

1.5A, 50V - 1000V Glass Passivated High Efficient Rectifiers

FEATURES

- Glass passivated chip junction
- High efficiency, Low VF
- 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 definition



MECHANICAL DATA

Case: DO-204AC (DO-15)

Molding compound, UL flammability classification rating 94V-0

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Pure tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Weight: 0.4g (approximately)

DO-204AC (DO-15)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | | | | | | |
|--|--------------------|--------------|----------|----------|----------|----------|----------|----------|----------|------|----|
| PARAMETER | SYMBOL | HER 151G | HER 152G | HER 153G | HER 154G | HER 155G | HER 156G | HER 157G | HER 158G | UNIT | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V | |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V | |
| Maximum average forward rectified current | I _{F(AV)} | 1.5 | | | | | | | | A | |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 50 | | | | | | | | A | |
| Maximum instantaneous forward voltage (Note 1) @ 1.5 A | V _F | 1.0 | | | 1.3 | | 1.7 | | | V | |
| Maximum reverse current @ rated VR | I _R | 5 150 | | | | | | | | μA | |
| Maximum reverse recovery time (Note 2) | t _{rr} | 50 | | | | | 75 | | | | ns |
| Typical junction capacitance (Note 3) | C _J | 35 | | | | | 20 | | | | pF |
| Typical thermal resistance | R _{θJA} | 60 | | | | | | | | °C/W | |
| Operating junction temperature range | T _J | - 55 to +150 | | | | | | | | °C | |
| Storage temperature range | T _{STG} | - 55 to +150 | | | | | | | | °C | |

Note 1: Pulse test with PW=300 μs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION

| PART NO. | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING |
|---------------------|--------------|---------------------|---------|------------------------|
| HER15xG (Note 1) | A0 | G | DO-15 | 1500 / Ammo box |
| | R0 | | DO-15 | 3,500 / 13" Paper reel |
| | B0 | | DO-15 | 1000 / Bulk packing |

Note 1: "x" defines voltage from 50V (HER151G) to 1000V (HER158G)

EXAMPLE

| PREFERRED P/N | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
|---------------|----------|--------------|---------------------|----------------|
| HER158G A0G | HER158G | A0 | G | Green compound |

