

DIGITRON SEMICONDUCTORS

KBU8A-KBU8M

SINGLE PHASE BRIDGE RECTIFIER

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

MAXIMUM RATINGS (@ 25°C ambient temperature unless otherwise noted)

Rating	Symbol	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward output rectified current at $T_C = 100^\circ\text{C}$ ⁽¹⁾⁽³⁾ $T_A = 40^\circ\text{C}$ ⁽²⁾	$I_{F(AV)}$				8.0				Amps
Peak forward surge current single sine wave superimposed on rated load	I_{FSM}				300				Amps
Operating and storage temperature range	T_J, T_{stg}				-50 to +150				°C
Typical thermal characteristics	$R_{\theta JA}$ $R_{\theta JC}$				18 ⁽²⁾ 3.0 ⁽³⁾				°C/W

Note 1: Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.

Note 2: Thermal resistance from junction to ambient with units mounted in free air, no heatsink, PCB at 0.375" lead length and 0.5 x 0.5" copper pads.

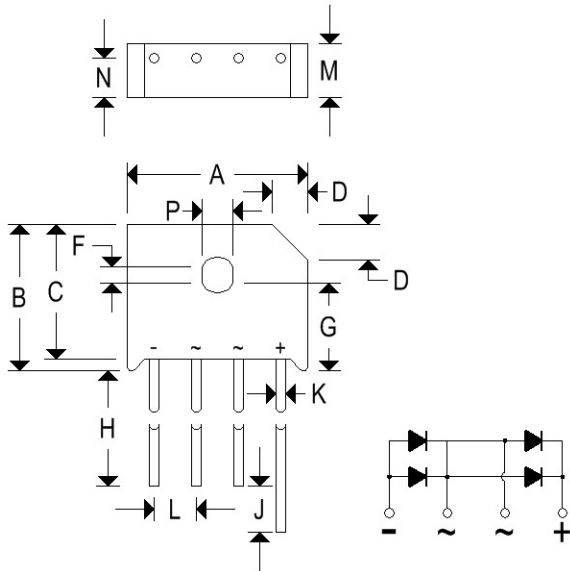
Note 3: Thermal resistance from junction to case with units mounted on 3.0 x 3.0 x 0.11" thick aluminum plate heatsink.

ELECTRICAL CHARACTERISTICS (@ 25°C ambient temperature unless otherwise noted)

Characteristic	Symbol	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	Units
Maximum instantaneous forward drop per diode @ 8.0A	V_F				1.0				Volts
Maximum DC reverse current at rated DC blocking voltage per diode $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R				10 1.0				μA mA

MECHANICAL CHARACTERISTICS

Case	Digi P
Marking	Body painted, alpha-numeric
Pin out	See below



	Digi P			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.895	0.935	22.700	23.700
B	-	0.760	-	19.300
C	0.660	0.700	16.800	17.800
D	0.165	0.185	4.200	4.700
F	0.065	0.085	1.700	2.200
G	0.405	0.455	10.300	11.300
H	1.000	-	25.400	-
J	0.200	0.2400	5.080	6.090
K	0.048	0.052	1.200	1.300
L	0.180	0.220	4.600	5.600
M	0.260	0.280	6.600	7.100
N	0.185	0.205	4.700	5.200
P	0.140	0.160	3.600	4.100

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KBU8A-KBU8M SINGLE PHASE BRIDGE RECTIFIER

