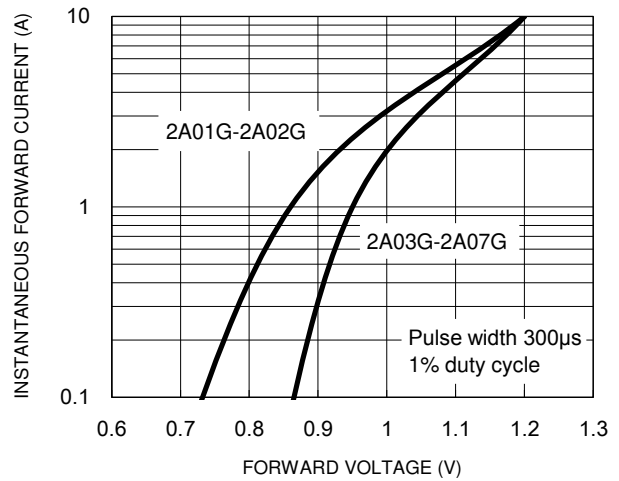
**Fig.2 Typical Junction Capacitance**



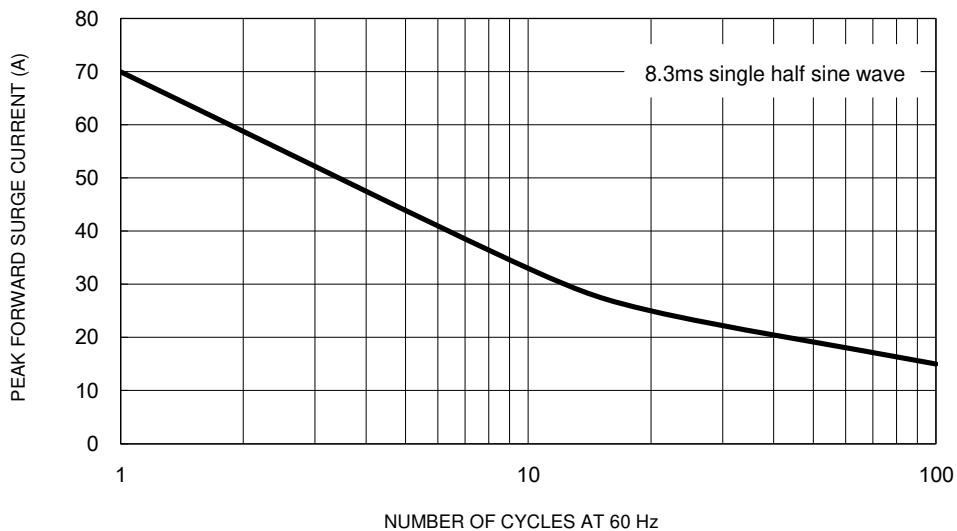
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

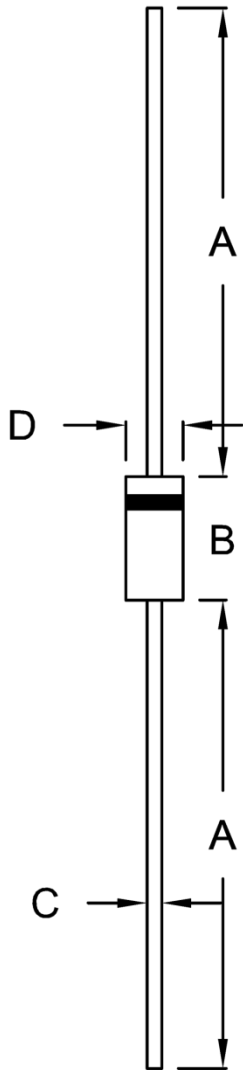


**Fig.5 Maximum Non-Repetitive Forward Surge Current**



**PACKAGE OUTLINE DIMENSIONS**

DO-204AC (DO-15)



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	5.80	7.60	0.228	0.299
C	0.70	0.90	0.028	0.035
D	2.60	3.60	0.102	0.142

**MARKING DIAGRAM**



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

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