

# 3A, 50V - 1000V Glass Passivated Rectifier

#### **FEATURES**

- Glass passivated chip junction
- High current capability, Low V<sub>F</sub>
- High reliability
- High surge current capability
- Low power loss, 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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- High frequency rectification
- Freewheeling application
- Switching mode converters and inverters in computer and telecommunication.

#### **MECHANICAL DATA**

- Case: DO-201AD
- Molding compound meets UL 94V-0 flammability rating
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 1.2 g (approximately)

KEY PARAMETERS					
PARAMETER	VALUE	UNIT			
$I_{F(AV)}$	3	Α			
$V_{RRM}$	50 - 1000	V			
I <sub>FSM</sub>	125	Α			
$T_{JMAX}$	150 °C				
Package	DO-201AD				
Configuration	Single Die				





**DO-201AD** 

PARAMETER	SYMBOL	1N5400 G-K	1N5401 G-K	1N5402 G-K	1N5404 G-K	1N5406 G-K	1N5407 G-K	1N5408 G-K	UNIT
Marking code on the device		1N5400G	1N5401G	1N5402G	1N5404G	1N5406G	1N5407G	1N5408G	
Repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Forward current	I <sub>F(AV)</sub>				3				Α
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>				125				А
Junction temperature	T <sub>J</sub>				- 55 to +15	50			°C
Storage temperature	T <sub>STG</sub>				- 55 to +15	60			°C

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THERMAL PERFORMANCE								
PARAMETER	SYMBOL	LIMIT	UNIT					
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	45	°C/W					
Junction-to-case thermal resistance	$R_{\Theta JC}$	15	°C/W					

ELECTRICAL SPECIFICATIONS (T <sub>A</sub> = 25°C unless otherwise noted)								
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT			
	1N5400G-K			_	1.1	V		
	1N5401G-K	I <sub>F</sub> = 3A,T <sub>J</sub> = 25°C	V <sub>F</sub>	_	1.1	V		
	1N5402G-K			-	1.0	V		
Forward voltage per diode (1)	1N5404G-K							
	1N5406G-K							
	1N5407G-K							
	1N5408G-K							
2 (2)		T <sub>J</sub> = 25°C		-	5	μΑ		
Reverse current @ rated V <sub>R</sub> per	aloae 🟏	T <sub>J</sub> = 125°C	I <sub>R</sub>	-	100	μA		
Junction capacitance	Junction capacitance			25	-	pF		

#### Notes:

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

ORDERING INFORMATION							
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING			
	A0	G	DO-201AD	500 / Ammo box			
1N540xG-K (Note 1, 2)	R0		DO-201AD	1,250 / 13" Paper reel			
(11010-1, 2)	В0		DO-201AD	500 / Bulk packing			

#### Notes:

- 1. "x" defines voltage from 50V (1N5400G-K) to 1000V (1N5408G-K)
- 2. Whole series with green compound (halogen-free)

EXAMPLE P/N							
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION			
1N5400G-K A0G	1N5400G-K	A0	G	Green compound			



### **CHARACTERISTICS CURVES**

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

Fig.1 Forward Current Derating Curve

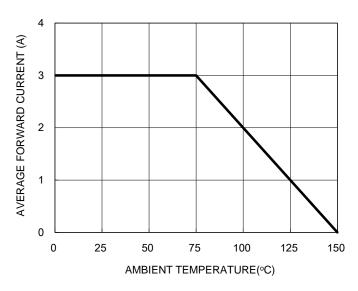


Fig.2 Typical Junction Capacitance

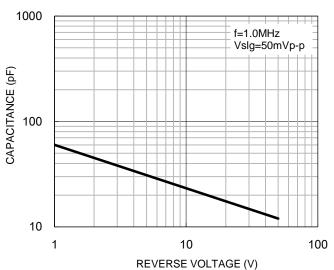


Fig.3 Typical Reverse Characteristics

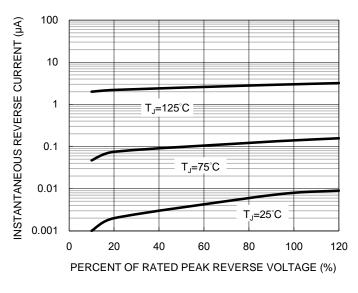
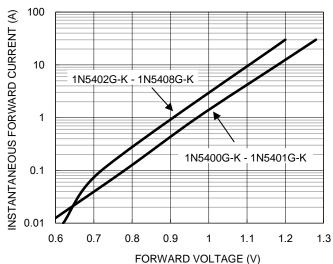


Fig.4 Typical Forward Characteristics

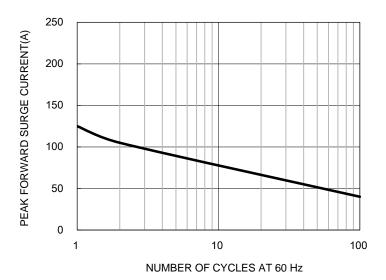




# **CHARACTERISTICS CURVES**

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

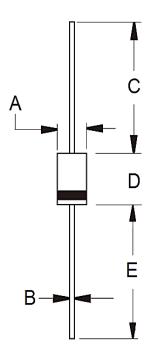
# Fig.5 Maximum Non-repetitive Forward Surge Current





# **PACKAGE OUTLINE DIMENSIONS**

**DO-201AD** 



DIM.	Unit (ı	nm)	Unit (inch)		
DIIVI.	Min	Max	Min	Max	
Α	5.00	5.60	0.197	0.220	
В	1.20	1.30	0.048	0.052	
С	25.40	1	1.000	-	
D	8.50	9.50	0.335	0.375	
E	25.40	1	1.000	-	

### **MARKING DIAGRAM**



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

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