

HER1601CT THRU HER1608CT

GLASS PASSIVATED HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 50 to 1000 V

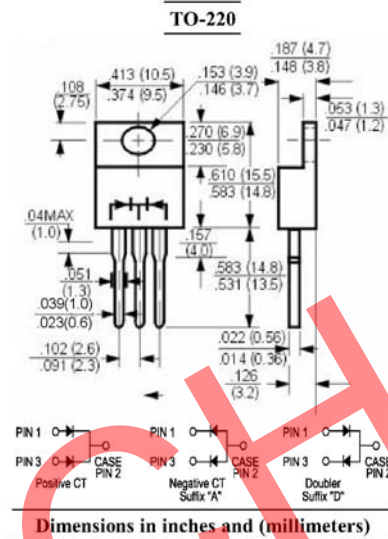
Forward Current - 16 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing 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

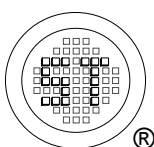
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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 $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	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 $T_A = 25^\circ\text{C}$	10								μA
	at $T_A = 125^\circ\text{C}$	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								$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{stg}	- 55 to + 150								$^\circ\text{C}$

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

²⁾ Reverse recovery test conditions: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

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

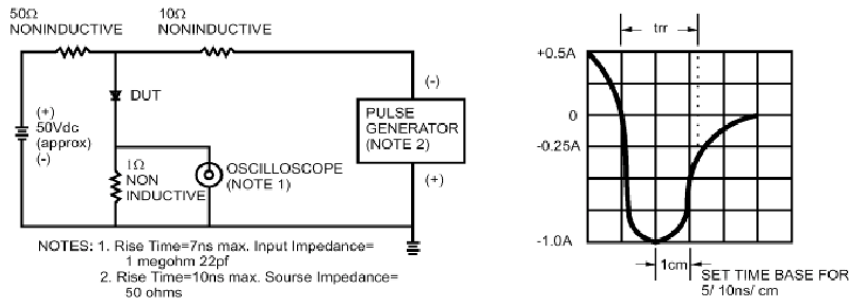


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

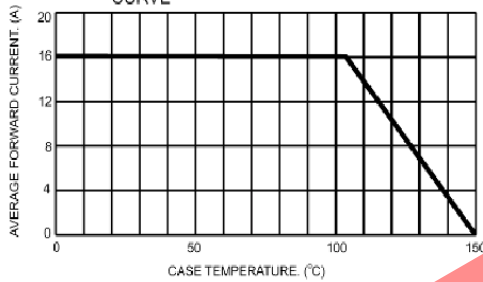


FIG.3- TYPICAL REVERSE CHARACTERISTICS PER LEG

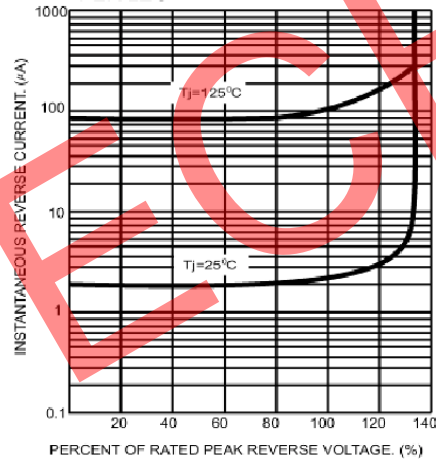


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

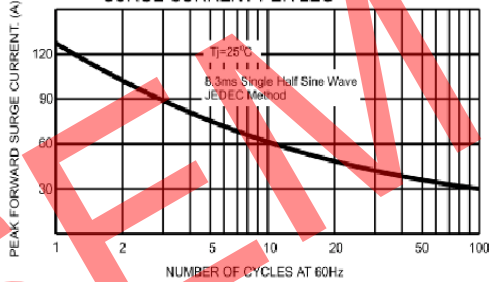


FIG.6- TYPICAL FORWARD CHARACTERISTICS PER LEG

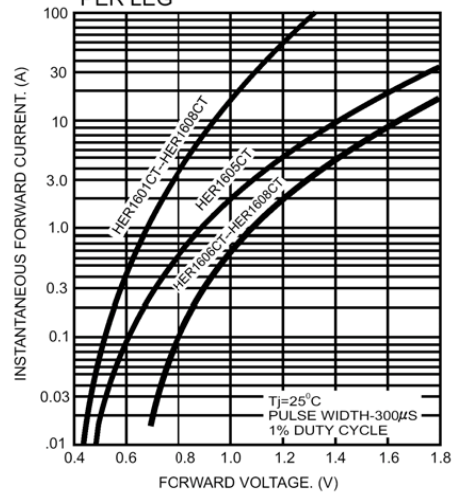
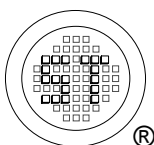
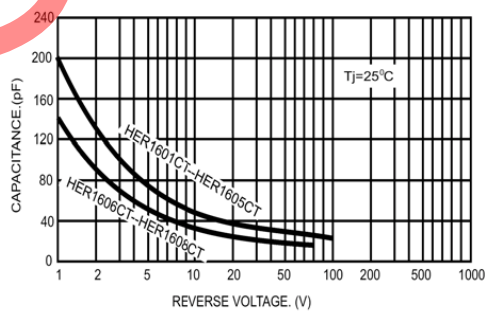


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG



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