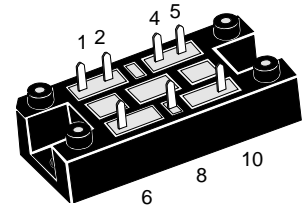
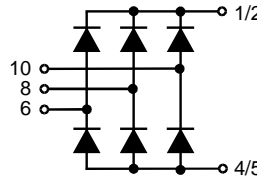


# Three Phase Rectifier Bridge

$I_{dAVM} = 45 \text{ A}$   
 $V_{RRM} = 800-1800 \text{ V}$

$V_{RSM}$ V	$V_{RRM}$ V	Type
900	800	VUO 34-08NO1
1300	1200	VUO 34-12NO1
1500	1400	VUO 34-14NO1
1700	1600	VUO 34-16NO1
1900	1800	VUO 34-18NO1



Symbol	Test Conditions	Maximum Ratings
$I_{dAV}$	$T_K = 90^\circ\text{C}$ , module	36 A
$I_{dAV}$	$T_A = 45^\circ\text{C}$ ( $R_{thKA} = 0.5 \text{ K/W}$ ), module	37 A
$I_{dAVM}$	module	45 A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$	t = 10 ms (50 Hz), sine: 300 A t = 8.3 ms (60 Hz), sine: 320 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine: 260 A t = 8.3 ms (60 Hz), sine: 280 A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine: 450 A <sup>2</sup> s t = 8.3 ms (60 Hz), sine: 425 A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine: 340 A <sup>2</sup> s t = 8.3 ms (60 Hz), sine: 325 A <sup>2</sup> s
$T_{VJ}$		-40...+130 °C
$T_{VJM}$		130 °C
$T_{sig}$		-40...+125 °C
$V_{ISOL}$	50/60 Hz, RMS	t = 1 min: 3000 V~ t = 1 s: 3600 V~
	$I_{ISOL} \leq 1 \text{ mA}$	
$M_d$	Mounting torque (M5) (10-32UNF)	2 - 2.5 Nm 18-22 lb.in.
Weight	typ.	35 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
- Leads suitable for PC board soldering
- UL registered E72873

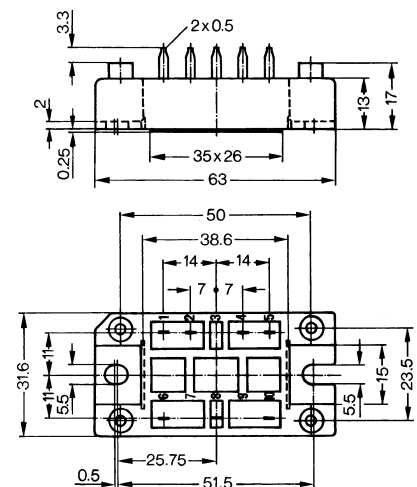
### Applications

- 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

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



Symbol	Test Conditions	Characteristic Values
$I_R$	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 0.3 \text{ mA}$
	$V_R = V_{RRM}$ $T_{VJ} = T_{VJM}$	$\leq 5 \text{ mA}$
$V_F$	$I_F = 55 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	$\leq 1.51 \text{ V}$
$V_{T0}$	For power-loss calculations only	0.8 V
$r_T$		15 mΩ
$R_{thJH}$	per diode, 120° rect.	2.5 K/W
	per module, 120° rect.	0.42 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>

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

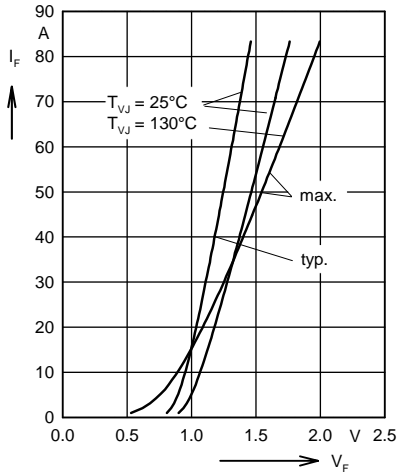


Fig. 1 Forward current versus voltage drop per diode

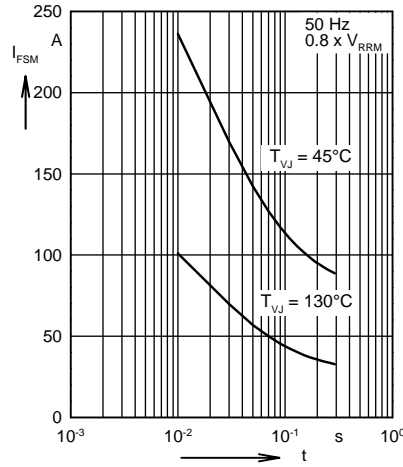


Fig. 2 Surge overload current per diode  
 $I_{FSM}$ : Crest value.  $t$ : duration

