

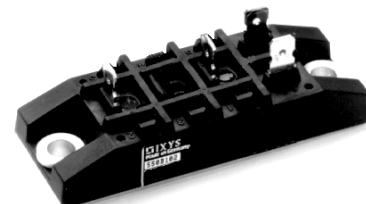
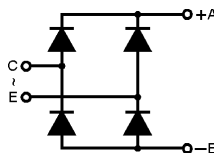
Single Phase Rectifier Bridge

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

$$V_{RRM} = 800-1600 \text{ V}$$

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 45-16NO7



Symbol	Test 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^2s
		$t = 8.3\text{ ms}$ (60 Hz), sine	1520	A^2s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10\text{ ms}$ (50 Hz), sine	1250	A^2s
		$t = 8.3\text{ ms}$ (60 Hz), sine	1250	A^2s
T_{VJ}			-40...+150	$^{\circ}\text{C}$
T_{VJM}			150	$^{\circ}\text{C}$
T_{stg}			-40...+125	$^{\circ}\text{C}$
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)		$5 \pm 15\%$	Nm
			$44 \pm 15\%$	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

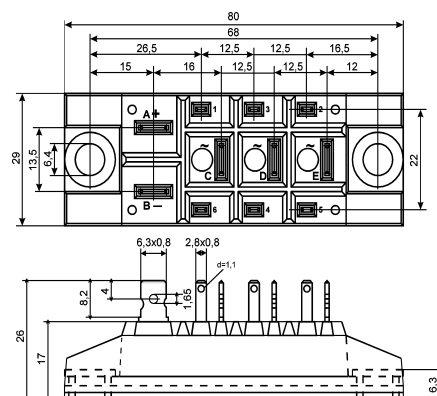
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Advantages

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

Symbol	Test Conditions	Characteristic Values
I_R	$V_R = V_{RRM}; T_{VJ} = 25^\circ\text{C}$	$\leq 0.5 \text{ mA}$
	$V_R = V_{RRM}; T_{VJ} = T_{VJM}$	$\leq 10 \text{ mA}$
V_F	$I_F = 150 \text{ A}; T_{VJ} = 25^\circ\text{C}$	$\leq 1.7 \text{ V}$
V_{T0}	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

Dimensions in mm (1 mm = 0.0394")



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.