



## HIGH EFFICIENCY RECTIFIER

**HER251 THRU HER258**

**VOLTAGE RANGE**  
**CURRENT**

**50 to 1000 Volts**  
**2.5Ampere**

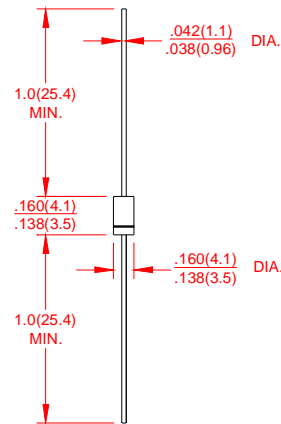
R-3

### FEATURES

- Low coat 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: 0.020ounce, 0.56 grams



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%

	SYMBOLS	HER 251	HER 252	HER 253	HER 254	HER 255	HER 256	HER 257	HER 258	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	700	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 $T_A=50^\circ\text{C}$	$I_{(AV)}$	2.5								Amp	
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100								Amps	
Maximum Instantaneous Forward Voltage @ 2.5A	$V_F$	1.0		1.3		1.5		1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_A=25^\circ\text{C}$								$\mu\text{A}$	
		$T_A=125^\circ\text{C}$									
Maximum Full Load Recovery Current,full cycle average 0.375”(9.5mm)lead length at $TL=55^\circ\text{C}$	$IR_{(AV)}$	100								$\mu\text{A}$	
Maximum Reverse Recovery Time Test conditions $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$	$trr$	50					75				ns
Typical Thermal Resistance (NOTE 2)	$C_J$	30					35				PF
Typical Thermal Resistance(NOTE 1)	$R_{\theta JA}$	35								°C/W	
Operating Junction Temperature Range	$T_J$	(-55 to +150)								°C	
Storage Temperature Range	$T_{STG}$	(-55 to +150)								°C	

#### Notes:

- 1 Thermal resistance from junction to ambient with .375”(9.5mm)lead length, PCB. mounted. .
2. Measured at 1.0 MHz and applied reverse of 4.0 V



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# RATING AND CHARACTERISTIC CURVES HER251 THRU HER258

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

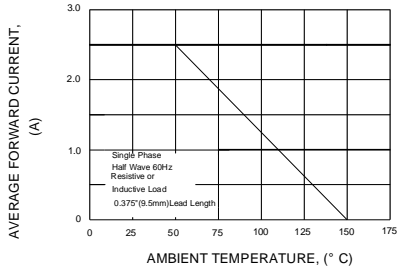


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

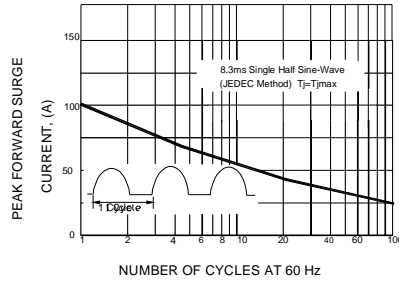


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

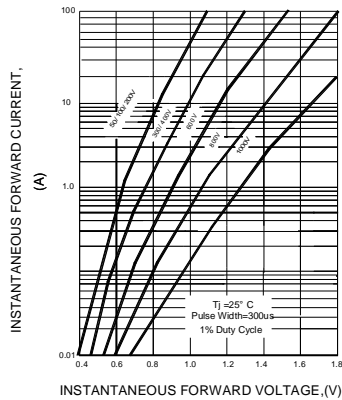


FIG.4-TYPICAL REVERSE CHARACTERISTICS

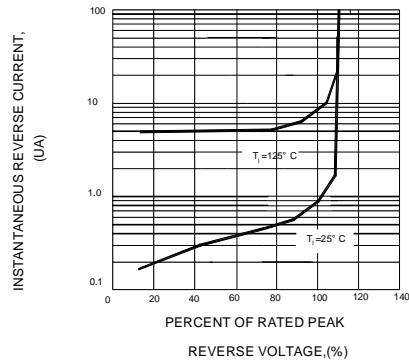


FIG.5-TYPICAL JUNCTION CAPACITANCE

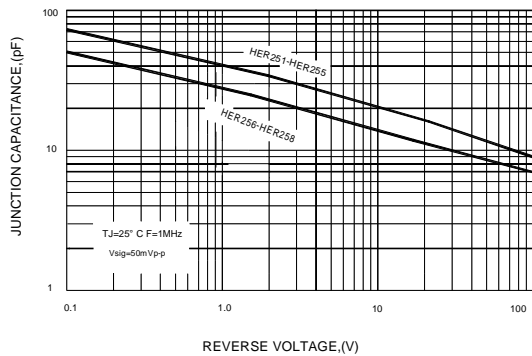


FIG. 6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