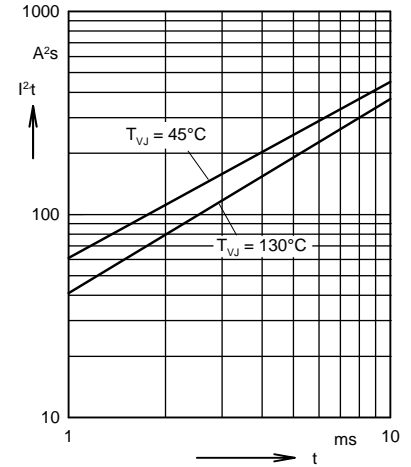


Fig. 3  $I^2t$  versus time (1-10 ms) per diode

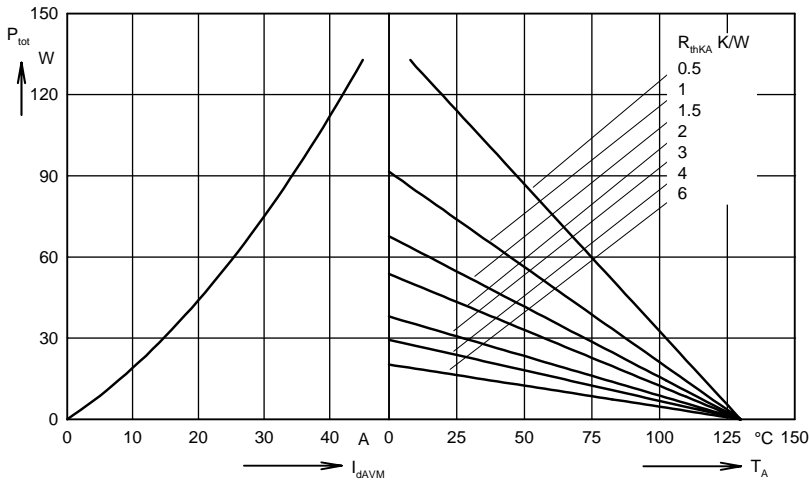


Fig. 4 Power dissipation versus direct output current and ambient temperature

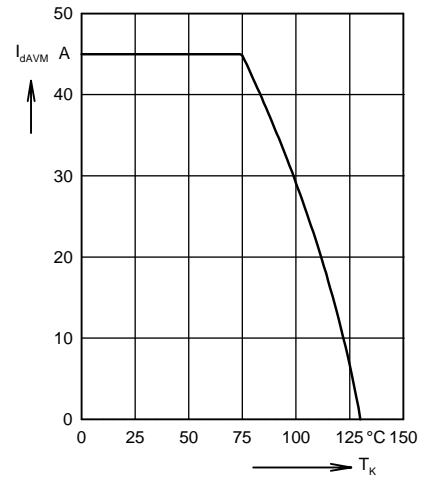


Fig. 5 Maximum forward current at heatsink temperature  $T_K$

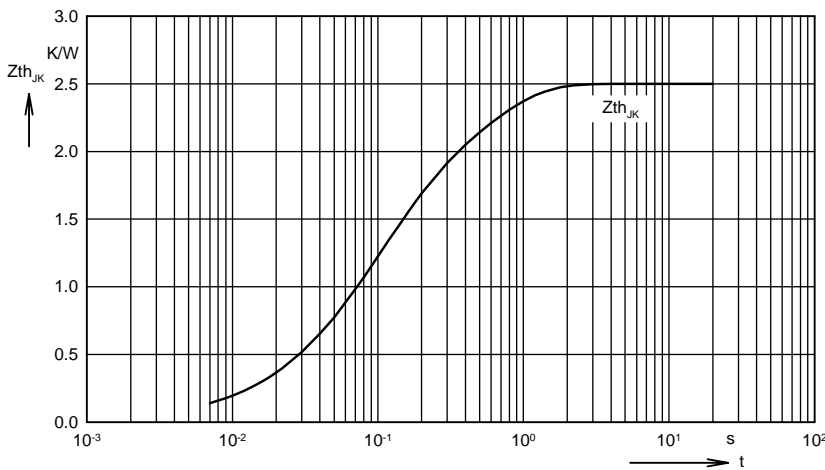


Fig. 6 Transient thermal impedance junction to heatsink per diode

Constants for  $Z_{thJK}$  calculation:

$i$	$R_{th}$ (K/W)	$t_i$ (s)
1	0.005	0.008
2	0.3	0.05
3	1.245	0.1
4	0.95	0.5