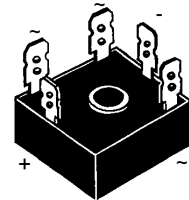
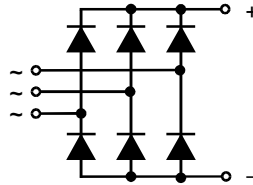


# Three Phase Rectifier Bridge

$I_{dAVM} = 25 \text{ A}$   
 $V_{RRM} = 1200-1800 \text{ V}$

$V_{RSM}$ V	$V_{RRM}$ V	Type
600	600	VUO 25-06NO8
1200	1200	VUO 25-12NO8
1400	1400	VUO 25-14NO8
1600	1600	VUO 25-16NO8
1800	1800	VUO 25-18NO8



Symbol	Test Conditions	Maximum Ratings	
$I_{dAV}$	$T_C = 85^\circ\text{C}$ , module	20 A	
$I_{dAVM}$	$T_C = 63^\circ\text{C}$ , module	25 A	
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C};$ $V_R = 0$	t = 10 ms (50 Hz), sine	380 A
		t = 8.3 ms (60 Hz), sine	400 A
$I^2t$	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine	360 A
		t = 8.3 ms (60 Hz), sine	400 A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine	725 A <sup>2</sup> s
		t = 8.3 ms (60 Hz), sine	750 A <sup>2</sup> s
$T_{VJ}$	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine	650 A <sup>2</sup> s
		t = 8.3 ms (60 Hz), sine	650 A <sup>2</sup> s
$T_{VJ}$		-40...+150 °C	
$T_{VJM}$		150 °C	
$T_{stg}$		-40...+150 °C	
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	t = 1 min	2500 V~
		t = 1 s	3000 V~
$M_d$	Mounting torque (M5) (10-32 UNF)	$2 \pm 10 \%$	Nm
		$18 \pm 10 \%$	lb.in.
Weight	typ.	22	g

### Features

- Package with 1/4" fast-on terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 72873

### Applications

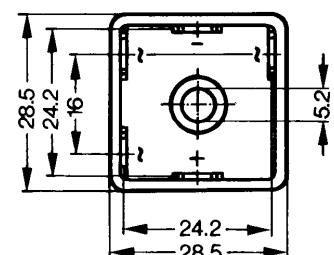
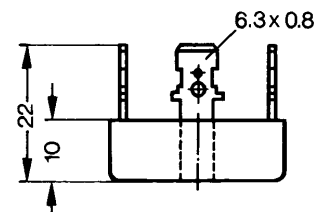
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

### Advantages

- Easy to mount with one screw
- Space and weight savings
- Improved temperature and power cycling

Symbol	Test Conditions	Characteristic Values
$I_R$	$T_{VJ} = 25^\circ\text{C};$	$V_R = V_{RRM}$ ≤ 0.3 mA
	$T_{VJ} = T_{VJM};$	$V_R = V_{RRM}$ ≤ 5.0 mA
$V_F$	$I_F = 150 \text{ A};$ $T_{VJ} = 25^\circ\text{C}$	≤ 2.2 V
$V_{T0}$	For power-loss calculations only	0.85 V
$r_T$		12 mΩ
$R_{thJC}$	per diode; DC current	9.3 K/W
	per module	1.55 K/W
$R_{thJH}$	per diode; DC current	10.2 K/W
	per module	1.7 K/W
$d_s$	Creeping distance on surface	12.7 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 DIN IEC 60747 and refer to a single diode unless otherwise stated. IXYS reserves the right to change limits, test conditions and dimensions.

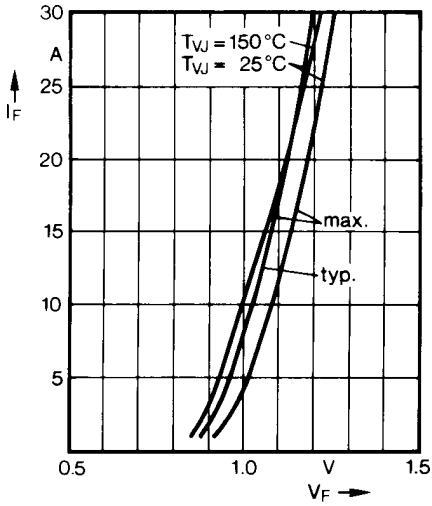


Fig. 1 Forward current versus voltage drop per diode

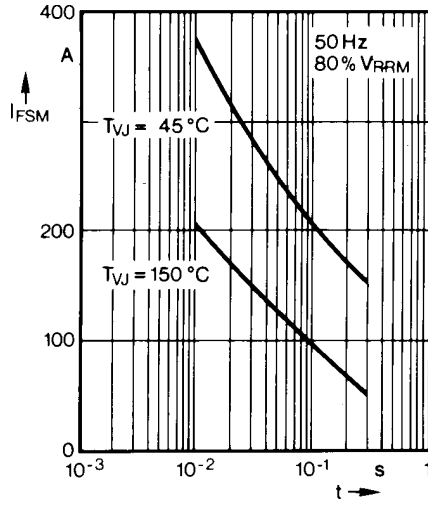


Fig. 2 Surge overload current per diode  
I<sub>FSM</sub>: Crest value. t: duration

