Data Sheet No. PD-4.007D

T-23-09

INTERNATIONAL RECTIFIER IOR

100JB, 250JB, 26MB, 35MB AND 36MB SERIES

10 to 35 amp rectifier bridges

Major Ratings and Characteristics

		100JB	250JB & 26MB	35MB & 36MB	Units
I_O		10	25	35	A
I_{FSM}	@ 50 Hz	125	335	400	A
	@ 60 Hz	130	350	420	
V_{RRM}		50–1200	50–1200	50–1200	V

NOW
U. L. Recognized
10-35 Amp "JB" & "MB"
Series Bridges

Description/Features

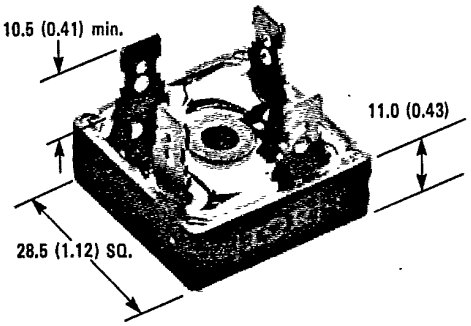
Three groups of Diode Bridge Rectifier Assemblies rated from 10 to 35 Amperes and 50 to 1,200 volts. Widely used for new circuits and for replacement.

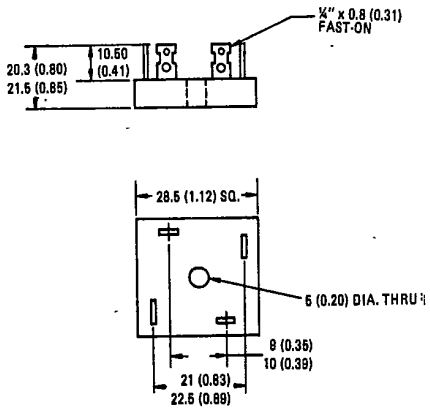
- Ease of assembly, installation, inventory.
- High surge rating.
- For new applications.
- Broad replacement capacity.
- Universal, 3-way terminals; snap-on, wrap-around or solder.
- High thermal conductivity, electrically insulated case.

D

NOTE: Fast recovery version also available. Contact your local IR sales office for information.

CASE STYLE AND DIMENSIONS





Case Style D-34

All Dimensions in Millimeters and (Inches)

100JB, 250JB, 26MB, 35MB and 36MB Series

INTERNATIONAL RECTIFIER IOR

T-23-09

VOLTAGE RATINGS

Part Numbers ①					V_{RRM} – Max. Peak Reverse Voltage (V)	V_{RSM} – Max. Non-Repetitive Peak Reverse Voltage (V)
100JB05L	250JB05L	26MB05A	35MB05A	36MB05A	50	75
100JB1L	250JB1L	26MB10A	35MB10A	36MB10A	100	150
100JB2L	250JB2L	26MB20A	35MB20A	36MB20A	200	275
100JB4L	250JB4L	26MB40A	35MB40A	36MB40A	400	500
100JB6L	250JB6L	26MB60A	35MB60A	36MB60A	600	725
100JB8L	250JB8L	26MB80A	35MB80A	36MB80A	800	900
100JB10L	250JB10L	26MB100A	35MB100A	36MB100A	1000	1100
100JB12L	250JB12L	26MB120A	35MB120A	36MB120A	1200	1300

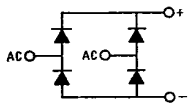
ELECTRICAL SPECIFICATIONS

		100JB	250JB / 26MB-A	35MB-A / 36MB-A	Units	Conditions
I_O	Max. DC output current	10	25	35	A	Resistive or inductive load; T_C = 65°C for 35MB-A, T_C = 65°C for 100JB & 250JB.
		8	20	28		Capacitive load
I_{FSM}	Max. peak one cycle, non-repetitive surge current	125	335	400	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.
		130	350	420		60 Hz half cycle sine wave or 5 ms rectangular pulse
I^2t	Max. I^2t capability for fusing	77	560	800	A^2s	t = 10 ms; Rated V_{RRM} applied following surge, initial
		70	510	735		t = 8.3 ms; T_J = max. operating junction temperature.
		109	790	1130	A^2s	t = 10 ms; V_{RRM} = 0 following surge, initial T_J = max.
		99	720	1030		t = 8.3 ms; operating junction temperature.
$I^2\sqrt{t}$	Max. $I^2\sqrt{t}$ capability for fusing ②	1090	7910	11310	$A^2\sqrt{s}$	V_{RRM} following surge = 0, t = 0.1 to 10 ms.
V_{FM}	Max. peak forward voltage	1.3	–	–	V	I_O = 10A (15.7A pk)
		–	1.1	–		I_O = 25A (39.3A pk); per diode, T_J = 25°C
		–	–	1.2		I_O = 35A (55A pk)
I_{RM}	Max. peak reverse current	10			μA	T_J = 25°C
		2000				T_J = T_J max.; per diode, at rated V_{RRM}
V_{ins}	RMS isolation voltage	2700			V_{RMS}	Base plate to any terminal

