



# HER201 THRU HER208

## HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 2.0 Amperes

### FEATURES

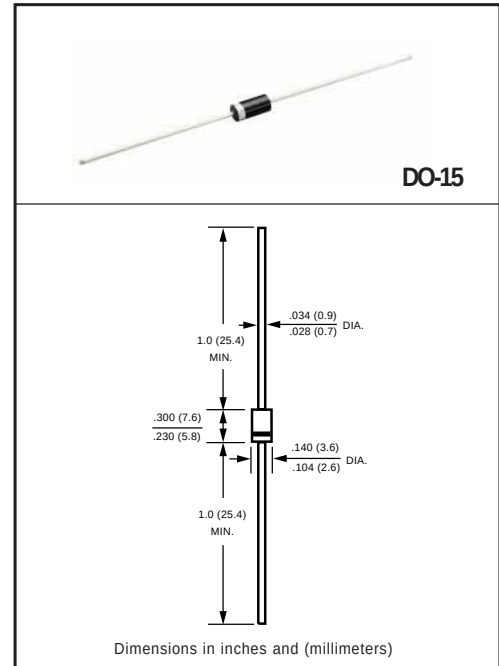
- \* Low power loss,high efficiency
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High speed switching
- \* High reliability
- \* High current surge

### MECHANICAL DATA

- \* Epoxy: Device has UL flammability classification 94V-O
- \* Case: Molded plastic
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.4 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



### MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

| RATINGS                                                                                           | SYMBOL           | HER201       | HER202 | HER203 | HER204 | HER205 | HER206 | HER207 | HER208 | UNITS            |    |
|---------------------------------------------------------------------------------------------------|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|------------------|----|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub> | 50           | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | Volts            |    |
| Maximum RMS Voltage                                                                               | V <sub>RMS</sub> | 35           | 70     | 140    | 210    | 280    | 420    | 560    | 700    | Volts            |    |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>  | 50           | 100    | 200    | 300    | 400    | 600    | 800    | 1000   | Volts            |    |
| Maximum Average Forward Rectified Current at T <sub>A</sub> = 50°C                                | I <sub>O</sub>   | 2.0          |        |        |        |        |        |        |        | Amps             |    |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 60           |        |        |        |        |        |        |        | Amps             |    |
| Typical Current Squared Time                                                                      | I <sup>2</sup> T | 14.9         |        |        |        |        |        |        |        | A <sup>2</sup> S |    |
| Typical Thermal Resistance (Note 1)                                                               | R <sub>θJL</sub> | 10           |        |        |        |        |        |        |        | °C/W             |    |
| Typical Thermal Resistance (Note 1)                                                               | R <sub>θJC</sub> | 15           |        |        |        |        |        |        |        | °C/W             |    |
| Typical Thermal Resistance (Note 1)                                                               | R <sub>θJA</sub> | 40           |        |        |        |        |        |        |        | °C/W             |    |
| Typical Junction Capacitance (Note 2)                                                             | C <sub>J</sub>   | 30           |        |        |        |        | 20     |        |        |                  | pF |
| Operating Temperature Range                                                                       | T <sub>J</sub>   | 150          |        |        |        |        |        |        |        | °C               |    |
| Storage Temperature Range                                                                         | T <sub>STG</sub> | -55 to + 150 |        |        |        |        |        |        |        | °C               |    |

### ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

| CHARACTERISTICS                                                            |                         | SYMBOL         | HER201 | HER202 | HER203 | HER204 | HER205 | HER206 | HER207 | HER208 | UNITS |
|----------------------------------------------------------------------------|-------------------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 2.0A DC                           |                         | V <sub>F</sub> | 1.0    |        |        | 1.3    |        | 1.7    |        |        | Volts |
| Maximum Full Load Reverse Current, Full cycle Average T <sub>L</sub> =55°C |                         | I <sub>R</sub> | 100    |        |        |        |        |        |        |        | μA    |
| Maximum Average Reverse Current                                            | @T <sub>A</sub> = 25°C  |                | 5      |        |        |        |        |        |        |        | μA    |
| at Rated DC Blocking Voltage                                               | @T <sub>A</sub> = 100°C |                | 100    |        |        |        |        |        |        |        | μA    |
| Maximum Reverse Recovery Time (Note 4)                                     |                         | trr            | 50     |        |        |        |        | 75     |        |        | nSec  |

NOTES : 1. Thermal Resistance : At 9.5mm lead length,PCB mounted.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
4. Test Conditions:  $I_F = 0.5A$ ,  $I_R = -1.0A$ ,  $I_{RR} = -0.25A$ .  
5. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2011-03  
REV:B

