DIGITRON SEMICONDUCTORS

2KBP005M-2KBP10M SERIES — 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	2KBP 005M	2KBP 01M	2KBP 02M	2KBP 04M	2KBP 06M	2KBP 08M	2KBP 10M	Units
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 = 55°C	$I_{F(AV)}$	2.0							Amps
Peak forward surge current single half-sine wave superimposed on rated load T_J= 150°C	I_{FSM}	60.0							Amps
Rating for fusing (t < 8.3ms)	I^2t	15.0							A^2s
Typical thermal resistance per leg (1)	$R_{\Theta JA}$ $R_{\Theta JL}$	30.0 11.0							°C/W
Operating and storage temperature range	T_J, T_{stg}	-55 to +165							°C

Note 1: Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.47 x 0.47" copper pads.

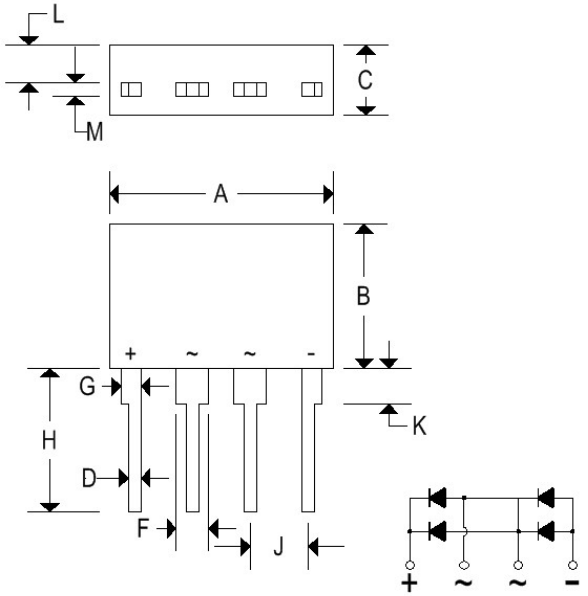
ELECTRICAL CHARACTERISTICS (@ 25°C ambient temperature unless otherwise noted)

Characteristic	Symbol	2KBP 005M	2KBP 01M	2KBP 02M	2KBP 04M	2KBP 06M	2KBP 08M	2KBP 10M	Units
Maximum instantaneous forward voltage drop per leg at 3.14A	V_F	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage per leg **T_A = 25°C** **T_A = 125°C**	I_R	 5 500							µA
Typical junction capacitance(2)	C_J	25							pF

Note 2: Measured at 1.0 MHz and applied reverse voltage of 4.0V.

MECHANICAL CHARACTERISTICS

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



	Digi M			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.580	0.620	14.732	15.748
B	0.360	0.400	9.144	10.160
C	0.185	0.195	4.699	4.953
D	0.025	0.035	0.635	0.889
F	0.080	0.090	2.032	2.286
G	0.040	0.055	1.016	1.397
H	0.390	0.430	9.906	10.922
J	0.145	0.160	3.683	4.064
K	0.080	0.090	2.032	2.286
L	0.090	0.110	2.286	2.794
M	0.025	0.035	0.635	0.889

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FIG. 1 - DERATING CURVE OUTPUT RECTIFIED CURRENT

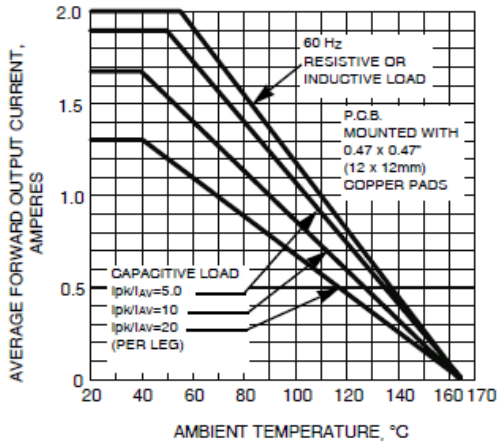


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

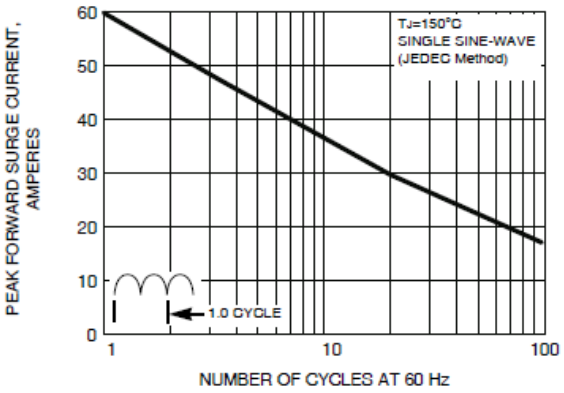


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS PER LEG

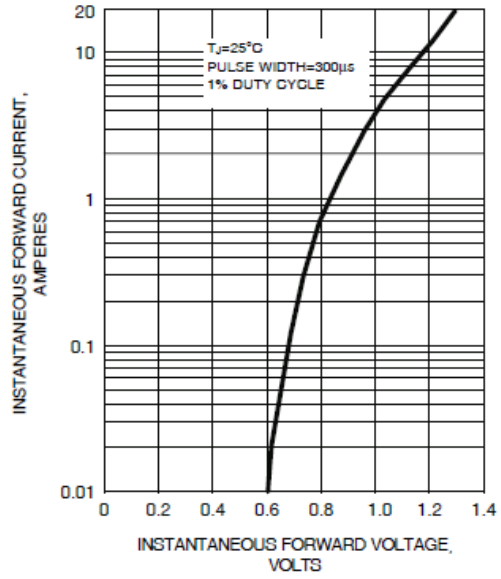


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

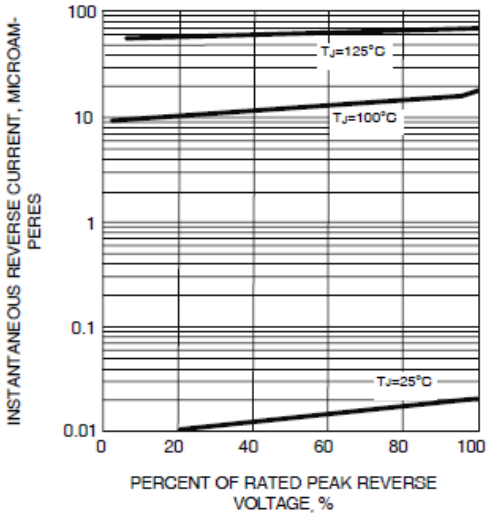
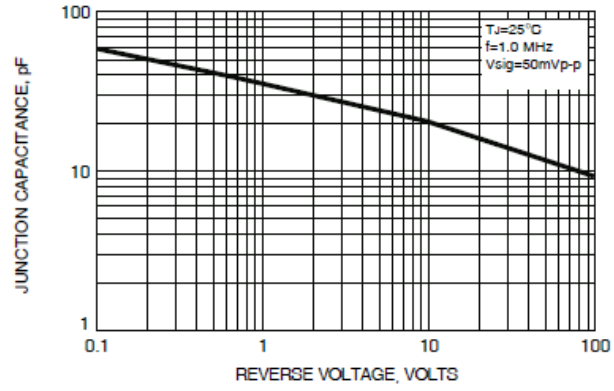


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG



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Rev. 20130128