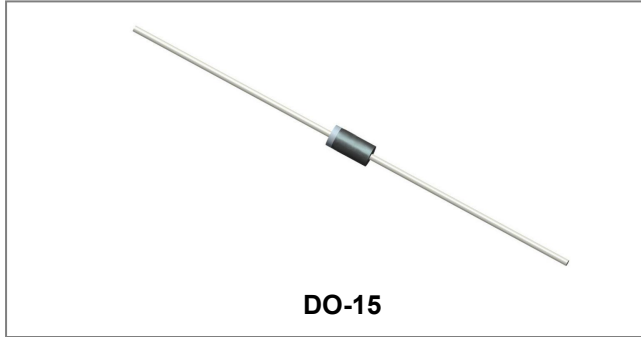


# HER208G

## HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 1000 Volts Forward Current - 2.0 Amperes



### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-O
- Ultra-fast switching for high efficiency
- Low reverse leakage
- Glass Passivated Die Construction
- High forward surge current capability
- High temperature soldering guaranteed 250°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3kg) tension
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: JEDEC DO-15 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.014 ounce, 0.40 grams

### Maximum Ratings

| Characteristics                             | Symbol     | Condition                                                 | Max. | Units |
|---------------------------------------------|------------|-----------------------------------------------------------|------|-------|
| Repetitive Peak Reverse Voltage             | $V_{RRM}$  | -                                                         | 1000 | V     |
| RMS Voltage                                 | $V_{RMS}$  | -                                                         | 700  | V     |
| DC Blocking Voltage                         | $V_{DC}$   | -                                                         | 1000 | V     |
| Average Forward Current                     | $I_F (AV)$ | 50% duty cycle @ $T_A = 50^\circ C$ rectangular wave form | 2.0  | A     |
| Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$  | 8.3 ms, half Sine pulse                                   | 60   | A     |

### Electrical Characteristics

| Characteristics       | Symbol   | Condition                                             | Typ. | Max. | Units   |
|-----------------------|----------|-------------------------------------------------------|------|------|---------|
| Forward Voltage Drop* | $V_{F1}$ | @ 2.0A, Pulse, $T_J = 25^\circ C$                     | 1.41 | 1.7  | V       |
| Reverse Current*      | $I_{R1}$ | @ $V_R = \text{rated } V_R$<br>$T_J = 25^\circ C$     | 3    | 5    | $\mu A$ |
|                       | $I_{R2}$ | @ $V_R = \text{rated } V_R$<br>$T_J = 100^\circ C$    | -    | 100  | $\mu A$ |
| Junction Capacitance  | $C_J$    | @ $V_R = 4V$ , $T_C = 25^\circ C$<br>$f_{SIG} = 1MHz$ | 20   | -    | pF      |
| Reverse Recovery Time | $T_{rr}$ | $I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A$              | -    | 75   | ns      |

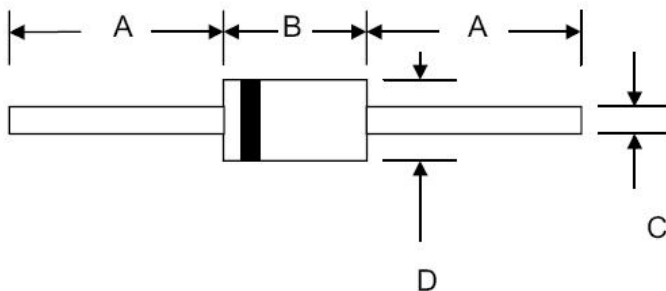
\* Pulse width < 300  $\mu s$ , duty cycle < 2%

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## Thermal-Mechanical Specifications

| Characteristics                                | Symbol          | Condition | Specification | Units |
|------------------------------------------------|-----------------|-----------|---------------|-------|
| Junction Temperature                           | $T_J$           | -         | -55 to +150   | °C    |
| Storage Temperature                            | $T_{stg}$       | -         | -55 to +150   | °C    |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | -         | 50            | °C/W  |

## Mechanical Dimensions DO-15



| SYMBOL | Millimeters |      | Inches |       |
|--------|-------------|------|--------|-------|
|        | Min.        | Max. | Min.   | Max.  |
| A      | 25.4        | -    | 1.000  | -     |
| B      | 5.5         | 7.62 | 0.217  | 0.300 |
| C      | 0.7         | 0.9  | 0.028  | 0.034 |
| D      | 2.6         | 3.6  | 0.104  | 0.140 |

## Ordering Information

| Device  | Package         | Shipping      |
|---------|-----------------|---------------|
| HER208G | DO-15 (Pb-Free) | 3000pcs /tape |

