



# HER301G THRU HER308G

## Ultra Fast Rectifiers

### FEATURES

- Glass Passivated chip junction
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Void-free Plastic in a DO-201AD package.
- 3.0 ampere operation at  $T_A=55$  With no thermal runaway.
- Ultra Fast switching for high efficiency.
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: Molded plastic, DO-201AD

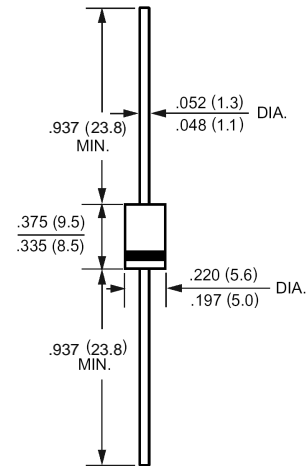
Terminals: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Band denotes cathode

Mounting position: Any

Weight: 0.04ounce, 1.1gram

### DO-201AD(DO-27)



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	HER301G	HER302G	HER303G	HER304G	HER305G	HER306G	HER307G	HER308G	Units
Maximum Recurrent 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 at $T_A=55$	$I_{(AV)}$	3.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	125								Amp
Maximum Forward Voltage at 3.0A and $T_A=25$	$V_F$	1.0		1.3		1.7			Volts	
Maximum Reverse Current at $T_J=25$ at Rated DC Blocking Voltage $T_J=100$	$I_R$	10.0 750								uAmp
Typical Junction Capacitance (Note 1)	$C_J$	70					50			pF
Maximum Reverse Recovery Time (Note 2)	$T_{RR}$	50					75			nS
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	20								/W
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150								

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Reverse Recovery Test Conditions :  $I_F=.5A$  ,  $I_R=1A$  ,  $I_{RR}=.25A$ .

3- Thermal Resistance from Junction to Ambient at 0.375"(9.5mm) lead length P.C.B. Mounted.

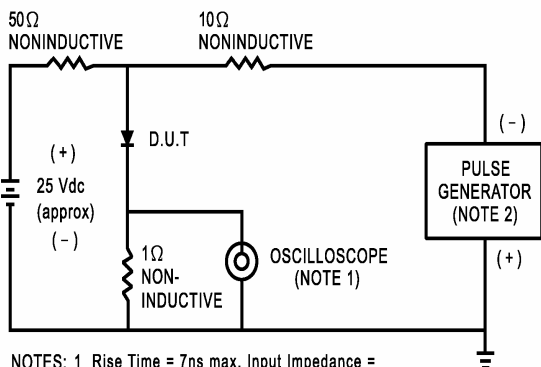


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### RATINGS AND CHARACTERISTIC CURVES

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



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

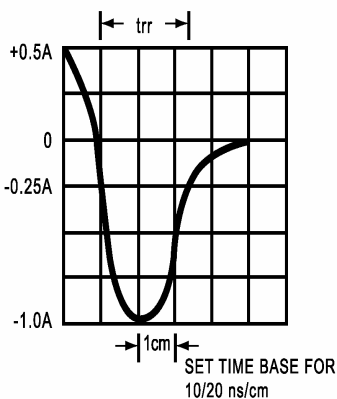


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

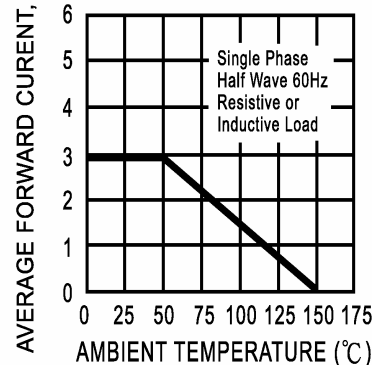


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

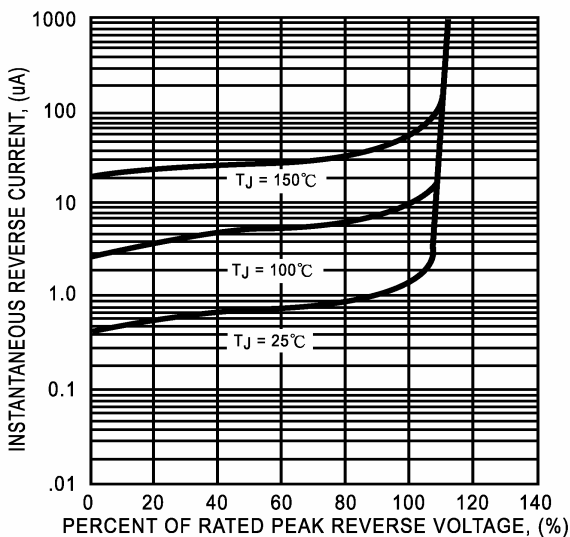


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

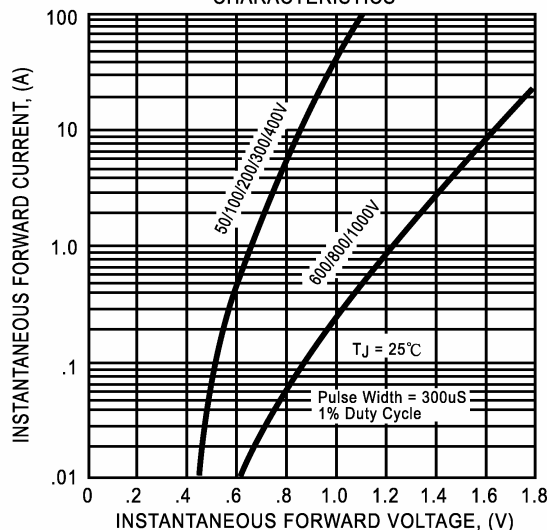


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

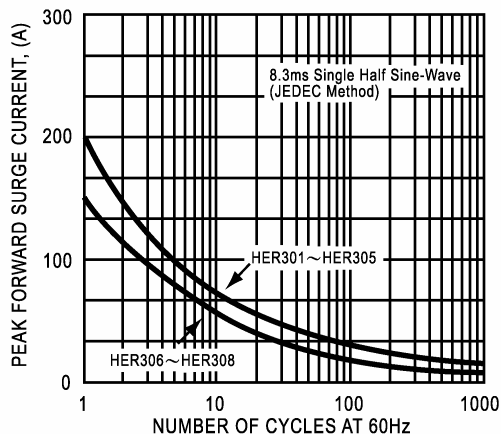


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

