

INTERNATIONAL RECTIFIER

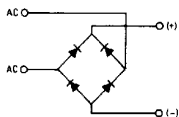


# 1KAB-E SERIES

## 1.2 amp rectifier bridge

### Maximum Ratings

	1KAB-E	Units
$I_O$	1.2	A
$I_{FSM}$	50 Hz	A
	60 Hz	
$I_{2t}$	50 Hz	$A^2_s$
	60 Hz	
$V_{RRM}$	100-1,000	V



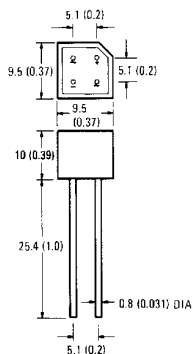
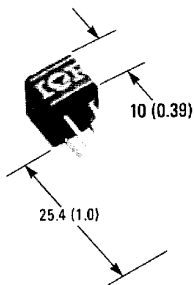
Single Phase Bridge Rectifier

### Description/Features

A 1.2A Diode Bridge Rectifier Assembly designed for new circuits and for replacement service. For printed circuit board applications.

- Ease of assembly, installation, inventory
- High surge rating
- Compact

### CASE STYLE AND DIMENSIONS



Case Style D-38

All Dimensions in Millimeters and (Inches)

**VOLTAGE RATINGS**

Type	$V_{RRM}, V_{RSM}$ (V)	$V_{RMS}$ (recommended) (V)	Maximum ① Load Capacitance ( $\mu F$ )	Minimum ① Source Resistance ( $\Omega$ )
1KAB10E	100	40	5000	0.5
1KAB20E	200	80	3300	0.8
1KAB40E	400	125	1600	1.5
1KAB60E	600	250	1200	2.6
1KAB80E	800	380	800	3.0
1KAB100E	1000	500	600	5.0

① See Figure 3.

**CROSS REFERENCE**

IR No.	DIN Code
1KAB10E	B40C1000
1KAB20E	B80C1000
1KAB40E	B125C1000
1KAB60E	B250C1000
1KAB80E	B380C1000
1KAB100E	B500C1000

**ELECTRICAL SPECIFICATIONS**

		1KAB-E	Units	Conditions
$I_O$	Max. DC output current	1.2	A	$T_A = 45^\circ C$ , Resistive or inductive load
		1.0	A	$T_A = 45^\circ C$ , Capacitive load
$I_{FSM}$	Max. peak one cycle, non-repetitive surge current	50	A	50 Hz half cycle sine wave or 6 ms rectangular pulse
		52		60 Hz half cycle sine wave or 5 ms rectangular pulse
$I^2 t$	Max. $I^2 t$ capability for fusing	12.5	$A^2 s$	$t = 10$ ms
		11.3		$t = 8.3$ ms
		17.7	$A^2 s$	$t = 10$ ms
		16.1		$t = 8.3$ ms
$I^2 \sqrt{t}$	Max. $I^2 \sqrt{t}$ capability for fusing ②	177	$A^2 \sqrt{s}$	$V_{RRM}$ following surge = 0, $t = 0.1$ to 10 ms
$V_{FM}$	Max. peak forward voltage per leg	1.1	V	$I_O = 1.2 A$ (1.88 A pk)
$I_{RM}$	Typical peak reverse current per leg	10	$\mu A$	At rated $V_{RRM}$ , $T_J = 25^\circ C$
		500	$\mu A$	At rated $V_{RRM}$ , $T_J = 150^\circ C$
$f$	Operating frequency range	40 to 2000	Hz	

 ②  $I^2 t$  for time  $t_x = I^2 \sqrt{t} \cdot \sqrt{t_x}$ .

**THERMAL AND MECHANICAL SPECIFICATIONS**

		1KAB-E	Units	Conditions
$T_J, T_{stg}$	Operating and storage junction temperature ranges	-40 to 150	$^\circ C$	
wt	Approximate weight	3 (0.1)	g (oz.)	

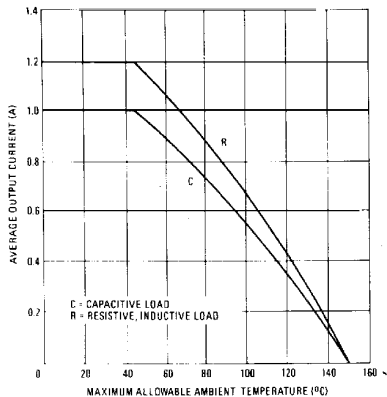


Fig. 1 – Average (DC) Output Current Vs. Maximum Allowable Ambient Temperature

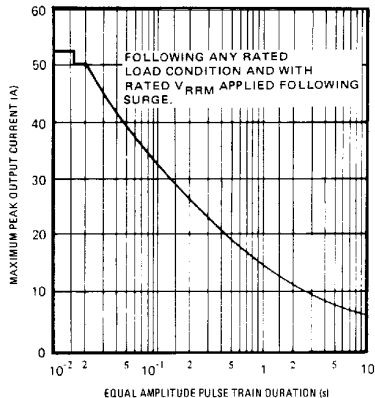


Fig. 2 – Maximum Non-Repetitive Surge Current Vs. Pulse Train Duration (f = 50 Hz)

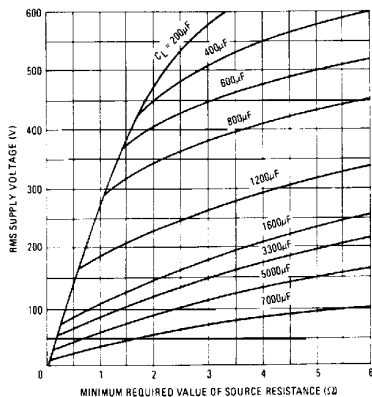


Fig. 3 – Minimum Required Source Resistance Vs. RMS Supply Voltage and Load Capacitance

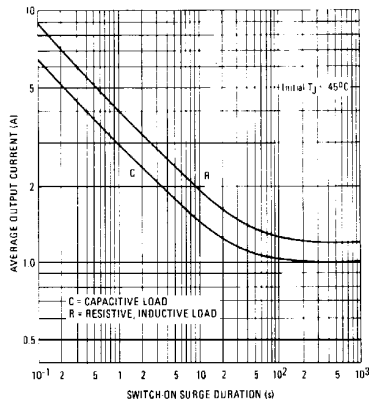


Fig. 4 – Maximum Switch-on Surge Current Vs. Surge Duration