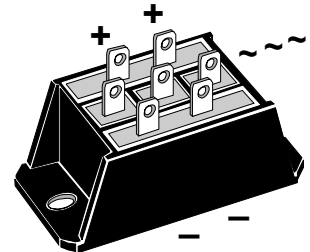
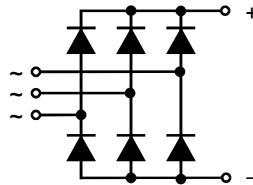


# Three Phase Rectifier Bridge

**$I_{dAV} = 72 \text{ A}$**   
 **$V_{RRM} = 1200-1800 \text{ V}$**

$V_{RSM}$ V	$V_{RRM}$ V	Type
1300	1200	VUO 60-12NO3
1500	1400	VUO 60-14NO3
1700	1600	VUO 60-16NO3
1900	1800	VUO 60-18NO3*

\* delivery time on request



Symbol	Test Conditions	Maximum Ratings
$I_{dAV}$ ①	$T_C = 85^\circ\text{C}$ , module	72 A
$I_{dAVM}$ ①	module	75 A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 600 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine 650 A
$I^2t$	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 540 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine 600 A
$T_{VJ}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 1800 A <sup>2</sup> s
		$t = 8.3 \text{ ms}$ (60 Hz), sine 1770 A <sup>2</sup> s
$T_{VJM}$	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine 1460 A <sup>2</sup> s
		$t = 8.3 \text{ ms}$ (60 Hz), sine 1510 A <sup>2</sup> s
$T_{stg}$		-40...+125 °C
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ min}$ 3000 V~
		$t = 1 \text{ s}$ 3600 V~
$M_d$	Mounting torque (M5) (10-32 UNF)	2-2.5 Nm 18-22 lb.in.
Weight	typ.	50 g

## Features

- Package with DCB ceramic base plate
- Isolation voltage 3600 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- ¼" fast-on terminals
- UL registered E 72873

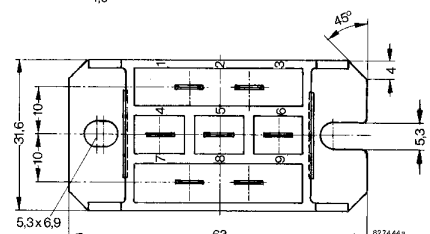
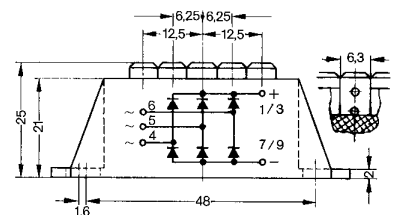
## Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Rectifier for DC motors field current

## Advantages

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

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



Symbol	Test Conditions	Characteristic Values
$I_R$	$V_R = V_{RRM}$ ; $V_R = V_{RRM}$	$T_{VJ} = 25^\circ\text{C}$ 0.3 mA
		$T_{VJ} = T_{VJM}$ 5 mA
$V_F$	$I_F = 150 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	1.9 V
$V_{T0}$	For power-loss calculations only	0.8 V
$r_T$		6.5 mΩ
$R_{thJC}$	per diode, DC current	1.2 K/W
	per module	0.2 K/W
$R_{thJH}$	per diode, DC current	1.6 K/W
	per module	0.27 K/W
$d_s$	Creep distance on surface	10 mm
$d_A$	Strike distance in air	9.4 mm
$a$	Max. allowable acceleration	50 m/s <sup>2</sup>

Data according to IEC 60747 and 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.

