

## HIGH EFFICIENCY RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts  
FORWARD CURRENT - 3.0 Ampere

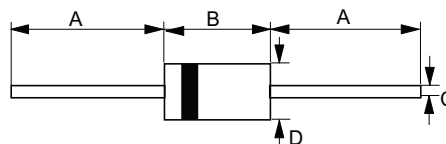
### FEATURES

- Plastic passivated chip
- Super fast switching for high efficiency
- High current capability
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

### MECHANICAL DATA

- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 1.071 grams

### DO-201AD



| DO-201AD                  |                    |                    |
|---------------------------|--------------------|--------------------|
| Dim.                      | Min.               | Max.               |
| A                         | 25.4               | -                  |
| B                         | 8.50               | 9.50               |
| C                         | 1.20 $\varnothing$ | 1.30 $\varnothing$ |
| D                         | 5.0 $\varnothing$  | 5.60 $\varnothing$ |
| Dimensions in millimeters |                    |                    |

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| CHARACTERISTICS  | SYMBOL           | HER         | HER | HER | HER | HER | HER | HER | HER  | UNIT |    |
|--|------------------|-------------|-----|-----|-----|-----|-----|-----|------|------|----|
|  |                  | 301         | 302 | 303 | 304 | 305 | 306 | 307 | 308  |      |    |
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub> | 50          | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V    |    |
| Maximum RMS Voltage  | V <sub>RMS</sub> | 35          | 70  | 140 | 210 | 280 | 420 | 560 | 700  | V    |    |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>  | 50          | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V    |    |
| Maximum Average Forward Rectified Current @T <sub>L</sub> =75 C                                      | I(AV)            | 3.0         |     |     |     |     |     |     |      | A    |    |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)    | I <sub>FSM</sub> | 150         |     |     |     |     |     |     |      | A    |    |
| Maximum forward Voltage at 3.0A DC   | V <sub>F</sub>   | 1.0         |     | 1.3 |     | 1.7 |     |     |      | V    |    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C | I <sub>R</sub>   | 10.0<br>100 |     |     |     |     |     |     |      | uA   |    |
| Maximum Reverse Recovery Time (Note 1)   | T <sub>RR</sub>  | 50          |     |     |     |     | 75  |     |      |      | ns |
| Typical Junction Capacitance (Note 2)  | C <sub>J</sub>   | 20          |     |     |     |     | 10  |     |      |      | pF |
| Typical Thermal Resistance (Note 3)  | R <sub>θJL</sub> | 30          |     |     |     |     |     |     |      | °C/W |    |
| Operating Temperature Range  | T <sub>J</sub>   | -55 to +150 |     |     |     |     |     |     |      | °C   |    |
| Storage Temperature Range  | T <sub>STG</sub> | -55 to +150 |     |     |     |     |     |     |      | °C   |    |

NOTES : 1.Reverse Recovery Test Conditions :I<sub>F</sub>=0.5A,I<sub>R</sub>=1.0A,I<sub>RR</sub>=0.25A.  
2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
3.Thermal Resistance junction to Lead.

RATINGS AND CHARACTERISTIC CURVES

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

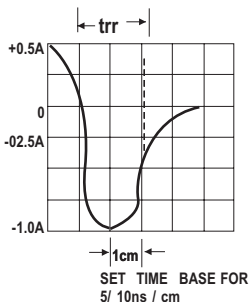
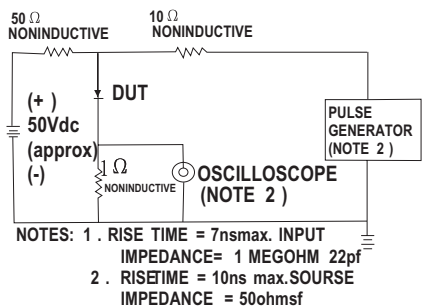


FIG. 2 - MAXIMUM AVERAGE FORWARD CURRENT DERATING

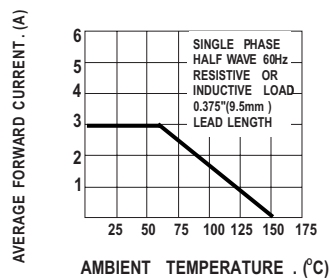


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

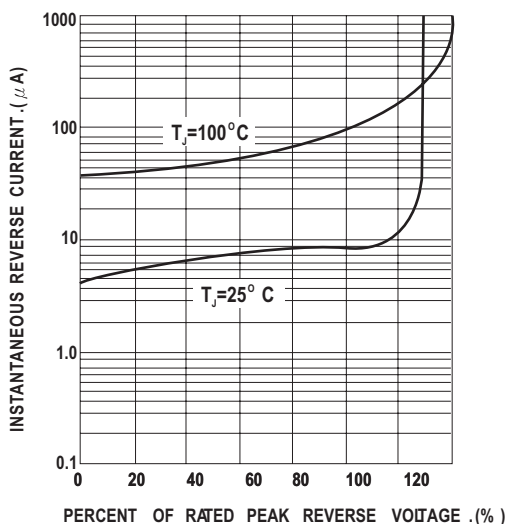


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

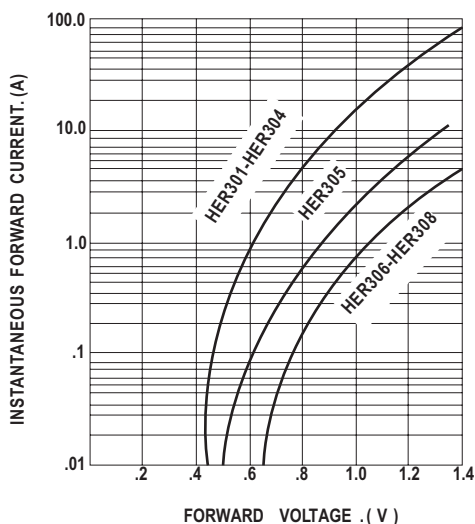


FIG. 5 - MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

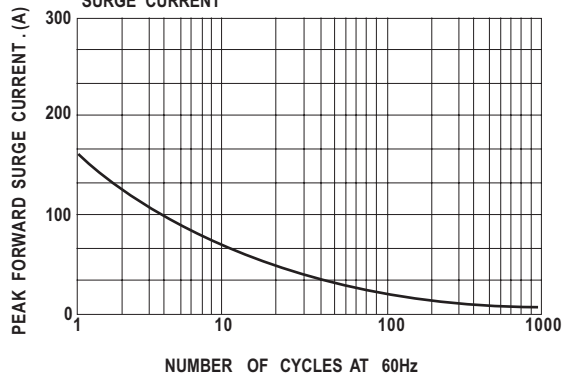


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

