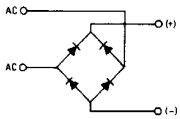
INTERNATIONAL RECTIFIER IOR

1KAB-E SERIES

1.2 amp rectifier bridge

Maximum Ratings

		1KAB-E	Units
I_O		1.2	A
I_{FSM}	50 Hz	50	A
	60 Hz	52	
I^2t	50 Hz	17.7	A^2s
	60 Hz	16.1	
V_{RRM}		100–1,000	V



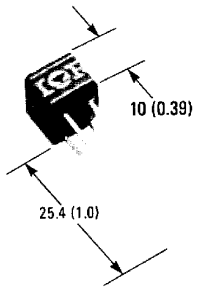
Single Phase Bridge Rectifier

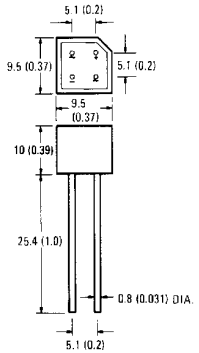
Description/Features

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 (μF)	Minimum ① Source Resistance (Ω)
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°C, Resistive or inductive load
		1.0	A	T_A = 45°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 — Following any rated load condition, and with rated V_{RRM} applied following surge.
		52		60 Hz half cycle sine wave or 5 ms rectangular pulse
I^2t	Max. I^2t capability for fusing	12.5	A^2s	t = 10 ms — Rated V_{RRM} applied following surge, initial T_J = 150°C.
		11.3		t = 8.3 ms
		17.7	A^2s	t = 10 ms — V_{RRM} = 0 following surge, initial T_J = 150°C.
		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 = 1.2A (1.88A pk)
I_{RM}	Typical peak reverse current per leg	10	μA	At rated V_{RRM}, T_J = 25°C
		500	μA	At rated V_{RRM}, T_J = 150°C
f	Operating frequency range	40 to 2000	Hz	

② I^2t 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	°C	
wt	Approximate weight	3 (0.1)	g (oz.)	

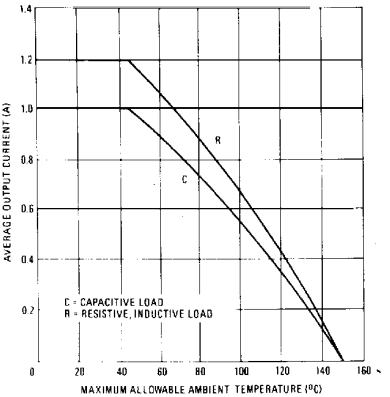


Fig. 1 – Average (DC) Output Current Vs. Maximum Allowable Ambient Temperature

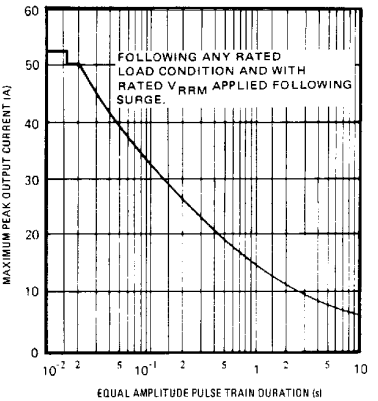


Fig. 2 – Maximum Non-Repetitive Surge Current Vs. Pulse Train Duration (f = 50 Hz)

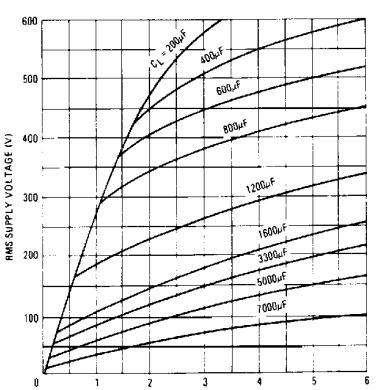


Fig. 3 – Minimum Required Source Resistance Vs. RMS Supply Voltage and Load Capacitance

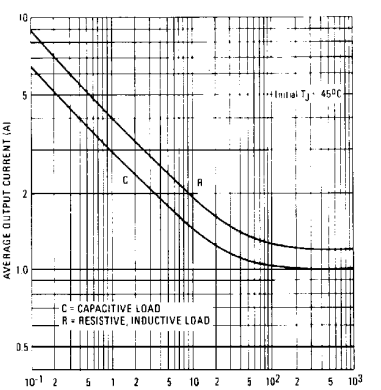


Fig. 4 – Maximum Switch-on Surge Current Vs. Surge Duration

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