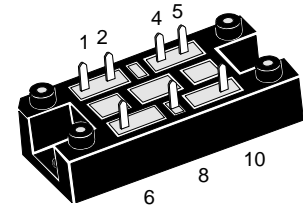
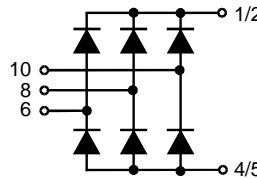


Three Phase Rectifier Bridge

$I_{dAVM} = 55 \text{ A}$
 $V_{RRM} = 800-1800 \text{ V}$

V_{RSM} V	V_{RRM} V	Type
900	800	VUO 52-08NO1
1300	1200	VUO 52-12NO1
1500	1400	VUO 52-14NO1
1700	1600	VUO 52-16NO1
1900	1800	VUO 52-18NO1



Symbol	Test Conditions	Maximum Ratings	
I_{dAV}	$T_K = 90^\circ\text{C}$, module	54 A	
I_{dAV}	$T_A = 45^\circ\text{C}$ ($R_{thKA} = 0.5 \text{ K/W}$), module	43 A	
I_{dAVM}	module	55 A	
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	350 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine	375 A
I_{FSM}	$T_{VJ} = T_{VJM}$; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	305 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine	325 A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	615 A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine	590 A ² s
I^2t	$T_{VJ} = T_{VJM}$; $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	465 A ² s
		$t = 8.3 \text{ ms}$ (60 Hz), sine	445 A ² s
T_{VJ}		-40...+130 °C	
T_{VJM}		130 °C	
T_{sig}		-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) (10-32UNF)		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

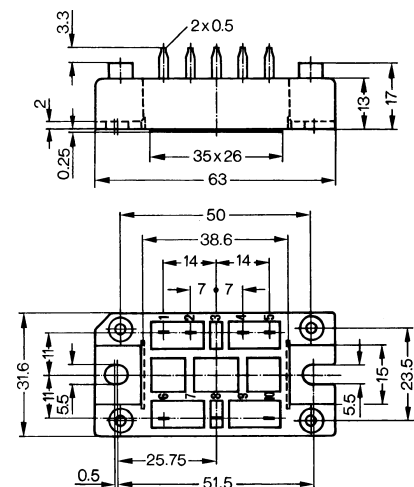
Applications

- 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	$I_F = 55 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 1.46 \text{ V}$
V_{T0}	For power-loss calculations only	0.8 V
r_T		12.5 mΩ
R_{thJH}	per diode, 120° rect.	1.5 K/W
	per module, 120° rect.	0.25 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 ²

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.

