



## High Efficiency Rectifier

### Features

- Low power loss, high efficiency
- Low leakage
- High Surge Capacity
- High switching speed
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance



### Mechanical Data

<b>Case:</b>	Transfer molded plastic
<b>Polarity:</b>	Color band denots cathode end
<b>Epoxy:</b>	UL94V-0 rate flame retardant
<b>Lead:</b>	Plated axial lead, solderable per MIL-STD-202E Method 208C
<b>Mounting Position:</b>	Any
<b>Weight:</b>	0.014 ounce, 0.39 gram

### Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	HER 151	HER 152	HER 153	HER 154	HER 155	HER 156	HER 157	HER 158	Unit	Conditions
<b>VRRM</b>	Max Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	V	
<b>VRMS</b>	Max RMS Voltage	35	70	140	210	280	420	560	700	V	
<b>VDC</b>	Max DC Blocking Voltage	50	100	200	300	400	600	800	1000	V	
<b>I(AV)</b>	Max Average Forward Rectified Current 0.375" (9mm) lead length	1.0								A	TA=50°C
<b>IFSM</b>	Peak Forward Surge Current	30								A	JEDEC method
<b>TJ,TSTG</b>	Operating and Storage Temperature Range	-55 to +150, -55 to +150								°C	
<b>Rθ-JA</b>	Typical Thermal Resistance	40								°C/W	Note 2

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	HER 151	HER 152	HER 153	HER 154	HER 155	HER 156	HER 157	HER 158	Unit	Conditions
<b>VF</b>	Max Instantaneous Forward Voltage	1.0	1.3	1.5	1.7					V	1.5A
<b>IR(AV)</b>	Maximum Full Load Reverse Current, Full Cycle average	100								μA	0.375" (9.5mm) lead length at TL= 55°C
<b>IR</b>	Max DC Reverse Current at Rated DC Blocking Voltage	5.0								μA	TA=25°C
		250									TA=125°C
<b>TRR</b>	Maximum reverse recovery time	50			70				nS	Note 1	
<b>CJ</b>	Typical Junction capacitance	30			20				pF	Measured at 1.0MHz / 4.0V	

#### Note:

1. Reverse recovery test conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
2. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted

