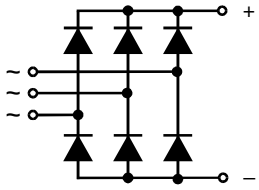
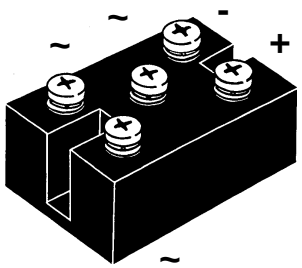
Three Phase Rectifier Bridge

I_{dAVM} = 166 A
V_{RRM} = 1200-1800 V

V_{RSM} V	V_{RRM} V	Type
1200	1200	VUO 125-12NO7
1400	1400	VUO 125-14NO7
1600	1600	VUO 125-16NO7
1800	1800	VUO 125-18NO7*

* delivery time on request





Symbol	Test Conditions		Maximum Ratings	
I_{dAVM}	T_C = 85°C, module		166	A
I_{FSM}	T_{VJ} = 45°C; V_R = 0	t = 10 ms (50 Hz), sine	1800	A
		t = 8.3 ms (60 Hz), sine	1950	A
	T_{VJ} = T_{VJM} V_R = 0	t = 10 ms (50 Hz), sine	1600	A
		t = 8.3 ms (60 Hz), sine	1800	A
I^2t	T_{VJ} = 45°C V_R = 0	t = 10 ms (50 Hz), sine	16200	A^2s
		t = 8.3 ms (60 Hz), sine	16000	A^2s
	T_{VJ} = T_{VJM} V_R = 0	t = 10 ms (50 Hz), sine	12800	A^2s
		t = 8.3 ms (60 Hz), sine	13600	A^2s
T_{VJ}			-40...+150	°C
T_{VJM}			150	°C
T_{stg}			-40...+150	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min	2500	V~
	I_{ISOL} ≤ 1 mA	t = 1 s	3000	V~
M_d	Mounting torque (M5)		5 ± 15 %	Nm
			44 ± 15 %	lb.in.
	Terminal connection torque (M5)		5 ± 15 %	Nm
			44 ± 15 %	lb.in.
Weight	typ.		225	g

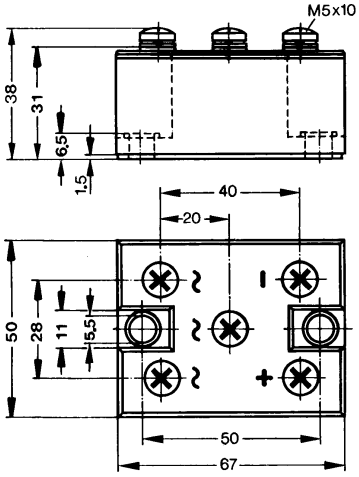
Symbol	Test Conditions		Characteristic Values		
I_R	V_R = V_{RRM};	T_{VJ} = 25°C	≤	0.3	mA
	V_R = V_{RRM};	T_{VJ} = T_{VJM}	≤	8.0	mA
V_F	I_F = 150 A;	T_{VJ} = 25°C	≤	1.3	V
V_{T0}	For power-loss calculations only			0.8	V
r_T				3	mΩ
R_{thJC}	per diode			0.83	K/W
	per module			0.138	K/W
R_{thJH}	per diode			1.13	K/W
	per module			0.188	K/W

Features
- Package with screw 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 two screws
- Space and weight savings
- Improved temperature and power cycling

Dimensions in mm (1 mm = 0.0394")



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.