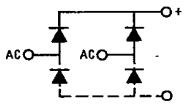
② I^2t for time $t_x = I^2\sqrt{t} \cdot \sqrt{t_x}$.

THERMAL-MECHANICAL SPECIFICATIONS

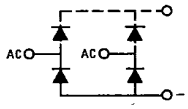
T_J	Operating junction temperature range	-40 to 150	-40 to 170		°C	V_{RRM} = 50 to 600V
			-40 to 150			V_{RRM} = 800 to 1200V
T_{stg}	Storage temperature range	-40 to 150			°C	
R_{thJC}	Max. thermal resistance, junction-to-case	3.5	1.8	1.4	deg. C/W	V_{RRM} = 50 to 600V
		–	1.4	1.15		V_{RRM} = 800 to 1200V
R_{thCS}	Thermal resistance, case-to-sink	0.2			deg. C/W	
f	Operating frequency range	40 to 1000			Hz	Mounting surface flat, smooth, and greased.
wt	Approximate weight	20 (0.71)			g (oz.)	
	Case Style	D-34				



Circuit B
Bridge Rectifier



Circuit C
Center Tap,
Common Cathode



Circuit J
Center Tap,
Common Anode

To use as a Center Tap assembly connect load either to positive or negative output terminal, as desired.

Current ratings are the same for all three applications.

T-23-09

100JB Series

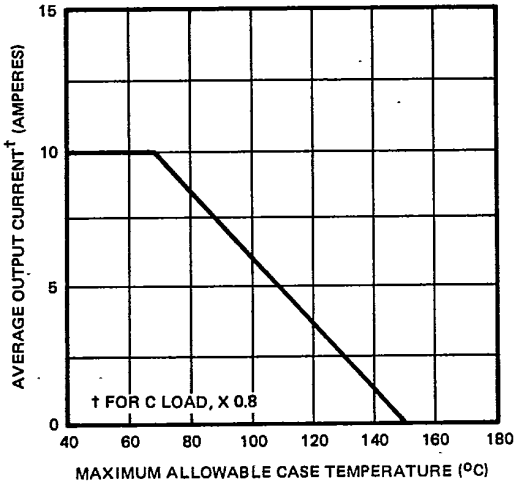


Fig. 1 – Average (DC) Output Current Vs. Maximum Allowable Case Temperature, 100JB Series

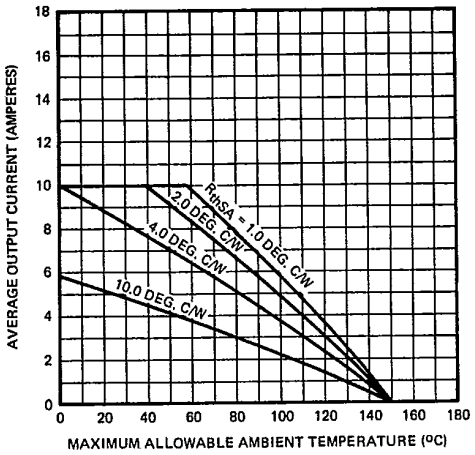


Fig. 2 – Average Output Current Vs. Maximum Allowable Ambient Temperature, 100JB Series