RATINGS AND CHARACTERISTICS CURVES

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

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

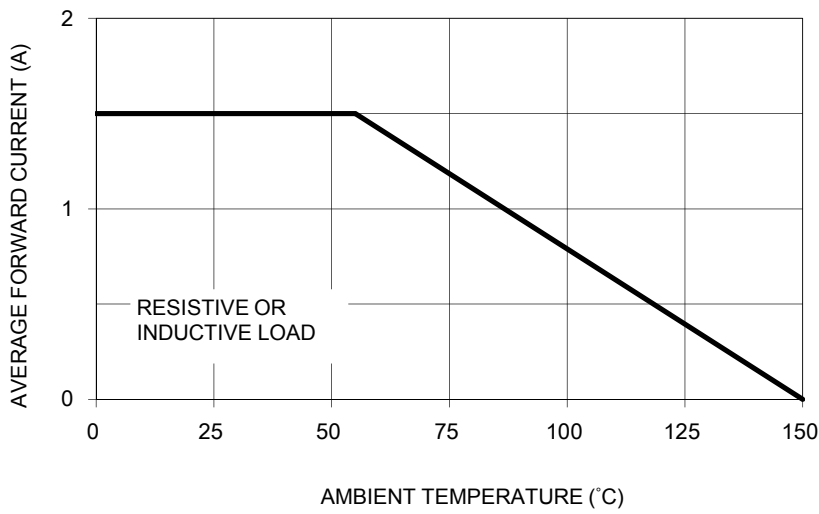


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

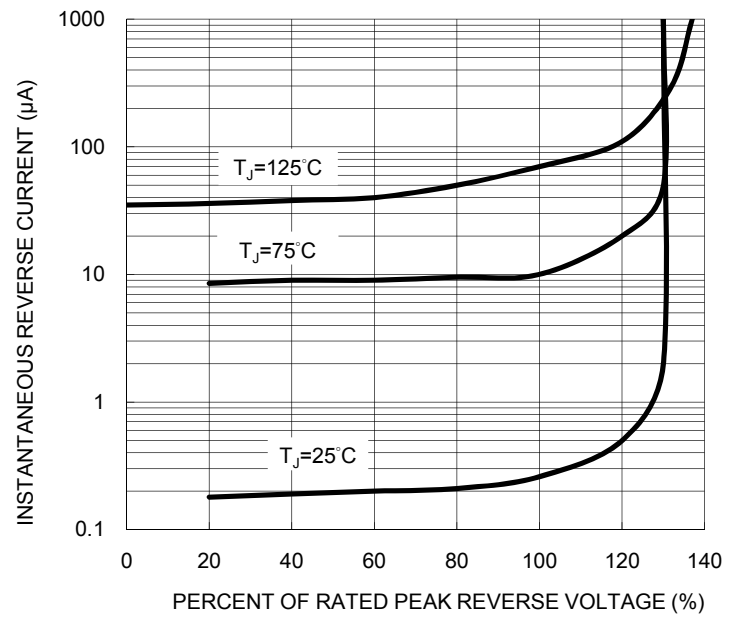


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

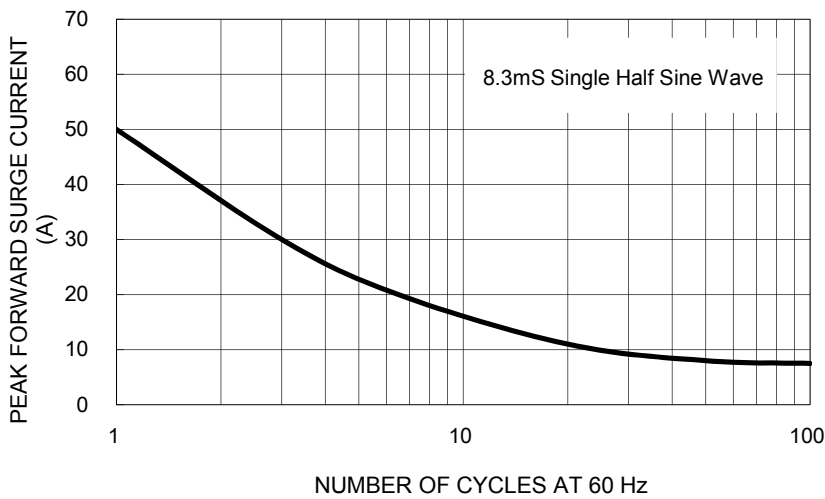


FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

