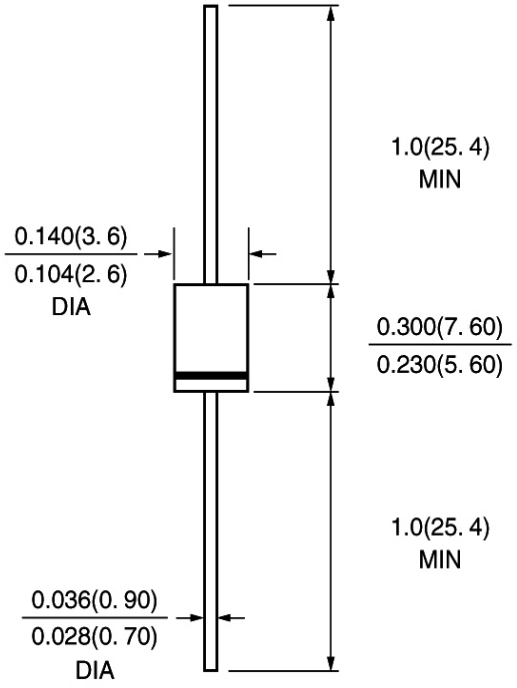
CURRENT 3.0 Ampere
VOLTAGE RANG 50 to 1000 Volts

# HER301 THRU HER308

DO-15\DO-204AC




Dimensions in inches and (millimeters)

## FEATURES

- Low coat construction
- Fast switching for high efficency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
  260 /10 secods/.375 (9.5mm)lead length at 5 lbs(2.3kg) tension

## MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25$^{O}$C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

| | SYMBOLS | HER 301 | HER 302 | HER 303 | HER 304 | HER 305 | HER 306 | HER 307 | HER 308 | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current 0.375 (9.5mm) lead length at $T_A$= 50 | $I_{(AV)}$ | 3.0 | | | | | | | | Amp |
| Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 125 | | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage @ 3.0A | $V_F$ | 1.0 | | | 1.3 | | 1.5 | 1.7 | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A$ = 25 | $I_R$ | 10 | | | | | | | | µA |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A$ = 125 | $I_R$ | 500 | | | | | | | | µA |
| Maximum Full Load Recovery Current,full cycle average 0.375 (9.5mm)lead length at TL=55 | $IR_{(AV)}$ | 150 | | | | | | | | µA |
| Maximum Reverse Recovery Time(NOTE 1) | trr | 50 | | | | | 75 | | | ns |
| Typical Thermal Resistance (NOTE 2) | $C_J$ | 70 | | | | | 50 | | | PF |
| Typical Thermal Resistance(NOTE 3) | $R_{\theta JA}$ | 20 | | | | | | | | /W |
| Operating Junction Temperature Range | $T_J$ ,$T_{STG}$ | (-55 to +150) | | | | | | | | |

**Notes:**
1 Test Condition:IF=0.5A,IR=1.0A,IRR=0.25A
2. Measured at 1.0 MHz and applied reverse of 4.0 V
3 Thermal resistance from junction to ambient with .375 (9.5mm)lead length, P.C.B. mounted. .

