

# HER151 - HER158

## 1.5 AMPS. High Efficient Rectifiers

### DO-15

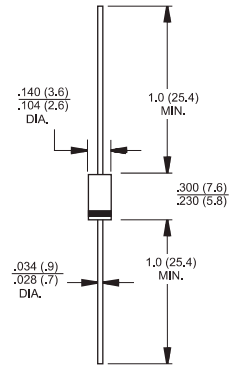


### Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application.
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

### Mechanical Data

- ✧ Case: Molded plastic DO-15
- ✧ Epoxy: UL 94V0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375"(.95mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Mounting position: Any
- ✧ Weight: 0.40 grams



Dimensions in inches and (millimeters)

#### Marking Diagram



- HER15X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

### 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	Symbol	HER 151	HER 152	HER 153	HER 154	HER 155	HER 156	HER 157	HER 158	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @T <sub>A</sub> = 55 °C	IF(AV)	1.5								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	IFSM	50								A
Maximum Instantaneous Forward Voltage @ 1.5A	VF	1.0			1.3		1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>A</sub> =25 °C ( Note 1 ) @ T <sub>A</sub> =125 °C	IR	5.0				150			uA	
Maximum Reverse Recovery Time ( Note 4 )	Trr	50				75			nS	
Typical Junction Capacitance ( Note 2 )	Cj	50				35			pF	
Typical thermal resistance ( Note 3 )	R <sub>θJA</sub>	60								°C/W
Operating Temperature Range	T <sub>J</sub>	-65 to +150								°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150								°C

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle  
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
 3. Mount on Cu-Pad Size 10mm x 10mm on PCB.  
 4. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

## RATINGS AND CHARACTERISTIC CURVES (HER151 THRU HER158)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

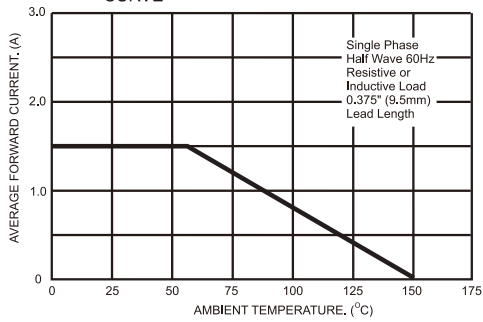


FIG.2- TYPICAL REVERSE CHARACTERISTICS

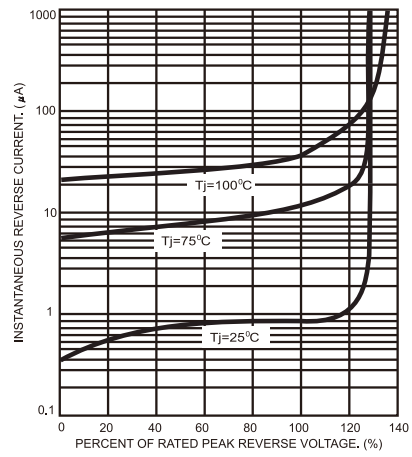


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

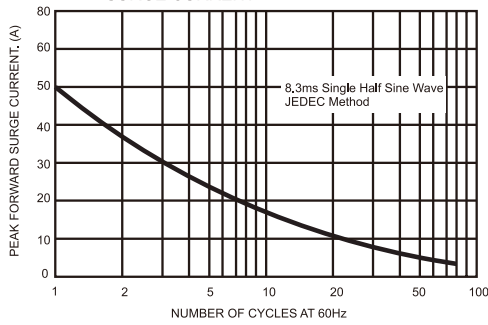


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

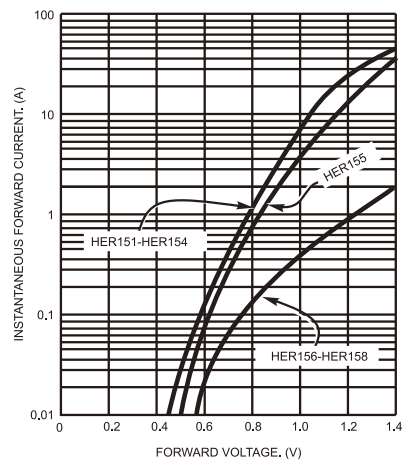


FIG.4- TYPICAL JUNCTION CAPACITANCE

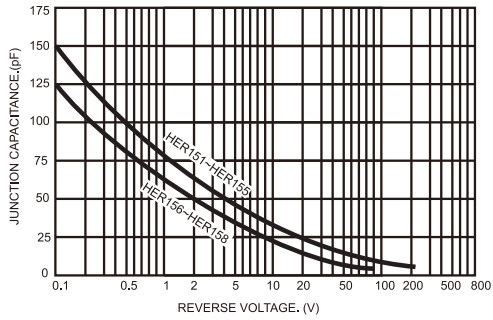
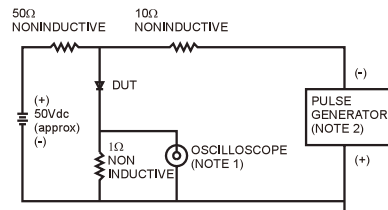


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance= 50 ohms

