

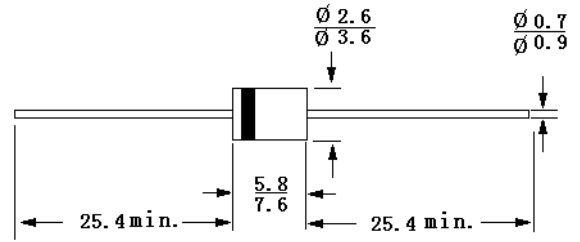
HER201 THRU HER208

HIGH EFFICIENCY RECTIFIERS

Voltage – 50 to 1000 Volts

Current – 2.0 Amperes

DO-15



Dimensions in mm

Features

- Void-free plastic in a DO-15 package
- 2A operation at $T_a = 55^\circ\text{C}$ with no thermal runaway
- Ultra fast switching for high efficiency

Mechanical Data

- **Case:** Molded plastic
- **Lead:** MIL-STD-202, method 208 guaranteed
- **Polarity:** Band denotes cathode
- **Mounting Position:** Any

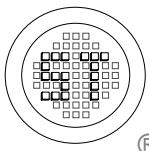
Absolute Maximum Ratings and Characteristics

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%.

	Symbols	HER 201	HER 202	HER 203	HER 204	HER 205	HER 206	HER 207	HER 208	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts	
Maximum average forward rectified current at $T_A = 55^\circ\text{C}$	I_O	2.0								Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	60								Amps	
Maximum instantaneous forward voltage at 2.0A DC	V_F	1.0		1.3		1.7				Volts	
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_J = 25^\circ\text{C}$ 5.0				$T_J = 100^\circ\text{C}$ 500					μAmps
Maximum reverse recovery time (Note 1)	t_{rr}	50					75				nSec
Typical junction capacitance (Note 2)	C_J	35								pF	
Typical thermal resistance (Note3)	$R_{\theta JA}$	45								$^\circ\text{C/W}$	
Operating and storage temperature range	T_J, T_S	-55 to +150								$^\circ\text{C}$	

Notes:

1. Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$.
2. Measured at 1 MHz and applied reverse voltage of 4 volts.
3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length P.C.B. mounted.



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



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Certificate No. 05103



ISO 14001
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ISO 9001 : 2000
Certificate No. 550-159-04-002-04

Dated : 03/07/2003 H

HER201 THRU HER208

RATINGS AND CHARACTERISTIC CURVES

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

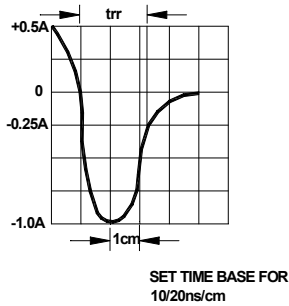
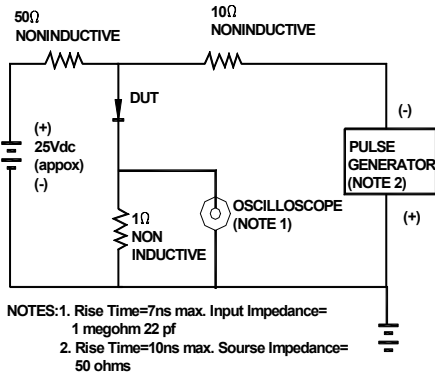


Fig.2 - TYPICAL FORWARD CURRENT DERATING

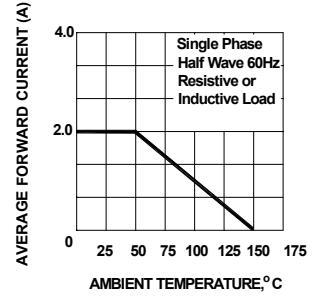


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

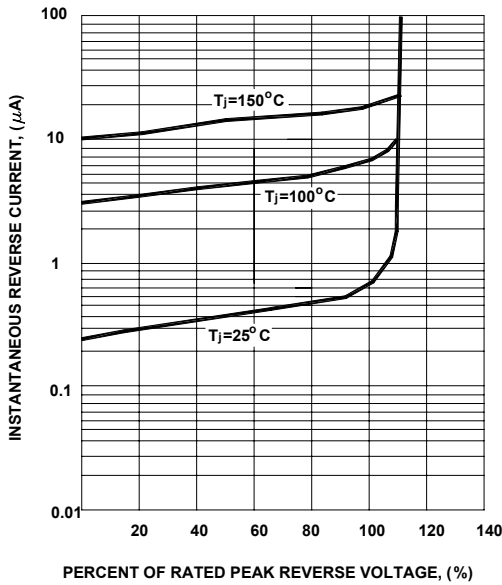


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

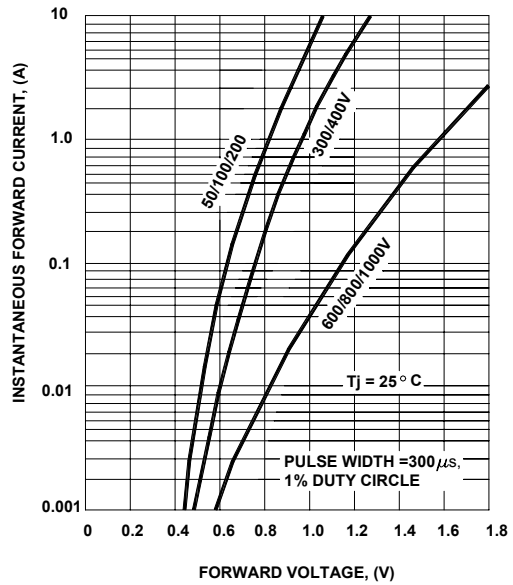


Fig. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

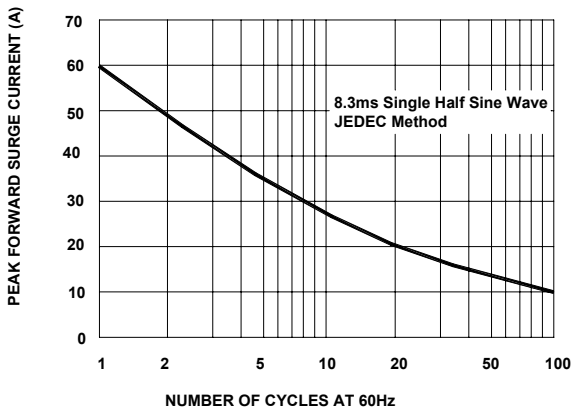
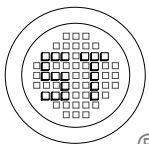
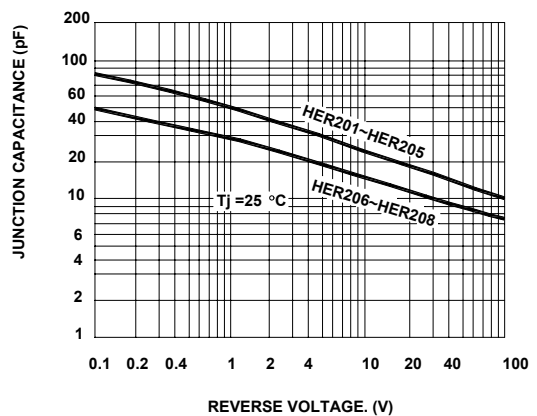


Fig. 6-TYPICAL JUNCTION CAPACITANCE



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