High Efficiency Rectifier

Features

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

Mechanical Data

Case:	Transfer molded plastic
Polarity:	Color band denots cathode end
Epoxy:	UL94V-0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E Method 208C
Mounting Position:	Any
Weight:	0.042 ounce, 1.19 gram

Maximum Ratings *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	HER 501G	HER 502G	HER 503G	HER 504G	HER 505G	HER 506G	HER 507G	HER 508G	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	**V**	
VRMS	Max RMS Voltage	35	70	140	210	280	420	560	700	**V**	
VDC	Max DC Blocking Voltage	50	100	200	300	400	600	800	1000	**V**	
I(AV)	Max Average Forward Rectified Current 0.375" (9mm) lead length	5.0								**A**	TA=50℃
IFSM	Peak Forward Surge Current	200				150				**A**	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +150, -55 to +150								℃	
RθJA	Typical Thermal Resistance	20								℃/W	Note 2

Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	HER 501G	HER 502G	HER 503G	HER 504G	HER 505G	HER 506G	HER 507G	HER 508G	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.0		1.3		1.5		1.7		**V**	5.0A
IR(AV)	Maximum Full Load Reverse Current, Full Cycle average	150								**μA**	0.375" (9.5mm) lead length at TL= 55℃
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10								**μA**	TA=25℃
		500									TA=125℃
TRR	Maximum reverse recovery time	50				70				**nS**	Note 1
CJ	Typical Junction capacitance	70				50				**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

HER501G ~ HER508G

RATINGS AND CHARACTERISTIC CURVES HER501G THRU HER508G

FIG.1—TYPICAL FORWARD CURRENT DERATING CURVE

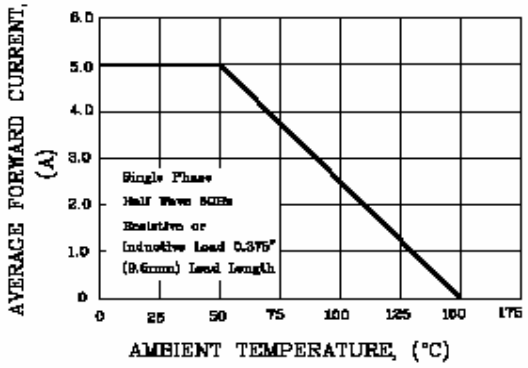


FIG.2—MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

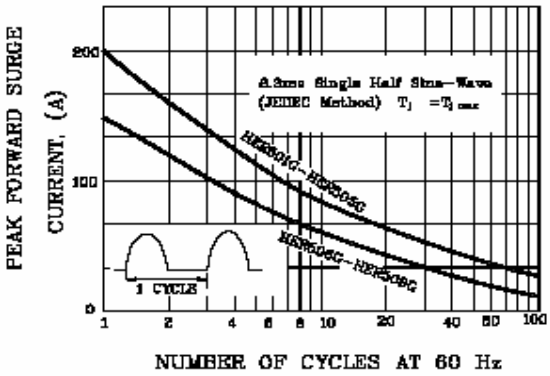


FIG.3—TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

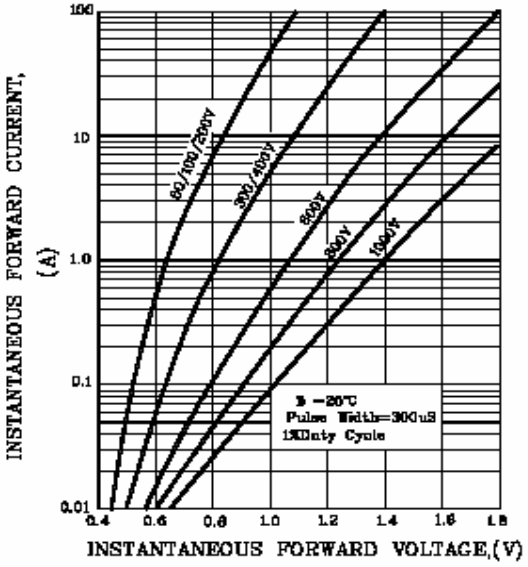


FIG.4—TYPICAL REVERSE CHARACTERISTICS

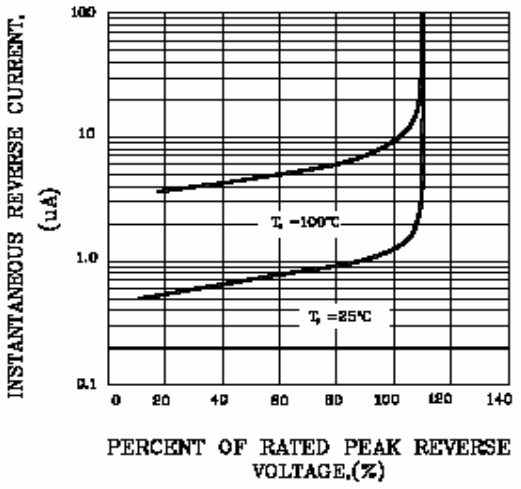


FIG.5—TYPICAL JUNCTION CAPACITANCE

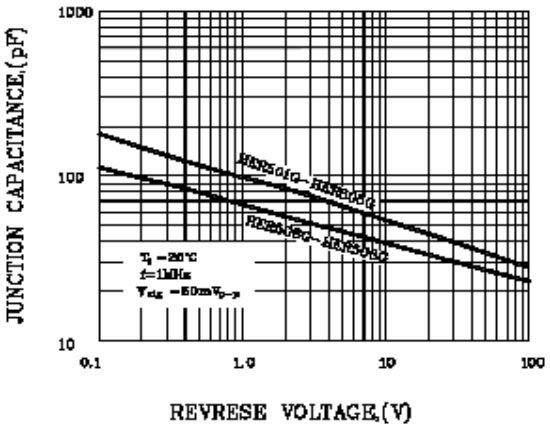
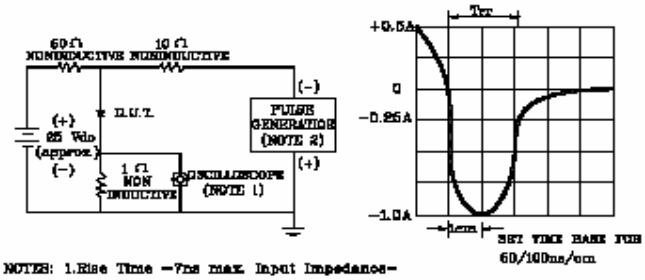


FIG.6—TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

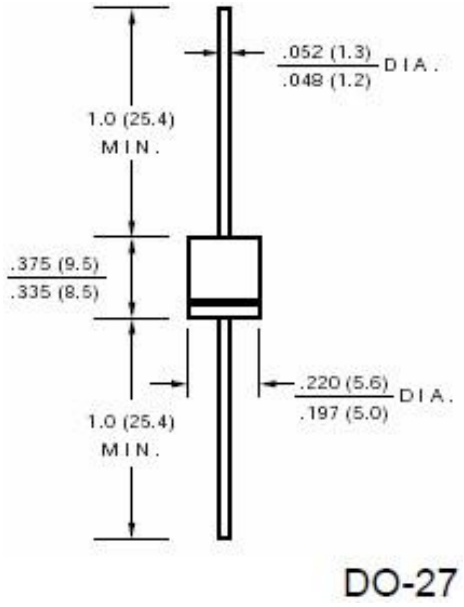


NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm, 22pF

2.Rise time=10ns max. Source Impedance= 50 ohms

HER501G ~ HER508G

Dimensions in inches (mm)



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