

2A, 800V - 1000V Glass Passivated High Efficient 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 |
| $I_{F(AV)}$ | 2 | A |
| V_{RRM} | 800 - 1000 | V |
| I_{FSM} | 60 | A |
| $T_{J\ MAX}$ | 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 | HER207G-K | HER208G-K | UNIT |
| Marking code on the device | | HER207G | HER208G | |
| Repetitive peak reverse voltage | V_{RRM} | 800 | 1000 | V |
| Reverse voltage, total rms value | $V_{R(RMS)}$ | 560 | 700 | V |
| Forward current | $I_{F(AV)}$ | 2 | | A |
| Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode | I_{FSM} | 60 | | 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 | $R_{\theta JA}$ | 60 | °C/W |

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

| PARAMETER | CONDITIONS | SYMBOL | TYP | MAX | UNIT |
|--|--|----------|-----|-----|---------------|
| Forward voltage per diode ⁽¹⁾ | $I_F = 2\text{A}, T_J = 25^\circ\text{C}$ | V_F | - | 1.7 | V |
| Reverse current @ rated V_R per diode ⁽²⁾ | $T_J = 25^\circ\text{C}$ | I_R | - | 5 | μA |
| | $T_J = 125^\circ\text{C}$ | | - | 150 | μA |
| Junction capacitance | 1 MHz, $V_R = 4.0\text{V}$ | C_J | 20 | - | pF |
| Reverse recovery time | $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$ $I_{RR} = 0.25\text{A}$ | t_{rr} | - | 75 | ns |

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 |
|--------------------------|--------------|---------------------|---------|------------------------|
| HER20xG-K (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 800V (HER207G-K) to 1000V (HER208G-K)
2. Whole series with green compound (halogen-free)

EXAMPLE P/N

| EXAMPLE P/N | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
|---------------|-----------|--------------|---------------------|----------------|
| HER207G-K A0G | HER207G-K | A0 | G | Green compound |

