

# HER251 - HER258

**PRV : 50 - 1000 Volts**  
**Io : 2.5 Amperes**

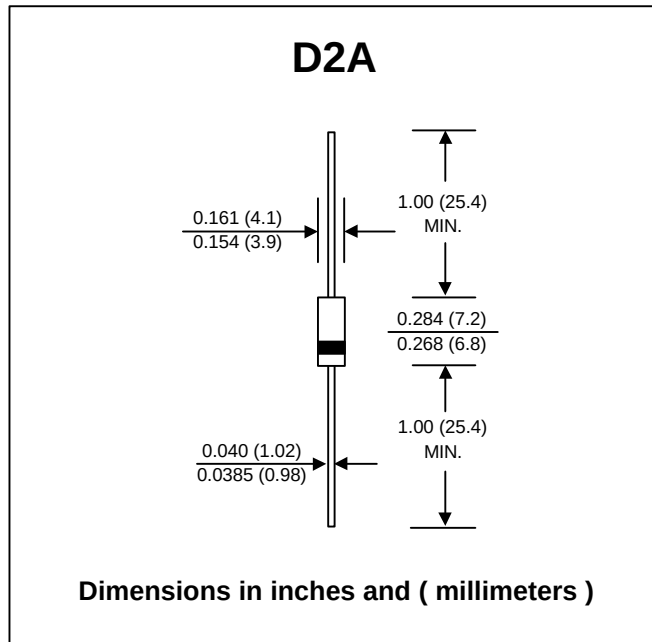
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency

## MECHANICAL DATA :

- \* Case : D2A Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.645 gram

# HIGH EFFICIENT RECTIFIER DIODES



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

| RATING                                                                                                          | SYMBOL | HER<br>251    | HER<br>252 | HER<br>253 | HER<br>254 | HER<br>255 | HER<br>256 | HER<br>257 | HER<br>258 | UNIT |
|-----------------------------------------------------------------------------------------------------------------|--------|---------------|------------|------------|------------|------------|------------|------------|------------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                          | VRRM   | 50            | 100        | 200        | 300        | 400        | 600        | 800        | 1000       | V    |
| Maximum RMS Voltage                                                                                             | VRMS   | 35            | 70         | 140        | 210        | 280        | 420        | 560        | 700        | V    |
| Maximum DC Blocking Voltage                                                                                     | VDC    | 50            | 100        | 200        | 300        | 400        | 600        | 800        | 1000       | V    |
| Maximum Average Forward Current<br>0.375"(9.5mm) Lead Length      Ta = 55 °C                                    | IF(AV) | 2.5           |            |            |            |            |            |            |            | A    |
| Maximum Peak Forward Surge Current,<br>8.3ms Single half sine wave superimposed<br>on rated load (JEDEC Method) | IFSM   | 100           |            |            |            |            |            |            |            | A    |
| Maximum Peak Forward Voltage at IF = 2.5 A                                                                      | VF     | 1.1           |            |            |            |            | 1.7        |            |            | V    |
| Maximum DC Reverse Current      Ta = 25 °C<br>at Rated DC Blocking Voltage      Ta = 100 °C                     | IR     | 10            |            |            |            |            |            |            |            | μA   |
|                                                                                                                 | IR(H)  | 50            |            |            |            |            |            |            |            | μA   |
| Maximum Reverse Recovery Time ( Note 1 )                                                                        | Trr    | 50            |            |            |            |            | 75         |            |            | ns   |
| Typical Junction Capacitance ( Note 2 )                                                                         | CJ     | 50            |            |            |            |            |            |            |            | pf   |
| Junction Temperature Range                                                                                      | TJ     | - 65 to + 150 |            |            |            |            |            |            |            | °C   |
| Storage Temperature Range                                                                                       | TSTG   | - 65 to + 150 |            |            |            |            |            |            |            | °C   |

