



HER101 THRU HER108

HIGH EFFICIENCY RECTIFIER

REVERSE VOLTAGE: 50 to 1000 VOLTS

FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Ultra Fast switching for high efficiency.
- High speed switching
- Suffix "H" indicates Halogen-free parts, ex. HER101H

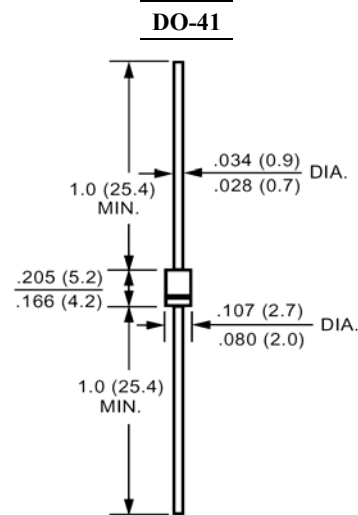
MECHANICAL DATA

Case : Molded plastic, DO-41

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

Polarity : Band denotes cathode

Mounting position : Any



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	HER101	HER102	HER103	HER104	HER105	HER106	HER107	HER108	Units	
Maximum Recerrent 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	$I_{(AV)}$	1.0								Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0								Amp	
Maximum Forward Voltage at 1.0A and $T_A=25^\circ\text{C}$	V_F	1.0			1.3		1.7			Volts	
Maximum Reverse Current at $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=100^\circ\text{C}$	I_R					5.0					uAmp
						100					
Typical Junction Capacitance (Note 1)	C_J	25				20				pF	
Maximum Reverse Recovery Time (Note 2)	T_{RR}	50				75				nS	
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	70.0								$^\circ\text{C/W}$	
Operating and Storage Temperature Range	T_J, T_{stg}	-65 to +150								$^\circ\text{C}$	

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 form 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

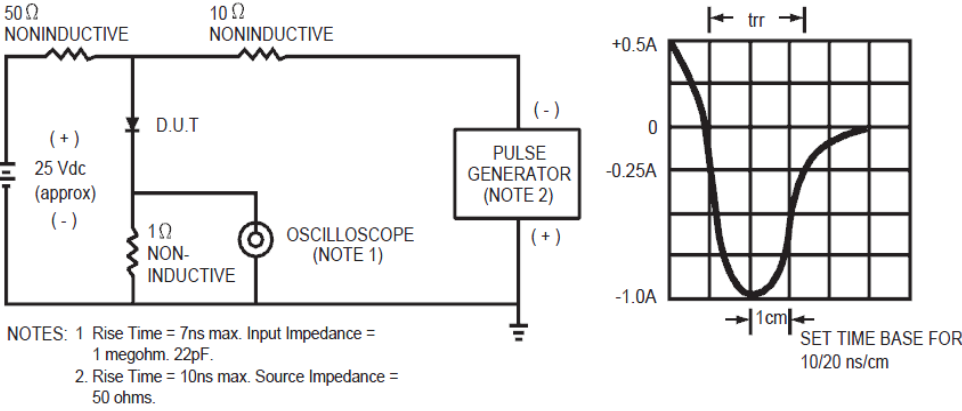


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

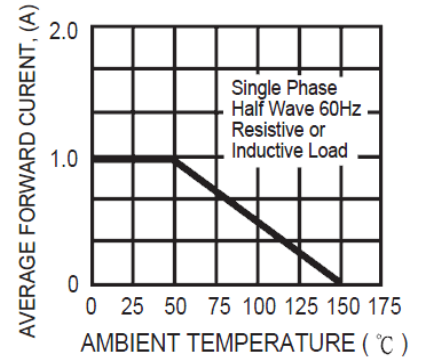


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

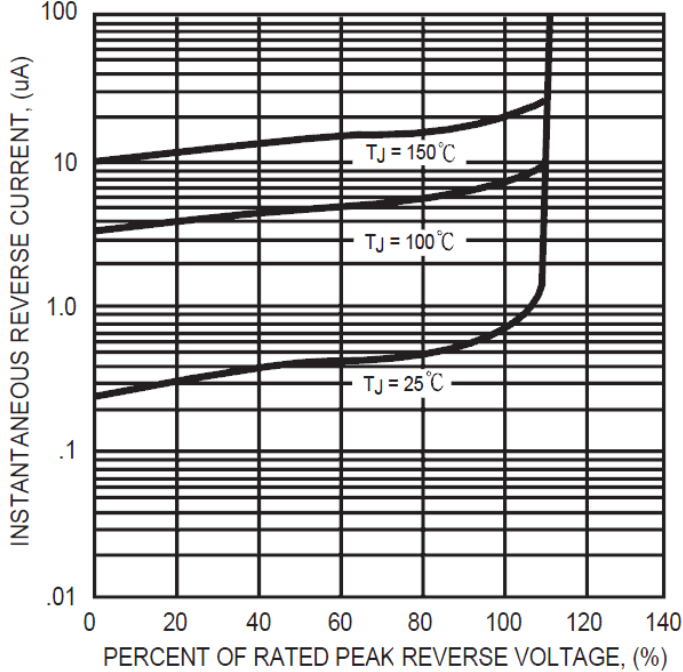


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

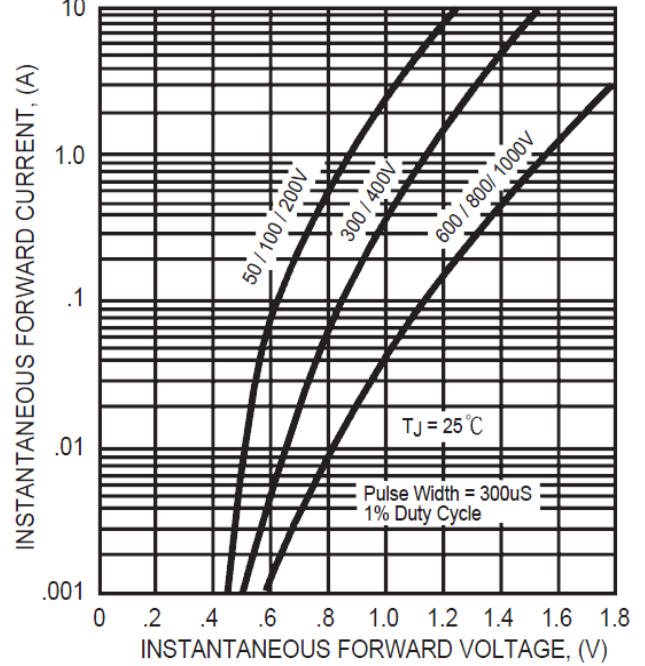


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

