

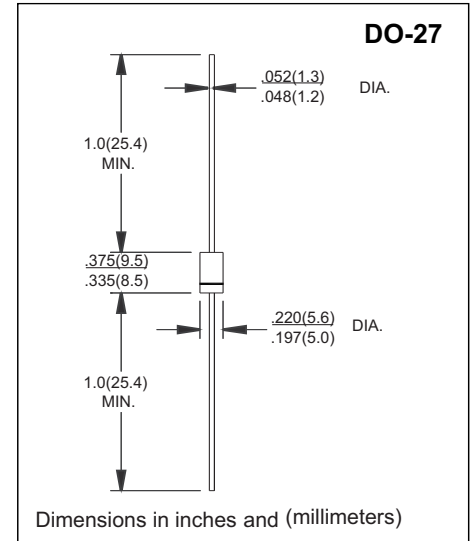
HIGH EFFICIENCY RECTIFIER

FEATURES

- Low cost construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 secods/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 grams



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 501	HER 502	HER 503	HER 504	HER 505	HER 506	HER 507	HER 508	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	800	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current 0.375”(9.5mm) lead length at $T_A = 50^\circ\text{C}$	$I_{(AV)}$	5.0								Amp	
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	200								Amps	
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	1.0			1.3		1.5	1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	10								μA	
	$T_A = 125^\circ\text{C}$	500									
Maximum Full Load Recovery Current,full cycle average 0.375”(9.5mm)lead length at $T_L = 55^\circ\text{C}$	$I_{R(AV)}$	150								μA	
Maximum Reverse Recovery Time(NOTE 1)	t_{rr}	70					100				ns
Typical Thermal Resistance (NOTE 2)	C_J	70					50				PF
Typical Thermal Resistance(NOTE 3)	$R_{\theta JA}$	20								$^\circ\text{C}/\text{W}$	
Operating Junction Temperature Range	T_J, T_{STG}	-55 to +150								$^\circ\text{C}$	

Notes:

- 1 Test Condition: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse of 4.0 V
- 3 Thermal resistance from junction to ambient with .375”(9.5mm)lead length, P.C.B. mounted. .

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RATING AND CHARACTERISTIC CURVES HER501 - HER508

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

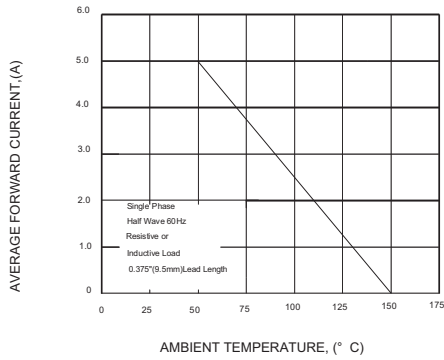


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

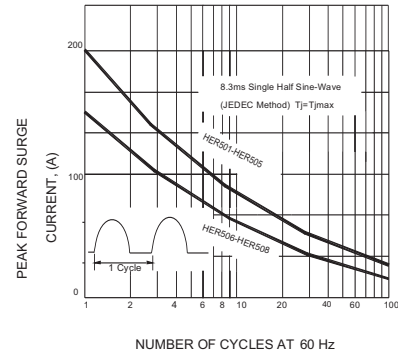


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

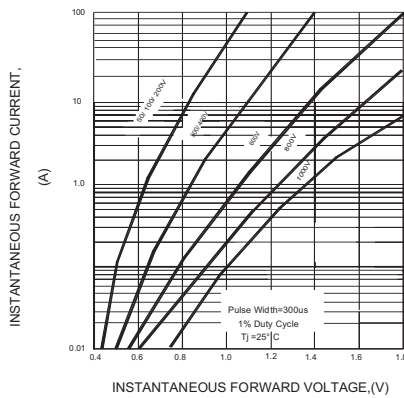


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

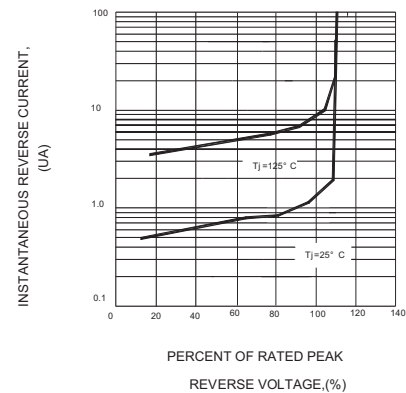


FIG. 5-TYPICAL JUNCTION CAPACITANCE

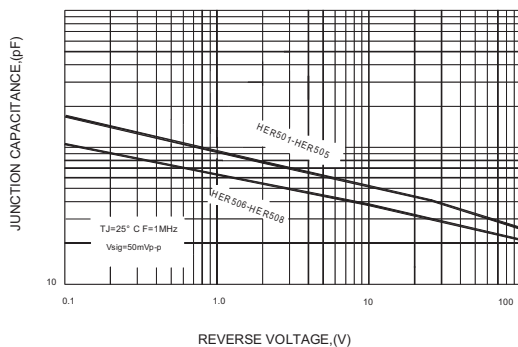
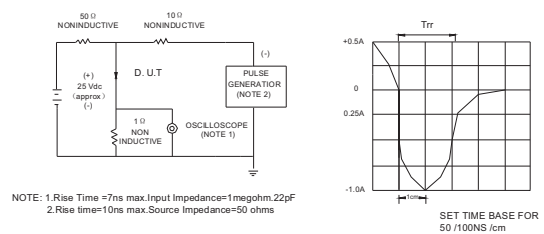


FIG. 6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



Disclaimer

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