**Use output terminals in parallel connection!**

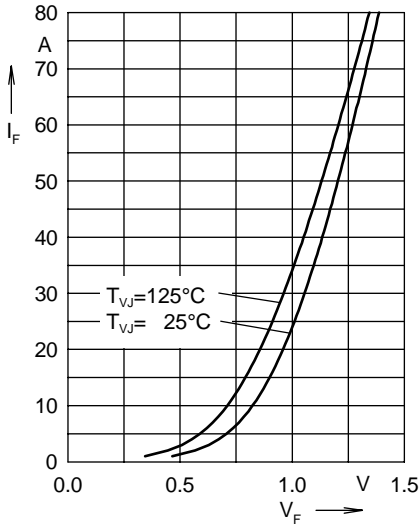


Fig. 4 Forward current versus voltage drop per diode

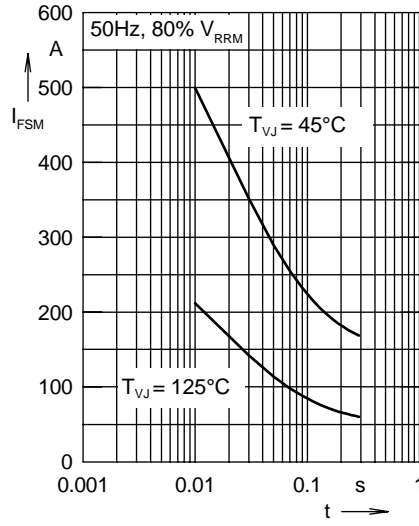


Fig. 5 Surge overload current

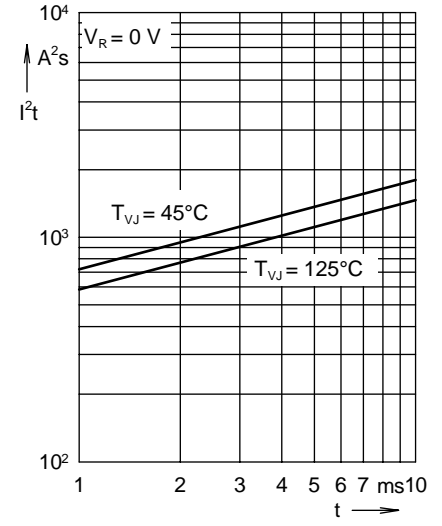


Fig. 6  $I^2t$  versus time per diode

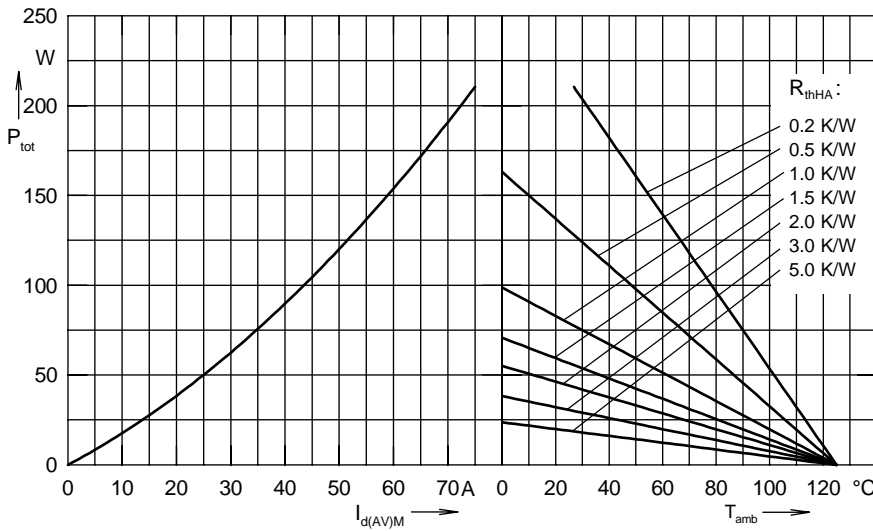


Fig. 7 Power dissipation versus direct output current and ambient temperature

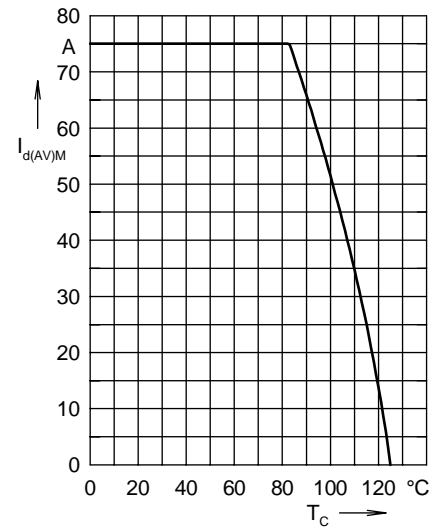


Fig. 8 Max. forward current versus case temperature

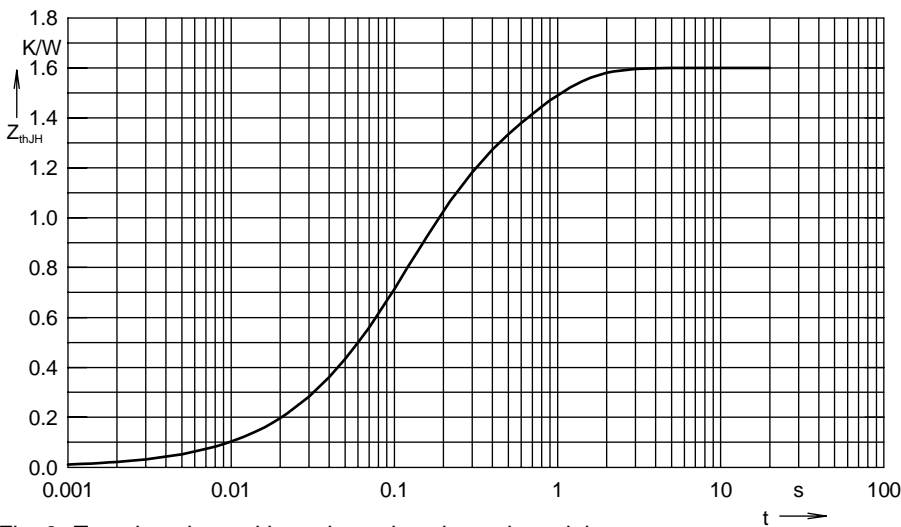


Fig. 9 Transient thermal impedance junction to heatsink

Constants for  $Z_{thJH}$  calculation:

i	$R_{thi}$ (K/W)	$t_i$ (s)
1	0.883	0.102
2	0.098	0.103
3	0.202	0.492
4	0.417	0.62