



# HZ3005 thru HZ310

## 3.0 A Single-Phase Silicon Bridge Rectifier Rectifier Reverse Voltage 50 to 1000V

### Features

- Ideal for printed circuit board mounting
- This series is UL listed under the Recognized Component Index, file number E142814
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed 260°C / 5 seconds at 5 lbs (2.3kg) tension

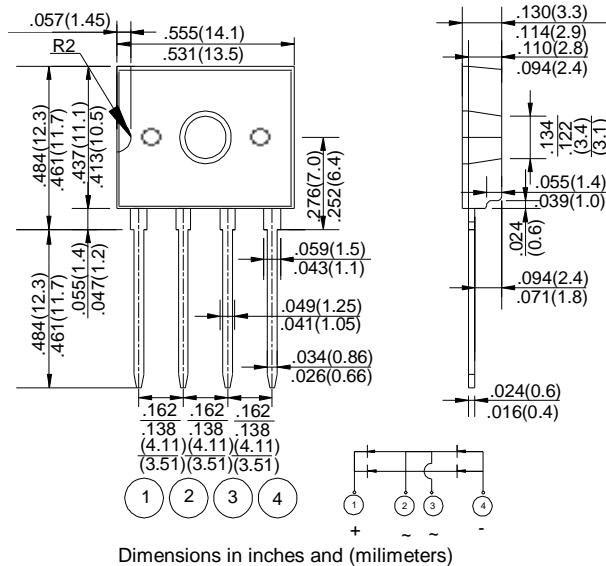
### Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting Position: Any

Weight: 1.35 grams (approx)



### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
For Capacitive load derate current by 20%.

Parameter	Symbol	HZ 3005	HZ 301	HZ 302	HZ 304	HZ 306	HZ 308	HZ 310	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=100°C (with heatsink)	IF(AV)				3.0				A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM				90				A
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t				35				A <sup>2</sup> sec
Typical thermal resistance per element (with heatsink) (1)	ReJA				55				°C / W
Operating junction and storage temperature range	TJ, TSTG				-55 to + 150				°C

### Electrical Characteristics

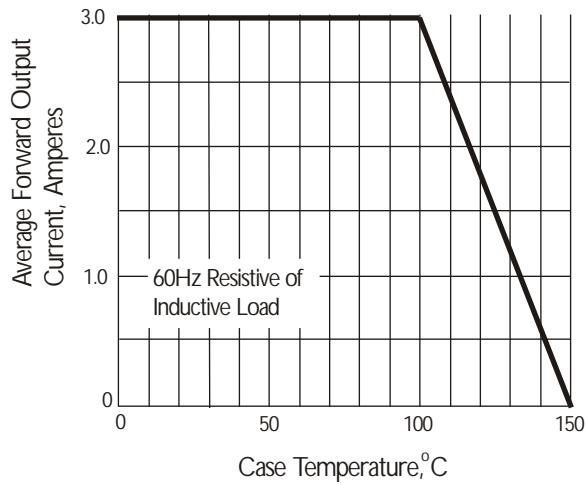
Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
For Capacitive load derate by 20 %.

Parameter	Symbol	HZ 3005	HZ 301	HZ 302	HZ 304	HZ 306	HZ 308	HZ 310	Unit
Maximum instantaneous forward voltage drop per leg at 3.0A	VF				1.1				V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR				10	1000			μA

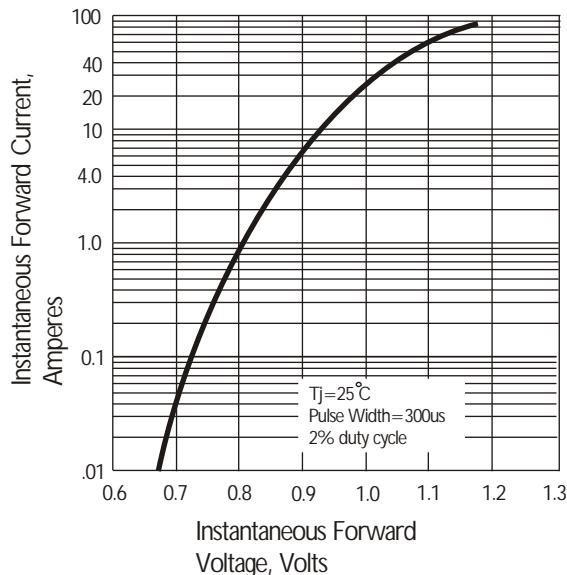
Notes: (1)Thermal resistance from Junction to Ambient on P.C.board mounting.

**Rating and Characteristic Curves** (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )  
**HZ3005 thru HZ310**

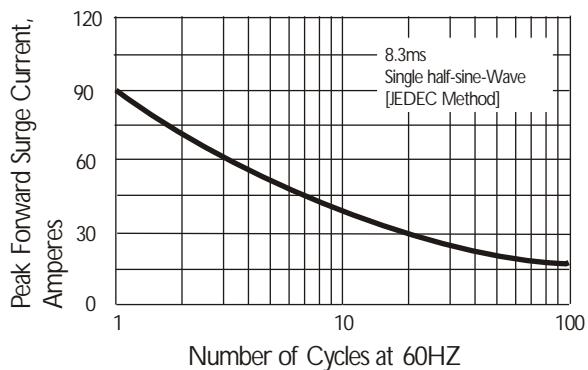
**Fig. 1 Derating Curve for Output Rectified Current**



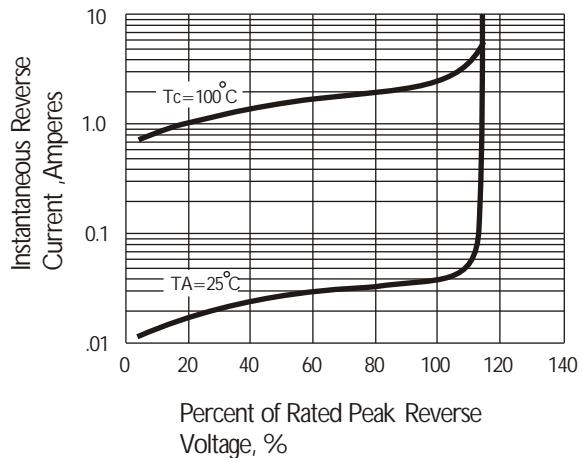
**Fig. 3 Typical Instantaneous Forward Characteristics**



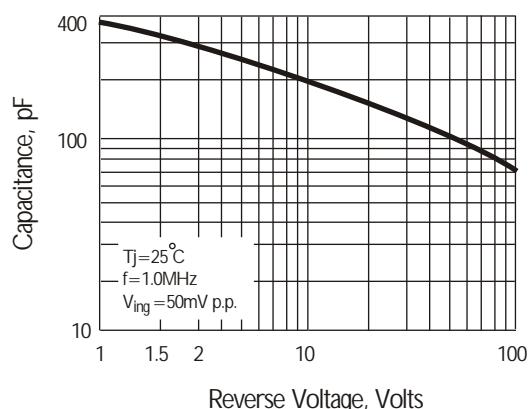
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 4 Typical Reverse Characteristics**



**Fig. 5 Typical Junction Capacitance**



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