

Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- High speed switching



DO-41

Mechanical Date

- **Case:** DO-41 Molded plastic
- **Epoxy:** UL 94V-O rate flame retardant
- **Lead:** Axial leads, solderable per MIL-STD-202 method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 0.34 gram

Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
V_{RRM}	50 V to 1000 V
I_{FSM}	30A
t_{rr}	50nS,70nS
V_F	1.0V,1.3V,1.85V
$T_j \text{ max.}$	125 °C

Maximum Ratings & Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase ,half wave, 60Hz, resistive or inductive load, For capacitive load, derate current by 20%.

Items	Symbol	HER 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=50 C	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30								A
Operating junction temperature	T_j	-65 to +125								°C
Storage temperature range	T_{STG}	-65 to +125								°C

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Test conditions	Symbol	HER101~HER103	HER104~HER105	HER106~HER108	UNIT
Instantaneous forward voltage	$I_F = 1.0 \text{ A}$	V_F	1.0	1.30	1.85	V
Reverse current	$V_R = V_{DC}$	I_R	$T_j = 25^\circ\text{C}$			μA
			$T_j = 100^\circ\text{C}$			
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1.0\text{A}, I_{rr} = 0.25 \text{ A}$	t_{rr}	50		70	nS
Typical junction capacitance	4.0 V ,1MHz	C_j	20			pF

Rating and Characteristic Curves (HER101 THRU HER108)

FIG.1 Reverse Recovery Time Characteristic and Test Circuit Diagram

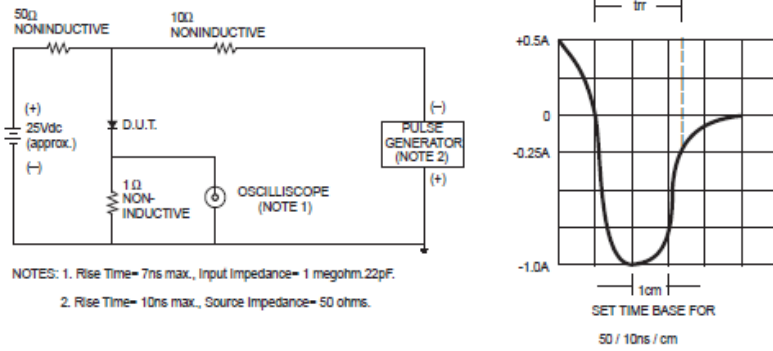


FIG.2 Typical Forward Current Derating Curve

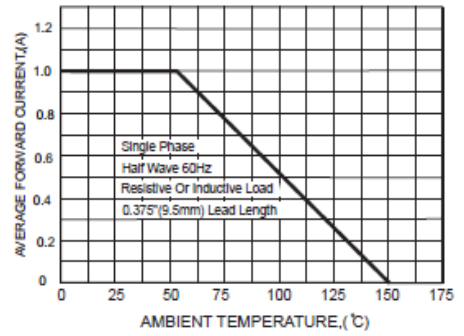


FIG.3 Maximum Non-repetitive Forward Surge Current

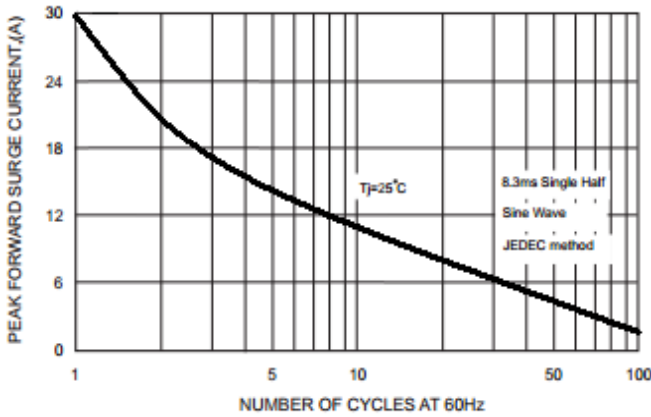


FIG.4 Typical Junction Capacitance

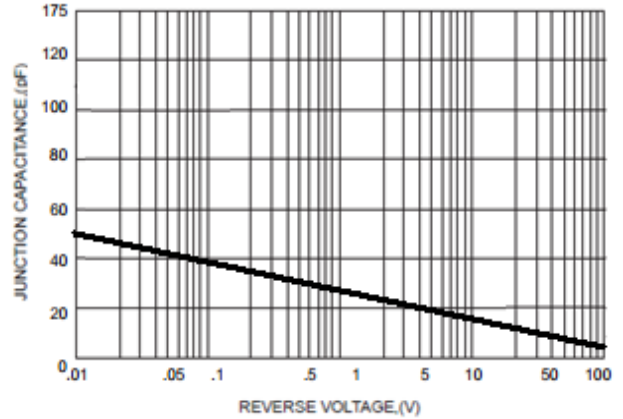
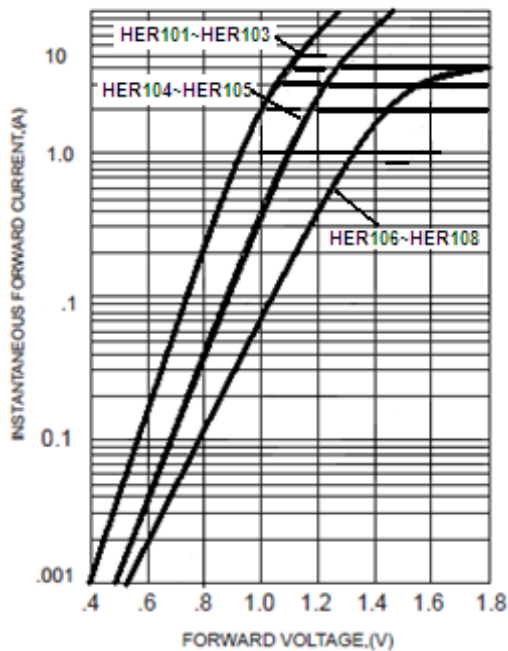
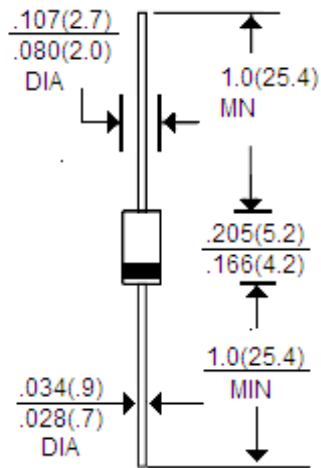


FIG.5 Typical Forward Characteristics



Package Outline**DO-41**

Dimensions in inches and (millimeters)