## RATING AND CHARACTERISTICS CURVES ( HER201 THRU HER208 )

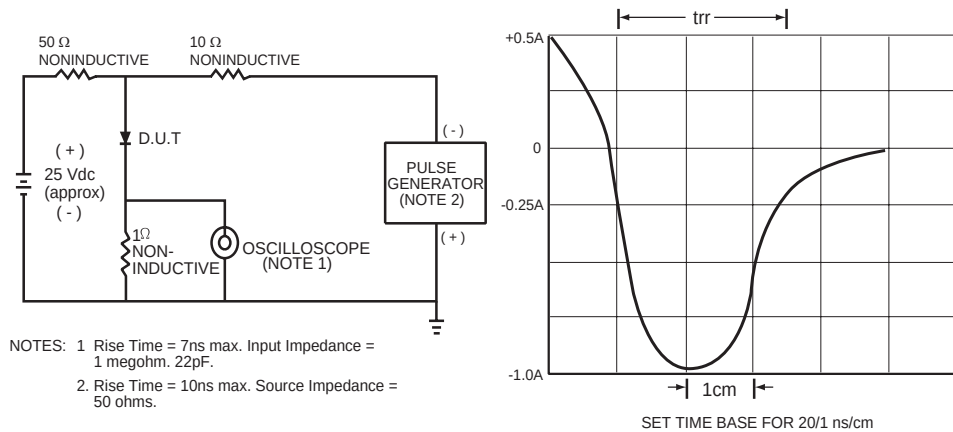


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

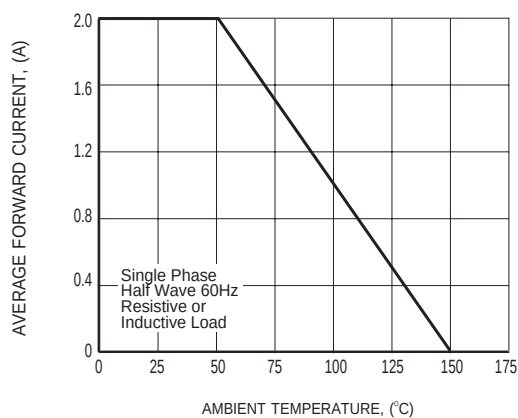


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

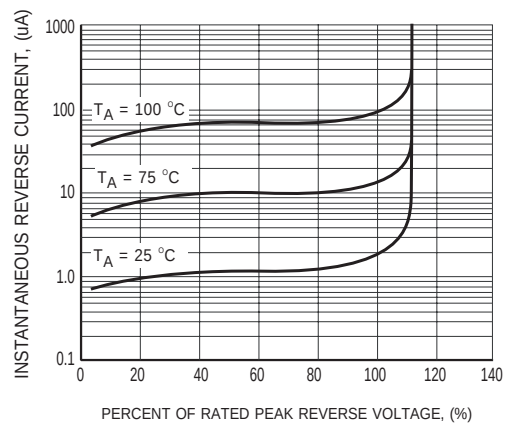
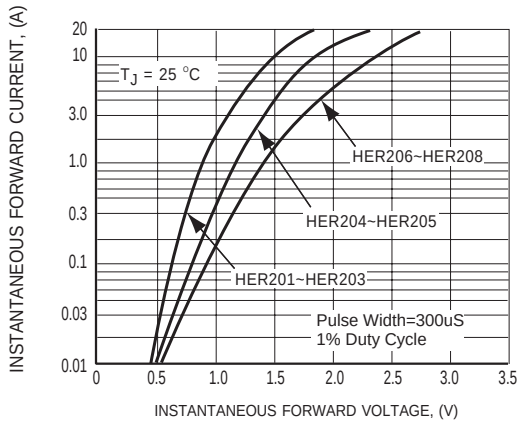
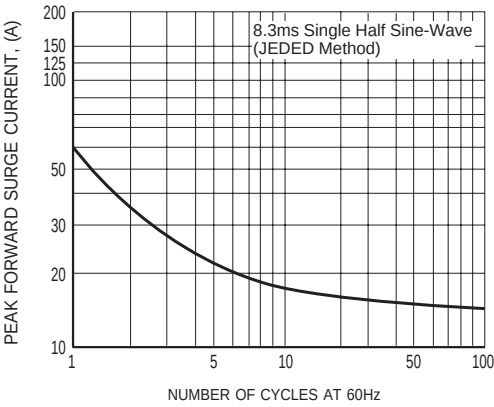


