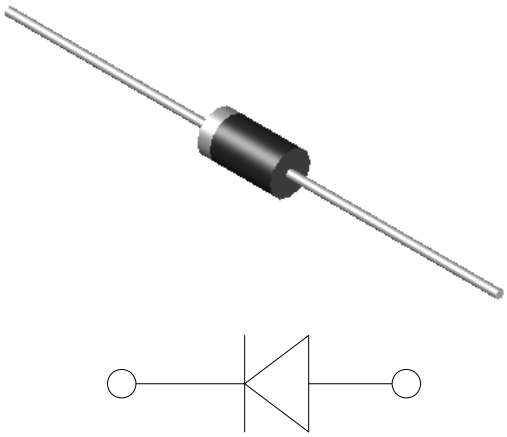
# HER501G THRU HER508G

RoHS COMPLIANT

## High Efficient Rectifier





### Features

- High efficiency
- High current capability
- High Reliability
- High surge current capability
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Mechanical Data

- **Package:** DO-201AD(DO-27)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:**Color band denotes cathode end

### ■Maximum Ratings (Ta=25℃ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | HER501G | HER502G | HER503G | HER504G | HER505G | HER506G | HER507G | HER508G |
|---|---|---|---|---|---|---|---|---|---|---|
| Device marking code | | | HER501G | HER502G | HER503G | HER504G | HER505G | HER506G | HER507G | HER508G |
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | $V_{RMS}$ | V | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 |
| Maximum DC blocking Voltage | $V_{DC}$ | V | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 |
| Average Forward Current @60Hz sine wave, Resistance load, Ta=50℃ | $I_{F(AV)}$ | A | 5.0 | | | | | | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃ | $I_{FSM}$ | A | 150 | | | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | 300 | | | | | | | |
| Current squared time @1ms≤t8.3≤ms Tj=25℃， Rating of per diode | $I^2t$ | $A^2s$ | 94 | | | | | | | |
| Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | Cj | pF | 72 | | | 46 | | 52 | | |
| Storage Temperature | Tstg | ℃ | -55 ~ +150 | | | | | | | |
| Junction Temperature | Tj | ℃ | -55 ~ +150 | | | | | | | |

### ■Electrical Characteristics ($T_a$=25℃ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | HER501G | HER502G | HER503G | HER504G | HER505G | HER506G | HER507G | HER508G |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | VF | V | IFM=5.0A | 1.0 | | | 1.3 | | 1.7 | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | IR | μA | Tj =25℃ | 2.5 | | | | | | | |
| | | | Tj =125℃ | 100 | | | | | | | |
| Maximum reverse recovery time | trr | ns | IF=0.5A,IR=1.0A, Irr=0.25A | 50 | | | | | 75 | | |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | HER501G | HER502G | HER503G | HER504G | HER505G | HER506G | HER507G | HER508G |
|---|---|---|---|---|---|---|---|---|---|---|
| Typical Thermal Resistance | $R_{\theta J-A}$ | ℃/W | 20 | | | | | | | |

## ■Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|---|
| HER501G~HER508G | D1 | Approximate 1.05 | 1250 | 1250 | 12500 | Tape |
| HER501G~HER508G | C1 | Approximate 1.05 | 250 | 250 | 12500 | Bulk |

