

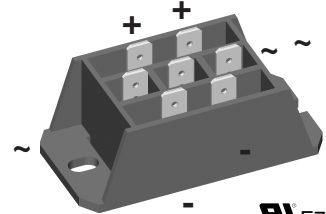
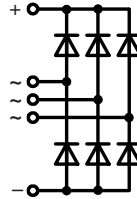
## Three Phase Rectifier Bridge

$$I_{dAV} = 37 \text{ A}$$

$$V_{RRM} = 800-1800 \text{ V}$$

$V_{RSM}$ V	$V_{RRM}$ V	Type
900	800	VUO 30-08NO3
1300	1200	VUO 30-12NO3
1500	1400	VUO 30-14NO3
1700	1600	VUO 30-16NO3
1900	1800	VUO 30-18NO3*

\* delivery time on request



UL E72873

Symbol	Conditions	Maximum Ratings	
$I_{dAV}$ ①	$T_C = 85^\circ\text{C}$ , module	37 A	
$I_{dAVM}$ ①	module	50 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	300 A 330 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine	270 A 290 A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine	450 A <sup>2</sup> s 460 A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine $t = 8.3 \text{ ms}$ (60 Hz), sine	365 A <sup>2</sup> s 355 A <sup>2</sup> s
$T_{VJ}$		-40...+125 °C	
$T_{VJM}$		125 °C	
$T_{stg}$		-40...+125 °C	
$V_{ISOL}$	50/60 Hz, RMS	$t = 1 \text{ min}$	3000 V~
	$I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ s}$	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
- 1/4" fast-on terminals
- UL registered E 72873

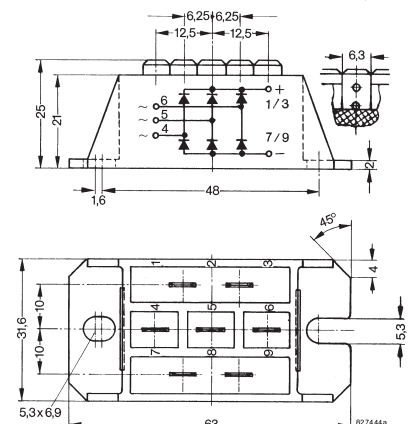
### Applications

- 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	Conditions	Characteristic Values
$I_R$	$V_R = V_{RRM}$ ; $T_{VJ} = 25^\circ\text{C}$	0.3 mA
	$V_R = V_{RRM}$ ; $T_{VJ} = T_{VJM}$	5 mA
$V_F$	$I_F = 150 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	2.55 V
$V_{T0}$	For power-loss calculations only	0.9 V
$r_T$		11 mΩ
$R_{thJC}$	per diode, DC current	2.4 K/W
	per module	0.4 K/W
$R_{thJH}$	per diode, DC current	3.0 K/W
	per module	0.5 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>

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.

20080527a

© 2008 IXYS All rights reserved

1 - 2

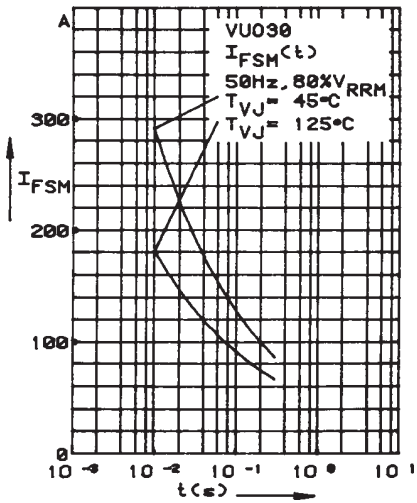


Fig. 1 Surge overload current  
I<sub>FSM</sub>: Crest value, t: duration

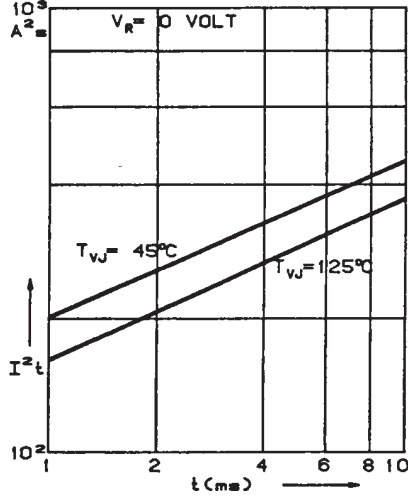


Fig. 2 I<sup>2</sup>t versus time (1-10 ms)

