

Pb Free Plating Product

HER1001D thru HER1008D



10Ampere Heat Sink Dual Doubler Polarity High Efficiency Rectifiers

Features

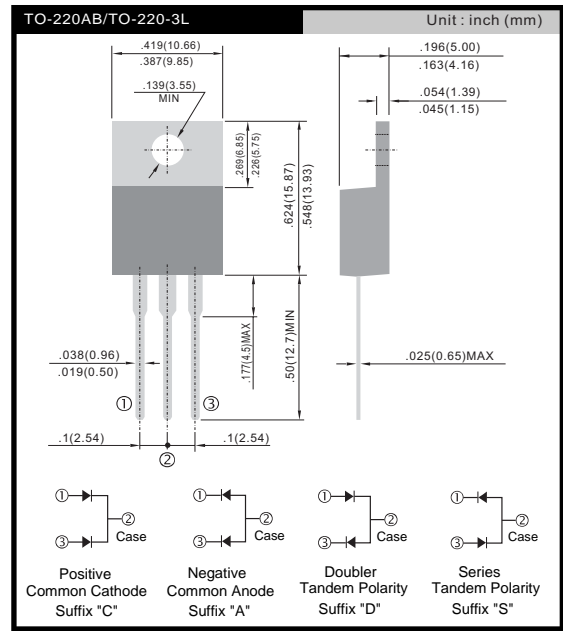
- * Fast switching for high efficiency
- * Low forward voltage drop
- * High current capability
- * Low reverse leakage current
- * High surge current capability

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_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	HER 1001D	HER 1002D	HER 1003D	HER 1004D	HER 1005D	HER 1006D	HER 1007D	HER 1008D	UNIT	
Maximum repetitive 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	I _{F(AV)}	10									A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	125									A
Maximum instantaneous forward voltage @ 5 A (Note 1)	V _F	1.0			1.3		1.7			V	
Maximum reverse current @ rated V _R T _J =25°C	I _R	10									μA
Maximum reverse current @ rated V _R T _J =125°C	I _R	400									μA
Maximum reverse recovery time (Note 2)	t _{rr}	50					80				ns
Typical junction capacitance (Note 3)	C _J	60					40				pF
Typical thermal resistance	R _{θJC}	1.5									°C/W
Operating junction temperature range	T _J	- 55 to +150									°C
Storage temperature range	T _{STG}	- 55 to +150									°C

Note 1: Pulse test with PW=300μs, 1% duty cycle
 Note 2: Test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=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

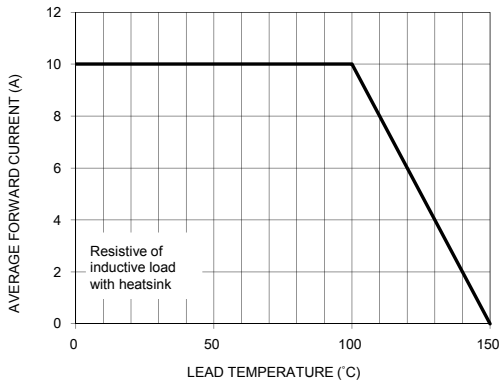


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

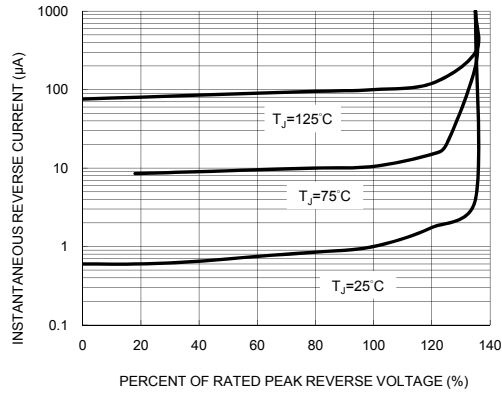


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

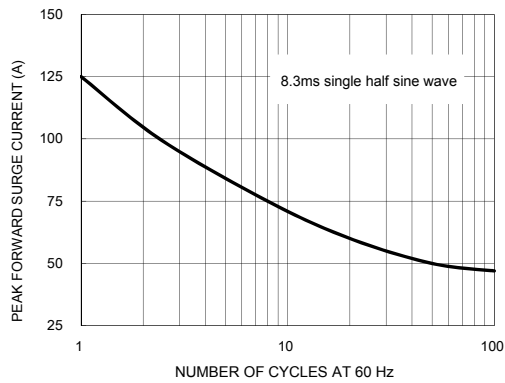


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

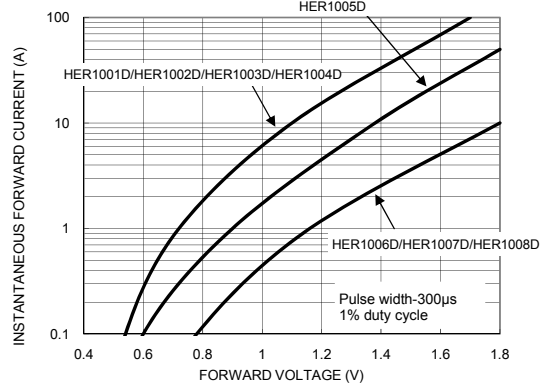


FIG. 5 TYPICAL JUNCTION CAPACITANCE

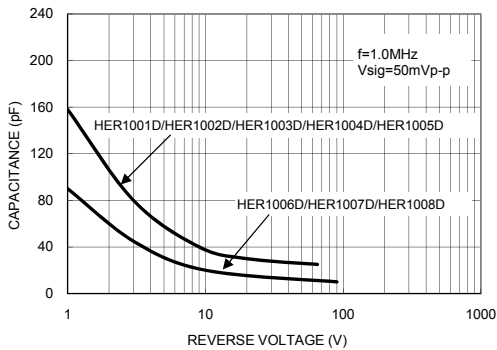


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

