

## HIGH EFFICIENCY RECTIFIERS

VOLTAGE RANGE: 50--- 1000 V

CURRENT: 1.5 A

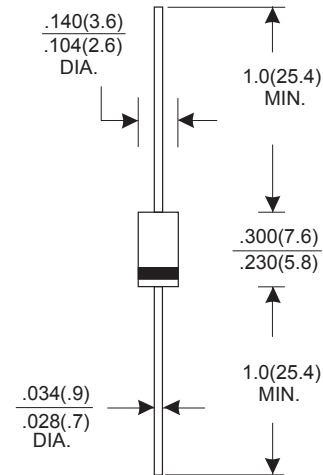
### FEATURES

- The plastic package carries Underwrites Laboratory Flammability Classification 94V-0
- High reliability
- Low forward voltage drop
- Low power loss, high efficiency
- High forward surge current capability
- High temperature soldering guaranteed: 260 C/10 seconds at terminals
- Component in accordance to RoHs 2002/95/EC and WEEE 2002/96/EC

### MECHANICAL DATA

- Case style: DO-15 plastic molded
- Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- Polarity:Color band denotes cathode end
- Mounting Position:Any

### DO-15



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase,half wave,60 Hz,resistive or inductive load.

For capacitive load,derate by 20%.

		HER 151	HER 152	HER 153	HER 154	HER 155	HER 156	HER 157	HER 158	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current.375"(9.5mm) Lead Length at Ta=50°C	$I_{F(AV)}$	1.5								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50.0								A
Maximum Instantaneous Forward Voltage at 1.5A	$V_F$	1.0		1.3		1.7			V	
Maximum reverse current at rated DC blocking voltage	@T <sub>A</sub> =25	5.0								μA
	@T <sub>A</sub> =100	150.0								
Maximum reverse recovery time (Note1)	$t_{rr}$	50				75				ns
Typical junction capacitance (Note2)	$C_J$	50				30				pF
Typical thermal resistance	$R_{θJA}$	50								°C/W
Operating junction temperature range	$T_j$	- 55 ---- + 125								°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150								°C

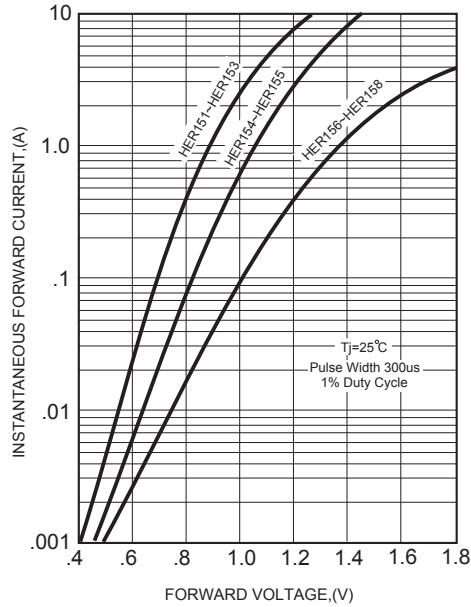
1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

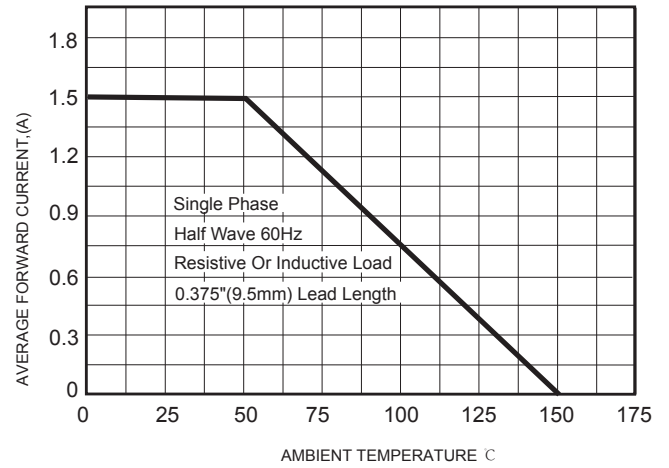


# RATINGS AND CHARACTERISTIC CURVES

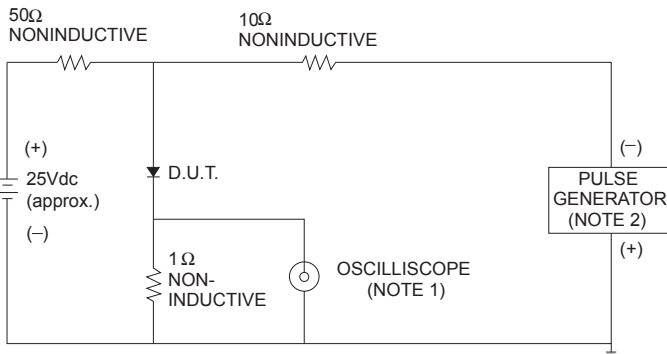
**FIG.1-TYPICAL FORWARD CHARACTERISTICS**



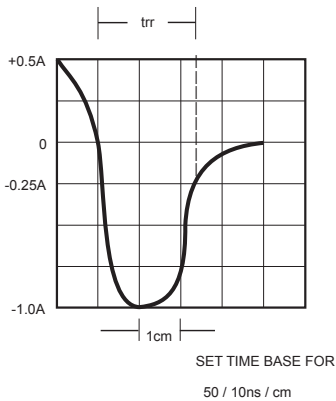
**FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE**