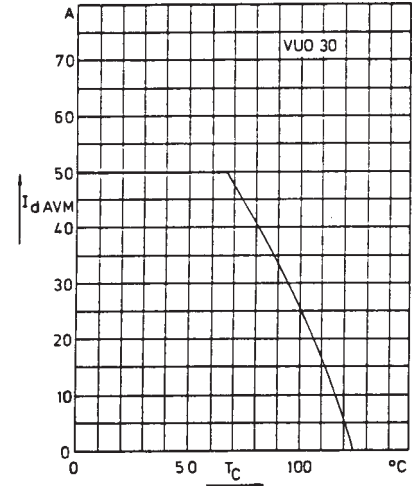


Fig. 3 Max. forward current at case temperature

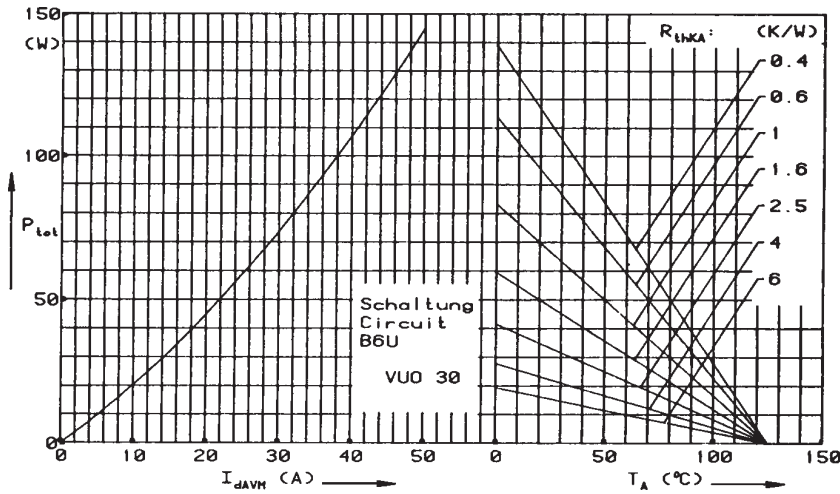


Fig. 4 Power dissipation versus forward current and ambient temperature

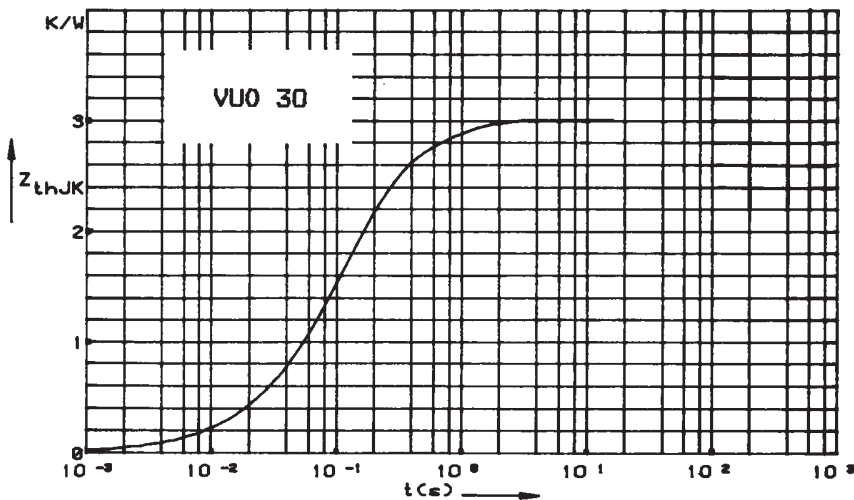


Fig. 5 Transient thermal impedance junction to heatsink per diode

Constants for Z<sub>thJK</sub> calculation:

i	R <sub>thi</sub> (K/W)	t <sub>i</sub> (s)
1	0.489	0.0717
2	0.544	0.1241
3	1.376	0.1214