



SYNSEMI SEMICONDUCTOR

HER101 thru HER108

1.0 Amp. High Efficient Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 1.0 Ampere

Features

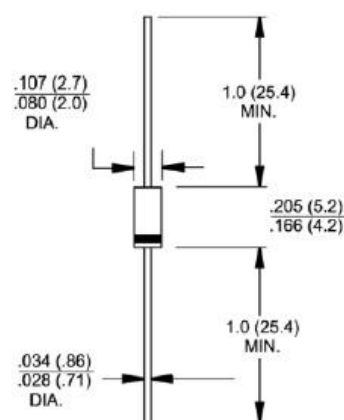
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability



DO-204AL (DO-41)

Mechanical Data

- ◆ Case: Molded plastic DO-204AL (DO-41)
- ◆ Epoxy: UL 94V-O rate flame retardant
- ◆ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ◆ Polarity: Color band denotes cathode end
- ◆ High temperature soldering guaranteed:
250°C/10 seconds .375", (9.5mm) lead
lengths at 5 lbs., (2.3kg) tension
- ◆ Mounting position: Any
- ◆ Weight: 0.012 ounce, 0.33 gram



Dimensions in inches and (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%

Parameter	Symbols	HER 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	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 .375" (9.5mm) lead length @ $T_A=55^{\circ}\text{C}$	$I_{F(AV)}$	1.0								Amp
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0								Amps
Maximum instantaneous forward voltage @ 1.0A	V_F	1.0			1.3		1.7			Volts
Maximum DC reverse current @ $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage @ $T_A=100^{\circ}\text{C}$	I_R	5.0 100								μA μA
Maximum reverse recovery time (Note 1)	t_r	50					75			nS
Typical junction capacitance (Note 2)	C_j	20					15			pF
Operating temperature range	T_J	-65 to +125								$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-65 to +150								$^{\circ}\text{C}$

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

HER101 thru HER108

RATINGS AND CHARACTERISTIC CURVES

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

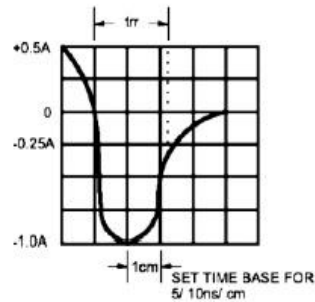
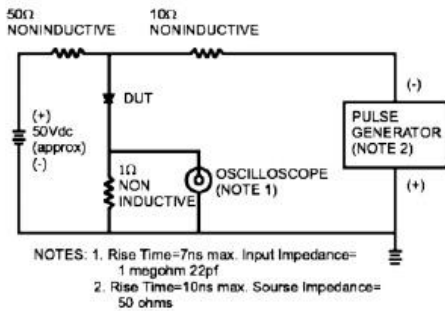


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

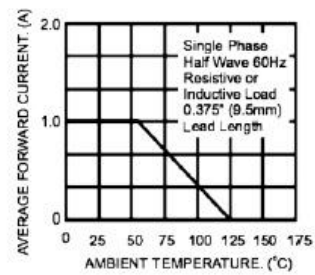


FIG.3- TYPICAL REVERSE CHARACTERISTICS

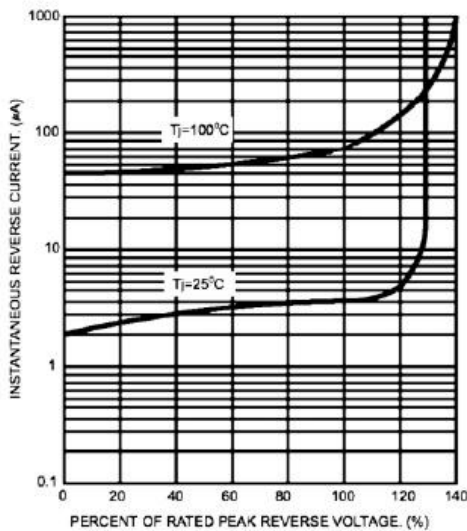


FIG.4- TYPICAL FORWARD CHARACTERISTICS

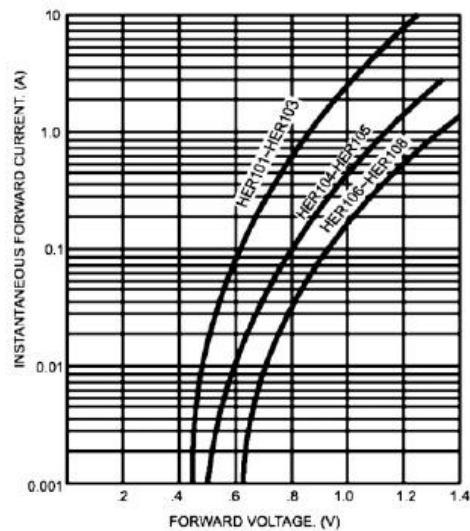


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

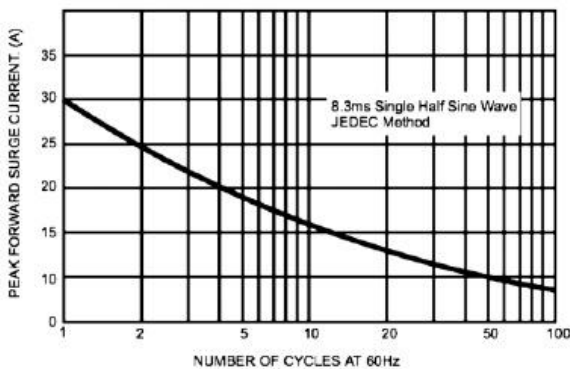


FIG.6- TYPICAL JUNCTION CAPACITANCE

