

HER301 - HER307

3.0AMPS High Efficient Rectifiers

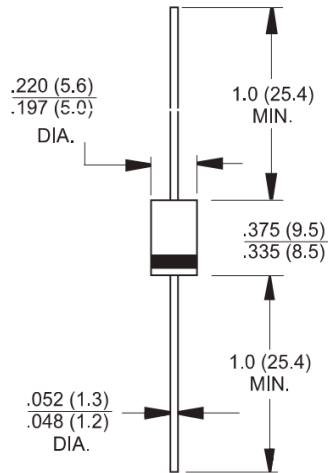
DO-201AD

Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10s / .375", (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
- ✧ Weight: 1.2 grams



Dimensions in inches and (millimeters)



Marking Diagram

- HER30X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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%

Type Number	Symbol	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A=55^\circ\text{C}$	$I_{F(AV)}$	3							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage (Note 1) @ 3 A	V_F	1.0			1.3		1.7		V
Maximum Reverse Current @ Rated VR $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	10 250							uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	50					75		nS
Typical Junction Capacitance (Note 3)	C_j	70					50		pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	40 7 10							$^\circ\text{C/W}$
Operating Temperature Range	T_J	- 65 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 150							$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $IRR=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (HER301 THRU HER307)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

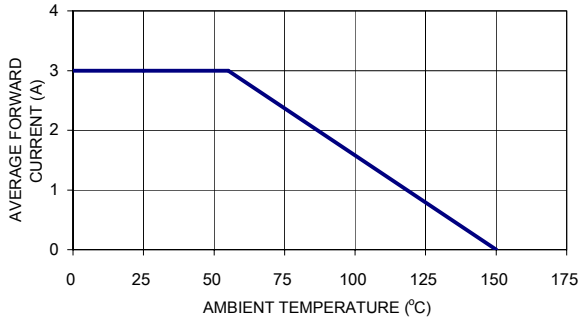


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

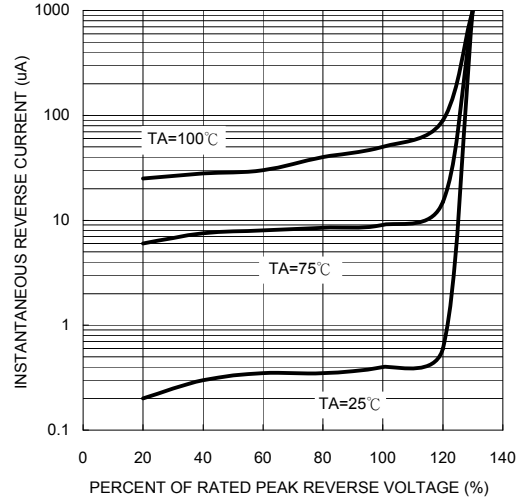


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

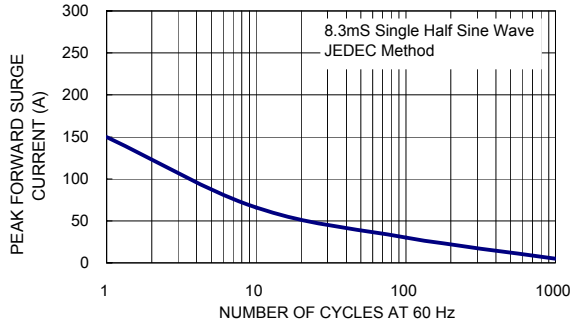


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

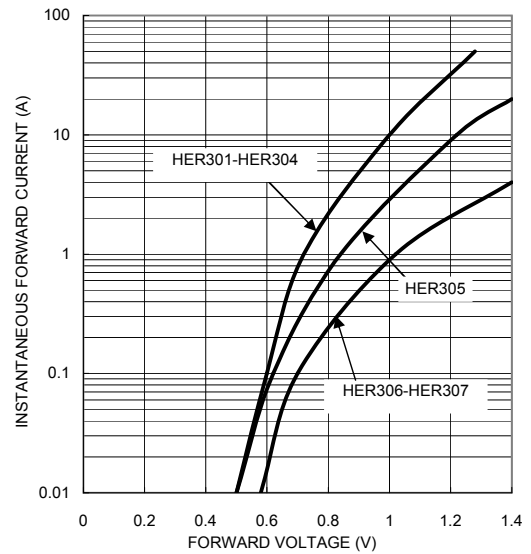


FIG. 4 TYPICAL JUNCTION CAPACITANCE

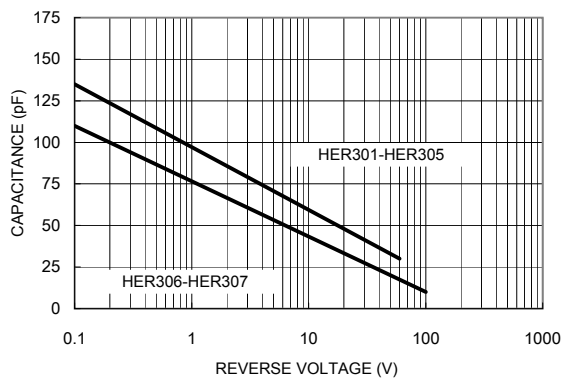


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