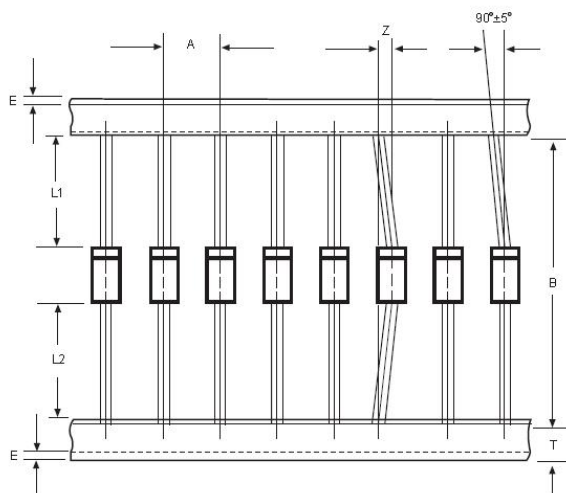
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram



HER208G = Part Name

## Carrier Tape Specification DO-15

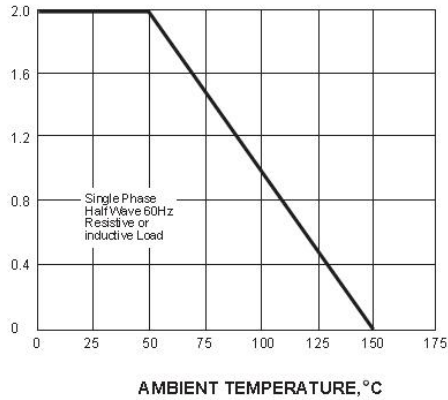


| SYMBOL  | Millimeters |      |
|---------|-------------|------|
|         | Min.        | Max. |
| A       | 4.50        | 5.50 |
| B       | 50.9        | 53.9 |
| Z       | -           | 1.20 |
| T       | 5.60        | 6.40 |
| E       | -           | 0.80 |
| IL1-L2I | -           | 1.0  |

**Ratings and Characteristics Curves**

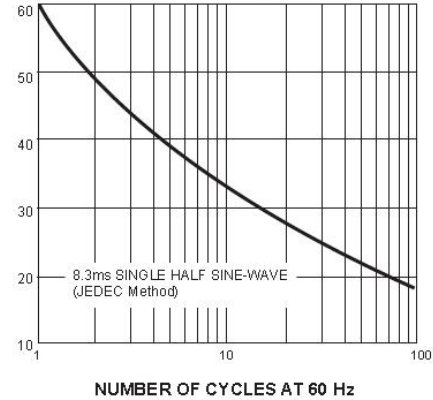
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



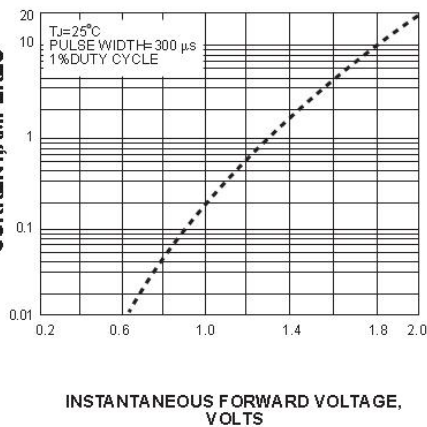
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



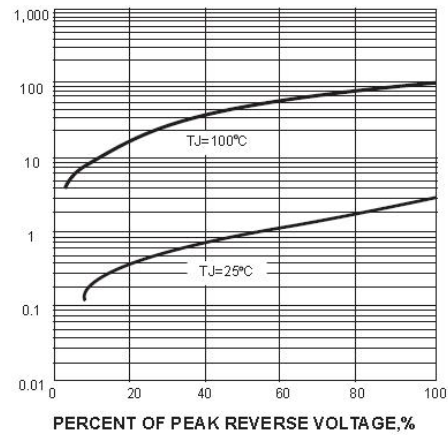
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



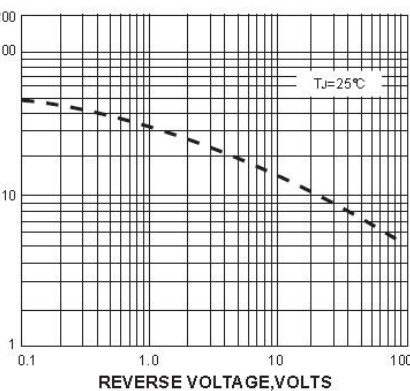
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



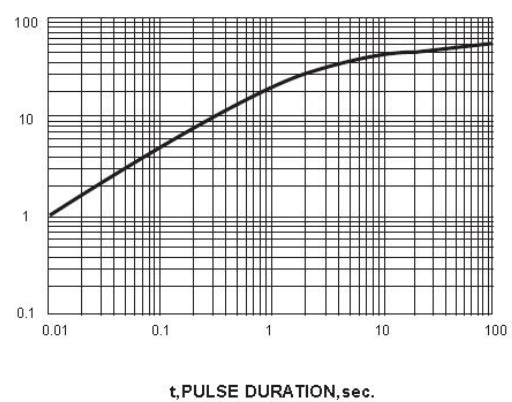
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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