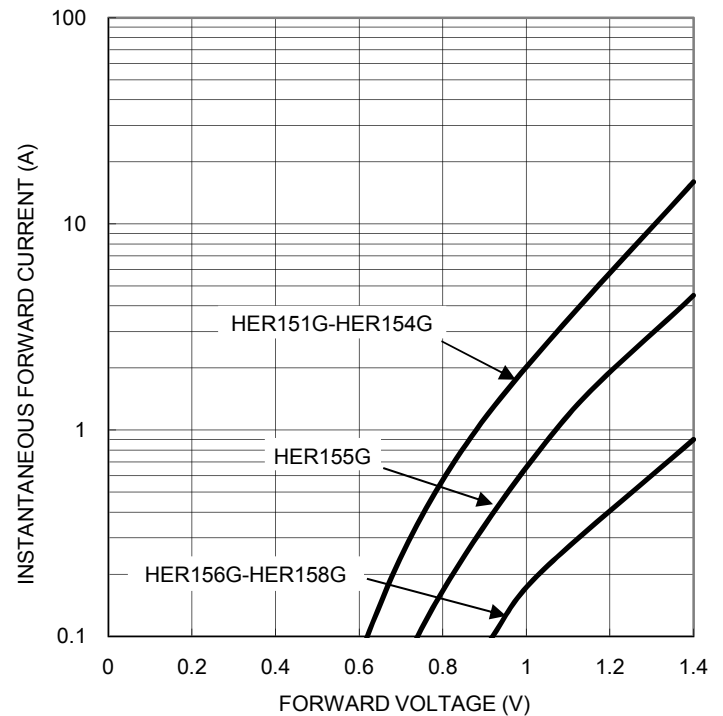


FIG. 5- TYPICAL JUNCTION CAPACITANCE

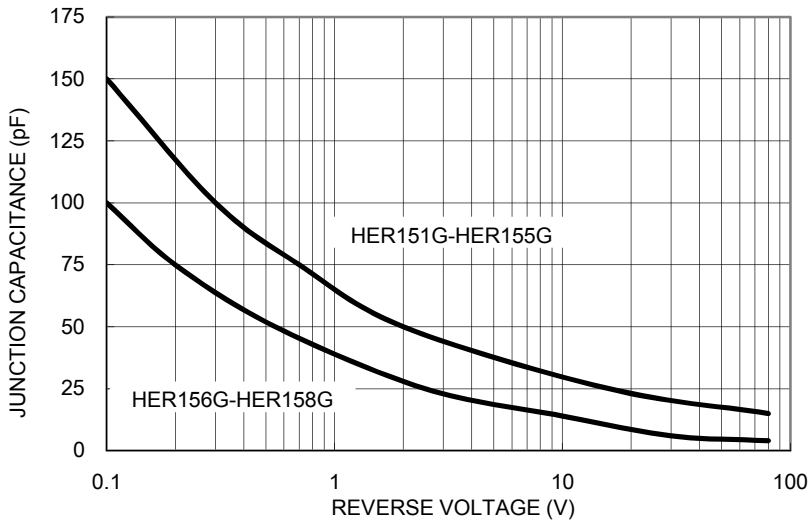
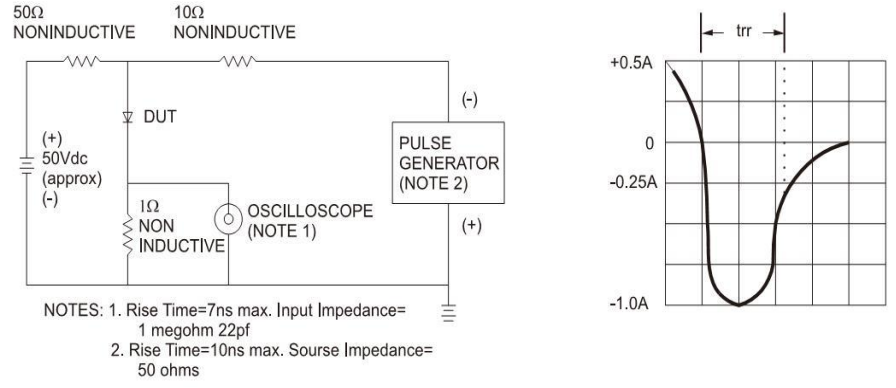
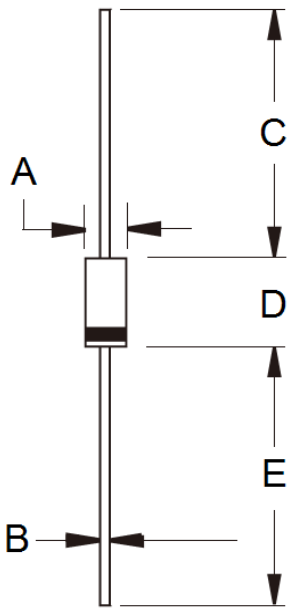


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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 = Specific Device Code
G = Green Compound
YWW = Date Code
F = Factory Code

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