

1.5A, 50V - 1000V Glass Passivated Rectifier

FEATURES

- Glass passivated chip junction
- High efficiency, Low V_F
- High current capability
- High surge current capability
- Low power loss
- 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
- TV
- Monitor

MECHANICAL DATA

- Case: DO-204AC (DO-15)
- 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: 0.4 g (approximately)

KEY PARAMETERS						
PARAMETER	VALUE	UNIT				
I _{F(AV)}	1.5	Α				
V_{RRM}	50 - 1000	V				
I _{FSM}	50 A					
T_{JMAX}	150 °C					
Package	DO-204AC (DO-15)					
Configuration	Single die					





DO-204AC (DO-15)

PARAMETER	SYMBOL	1N5391	1N5392	1N5393	1N5395	1N5397	1N5398	1N5399	
		G-T	G-T G-T	G-T	G-T	G-T	G-T	G-T	UNIT
Marking code on the device		1N5391G	1N5392G	1N5393G	1N5395G	1N5397G	1N5398G	1N5399G	
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(AV)}		1.5			Α			
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I _{FSM}		50					Α	
Junction temperature	T_J	- 55 to +150					°C		
Storage temperature	T _{STG}		- 55 to +150					°C	

THERMAL PERFORMANCE							
PARAMETER	SYMBOL	LIMIT	UNIT				
Junction-to- ambient thermal resistance	$R_{\Theta JA}$	65	°C/W				

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
	1N5391G-T				1.1	W
	1N5392G-T			-	1.1	V
	1N5393G-T					
Forward voltage per diode (1)	1N5395G-T	$I_F = 1.5A, T_J = 25^{\circ}C$	V _F	_	1.0	V
	1N5397G-T					
	1N5398G-T					
	1N5399G-T					
Reverse current @ rated V _R per diode ⁽²⁾		T _J = 25°C		-	5	μΑ
		T _J = 125°C	I _R	-	100	μA
Junction capacitance		1 MHz, V _R =4.0V	CJ	15	-	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			
1N539xG-T (Note 1, 2)	A0		DO-15	1,500 / Ammo box			
	R0	G	DO-15	3,500 / 13" Paper reel			
	В0		DO-15	1,000 / Bulk packing			

Notes:

- 1. "x" defines voltage from 50V (1N5391G-T) to 1000V (1N5399G-T)
- 2. Whole series with green compound (halogen-free)

EXAMPLE P/N								
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION				
1N5391G-T A0G	1N5391G-T	A0	G	Green compound				

2



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

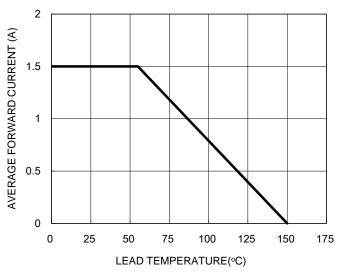


Fig.2 Typical Junction Capacitance

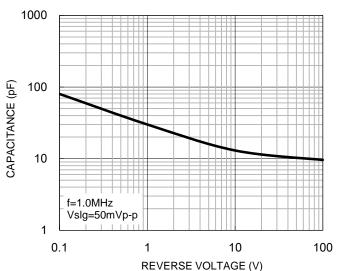


Fig.3 Typical Reverse Characteristics

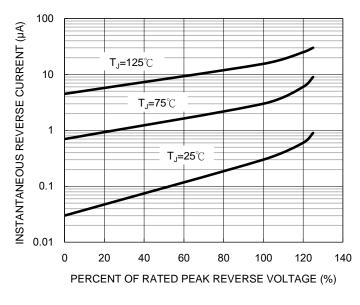
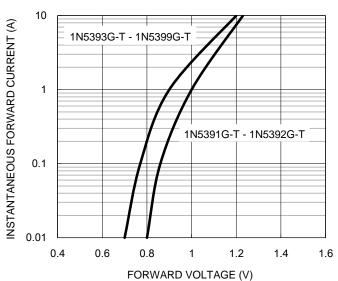


Fig.4 Typical Forward Characteristics

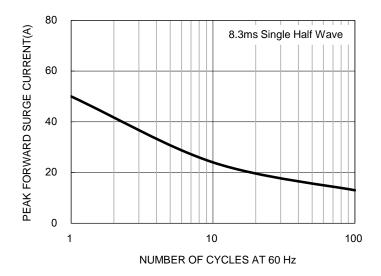




CHARACTERISTICS CURVES

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

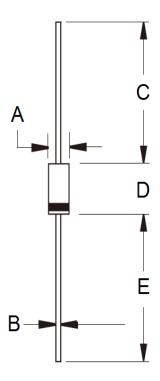
Fig5. Maximum Non-repetitive Forward Surge Current





PACKAGE OUTLINE DIMENSIONS

DO-204AC (DO-15)



DIM.	Unit (ı	mm)	Unit (inch)		
DIIVI.	Min	Max	Min	Max	
Α	2.60	3.60	0.102	0.142	
В	0.70	0.90	0.028	0.035	
С	25.40	1	1.000	-	
D	5.80	7.60	0.228	0.299	
Е	25.40	1	1.000	-	

MARKING DIAGRAM



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

F = Factory Code



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