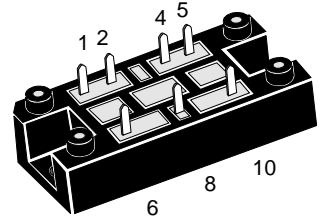
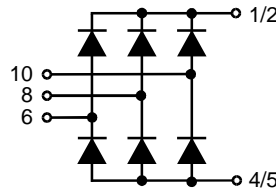


# Three Phase Rectifier Bridge

**$I_{dAVM} = 20\text{ A}$**   
 **$V_{RRM} = 800\text{-}1800\text{ V}$**

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



Symbol	Test Conditions	Maximum Ratings	
$I_{dAV}$	$T_K = 90^\circ\text{C}$ , module	15	A
$I_{dAV}$	$T_A = 45^\circ\text{C}$ ( $R_{thKA} = 0.5\text{ K/W}$ ), module	20	A
$I_{dAVM}$	module	20	A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$	t = 10 ms (50 Hz), sine	100 A
		t = 8.3 ms (60 Hz), sine	106 A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	85 A
	$V_R = 0$	t = 8.3 ms (60 Hz), sine	90 A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$	t = 10 ms (50 Hz), sine	50 A <sup>2</sup> s
	$V_R = 0$	t = 8.3 ms (60 Hz), sine	47 A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	36 A <sup>2</sup> s
	$V_R = 0$	t = 8.3 ms (60 Hz), sine	33 A <sup>2</sup> s
$T_{VJ}$		-40...+130	°C
$T_{VJM}$		130	°C
$T_{stg}$		-40...+125	°C
$V_{ISOL}$	50/60 Hz, RMS t = 1 min	3000	V~
	$I_{ISOL} \leq 1\text{ mA}$ t = 1 s	3600	V~
$M_d$	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

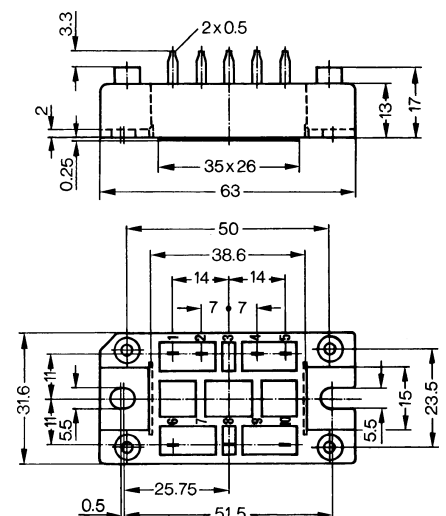
### Applications

- 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	
$I_R$	$V_R = V_{RRM}$	$T_{VJ} = 25^\circ\text{C}$	$\leq 0.3\text{ mA}$
	$V_R = V_{RRM}$	$T_{VJ} = T_{VJM}$	$\leq 5\text{ mA}$
$V_F$	$I_F = 7\text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	$\leq 1.15$	V
$V_{T0}$	For power-loss calculations only	0.8	V
$r_T$		50	mΩ
$R_{thJH}$	per diode,	120° rect.	4.5 K/W
	per module,	120° rect.	0.75 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.

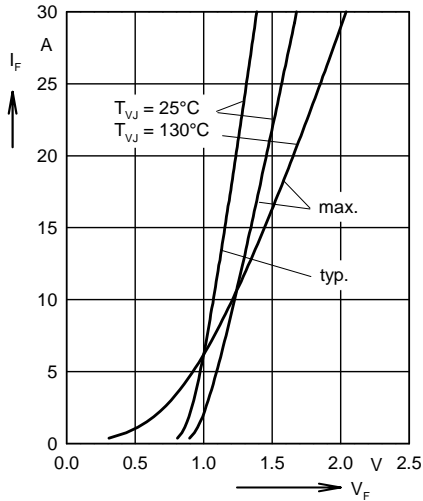


Fig. 1 Forward current versus voltage drop per diode

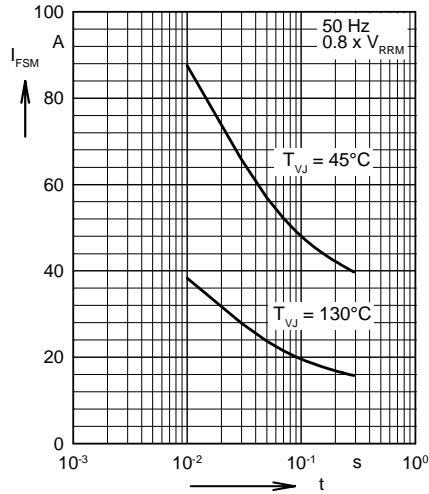


Fig. 2 Surge overload current per diode  
I<sub>FSM</sub>: Crest value. t:duration