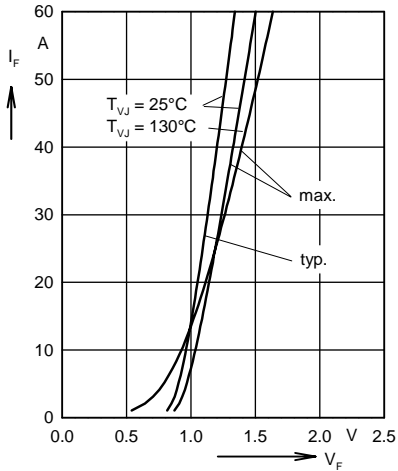


Fig. 1 Forward current versus voltage drop per diode

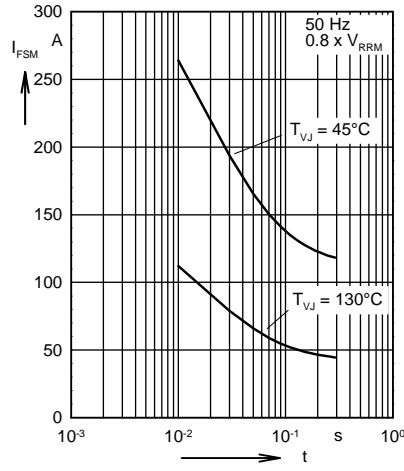


Fig. 2 Surge overload current per diode
 I_{FSM} : Crest value. t : duration

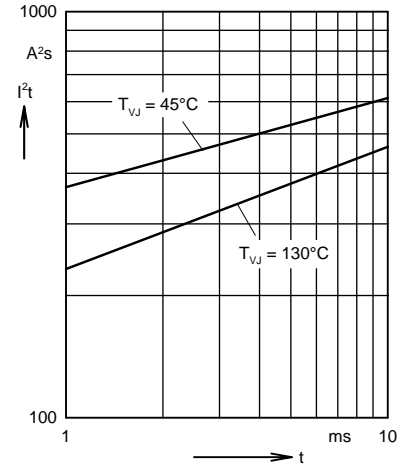


Fig. 3 I^2t versus time (1-10 ms) per diode

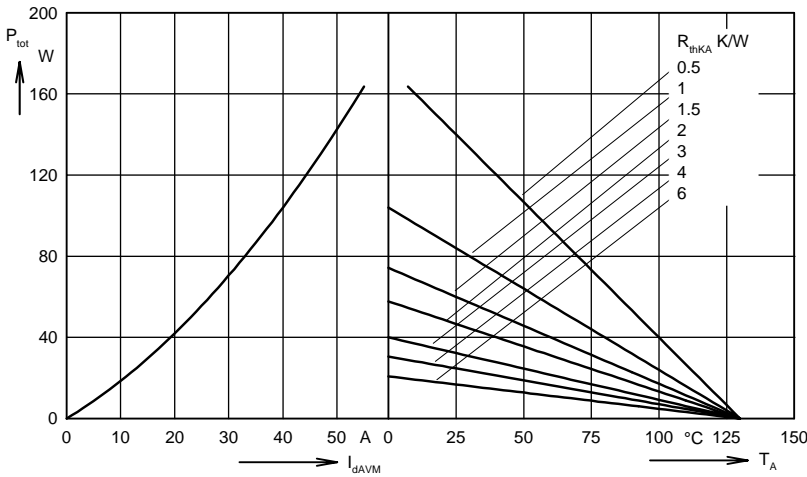


Fig. 4 Power dissipation versus direct output current and ambient temperature

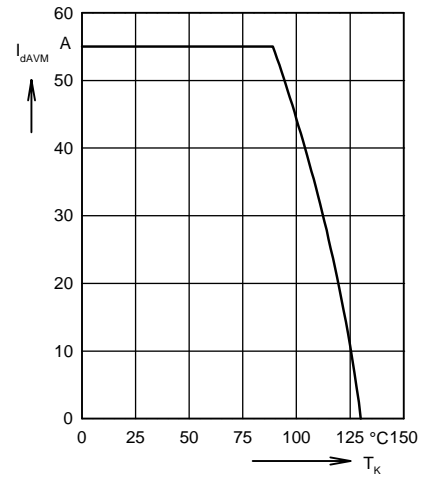


Fig. 5 Maximum forward current at heatsink temperature T_K

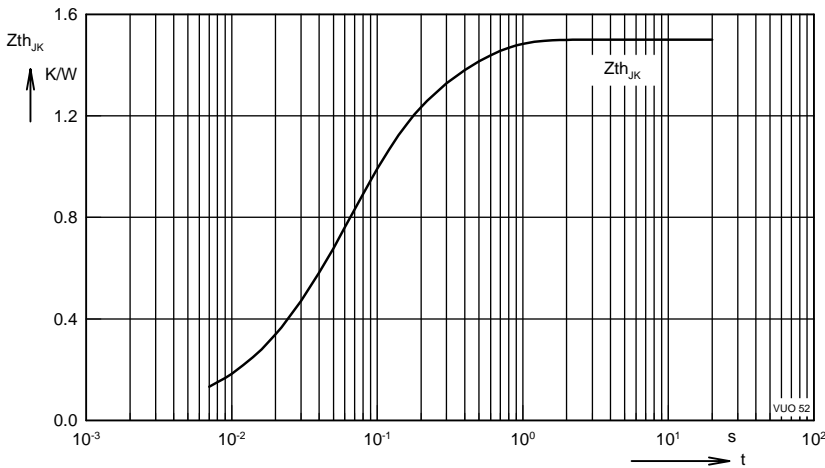


Fig. 6 Transient thermal impedance junction to heatsink per diode

Constants for Z_{thJK} calculation:

i	R_{th} (K/W)	t_i (s)
1	0.005	0.008
2	0.2	0.05
3	0.845	0.06
4	0.45	0.3