



High Efficiency Rectifier

Features

- Low power loss, high efficiency
- Low leakage
- High Surge Capacity
- High switching speed
- High temperature soldering guaranteed:
260°C/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 ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

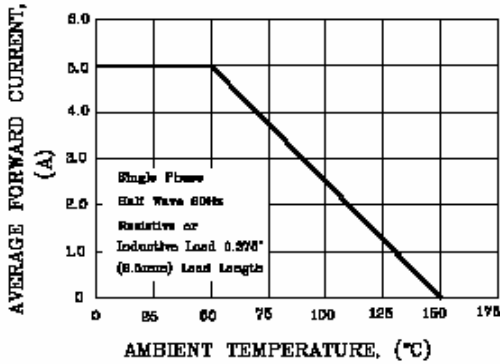
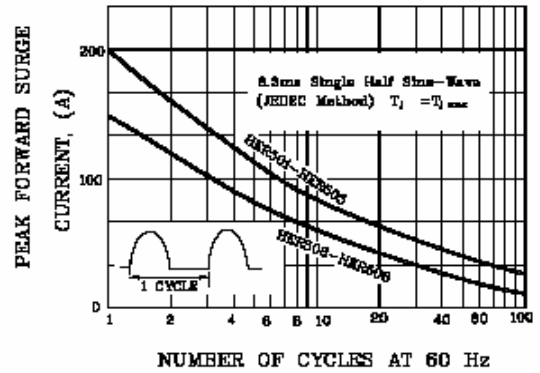
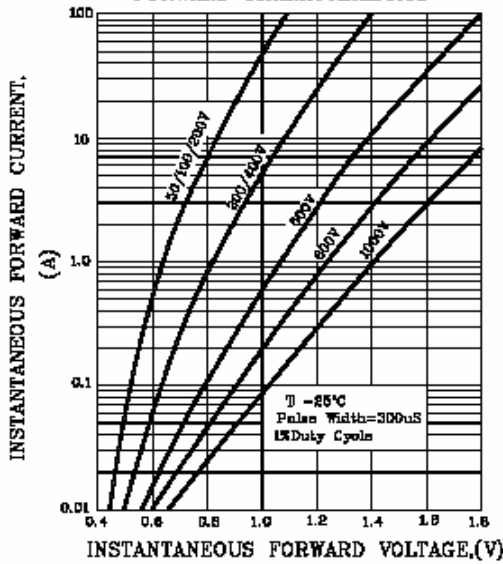
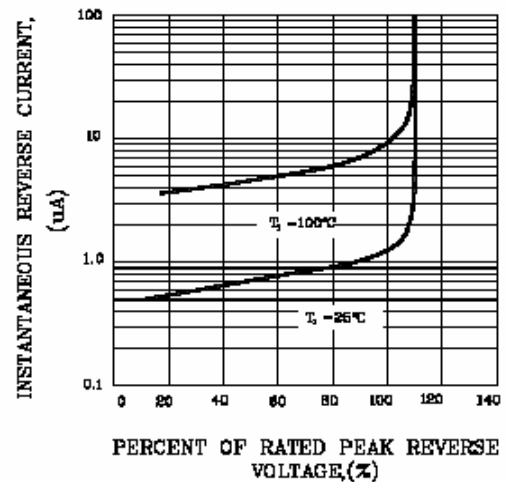
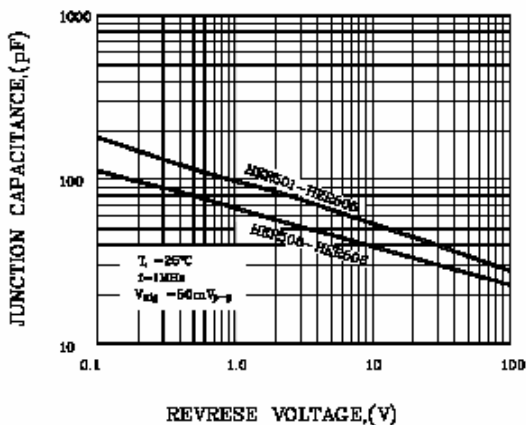
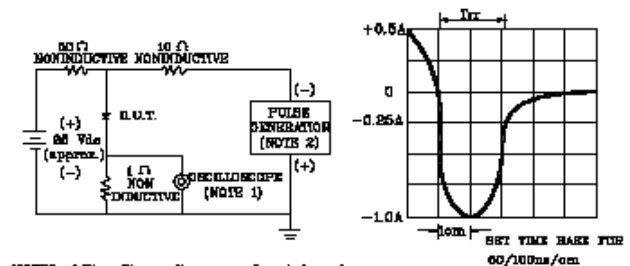
Symbol	Description	HER 501	HER 502	HER 503	HER 504	HER 505	HER 506	HER 507	HER 508	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	210	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	300	400	600	800	1000	V	
I(AV)	Max Average Forward Rectified Current 0.375" (9mm) lead length	3.0								A	TA=50°C
IFSM	Peak Forward Surge Current	200				150				A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +150, -55 to +150								°C	
Rθ-JA	Typical Thermal Resistance	20								°C/W	Note 2

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	HER 501	HER 502	HER 503	HER 504	HER 505	HER 506	HER 507	HER 508	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°C
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10										µA	TA=25°C
		250											TA=125°C
TRR	Maximum reverse recovery time	50				70				nS	Note 1		
CJ	Typical Junction capacitance	70				50				pF	Measured at 1.0MHz / 4.0V		

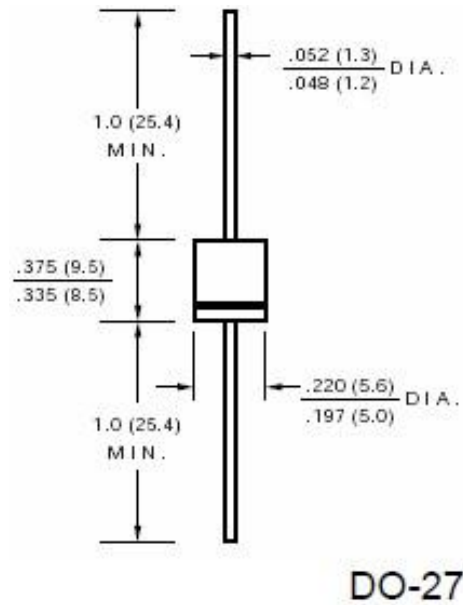
Note:

1. Reverse recovery test conditions: IF= 0.5A, IR=1.0A, IRR = 0.25A
2. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted

HER501 ~ HER508
RATINGS AND CHARACTERISTIC CURVES HER501 THRU HER508
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 = t_{ris} max. Input Impedance = 1 megohm. 22pF
2.Rise time=10ns max. Source Impedance = 50 ohms

Dimensions in inches (mm)



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