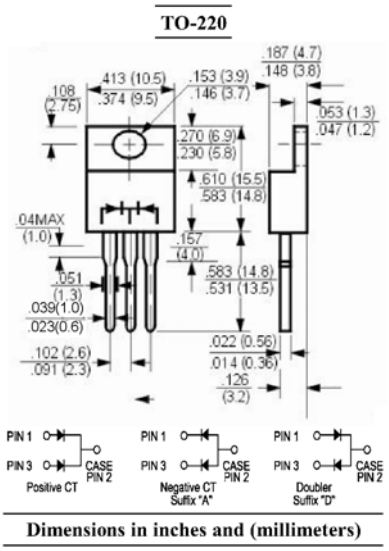
HER1601CT THRU HER1608CT

GLASS PASSIVATED HIGH EFFICENCY RECTIFIERS

Reverse Voltage - 50 to 1000 V
Forward Current - 16 A

Features

- Plastic package has Underwriters Laboratory Flammabiliy Classification 94V-0 ctilizing Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capacity.
- Ultra fast recovery times, high voltage.



Mechanical Data

- **Case:** Molded plastic, TO-220
- **Epoxy:** UL 94V-0 rate flame retardant.
- **Terminals:** leads solderable per MIL-STD-202, method 208 guaranteed
- **Polarity:** As marked
- **Mounting Position:** Any

Absolute Maximum Ratings and 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%.

Parameter		Symbols	HER 1601CT	HER 1602CT	HER 1603CT	HER 1604CT	HER 1605CT	HER 1606CT	HER 1607CT	HER 1608CT	Units
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage		V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage		V_{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_C = 100 °C		$I_{F(AV)}$	16								A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	125								A
Maximum Forward Voltage at 8 A DC		V_F	1			1.3		1.7			V
Maximum Reverse Current at Rated DC Blocking Voltage	at T_A = 25 °C	I_R	10								μA
	at T_A = 125 °C		500								
Typical Junction Capacitance [1]		C_J	80					50			pF
Maximum Reverse Recovery Time [2]		t_{rr}	50					80			ns
Typical Thermal Resistance [3]		$R_{\theta JC}$	3								°C/W
Operating and Storage Temperature Range		T_j, T_{stg}	- 55 to + 150								°C

[1] Measured at 1 MHz and applied reverse voltage of 4 VDC.

[2] Reverse recovery test conditions: I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A.

[3] Thermal resistance from junction to case per leg mounted on heatsink.

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FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

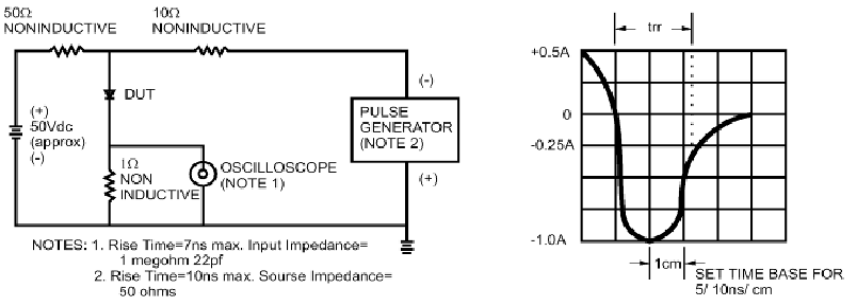

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

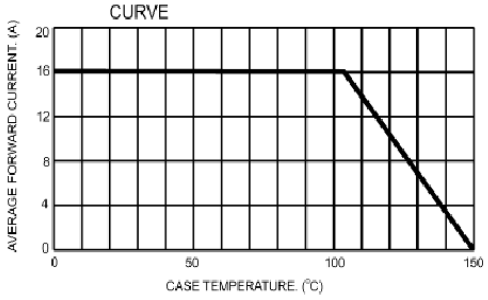

FIG.3- TYPICAL REVERSE CHARACTERISTICS PER LEG

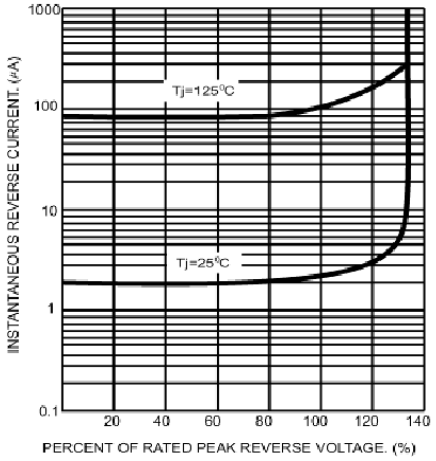

FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

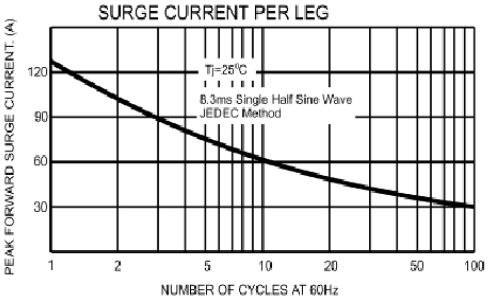

FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

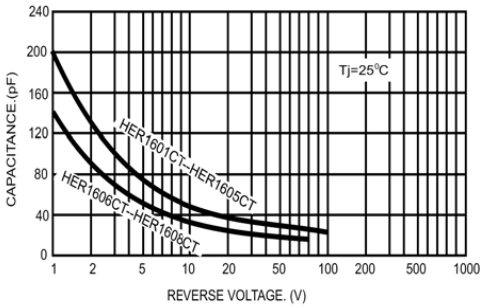

FIG.6- TYPICAL FORWARD CHARACTERISTICS PER LEG