FIG.3 TYPICAL REVERSE CHARACTERISTICS

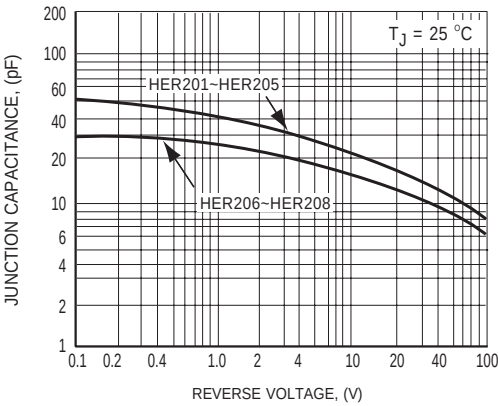
**RATING AND CHARACTERISTICS CURVES ( HER201 THRU HER208 )**



**FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



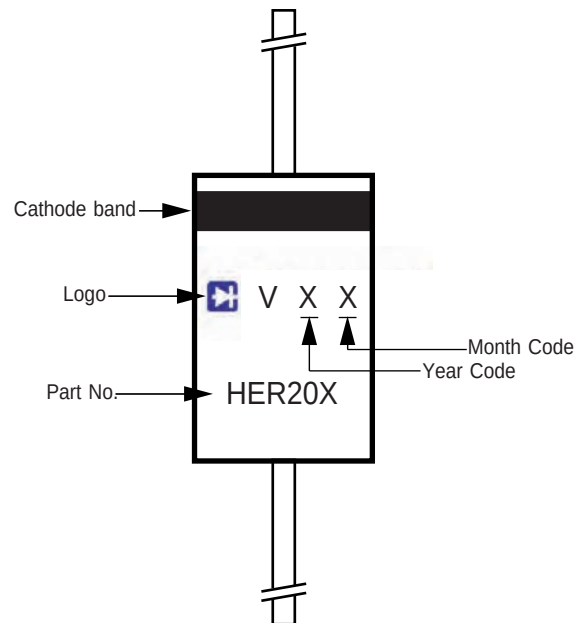
**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



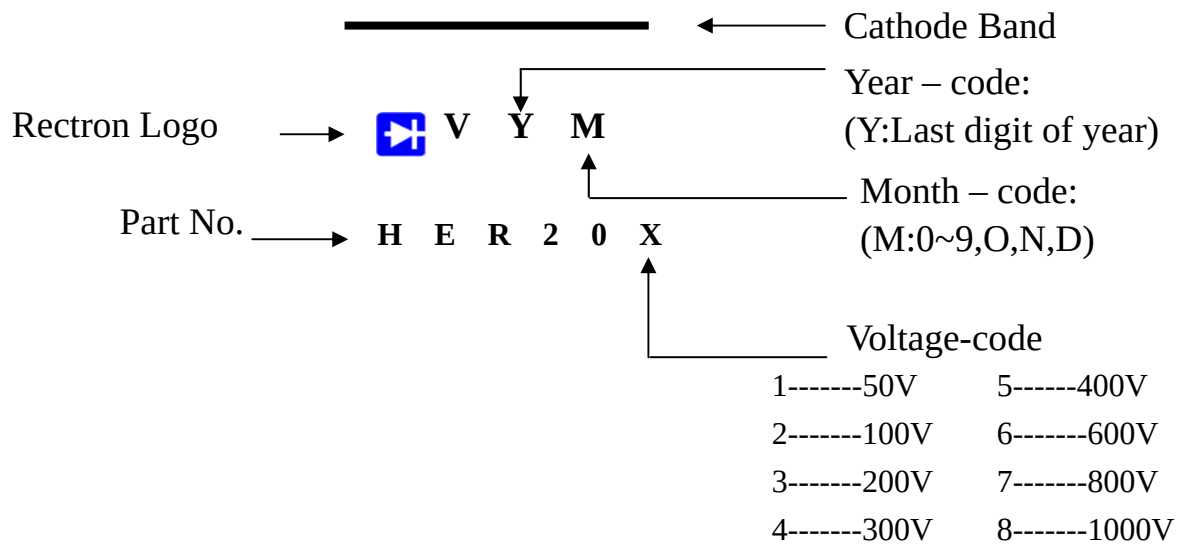
**FIG.6 TYPICAL JUNCTION CAPACITANCE**

# THE MARKING OF HER20X

## Marking Description:



## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### BULK PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|------------|---------------------|------------------|---------------|------------------|
| DO-15   | -B           | 500        | 194*84*21           | 450*220*255      | 25,000        | 12.74            |

### REEL PACK

| PACKAGE | PACKING CODE | EA PER REEL | COMPONENT SPACE(mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|-------------|---------------------|-----------------|---------------|------------------|---------------|------------------|
| DO-15   | -T           | 4,000       | 5.0                 | 52              | 330           | 355*350*335      | 16,000        | 10.05            |

### AMMO PACK

| PACKAGE | PACKING CODE | REEL ( EA ) | COMPONENT SPACE(mm) | TAPE SPACE (mm) | BOX SIZE (mm) | CARTON SIZE(mm) | CARTON ( EA ) | GROSS WEIGHT (Kg) |
|---------|--------------|-------------|---------------------|-----------------|---------------|-----------------|---------------|-------------------|
| DO-15   | -F           | 1,500       | 5.0                 | 52              | 255*73*100    | 400*268*225     | 15,000        | 8.8               |

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