DIGITRON™ Semiconductors

High-reliability discrete products and engineering services since 1977

KBL005-KBL10

SINGLE PHASE BRIDGE RECTIFIERS

FEATURES

- Available as “HR” (high reliability) screened per MIL-PRF-19500, JANTX level. Add “HR” suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding “-PBF” suffix.

MAXIMUM RATINGS

Rating	Symbol	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	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_A = 50°C	$I_{F(AV)}$	4.0							Amps
Peak forward surge current single sine wave superimposed on rated load	I_{FSM}	200							Amps
Operating and storage temperature range	T_J, T_{stg}	-50 to +150							°C
Typical thermal characteristics	$R_{\Theta JA}$ $R_{\Theta JL}$	19[1] 2.4[2]							°C/W

Note 1: Thermal resistance from junction to ambient with units mounted on 3.0x3.0x0.11” thick aluminum plate
Note 2: Thermal resistance from junction to lead with units mounted on PCB at 0.375” lead length and 0.5x0.5” copper pads.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Characteristic	Symbol	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	Units
Maximum instantaneous forward drop per diode @ 4.0A	**V_F**	**1.1**							**Volts**
Maximum DC reverse current at rated DC blocking voltage per diode	**I_R**								
T_A = 25°C		**5**							**µA**
T_A = 125°C		**1**							**mA**

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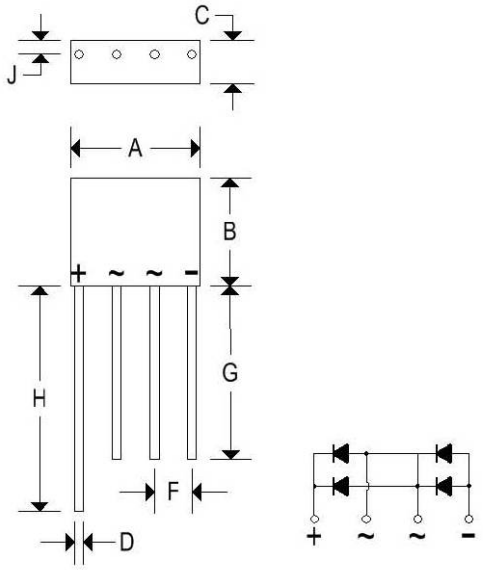
MECHANICAL CHARACTERISTICS

Case	Digi N
Marking	Alpha-numeric
Pin out	See below



	Digi N			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.745	0.755	18.920	19.180
B	0.620	0.630	15.750	16.000
C	0.245	0.255	6.220	6.480
D	0.048	0.052	1.220	1.320
F	0.180	0.220	4.570	5.590
G	1.000	-	25.400	-
H	1.100	-	27.940	-
J	0.091	0.085	2.057	2.180

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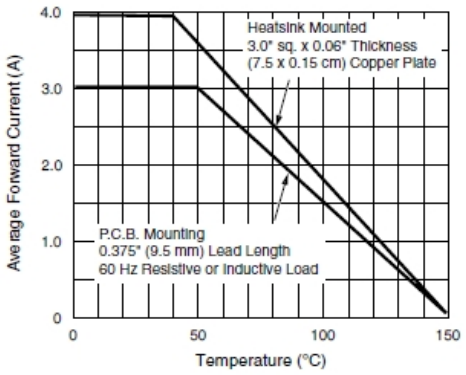

Figure 1. Derating Curve Output Rectified Current

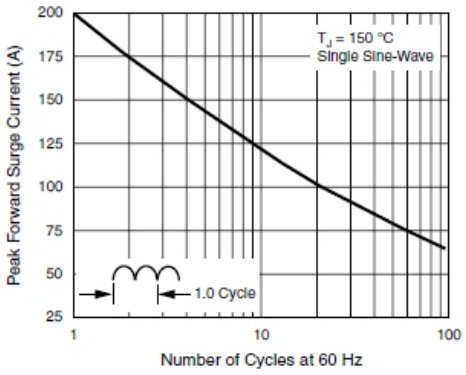

Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

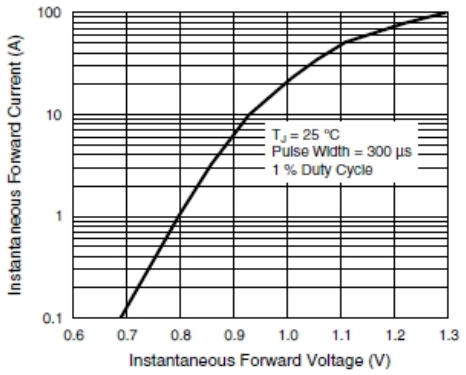

Figure 3. Typical Instantaneous Forward Characteristics Per Diode

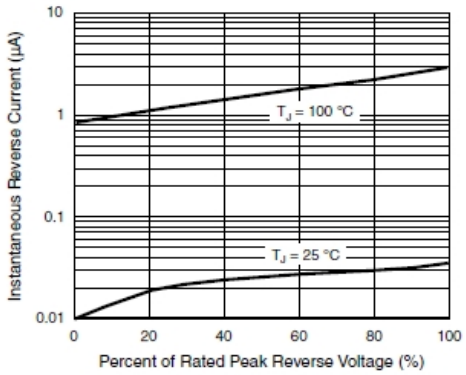

Figure 4. Typical Reverse Leakage Characteristics Per Diode