## Notes :

- ( 1 ) Reverse Recovery Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>rr</sub> = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 V<sub>DC</sub>

## RATING AND CHARACTERISTIC CURVES ( HER251 - HER258 )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

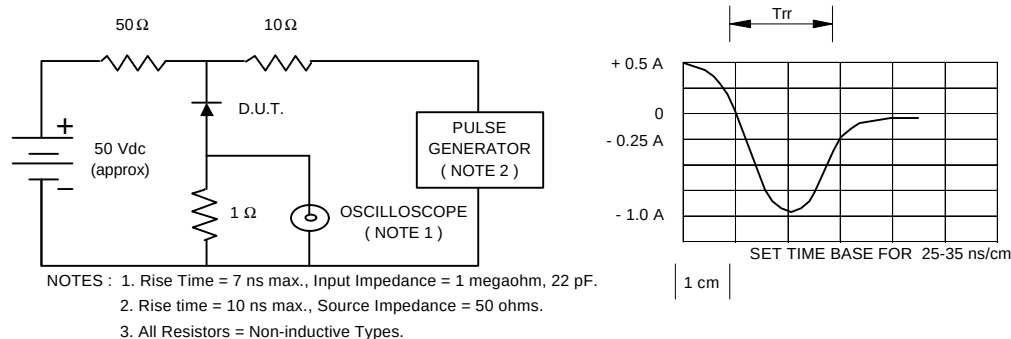


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

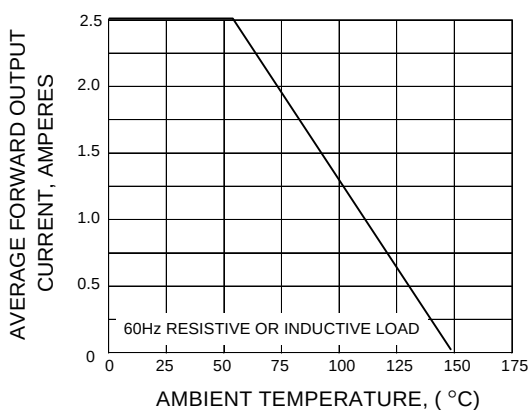


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

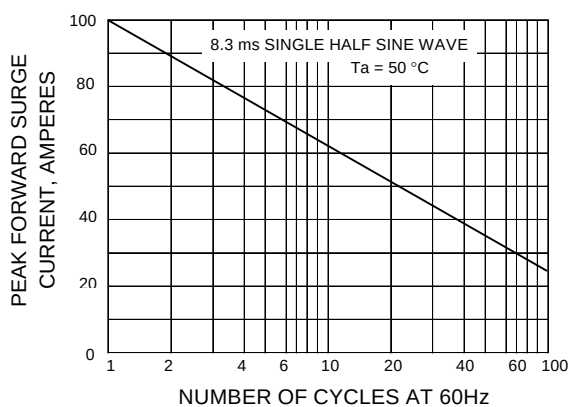


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

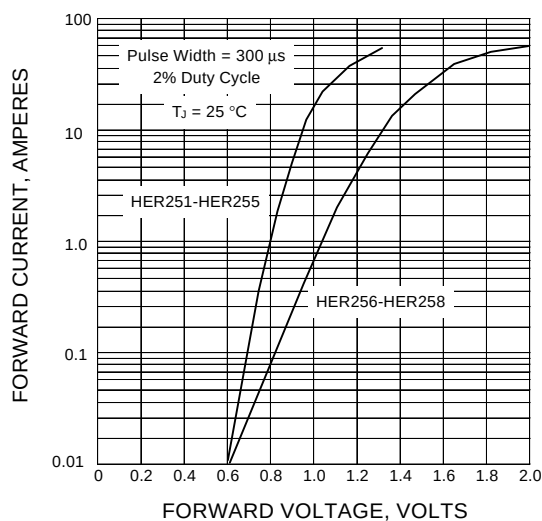


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