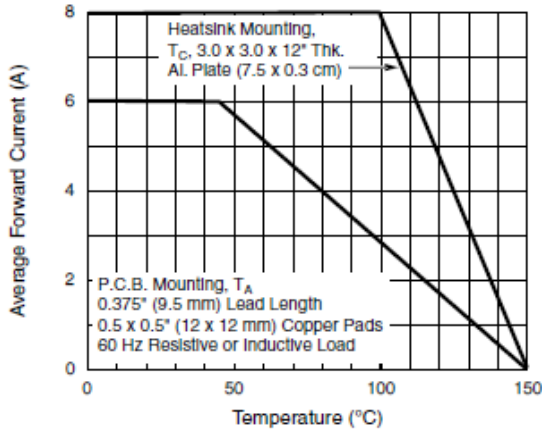


Figure 1. Derating Curve Output Rectified Current

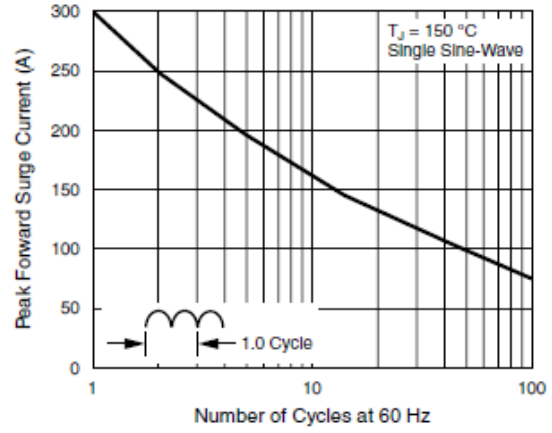


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

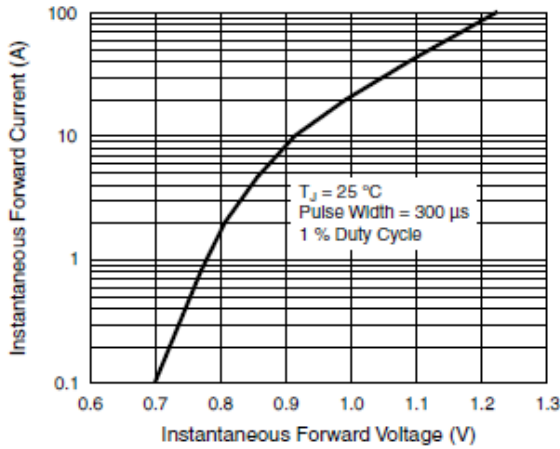


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

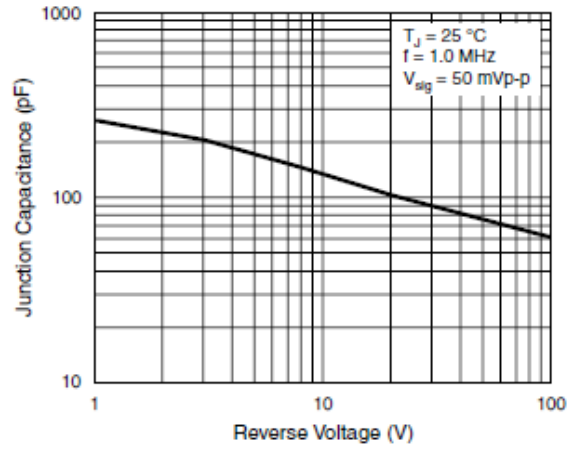


Figure 5. Typical Junction Capacitance Per Diode

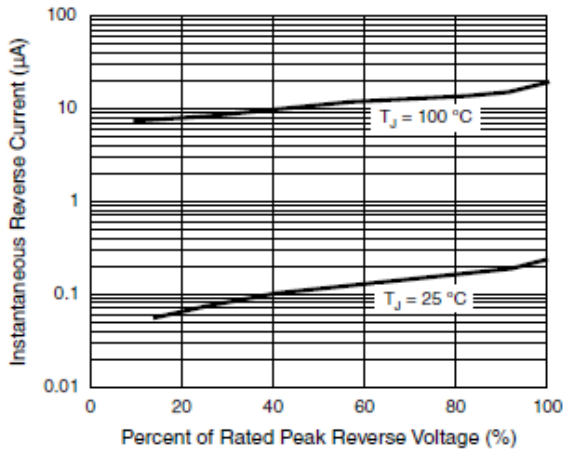


Figure 4. Typical Reverse Leakage Characteristics Per Diode