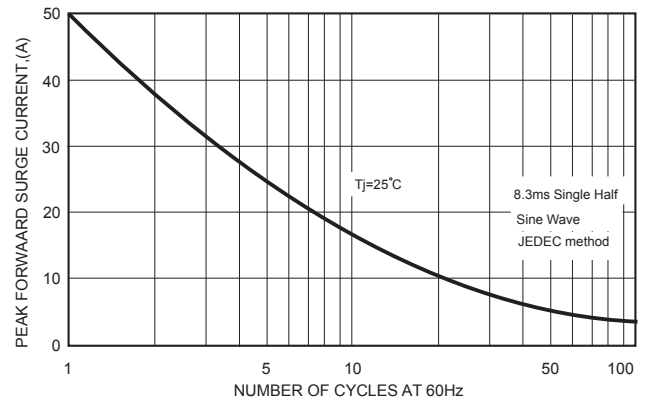
**FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



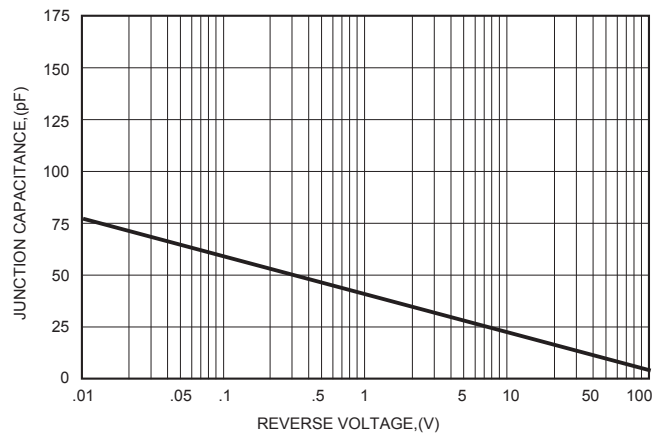
- NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
 2. Rise Time= 10ns max., Source Impedance= 50 ohms.



**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.5 -- TYPICAL JUNCTION CAPACITANCE**



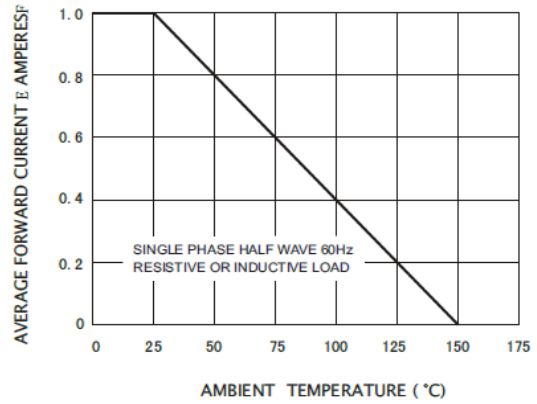
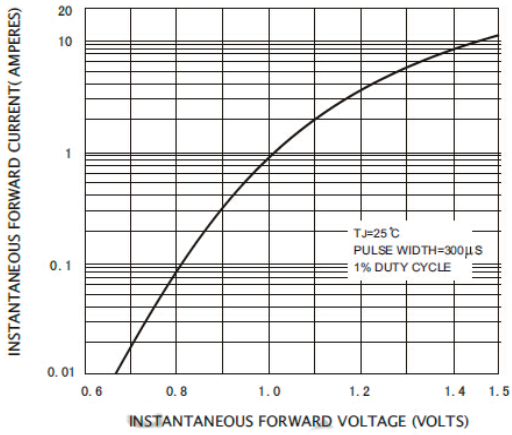


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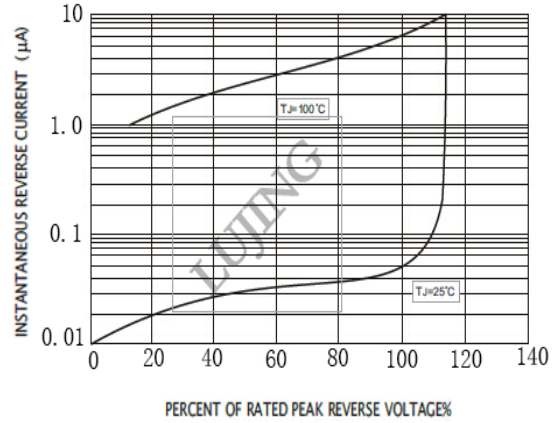
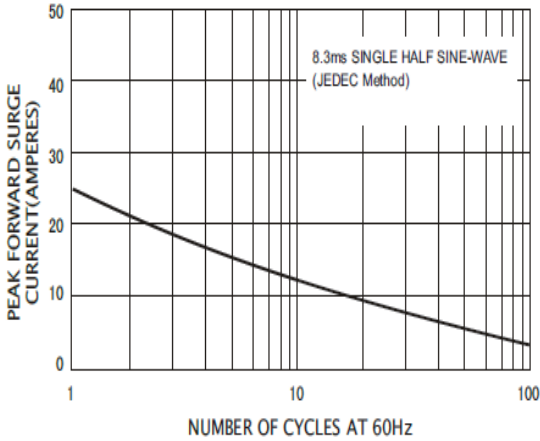
**FIG.1 -- PEAK PULSE POWER RATING CURVE**

**FIG.2 -- PULSE DERATING CURVE**



**FIG.3 -- PEAK FORWARD SURGE CURRENT**

**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.4 - TYPICAL JUNCTION CAPACITANCE**