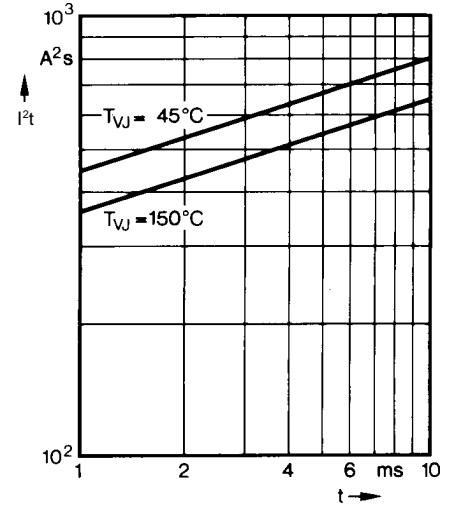


Fig. 3 I<sup>2</sup>t versus time (1-10 ms) per diode

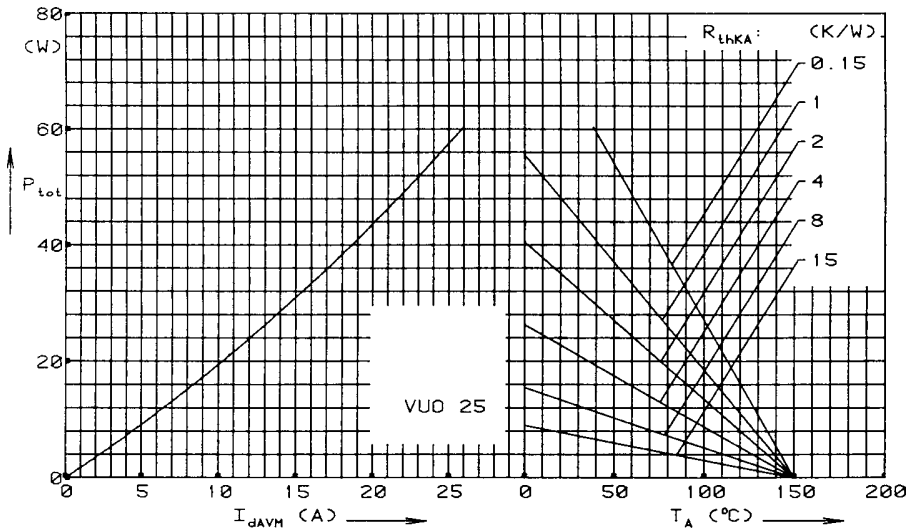


Fig. 4 Power dissipation versus direct output current and ambient temperature

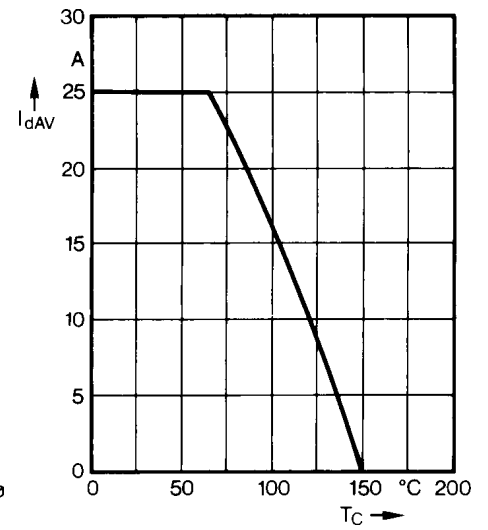


Fig. 5 Maximum forward current at case temperature

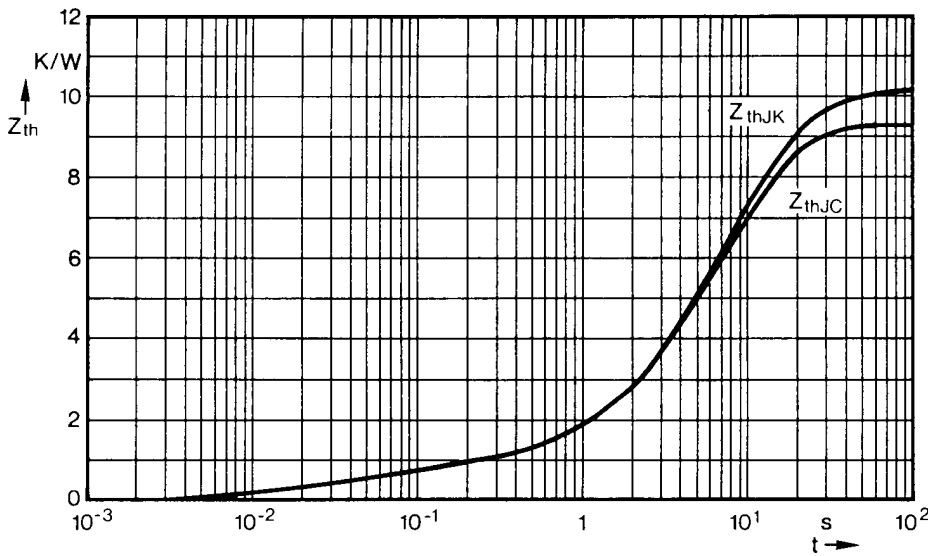


Fig. 6 Transient thermal impedance per diode

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

i	R <sub>thi</sub> (K/W)	t <sub>i</sub> (s)
1	0.194	0.024
2	0.556	0.07
3	2.25	5.8
4	6.3	8.5

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

i	R <sub>thi</sub> (K/W)	t <sub>i</sub> (s)
1	0.194	0.024
2	0.556	0.07
3	2.25	5.8
4	6.3	8.5
5	0.9	28.0