CURRENT 3.0 Ampere
VOLTAGE RANG 50 to 1000 Volts

# HER301 THRU HER308

## RATING AND CHRACTERISTIC CURVES HER301 Thru HER308

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

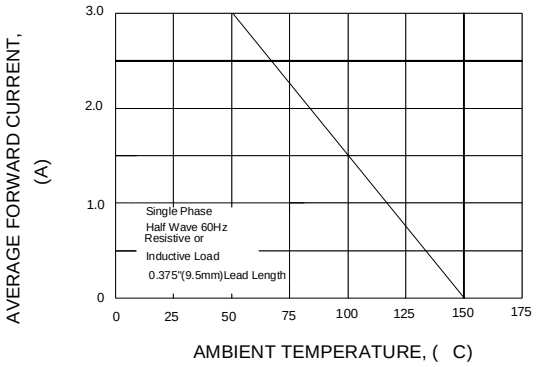



FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

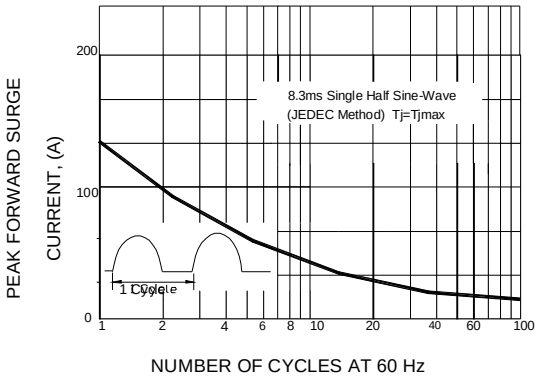



FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

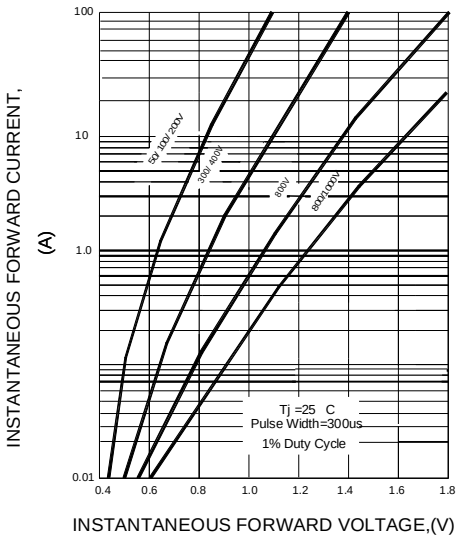



FIG.5-TYPICAL JUNCTION CAPACITANCE

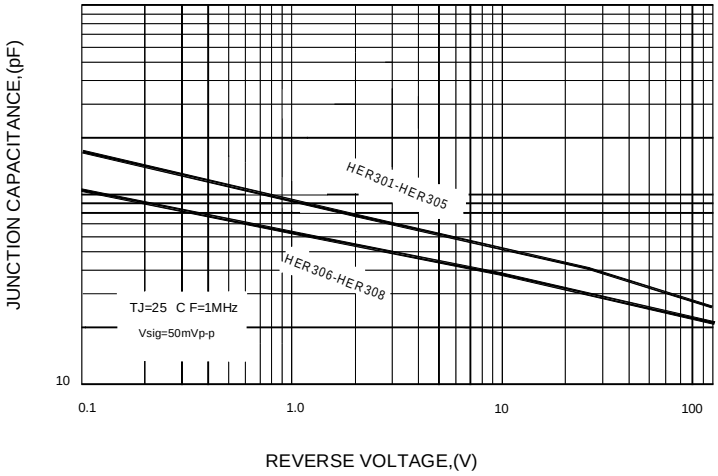



FIG.4-TYPICAL REVERSE CHARACTERISTICS

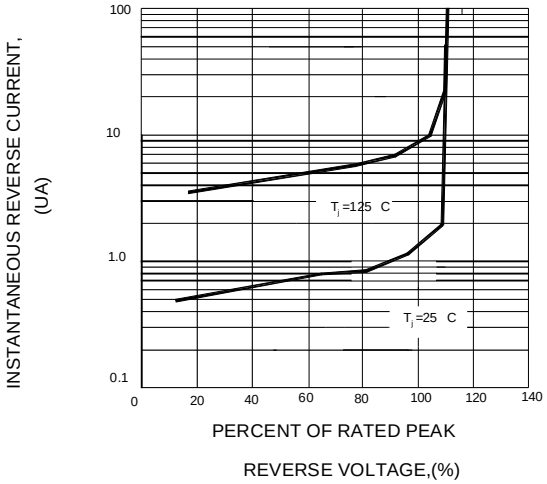
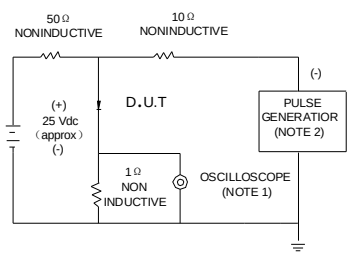
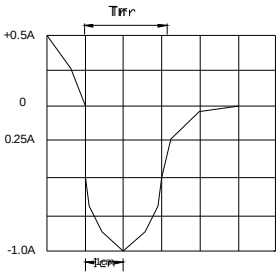



FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE REXOVERY TIME CHARACTERISTIC




NOTE: 1.Rise Time =7ns max.Input Impedance=1megohm.22pF
2.Rise time=10ns max.Source Impedance=50 ohms

SET TIME BASE FOR 50 /100NS /cm