

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

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)

| KEY PARAMETERS | | |
|----------------|------------------|------|
| PARAMETER | VALUE | UNIT |
| $I_{F(AV)}$ | 1.5 | A |
| 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)

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ 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 ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | | |
|---|----------------------------|---|------------|------------|---------------|---|
| PARAMETER | CONDITIONS | SYMBOL | TYP | MAX | UNIT | |
| Forward voltage per diode ⁽¹⁾ | 1N5391G-T | $I_F = 1.5\text{A}, T_J = 25^\circ\text{C}$ | V_F | - | 1.1 | V |
| | 1N5392G-T | | | | | |
| | 1N5393G-T | | | | | |
| | 1N5395G-T | | | | | |
| | 1N5397G-T | | | | | |
| | 1N5398G-T | | | | | |
| | 1N5399G-T | | | | | |
| Reverse current @ rated V_R per diode ⁽²⁾ | $T_J = 25^\circ\text{C}$ | I_R | - | 5 | μA | |
| | $T_J = 125^\circ\text{C}$ | | - | 100 | μA | |
| Junction capacitance | 1 MHz, $V_R = 4.0\text{V}$ | C_J | 15 | - | pF | |

Notes:

1. Pulse test with $PW = 0.3\text{ ms}$
2. Pulse test with $PW = 30\text{ ms}$

| 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

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

Fig.1 Forward Current Derating Curve

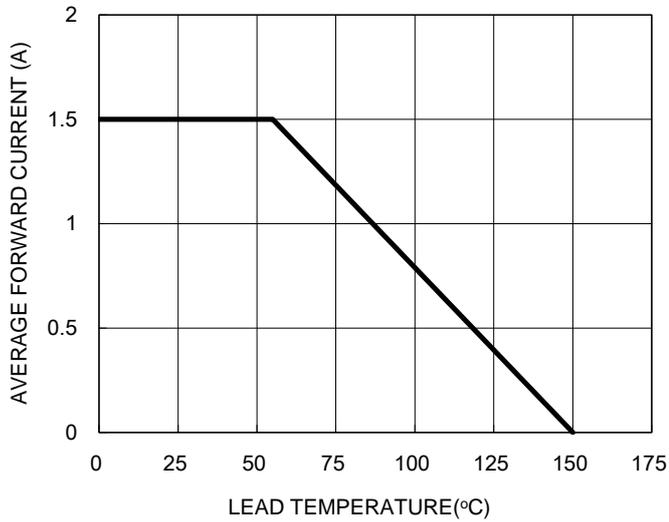


Fig.2 Typical Junction Capacitance

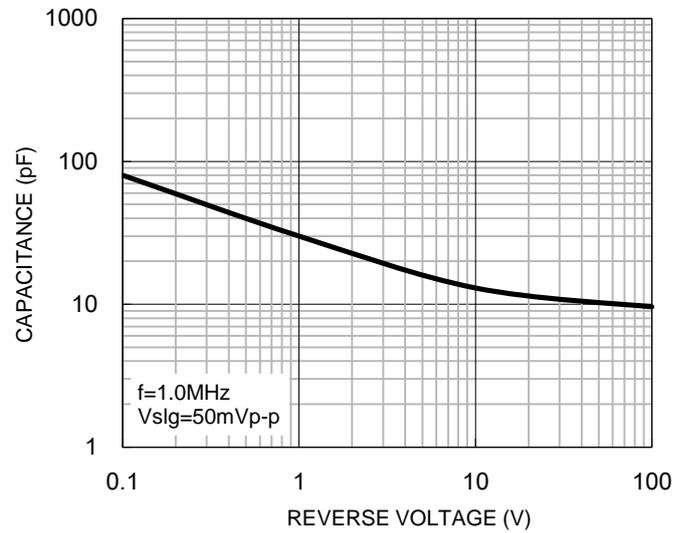


Fig.3 Typical Reverse Characteristics

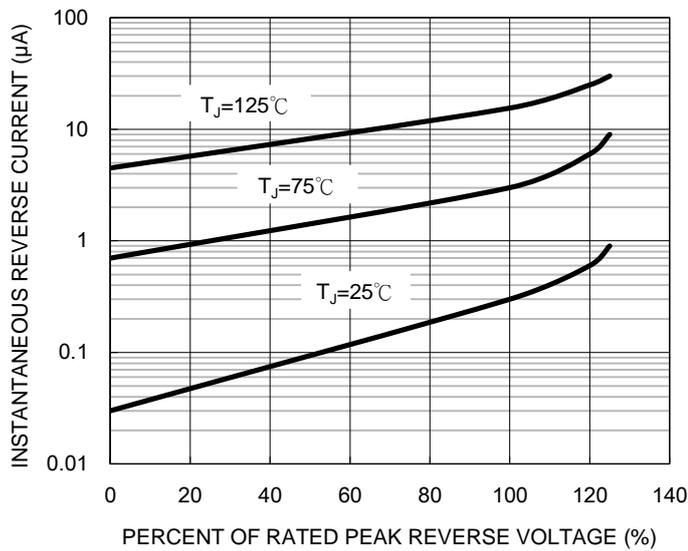
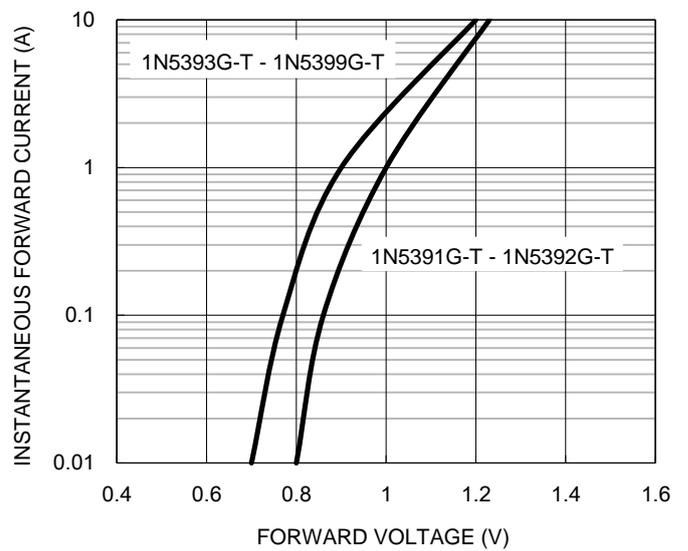


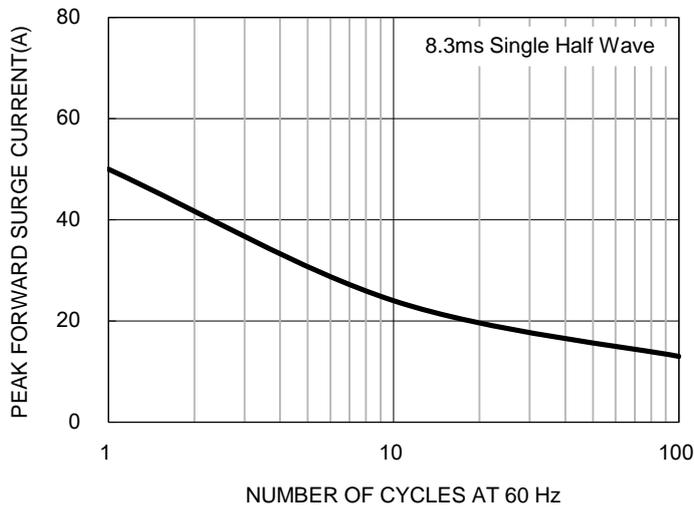
Fig.4 Typical Forward Characteristics



CHARACTERISTICS CURVES

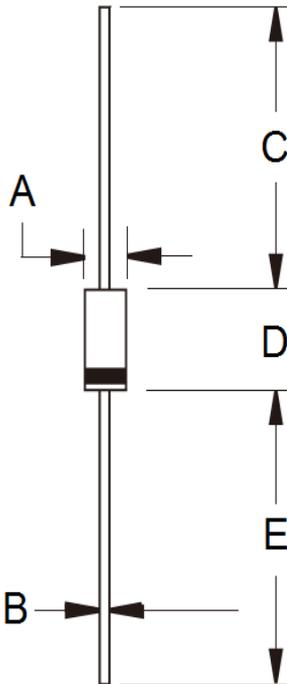
(T_A = 25°C unless otherwise noted)

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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru

www.lifeelectronics.ru