



HER1001~HER1007

ULTRAFast RECOVEY RECTIFIERS

Voltage Range 50 to 800 Volts
Current 10.0 Amperes

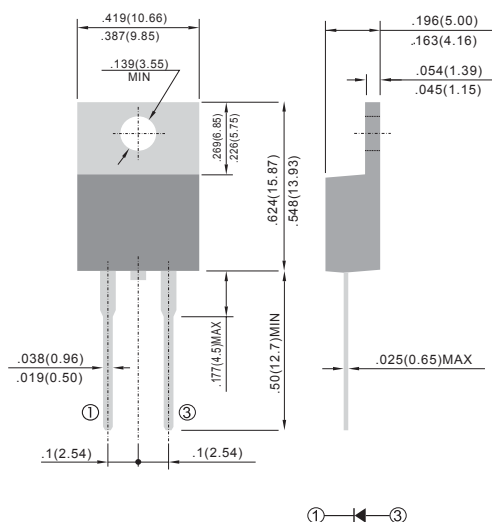
Features

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- * Exceeds environmental standards of MIL-S-19500/228
- * Low power loss, high efficiency.
- * Low forward voltage, high current capability
- * High surge capacity.
- * Ultra fast recovery time, high voltage.
- * Both normal and Pb free product are available :
 Normal : 80~95% Sn, 5~20% Pb
 Pb free: 98.5% Sn above

Mechanical Data

Case: TO-220AC full molded plastic package
 Terminals: Lead solderable per MIL-STD-202, Method 208
 Polarity: As marked.
 Standard packaging: Any
 Weight: 0.08 ounces, 2.24grams.

TO-220AC



Dimensions in millimeters

Maximum Ratings and Electrical Characteristics

Ratings at 25°C Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

PARAMETER	SYMBOL	HER1001	HER1002	HER1003	HER1004	HER1005	HER1006	HER1007	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	V
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	V
Maximum Average Forward Current at T _c = 100°C	I _{AV}	10							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I _{FSM}	150							A
Maximum Forward Voltage at 10.0A	V _F	1.0		1.30		1.70		V	
Maximum DC Reverse Current T _A =25°C at Rated DC Blocking Voltage T _A =125°C	I _R	10 500							uA
Typical Junction Capacitance (Note 1)	C _J	80			50			pF	
Maximum Reverse Recovery Time (Note 2)	T _{RR}	50			100			ns	
Typical Thermal Resistance (Note 3)	R _{θJC}	2							°C / W
Operating Junction and Storage Temperature Range	T _J ,T _{STG}	-50 to +150							°C

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I_{rr}=.25A.
3. Thermal resistance from Junction to case.
4. Both Bonding and Chip structure are available.

[Http://www.upm.com.tw](http://www.upm.com.tw)

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Rating and Characteristic Curves

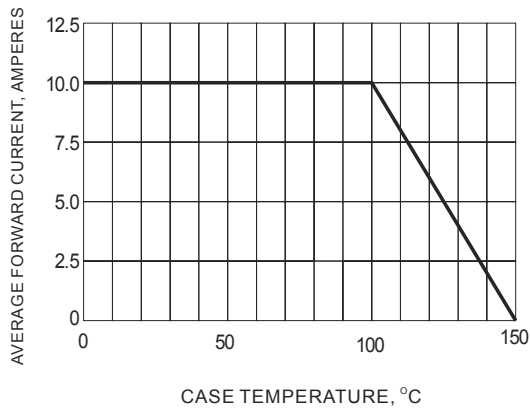


Fig.1 FORWARD CURRENT DERATING CURVE

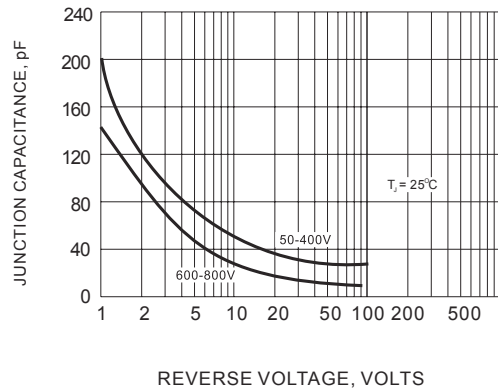


Fig.2 TYPICAL JUNCTION CAPACITANCES

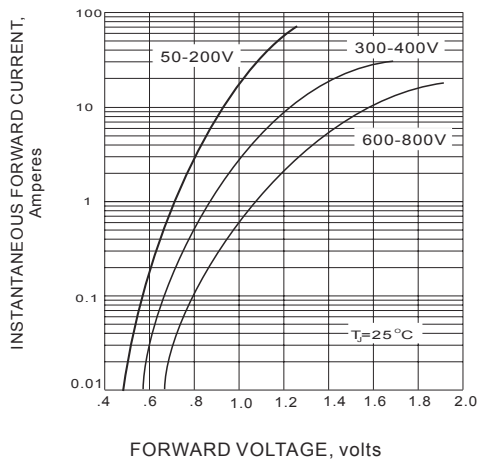


Fig.3 FORWARD CHARACTERISTICS

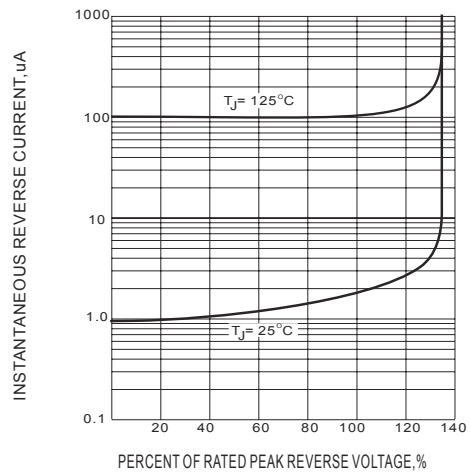


Fig.4 TYPICAL REVERSE CHARACTERISTICS

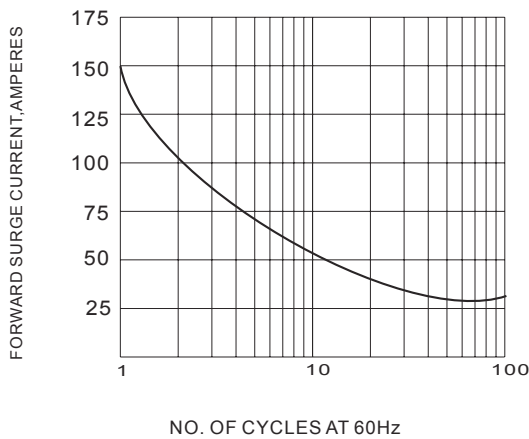


Fig.5 PEAK FORWARD SURGE CURRENT