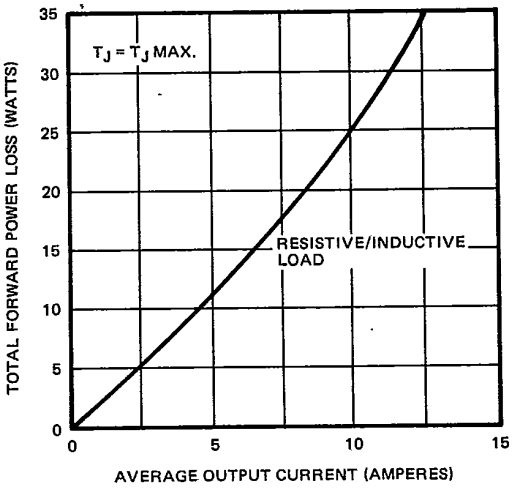


Fig. 3 – Maximum Power Loss Vs. Average Output Current, 100JB Series

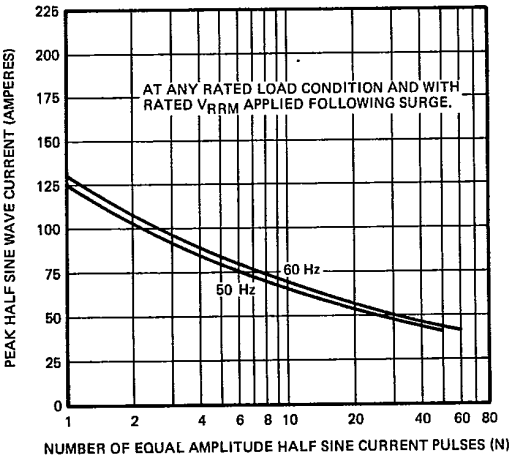


Fig. 4 – Maximum Non-Repetitive Surge Current Vs. Number of Current Pulses, 100JB Series

D

T-23-09

250JB Series

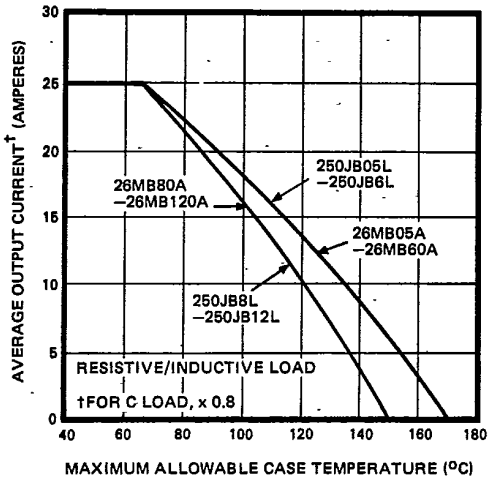


Fig. 5 – Average (DC) Output Current Vs. Maximum Allowable Case Temperature, 250JB and 26MB Series

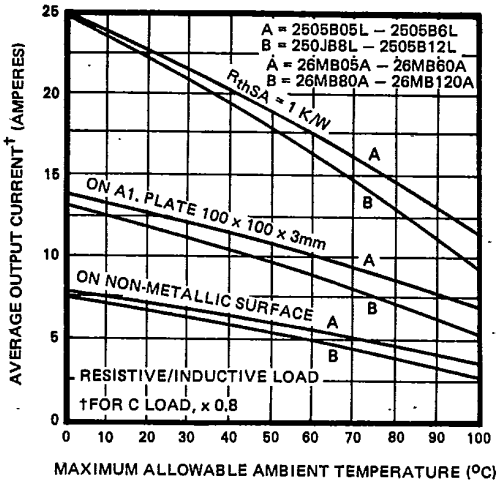


Fig. 6 – Average Output Current Vs. Maximum Allowable Ambient Temperature, 250JB and 26MB Series

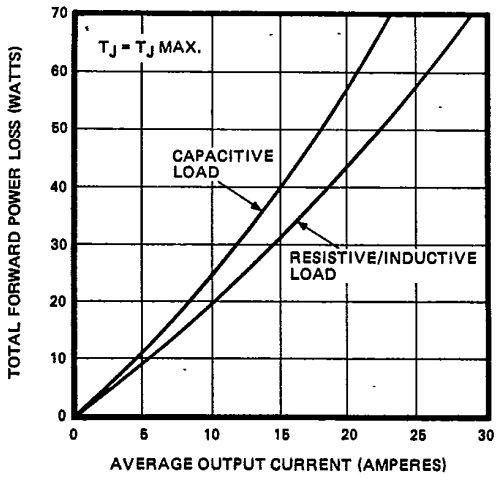


Fig. 7 – Maximum Power Loss Vs. Average Output Current, 250JB and 26MB Series

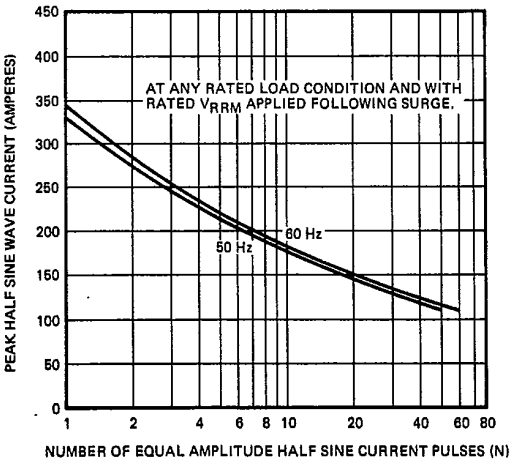


Fig. 8 – Maximum Non-Repetitive Surge Current Vs. Number of Current Pulses, 250JB and 26MB Series

