# 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

| KEY PARAMETERS | | |
|---|---|---|
| **PARAMETER** | **VALUE** | **UNIT** |
| $I_{F(AV)}$ | 1.5 | A |
| $V_{RRM}$ | 50 - 1000 | V |
| $I_{FSM}$ | 50 | A |
| $T_{J\ MAX}$ | 150 | °C |
| Package | DO-204AC (DO-15) | |
| Configuration | Single die | |

## APPLICATIONS

- 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)

Pb-Free RoHS COMPLIANT HALOGEN FREE

**DO-204AC (DO-15)**

| **ABSOLUTE MAXIMUM RATINGS** ($T_A$ = 25°C unless otherwise noted) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PARAMETER** | **SYMBOL** | **1N5391 G-T** | **1N5392 G-T** | **1N5393 G-T** | **1N5395 G-T** | **1N5397 G-T** | **1N5398 G-T** | **1N5399 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 | | | | | | | A |
| Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode | $I_{FSM}$ | 50 | | | | | | | A |
| 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 |

## ELECTRICAL SPECIFICATIONS ($T_A$ = 25°C unless otherwise noted)

| PARAMETER | | CONDITIONS | SYMBOL | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Forward voltage per diode (1) | 1N5391G-T | $I_F$ = 1.5A, $T_J$ = 25°C | $V_F$ | - | 1.1 | V |
| | 1N5392G-T | | | | | |
| | 1N5393G-T | | | | | |
| | 1N5395G-T | | | - | 1.0 | V |
| | 1N5397G-T | | | | | |
| | 1N5398G-T | | | | | |
| | 1N5399G-T | | | | | |
| Reverse current @ rated $V_R$ per diode (2) | | $T_J$ = 25°C | $I_R$ | - | 5 | μA |
| | | $T_J$ = 125°C | | - | 100 | μA |
| Junction capacitance | | 1 MHz, $V_R$=4.0V | $C_J$ | 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 | G | DO-15 | 1,500 / Ammo box |
| | R0 | | DO-15 | 3,500 / 13" Paper reel |
| | B0 | | 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 |

## CHARACTERISTICS CURVES

($T_A$ = 25°C unless otherwise noted)

