

# 1A High Efficiency Rectifiers

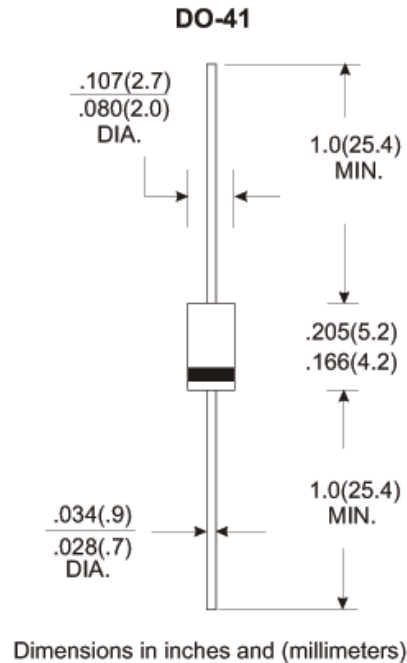
## HER101 THRU HER108 50 to 1000 V 1.0 A

### FEATURES

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

### MECHANICAL DATA

- Case: 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
- High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: 0.34 gram



### 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	Symbols	HER 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	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 @ $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30								Amp
Maximum instantaneous Forward Voltage@ 1.0A	$V_F$	1.0			1.3		1.7			Volts
Maximum Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0 100								uAmp
Maximum Reverse Recovery Time (Note 1)	TRR	50			75					nS
Typical Junction Capacitance (Note2)	$C_J$	20			15					pF
Operating Temperature Range	$T_J$	-55 to +150								°C
Storage Temperature Range	$T_{STG}$	-55 to +150								°C

### NOTES:

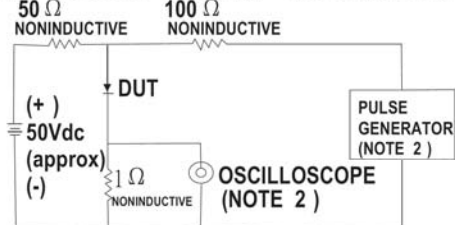
1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

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### RATINGS AND CHARACTERISTIC CURVES (HER101 THRU HER108)

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



- NOTES: 1. RISE TIME = 7nsmax. INPUT IMPEDANCE= 1 MEGOHM 22p  
2. RISE TIME = 10ns max. SOURCE IMPEDANCE = 50ohmsf

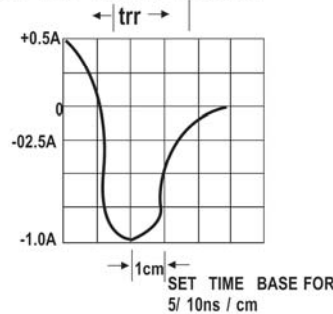


FIG. 2 - MAXIMUM AVERAGE FORWARD CURRENT DERATING

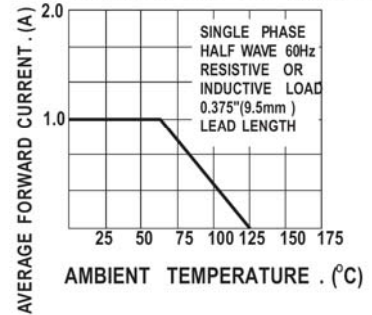


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

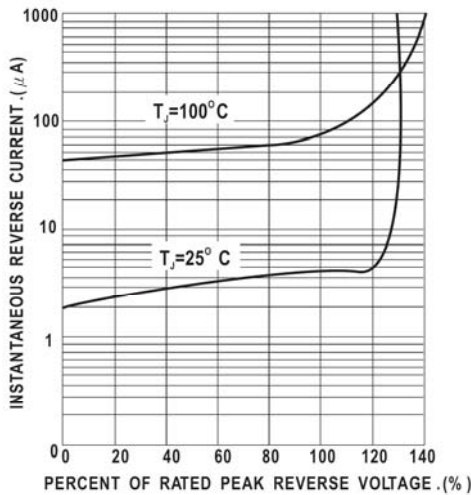


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

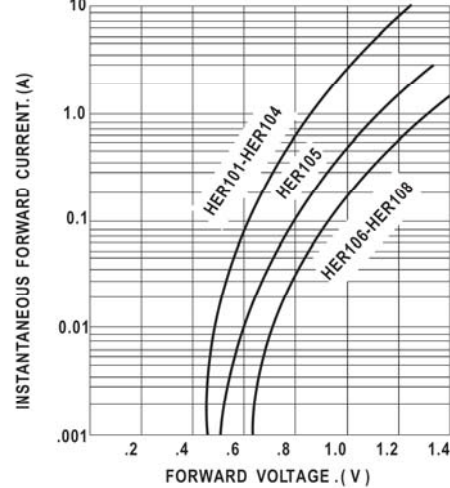


FIG. 5 - MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

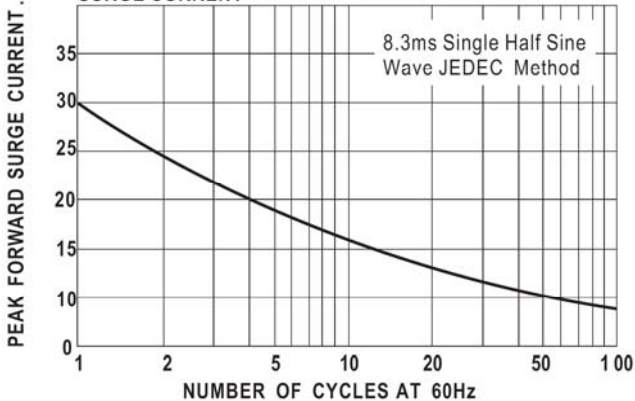


FIG. 6 - TYPICAL REVERSE CHARACTERISTICS

