



HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

HER251G THRU HER258G

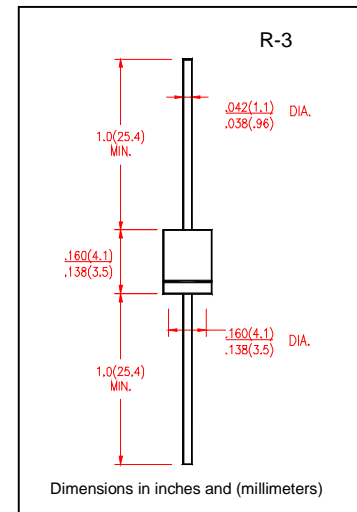
VOLTAGE RANGE 50 to 1000 Volts
CURRENT 2.5 Ampere

FEATURES

- Glass passivated chip junction
- Low power loss, high efficiency
- Low leakage
- High speed switching
- High surge capacity
- High temperature soldering guaranteed
260°C/10 seconds, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 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 gram



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

Notes:

1. Thermal Resistance from Junction to ambient with 0.375" (9.5mm) lead length, PCB mounted.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V



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RATING AND CHARACTERISTIC CURVES HER251G THRU HER258G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

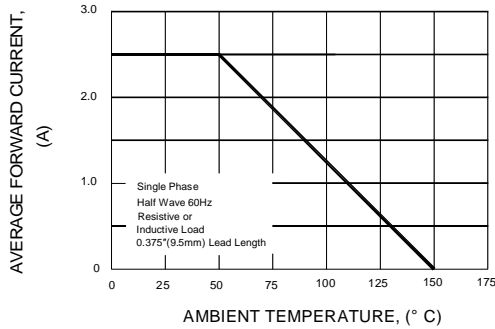


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

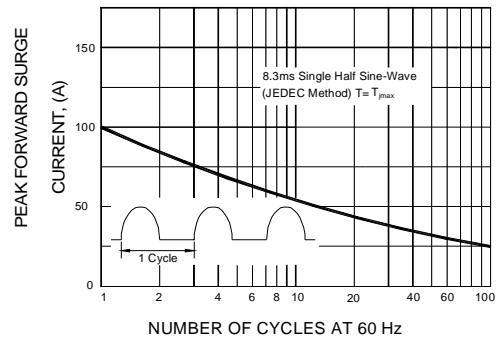


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

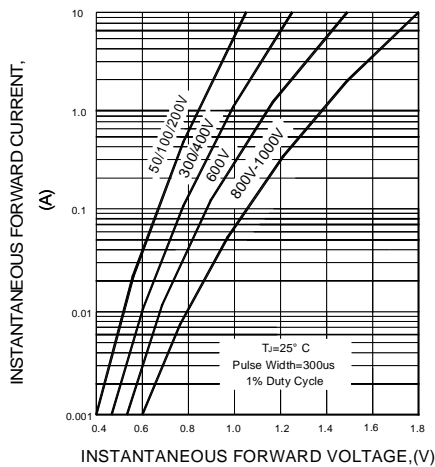


FIG.4-TYPICAL REVERSE CHARACTERISTICS

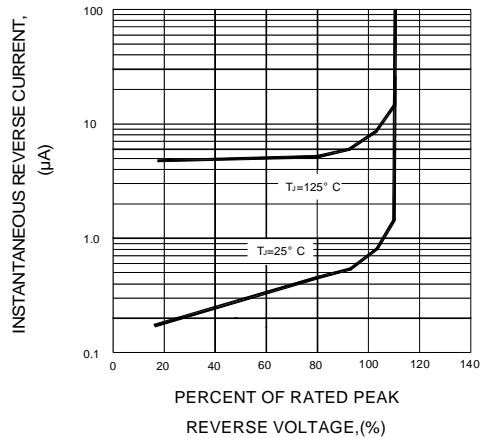


FIG.5-TYPICAL JUNCTION CAPACITANCE

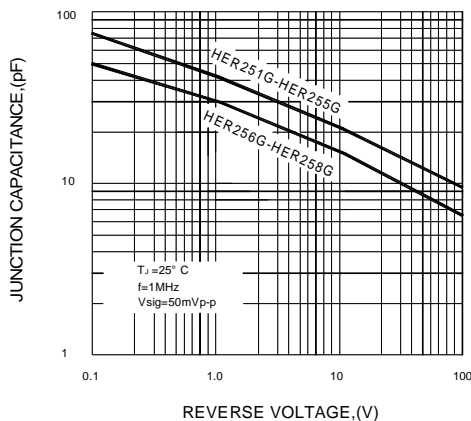
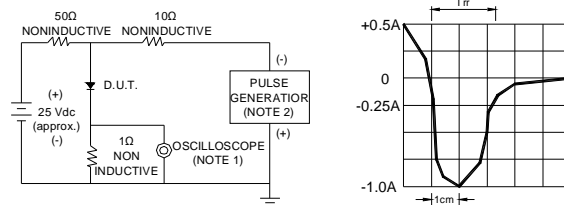


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR 50/100ns/cm