

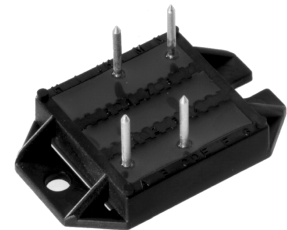
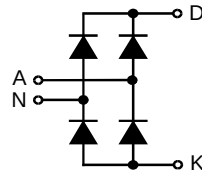
Single Phase Rectifier Bridge

$$I_{dAVM} = 21 \text{ A}$$

$$V_{RRM} = 600\text{-}1200 \text{ V}$$

Preliminary data

V_{RSM} V	V_{RRM} V	Type
700	600	VBO 21-06NO7
900	800	VBO 21-08NO7
1300	1200	VBO 21-12NO7



Symbol	Test Conditions	Maximum Ratings
$I_{dAV}^{①}$	$T_C = 100^\circ\text{C}$, module	21 A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 100 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine 106 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 85 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine 90 A
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 50 A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine 47 A ² s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 36 A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine 33 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 (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

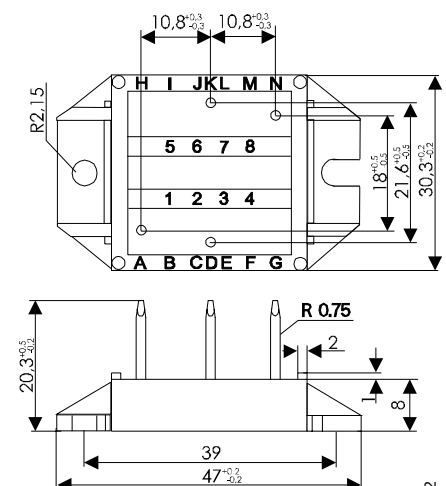
- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight

Symbol	Test Conditions	Characteristic Values
I_R	$V_R = V_{RRM}^{①}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 0.3 \text{ mA}$
	$V_R = V_{RRM}^{①}$ $T_{VJ} = T_{VJM}$	$\leq 5 \text{ mA}$
V_F	$I_F = 7 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 1.12 \text{ V}$
V_{T0}	For power-loss calculations only	0.8 V
r_T		40 mΩ
R_{thJC}	per diode; DC current	2.3 K/W
	per module	0.58 K/W
R_{thJH}	per diode, DC current	2.8 K/W
	per module	0.7 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.

Dimensions in mm (1 mm = 0.0394")



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[VBO21-08NO7](#) [VBO21-12NO7](#)