**Fig.1 Forward Current Derating Curve**

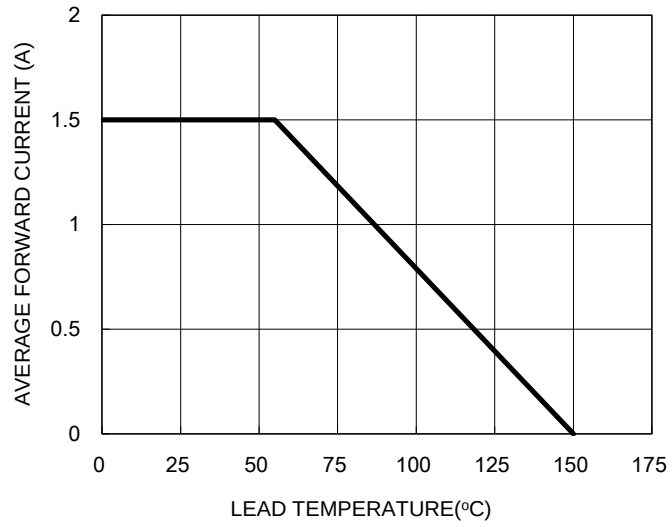



**Fig.2 Typical Junction Capacitance**

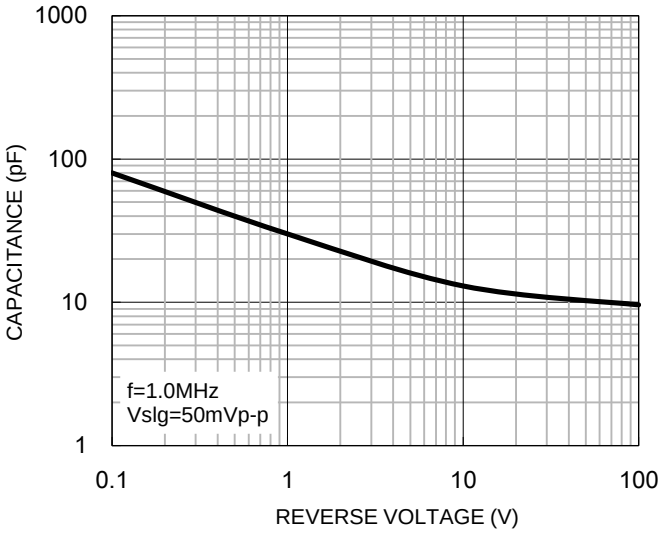



**Fig.3 Typical Reverse Characteristics**

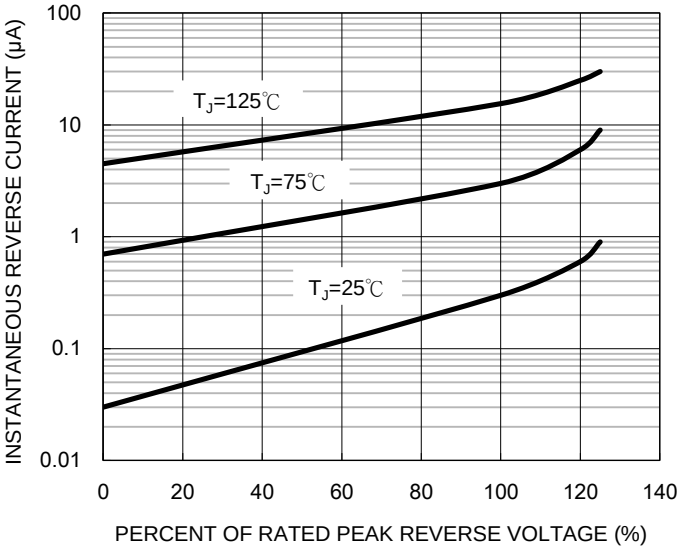
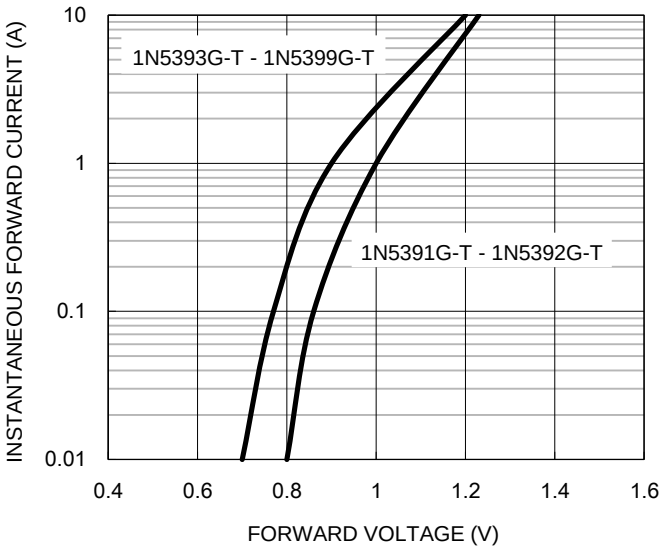


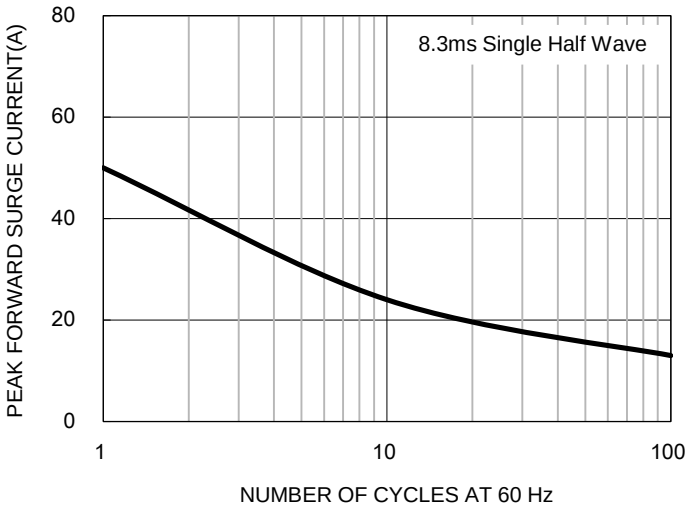

**Fig.4 Typical Forward Characteristics**



## CHARACTERISTICS CURVES

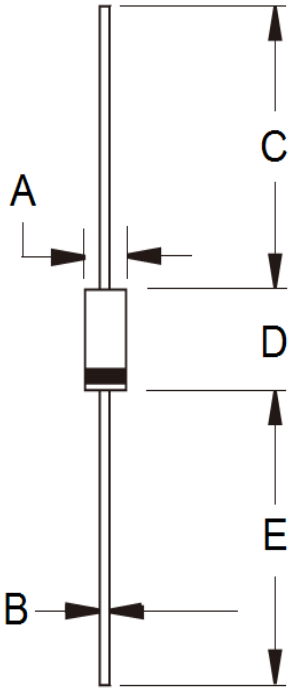
($T_A$ = 25°C unless otherwise noted)

**Fig5. Maximum Non-repetitive Forward Surge Current**



## PACKAGE OUTLINE DIMENSIONS

**DO-204AC (DO-15)**




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

## MARKING DIAGRAM

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

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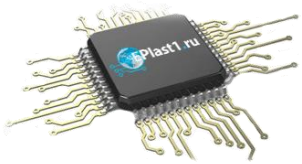
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

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