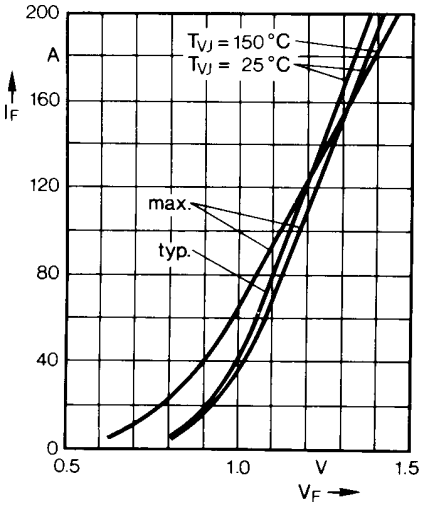


Fig. 1 Forward current versus voltage drop per diode

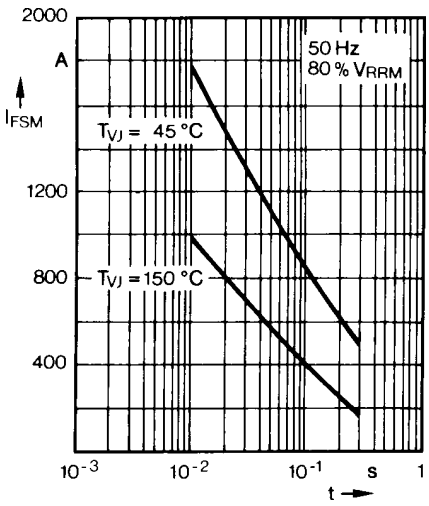


Fig. 2 Surge overload current per diode
I_{FSM}: Crest value. t: duration

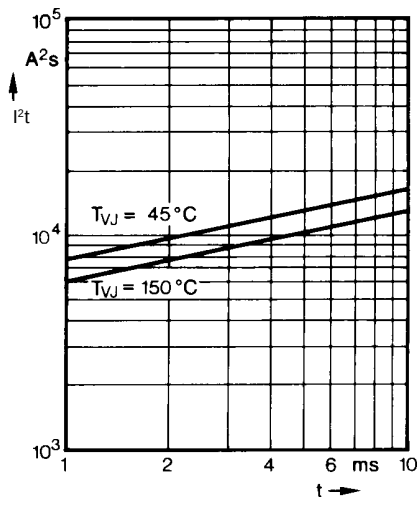


Fig. 3 I^2t versus time (1-10 ms) per diode

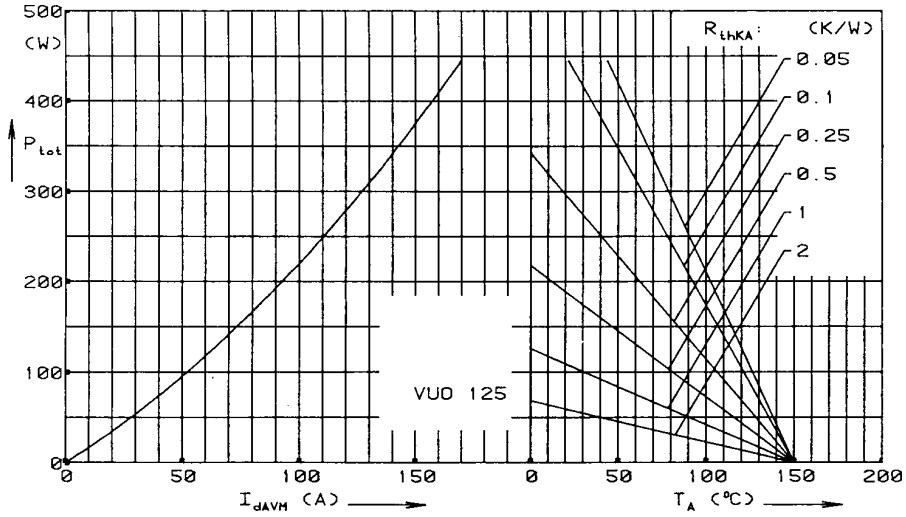


Fig. 4 Power dissipation versus direct output current and ambient temperature

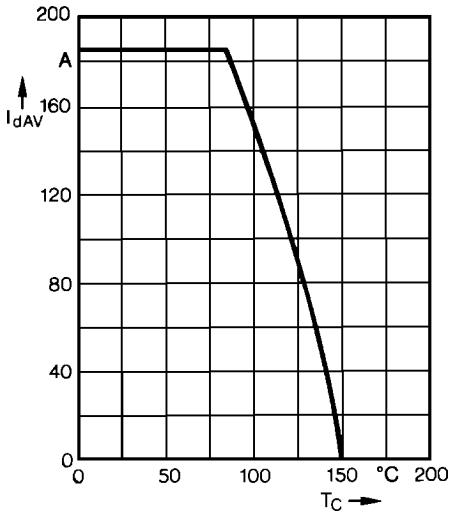


Fig. 5 Maximum forward current at case temperature

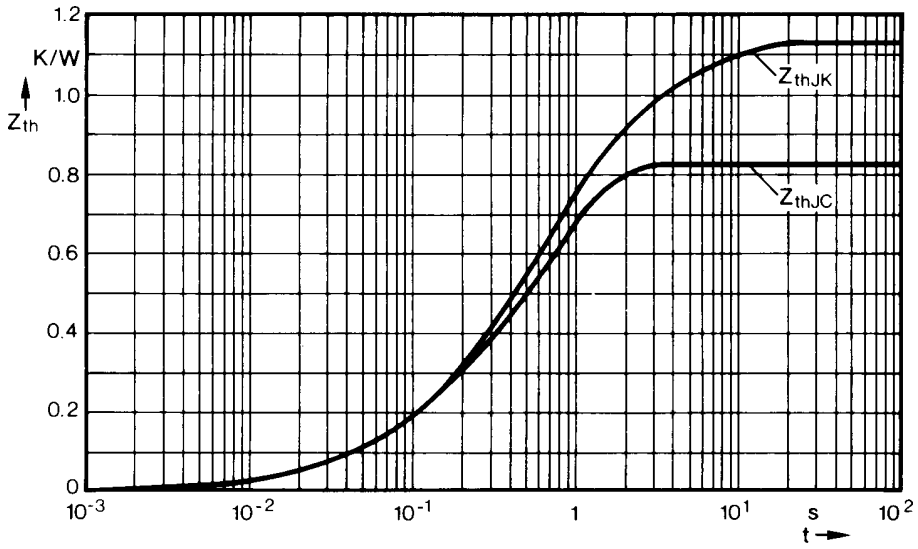


Fig. 6 Transient thermal impedance per diode

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.014	0.011
2	0.067	0.094
3	0.139	0.28
4	0.61	0.7

Constants for Z_{thJK} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.014	0.011
2	0.067	0.094
3	0.139	0.28
4	0.61	0.7
5	0.3	4.2