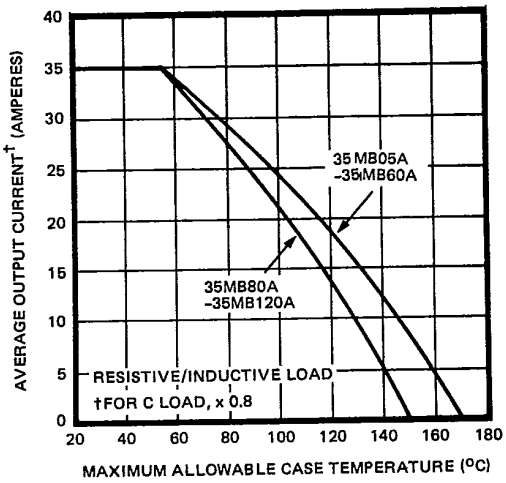


Fig. 9 — Average (DC) Output Current Vs. Maximum Allowable Case Temperature, 35MB and 36MB Series

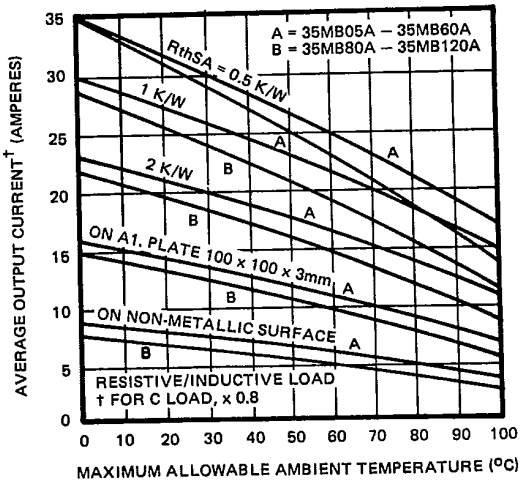


Fig. 10 — Average Output Current Vs. Maximum Allowable Ambient Temperature, 35MB and 36MB Series

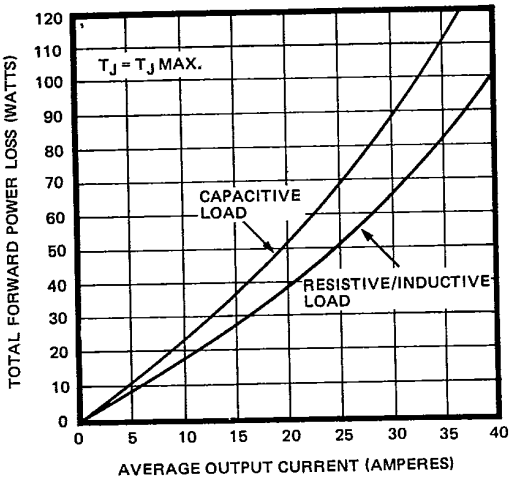


Fig. 11 — Maximum Power Loss Vs. Average Output Current, 35MB and 36MB Series

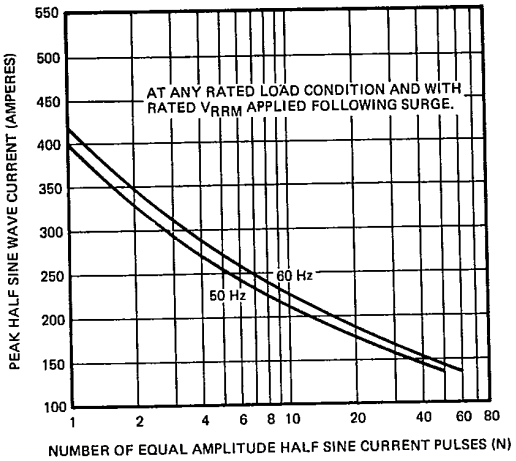


Fig. 12 — Maximum Non-Repetitive Surge Current Vs. Number of Current Pulses, 35MB and 36MB Series

D