## ■ Characteristics (Typical)

FIG.1: Io-Ta Curve

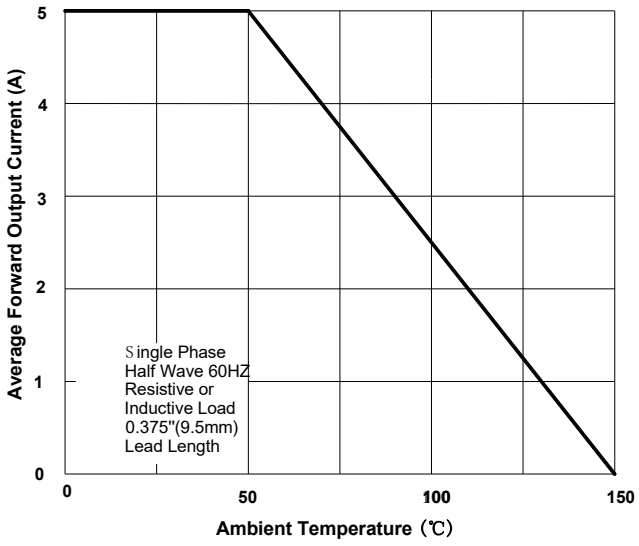



FIG.2: Forward Surge Current Capability

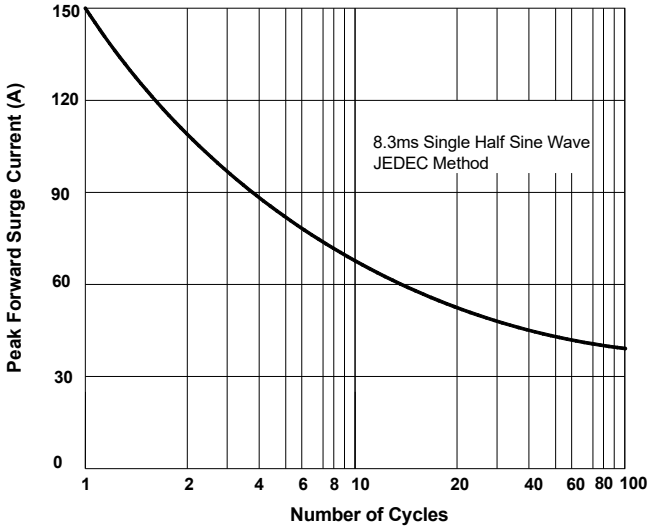



FIG.3: Forward Voltage

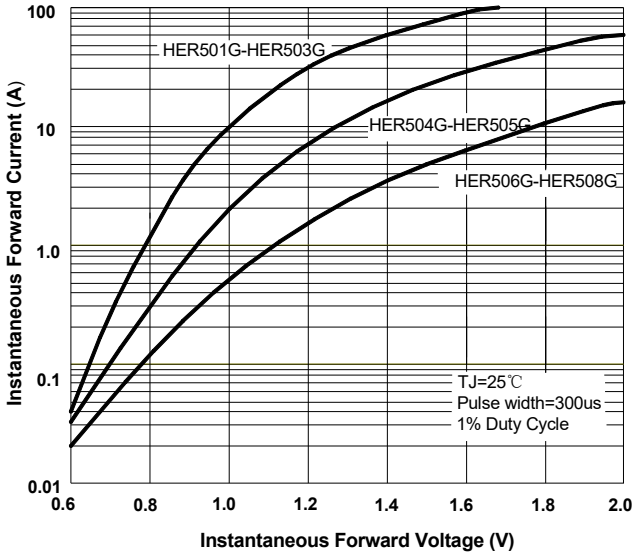



FIG.4: Typical Rrverse Characteristics

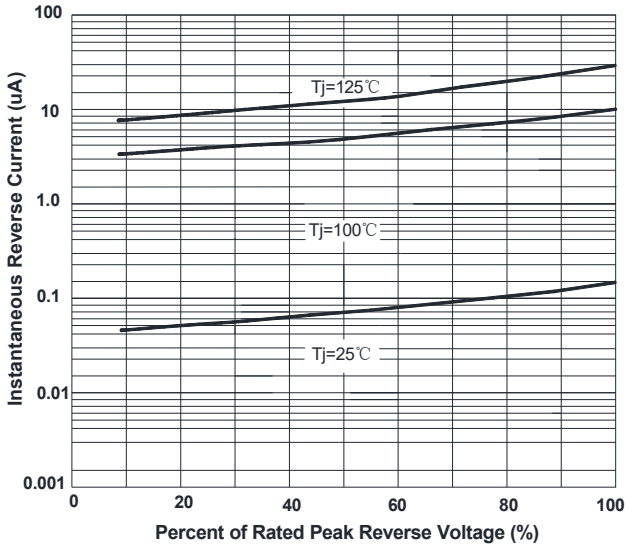
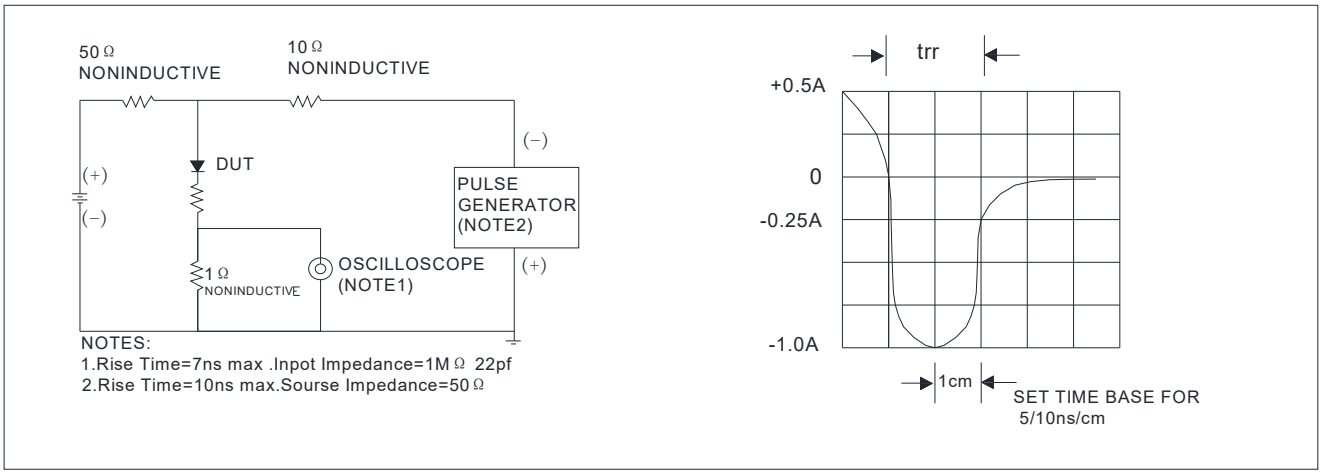
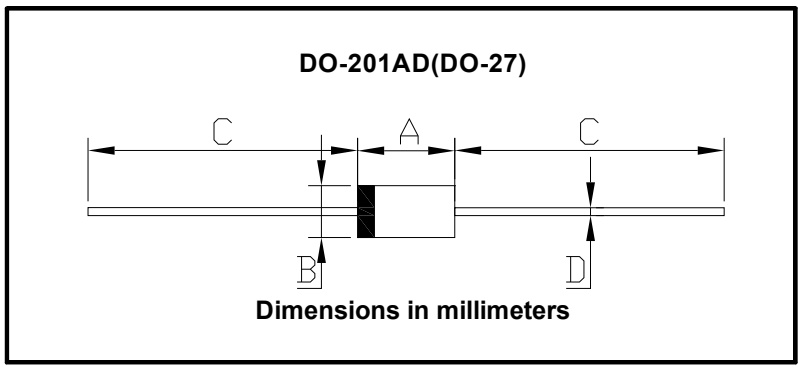


**FIG.5: Diagram of circuit and Testing wave form of reverse recovery time**




## ■ Outline Dimensions




| DO-201AD(DO-27) | | |
|---|---|---|
| Dim | Min | Max |
| A | 8.50 | 9.50 |
| B | 5.00 | 5.60 |
| C | 25.4 | / |
| D | 1.20 | 1.30 |

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