# HER151 ~ HER158

## RATINGS AND CHARACTERISTIC CURVES HER151 THRU HER158

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

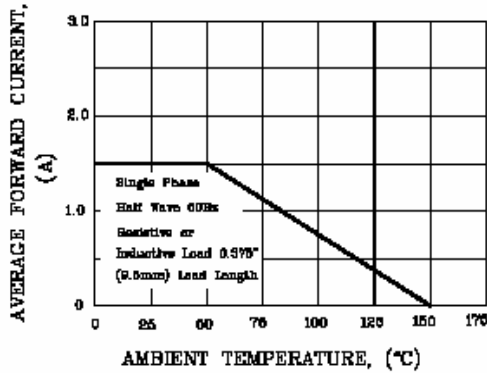


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

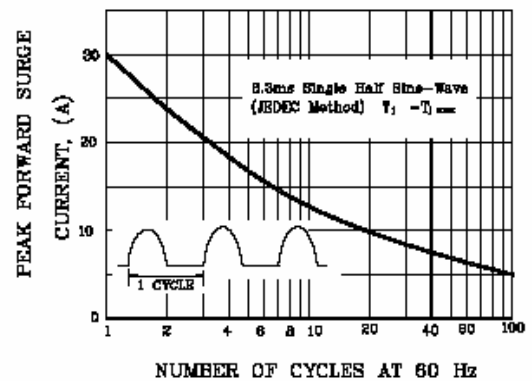


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

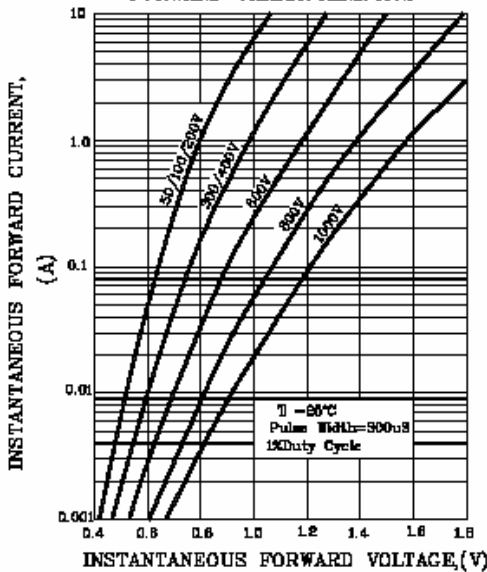


FIG.4-TYPICAL REVERSE CHARACTERISTICS

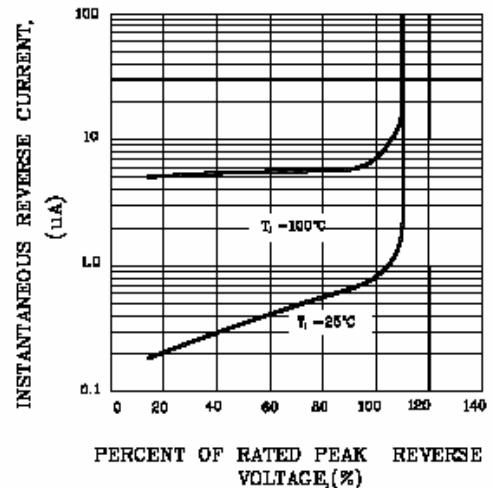


FIG.5-TYPICAL JUNCTION CAPACITANCE

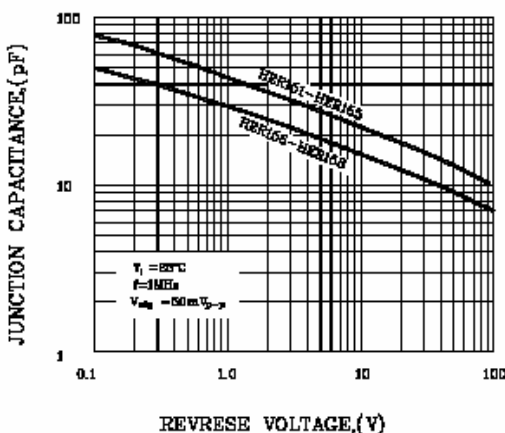
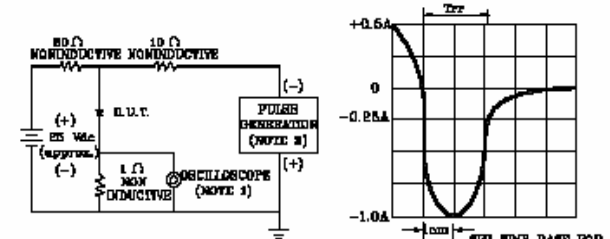
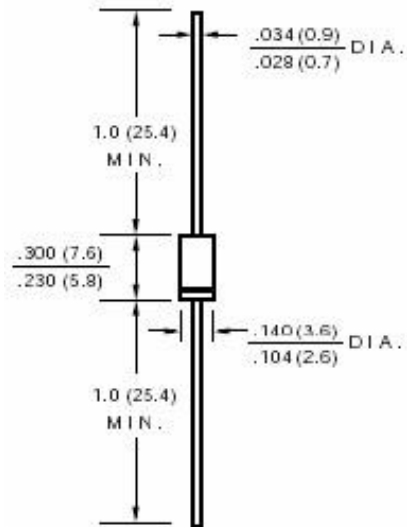


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. Rise Time -  $T_{\text{RR}}$  max. Input Impedance= 1 megohm 22pF  
2. Rise time=10ns max. Source Impedance= 50 ohms

Dimensions in inches (mm)



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