

Pb Free Plating Product

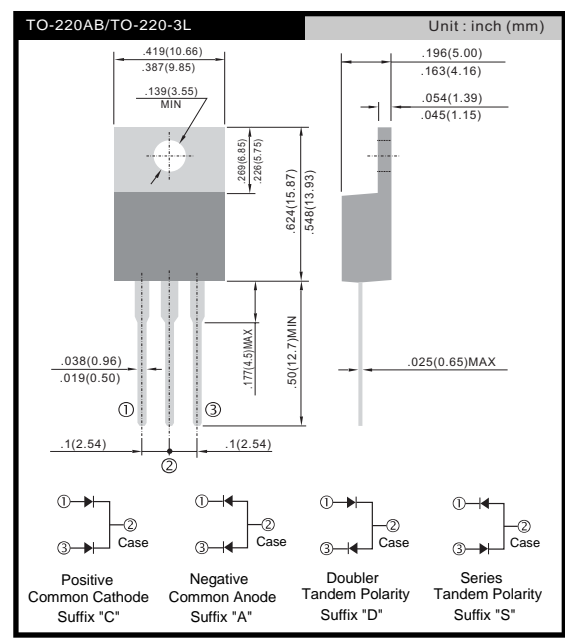
HER1001C thru HER1008C



10Ampere Heat Sink Dual Common Cathode High Efficiency Rectifiers

- Features**
- \* Fast switching for high efficiency
  - \* Low forward voltage drop
  - \* High current capability
  - \* Low reverse leakage current
  - \* High surge current capability
- Application**
- \* Automotive Inverters and Solar Inverters
  - \* Plating Power Supply, SMPS and UPS
  - \* Car Audio Amplifiers and Sound Device Systems

- Mechanical Data**
- \* Case: Heatsink TO-220AB open metal package
  - \* Epoxy: UL 94V-0 rate flame retardant
  - \* Terminals: Solderable per MIL-STD-202 method 208
  - \* Polarity: As marked on diode body
  - \* Mounting position: Any
  - \* Weight: 2.0 gram approximately



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	HER 1001C	HER 1002C	HER 1003C	HER 1004C	HER 1005C	HER 1006C	HER 1007C	HER 1008C	UNIT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	1000	V	
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	700	V	
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	1000	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	10									A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	125									A
Maximum instantaneous forward voltage @ 5 A (Note 1)	V <sub>F</sub>	1.0			1.3		1.7			V	
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C	I <sub>R</sub>	10									μA
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =125°C	I <sub>R</sub>	400									μA
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	50					80				ns
Typical junction capacitance (Note 3)	C <sub>J</sub>	60					40				pF
Typical thermal resistance	R <sub>θJC</sub>	1.5									°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150									°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150									°C

Note 1: Pulse test with PW=300μs, 1% duty cycle  
 Note 2: Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A  
 Note 3: Measured at 1 MHz and applied reverse voltage of 4.0V DC.

RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

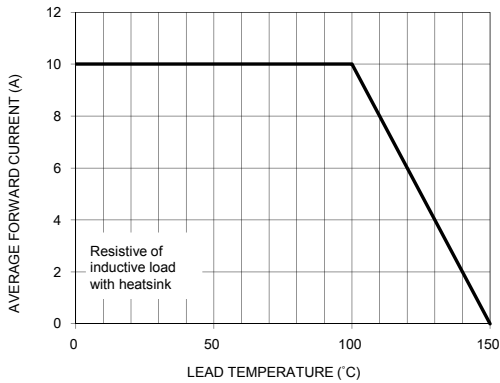


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

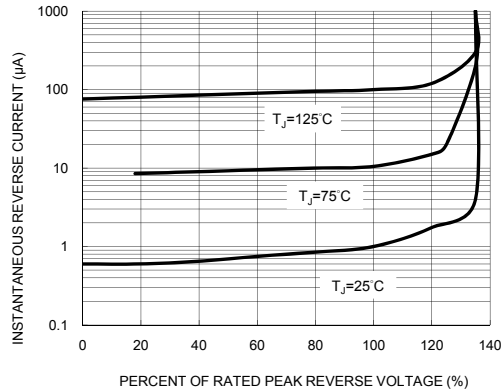


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

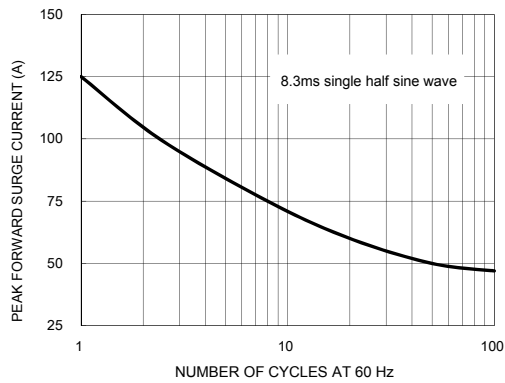


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

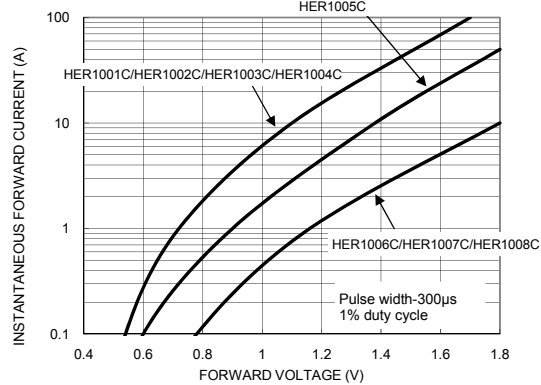


FIG. 5 TYPICAL JUNCTION CAPACITANCE

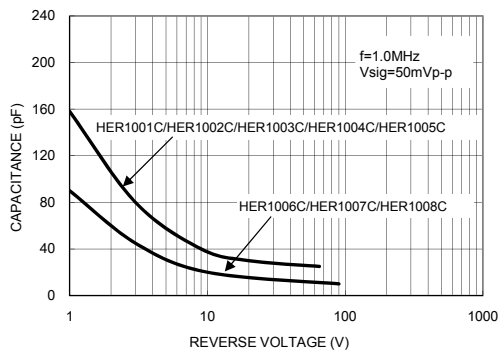


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