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

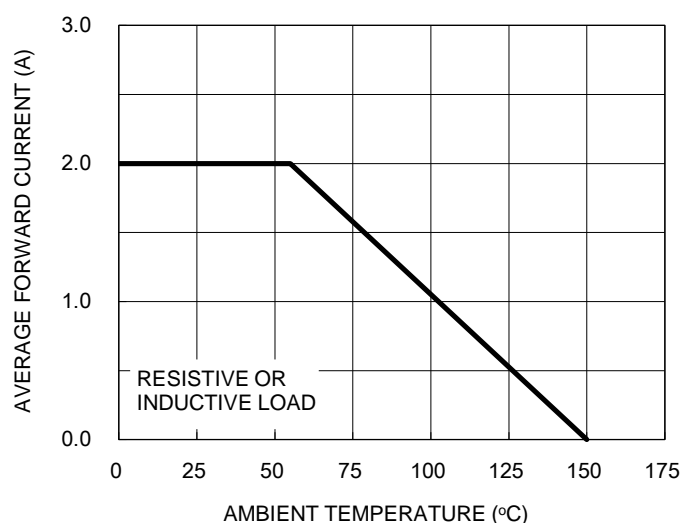


Fig.2 Typical Junction Capacitance

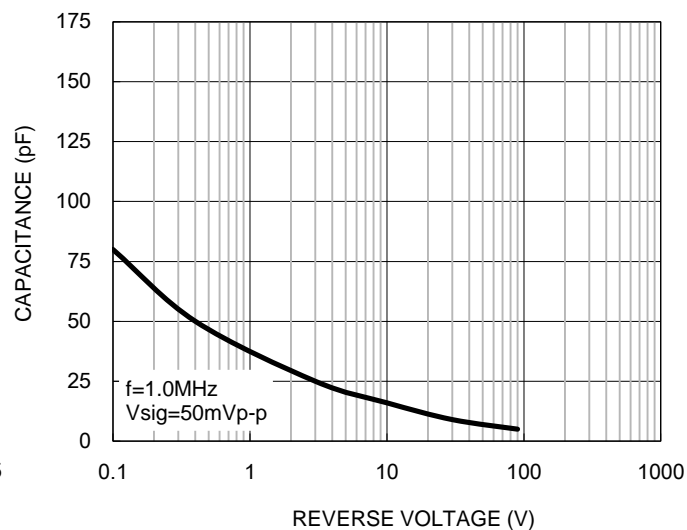


Fig.3 Typical Reverse Characteristics

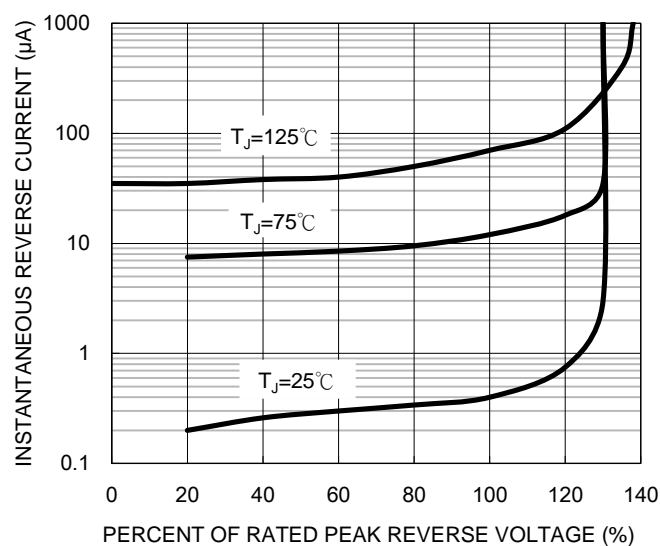
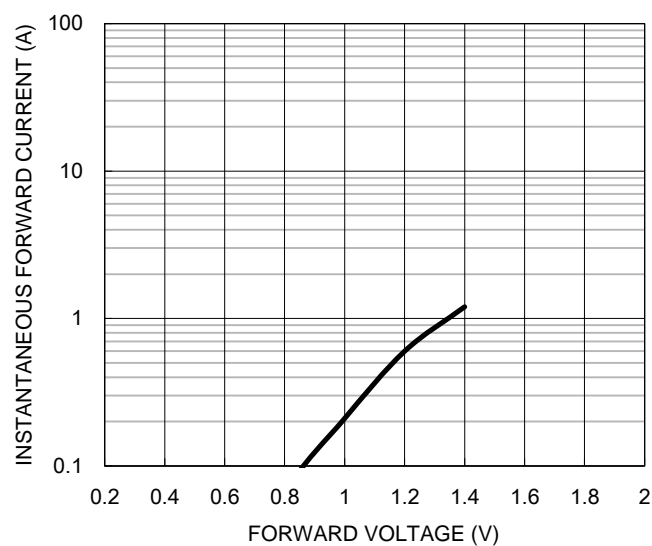


Fig.4 Typical Forward Characteristics



CHARACTERISTICS CURVES

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

Fig.5 Maximum Non-repetitive Forward Surge Current

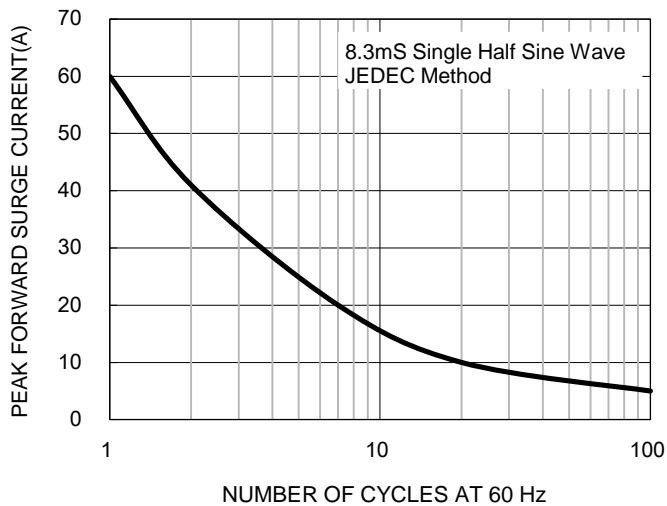
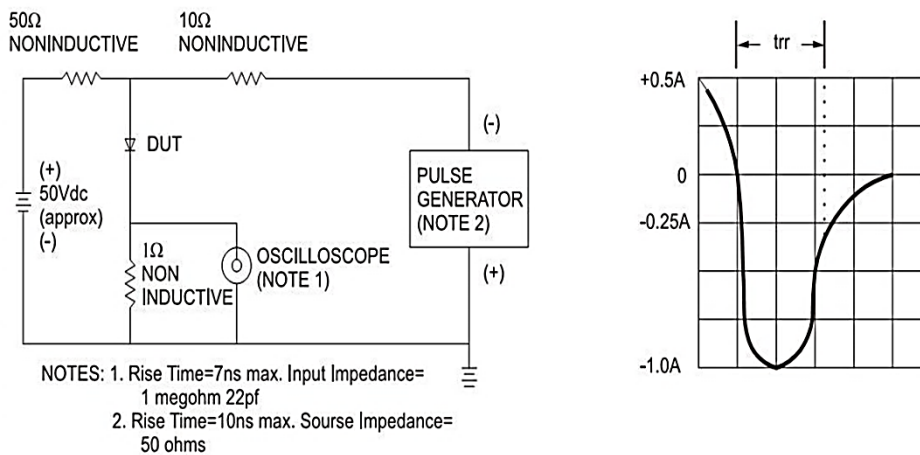
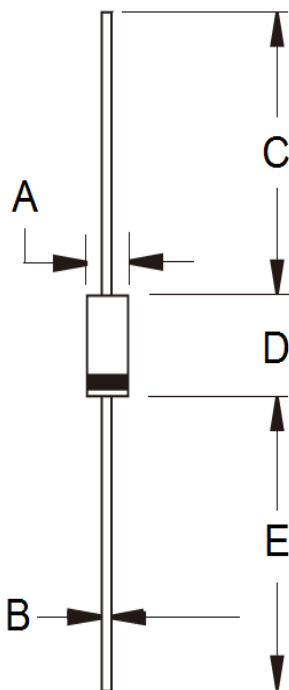


Fig.6 Reverse Recovery Time Characteristic And Test Circuit Diagram



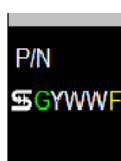
PACKAGE OUTLINE DIMENSIONS

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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