



HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

HER301G THRU HER308G

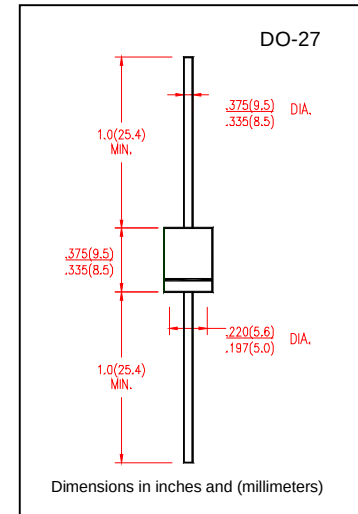
VOLTAGE RANGE
50 to 1000 Volts
CURRENT
3.0 Ampere

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: 0.042ounce, 1.19 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 301G	HER 302G	HER 303G	HER 304G	HER 305G	HER 306G	HER 307G	HER 308G	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 0.375" (9.5mm) lead length at T _A =50°C	I _(AV)	3.0								Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	125								Amps	
Maximum Instantaneous Forward Voltage at 3.0A	V _F	1.0			1.3		1.5	1.7		Volts	
Maximum DC Reverse Current at rated DC Blocking Voltage at	T _A = 25°C	I _R	10								μA
	T _A = 125°C		500								
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at T _L =55°C	I _{R(AV)}	150								μA	
Maximum Reverse Recovery Time Test conditions I _F =0.5A, I _R =1.0A, I _{RR} =0.25A,	t _{rr}	50					75			nS	
Typical Junction Capacitance (NOTE 2)	C _J	70						50		pF	
Typical Thermal Resistance (NOTE 1)	R _{θJA}	20								°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 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 HER301G THRU HER308G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

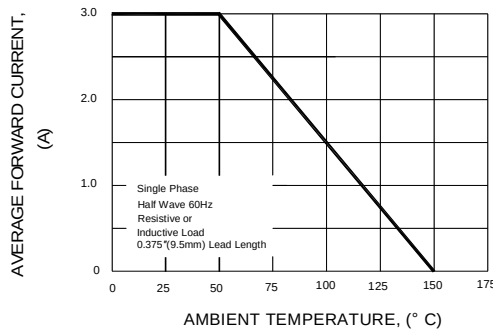


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

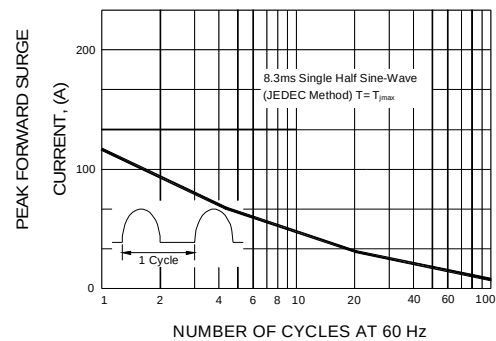


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

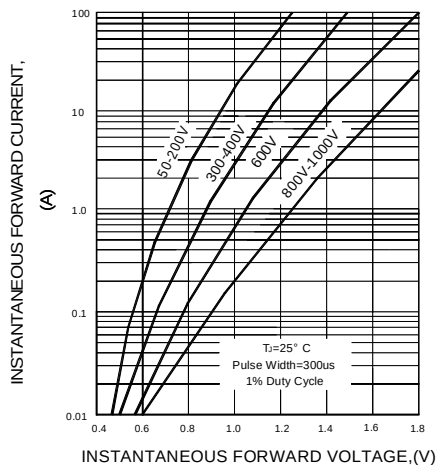


FIG.4-TYPICAL REVERSE CHARACTERISTICS

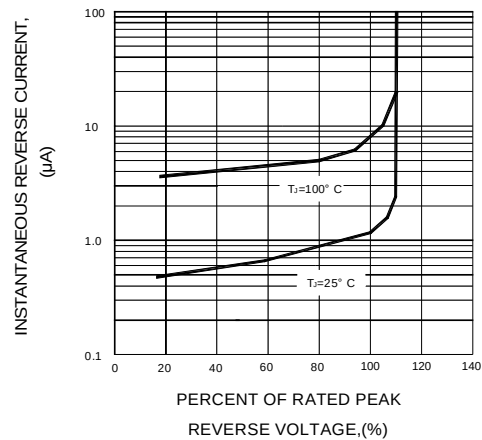


FIG.5-TYPICAL JUNCTION CAPACITANCE

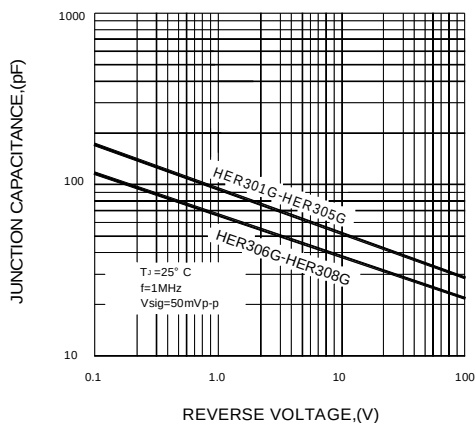
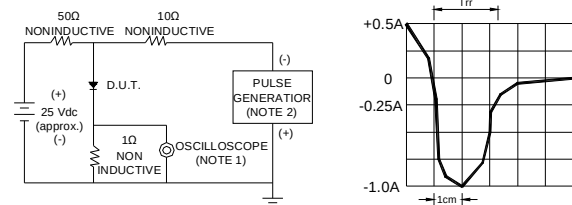


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- 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