

Single Phase Rectifier Bridge

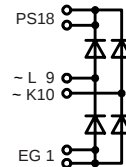
in ECO-PAC 2

$$I_{dAV} = 78 \text{ A}$$

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

Preliminary data

V_{RSM} V	V_{RRM} V	Types
900	800	VBO 78-08NO7
1300	1200	VBO 78-12NO7
1500	1400	VBO 78-14NO7
1700	1600	VBO 78-16NO7



Pin arrangement see outlines

Symbol	Test Conditions	Maximum Ratings
I_{dAV} ①	$T_C = 100^\circ\text{C}$, module	78 A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine
		750 A
		820 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine
		2800 A ² s
		2820 A ² s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine
T_{VJ} T_{VJM} T_{stg}		-40...+150 °C
		150 °C
		-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 (M4)	1.5 - 2 Nm 14 - 18 lb.in.
Weight	typ.	18 g

Features

- Package with DCB ceramic base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering

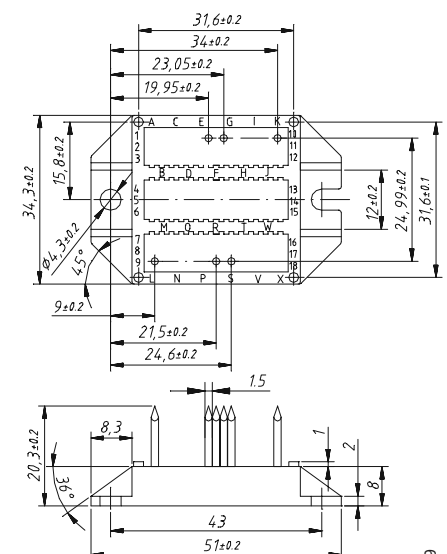
Applications

- 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

Dimensions in mm (1 mm = 0.0394")



Symbol	Test Conditions	Characteristic Values
I_R	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 0.5 \text{ mA}$
	$V_R = V_{RRM}$; $T_{VJ} = T_{VJM}$	$\leq 5 \text{ mA}$
V_F	$I_F = 150 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 1.6 \text{ V}$
V_{T0}	For power-loss calculations only	0.8 V
r_T		6 mΩ
R_{thJC}	per diode; DC current	1.2 K/W
	per module	0.3 K/W
R_{thJH}	per diode, DC current (typ.)	1.5 K/W
	per module (typ.)	0.375 K/W
d_s	Creeping distance on surface	11.2 mm
d_A	Creepage distance in air	9.7 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.