

6 AMP SILICON BRIDGE RECTIFIERS

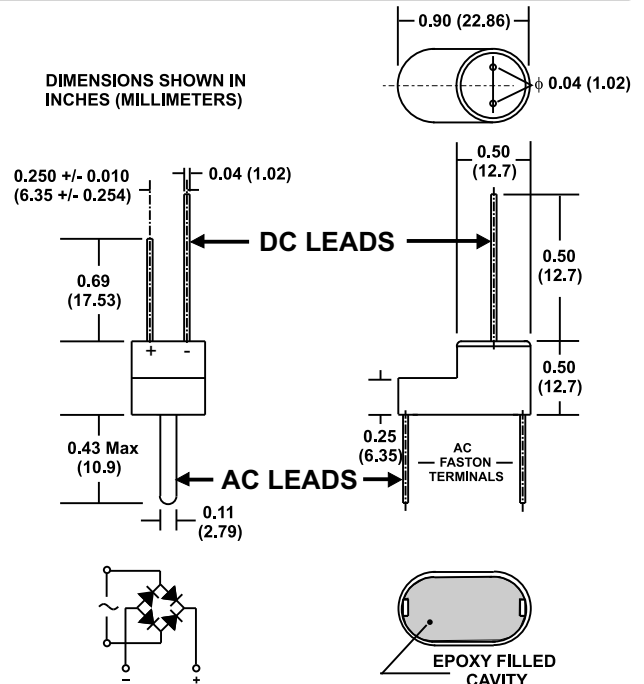
FEATURES

- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- BUILT-IN STRESS RELIEF MECHANISM FOR SUPERIOR RELIABILITY AND PERFORMANCE
- Unique structure - DC leads on one side, AC leads on the opposite side
- Ideal for DC motor related applications
- **UL RECOGNIZED - FILE #E124962**
- **RoHS COMPLIANT**

MECHANICAL DATA

- Case: Molded Epoxy (UL Flammability Rating 94V-0)
- Terminals: Round silver plated copper pins/faston connectors
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any.
- Weight: 0.13 Ounces (3.6 Grams)

MECHANICAL SPECIFICATION

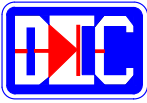


MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		AHBU 604	AHBU 606	AHBU 608	HBU 600	HBU 601	HBU 602	HBU 604	HBU 606	HBU 608	HBU 610	
Maximum DC Blocking Voltage	V _{RM}											VOLTS
Working Peak Reverse Voltage	V _{RWM}	400	600	800	50	100	200	400	600	800	1000	
Maximum Peak Recurrent Reverse Voltage	V _{RRM}											
RMS Reverse Voltage	V _{R (RMS)}	280	420	560	35	70	140	280	420	560	700	
Power Dissipation in V _(BR) Region for 100 μs Square Wave	P _{RM}	400			n/a							WATTS
Continuous Power Dissipation in V _(BR) Region @ T _{HS} =80 °C (Heat Sink Temp)	P _R	2			n/a							
Thermal Energy (Rating for Fusing)	I ² t	127										AMPS ² SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T _J = 125° C	I _{FSM}	250										AMPS
Average Forward Rectified Current @ T _C = 50° C @ T _A = 40° C	I _O	6 3										
Junction Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150										°C
Minimum Avalanche Voltage	V _{(BR) Min}	See Note 1			n/a							VOLTS
Maximum Avalanche Voltage	V _{(BR) Max}	See Note 1			n/a							
Maximum Forward Voltage (Per Diode) at 6 Amps DC	V _{FM}	0.95 (Typical < 0.90)										
Maximum Reverse Current at Rated V _{RM} @ T _A = 25° C @ T _A = 100° C	I _{RM}	1 50										μA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V _{ISO}	2000										VOLTS
Typical Thermal Resistance (on Heat Sink) Junction to Ambient	R _{θJA}	16.0										°C/W
Junction to Case	R _{θJC}	5.7										

NOTES: (1) These bridges exhibit the avalanche characteristic at breakdown. If your application requires a specific breakdown voltage range, please contact us.



