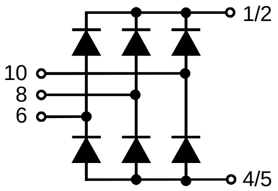
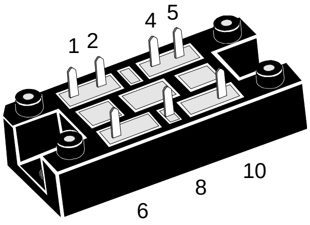
IXYS **VUO 22**

Three Phase Rectifier Bridge

I_{dAVM} = 25 A
V_{RRM} = 800-1800 V

V_{RSM} V	V_{RRM} V	Type
900	800	VUO 22-08NO1
1300	1200	VUO 22-12NO1
1500	1400	VUO 22-14NO1
1700	1600	VUO 22-16NO1
1900	1800	VUO 22-18NO1





Symbol	Test Conditions		Maximum Ratings	
I_{dAV}	T_K = 90°C, module		22	A
I_{dAV}	T_A = 45°C (R_{thKA} = 0.5 K/W), module		25	A
I_{dAVM}	module		25	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	100	A
	V_R = 0	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°C	t = 10 ms (50 Hz), sine	50	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	47	A^2s
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	36	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	33	A^2s
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} ≤ 1 mA	t = 1 s	3600	V~
M_d	Mounting torque	(M5)	2 - 2.5	Nm
		(10-32UNF)	18-22	lb.in.
Weight	typ.		35	g

Symbol	Test Conditions			Characteristic Values	
I_R	V_R = V_{RRM}	T_{VJ} = 25°C	≤	0.3	mA
	V_R = V_{RRM}	T_{VJ} = T_{VJM}	≤	5	mA
V_F	I_F = 7 A;	T_{VJ} = 25°C	≤	1.12	V
V_{T0}	For power-loss calculations only			0.8	V
r_T				40	mΩ
R_{thJH}	per diode, 120° rect.			3.1	K/W
	per module, 120° rect.			0.516	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

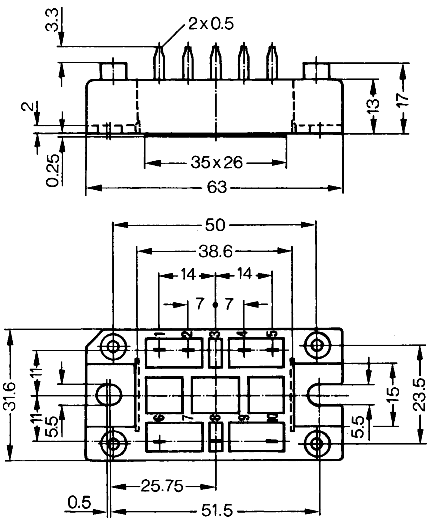
Data according to IEC 60747 and refer to a single diode unless otherwise stated.
IXYS reserves the right to change limits, test conditions and dimensions.

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")