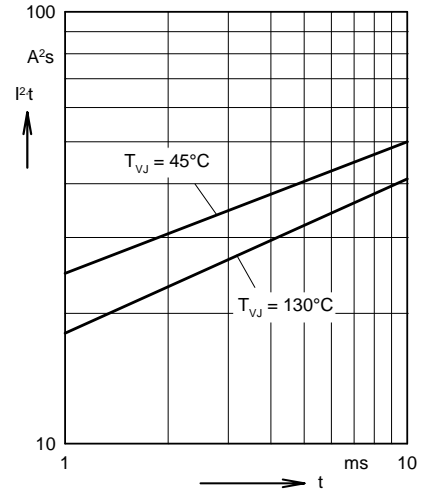


Fig. 3 I<sup>2</sup>t versus time (1-10 ms) per diode

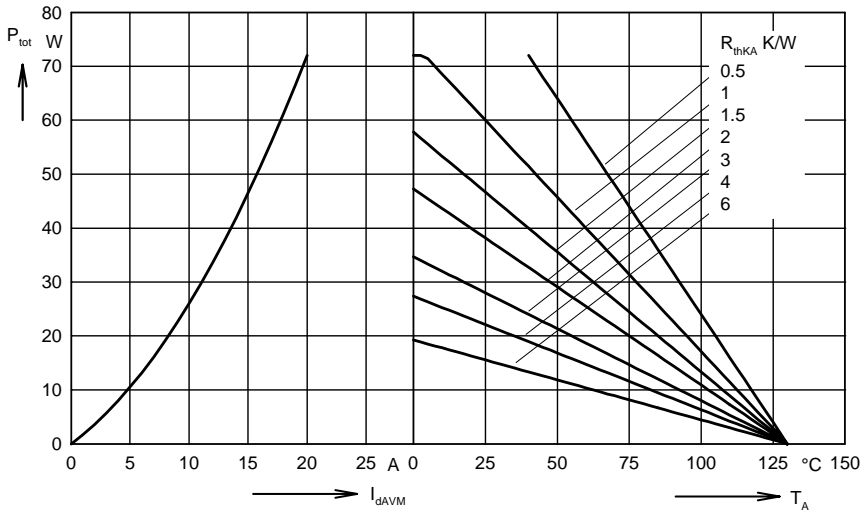


Fig. 4 Power dissipation versus direct output current and ambient temperature

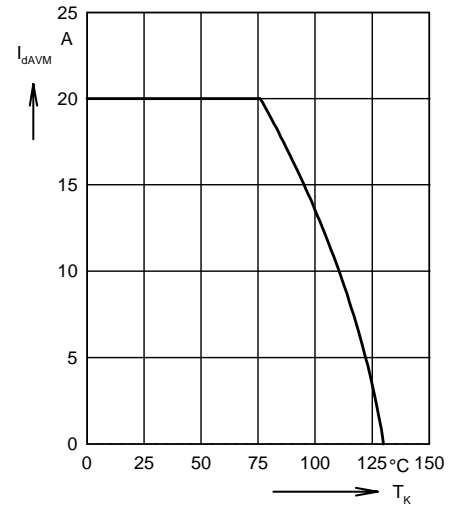


Fig. 5 Maximum forward current at heatsink temperature T<sub>k</sub>

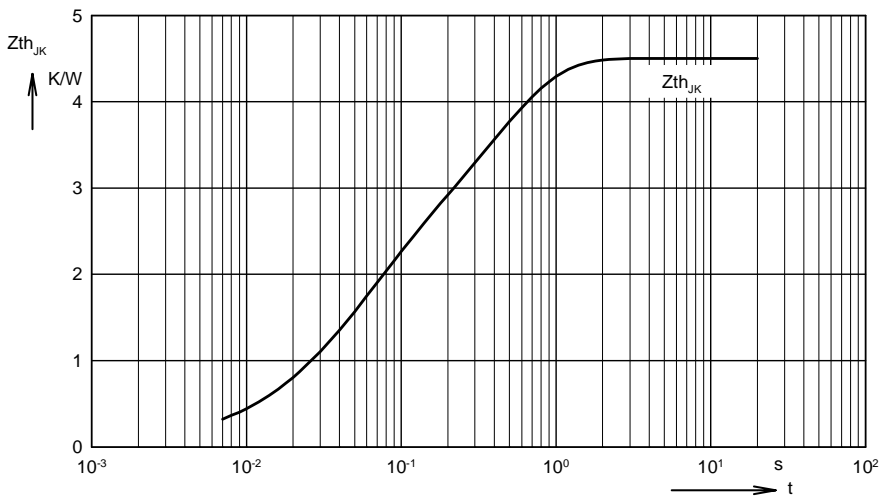


Fig. 6 Transient thermal impedance junction to heatsink per diode

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

i	R <sub>th</sub> (K/W)	t <sub>i</sub> (s)
1	0.015	0.008
2	0.1	0.02
3	1.835	0.05
4	2.55	0.4