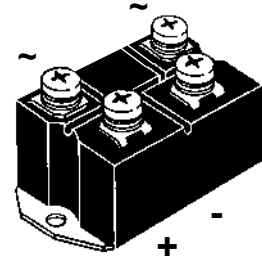
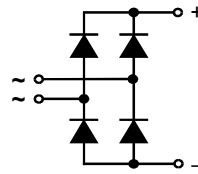


# Single Phase Rectifier Bridge

 $I_{dAV} = 52/72 \text{ A}$   
 $V_{RRM} = 800-1800 \text{ V}$ 

$V_{RSM}$ V	$V_{RRM}$ V	Type	
800	800	VBO 52-08NO7	VBO 72-08NO7
1200	1200	VBO 52-12NO7	VBO 72-12NO7
1400	1400	VBO 52-14NO7	VBO 72-14NO7
1600	1600	VBO 52-16NO7	VBO 72-16NO7
1800	1800	VBO 52-18NO7	VBO 72-18NO7



Symbol	Test Conditions	Maximum Ratings		
		VBO 52	VBO 72	
$I_{dAV}$	$T_C = 100^\circ\text{C}$ , module	52	72	A
$I_{dAV}$	$T_A = 45^\circ\text{C}$ ( $R_{thCA} = 0.6 \text{ K/W}$ ), module	41	49	A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $t = 10 \text{ ms}$ (50 Hz), sine	550	750	A
	$V_R = 0$ ; $t = 8.3 \text{ ms}$ (60 Hz), sine	600	820	A
$I^2t$	$T_{VJ} = T_{VJM}$ ; $t = 10 \text{ ms}$ (50 Hz), sine	500	670	A
	$V_R = 0$ ; $t = 8.3 \text{ ms}$ (60 Hz), sine	550	740	A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ ; $t = 10 \text{ ms}$ (50 Hz), sine	1520	2800	A <sup>2</sup> s
	$V_R = 0$ ; $t = 8.3 \text{ ms}$ (60 Hz), sine	1520	2800	A <sup>2</sup> s
$I^2t$	$T_{VJ} = T_{VJM}$ ; $t = 10 \text{ ms}$ (50 Hz), sine	1250	2250	A <sup>2</sup> s
	$V_R = 0$ ; $t = 8.3 \text{ ms}$ (60 Hz), sine	1250	2250	A <sup>2</sup> 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)	5 ± 15 %		Nm
	Terminal connection torque (M5)	5 ± 15 %		Nm
Weight	typ.	160		g

## Features

- Package with screw terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL applied

## Applications

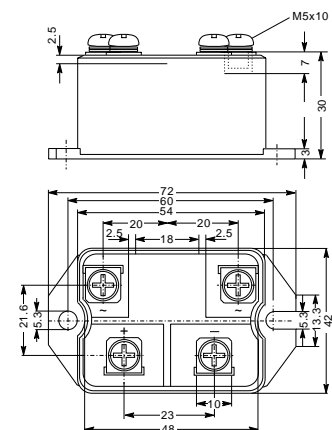
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

## Advantages

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

Symbol	Test Conditions	Characteristic Values		
		VBO 52	VBO 72	
$I_R$	$V_R = V_{RRM}$ ; $T_{VJ} = 25^\circ\text{C}$	≤ 0.3	0.3	mA
	$V_R = V_{RRM}$ ; $T_{VJ} = T_{VJM}$	≤ 5	5	mA
$V_F$	$I_F = 150 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	≤ 1.8	1.6	V
$V_{T0}$	For power-loss calculations only	0.8	0.8	V
$r_T$	$T_{VJ} = T_{VJM}$	8	5	mΩ
$R_{thJC}$	per diode	1.45	1.1	K/W
	per module	0.36	0.28	K/W
$R_{thJK}$	per diode	1.87	1.52	K/W
	per module	0.47	0.38	K/W
$d_s$	Creeping distance on surface	10		mm
$d_A$	Creepage distance in air	9.4		mm
$a$	Max. allowable acceleration	50		m/s <sup>2</sup>

## Dimensions in mm (1 mm = 0.0394")



Data according to IEC 60747 refer to a single diode unless otherwise stated. IXYS reserves the right to change limits, test conditions and dimensions.