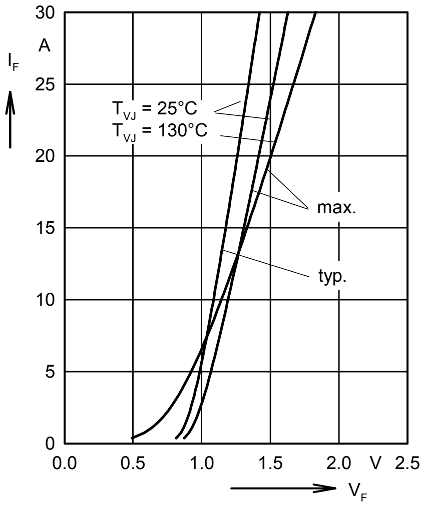


Fig. 1 Forward current versus voltage drop per diode

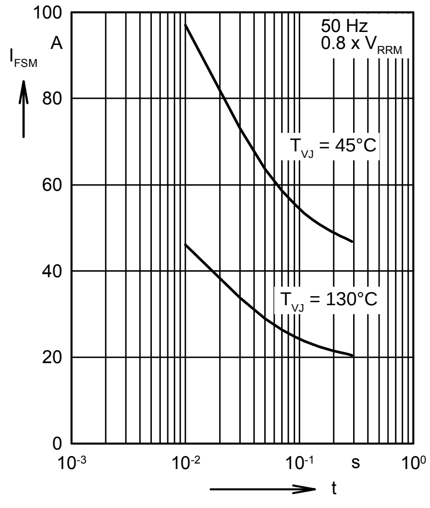


Fig. 2 Surge overload current per diode I_{FSM}: Crest value. t:duration

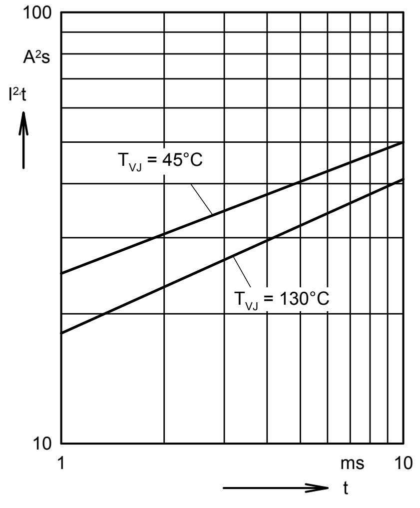


Fig. 3 I²t versus time (1-10 ms) per diode

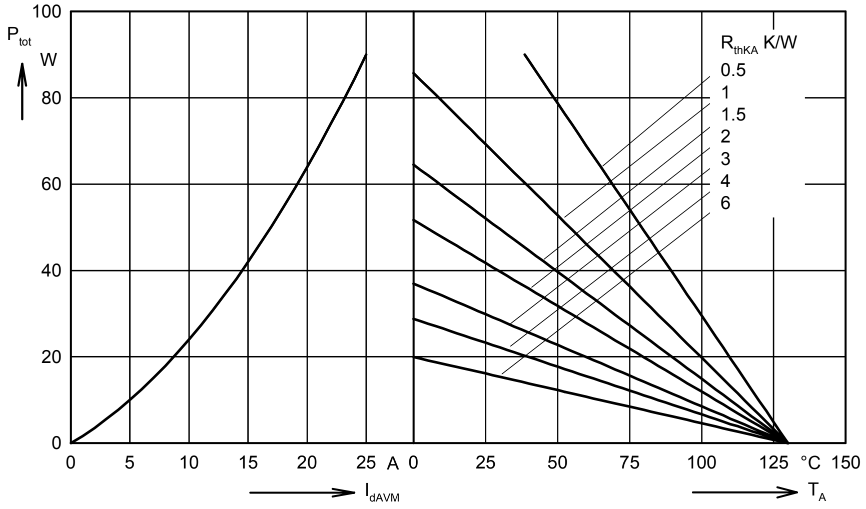


Fig. 4 Power dissipation versus direct output current and ambient temperature

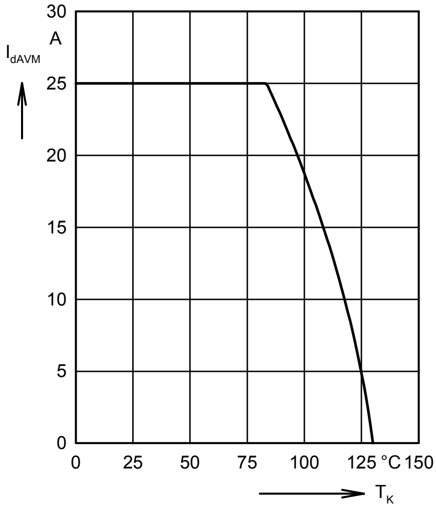


Fig. 5 Maximum forward current at heatsink temperature T_K

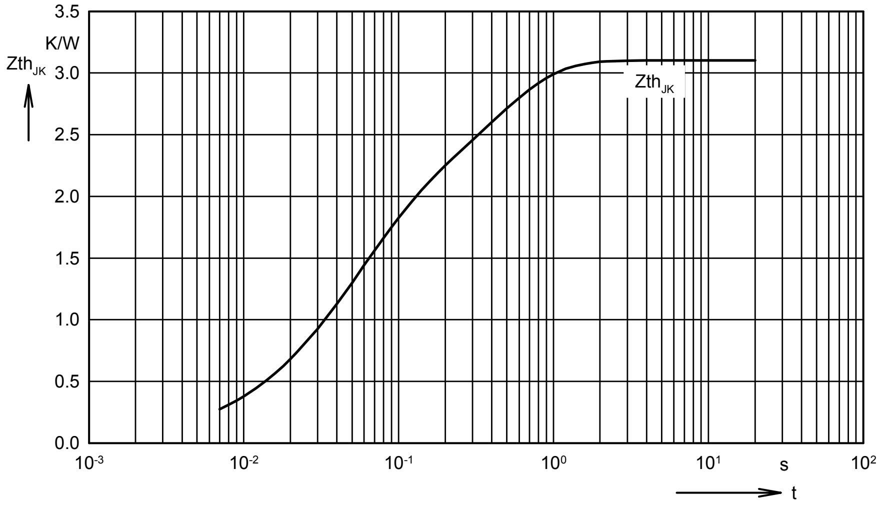


Fig. 6 Transient thermal impedance junction to heatsink per diode

Constants for Z_{thJK} calculation:

i	R_{th} (K/W)	t_i (s)
1	0.015	0.008
2	0.1	0.02
3	1.635	0.05
4	1.35	0.4