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RATING & CHARACTERISTIC CURVES FOR SERIES HBU600 - HBU610 and SERIES AHBU604 - AHBU608

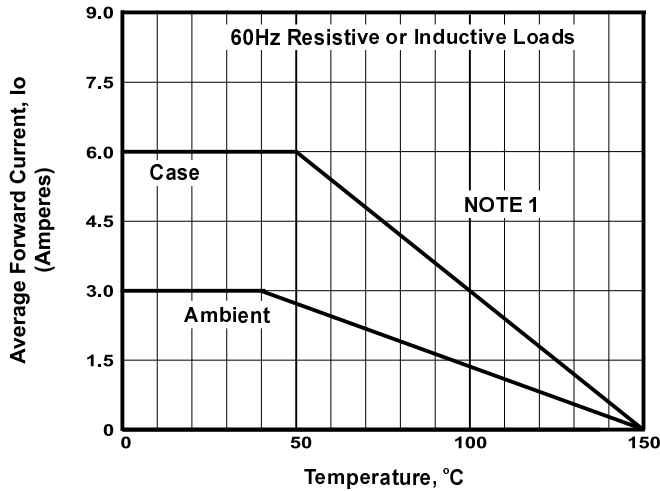


FIGURE 1. FORWARD CURRENT DERATING CURVE

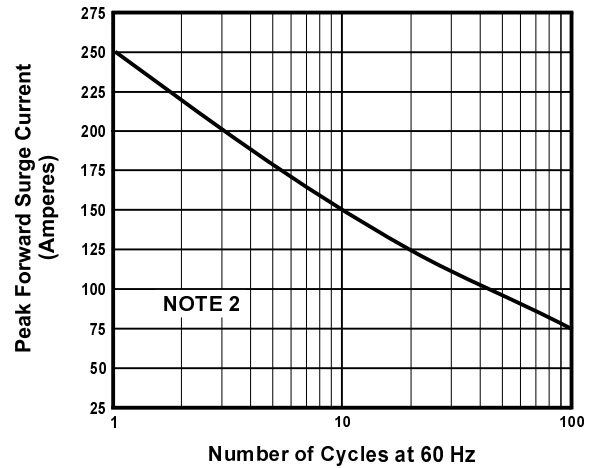


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

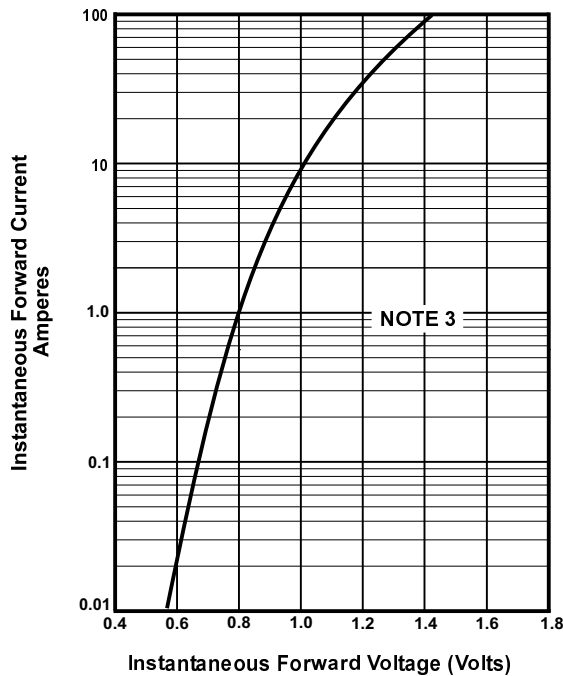


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

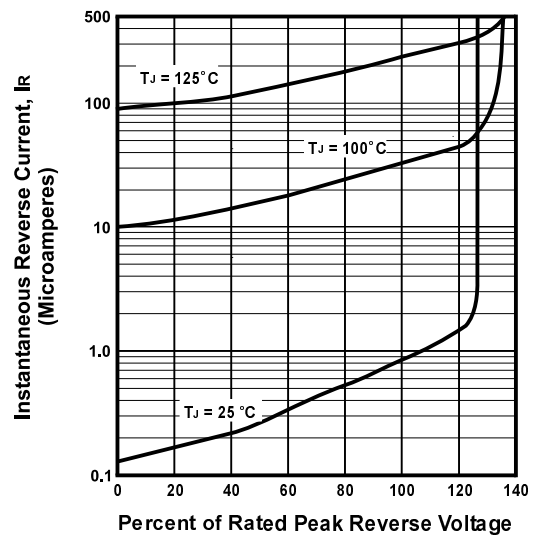


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS PER DIODE

NOTES

- (1) Ambient = Ambient temperature, T_A . P.C. Board mounting with 0.375" (9.5 mm) Lead lengths
 Case = Case Temperature, T_C . Mounted on aluminum plate 5.5" x 6.0" x 0.11" thick (14cm x 15cm x 0.3 cm)
- (2) $T_J = 125^\circ\text{C}$
- (3) $T_J = 25^\circ\text{C}$; Pulse Width = 300 μSec ; 1% Duty Cycle