

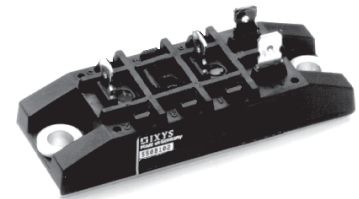
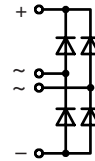
Single Phase Rectifier Bridge

$$I_{dAV} = 45 \text{ A}$$

$$V_{RRM} = 800-1800 \text{ V}$$

Preliminary data

V_{RSM} V	V_{RRM} V	Types
900	800	VBO 45-08NO7
1300	1200	VBO 45-12NO7
1500	1400	VBO 45-14NO7
1700	1600	VBO 45-16NO7
1900	1800	VBO 45-18NO7



Symbol	Conditions	Maximum Ratings
I_{dAV} ① $T_C = 100^\circ\text{C}$, module		45 A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 550 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine 600 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 500 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine 550 A
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 1520 A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine 1520 A ² s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 1250 A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine 1250 A ² s
T_{VJ}		-40...+150 °C
T_{VJM}		150 °C
T_{stg}		-40...+125 °C
V_{ISOL}	50/60 Hz, RMS	$t = 1 \text{ min}$ 2500 V~
	$I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ s}$ 3000 V~
M_d	Mounting torque (M5) (10-32 UNF)	5 ± 15 % Nm
		44 ± 15 % lb.in.
Weight	typ.	110 g

Features

- Package with copper base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- 1/4" fast-on power terminals

Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight

Symbol	Conditions	Characteristic Values
I_R	$V_R = V_{RRM1}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 0.5 \text{ mA}$
	$V_R = V_{RRM1}$; $T_{VJ} = T_{VJM}$	$\leq 10 \text{ mA}$
V_F	$I_F = 150 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 1.7 \text{ V}$
V_{TO}	For power-loss calculations only	0.8 V
r_T	$T_{VJ} = T_{VJM}$	8 mΩ
R_{thJC}	per diode; DC current	1.45 K/W
	per module	0.363 K/W
R_{thJK}	per diode, DC current	1.9 K/W
	per module	0.475 K/W
d_s	Creeping distance on surface	16.1 mm
d_A	Creepage distance in air	7.5 mm
a	Max. allowable acceleration	50 m/s ²

Data according to IEC 60747 refer to a single diode unless otherwise stated
① for resistive load at bridge output.

IXYS reserves the right to change limits, test conditions and dimensions.

© 2004 IXYS All rights reserved

Dimensions in mm (1 mm = 0.0394")

