

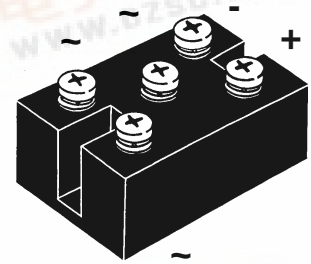
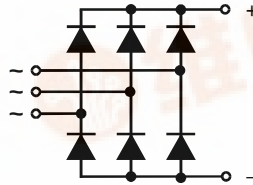
Three Phase Rectifier Bridge

$$I_{dAVM} = 166 \text{ A}$$

$$V_{RRM} = 1200\text{-}1800 \text{ V}$$

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

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

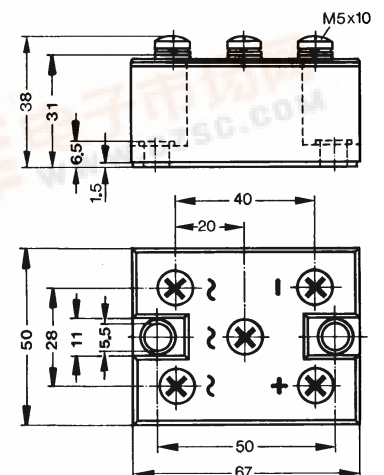
Applications

- 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")



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

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.

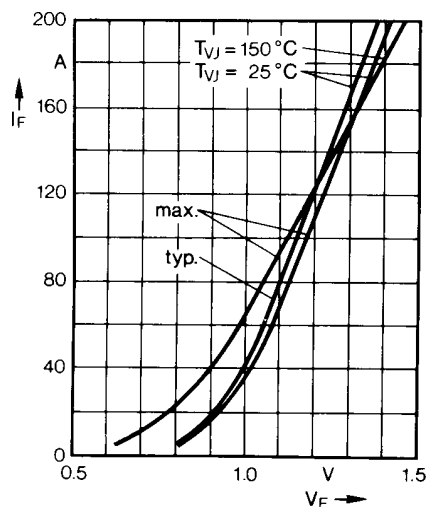


Fig. 1 Forward current versus voltage drop per diode

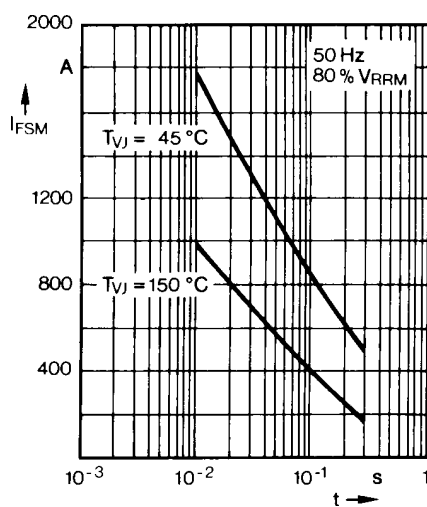


Fig. 2 Surge overload current per diode
 I_{FSM} : Crest value. t : duration

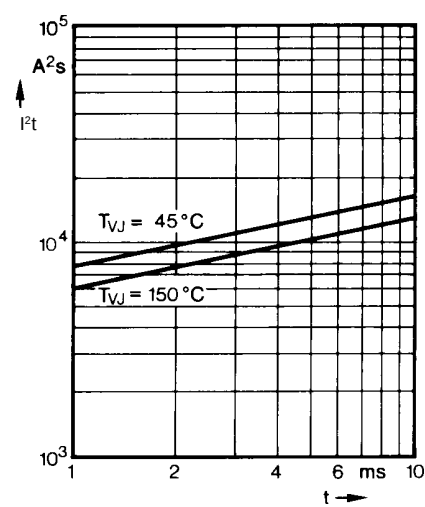


Fig. 3 I^2t versus time (1-10 ms) per diode

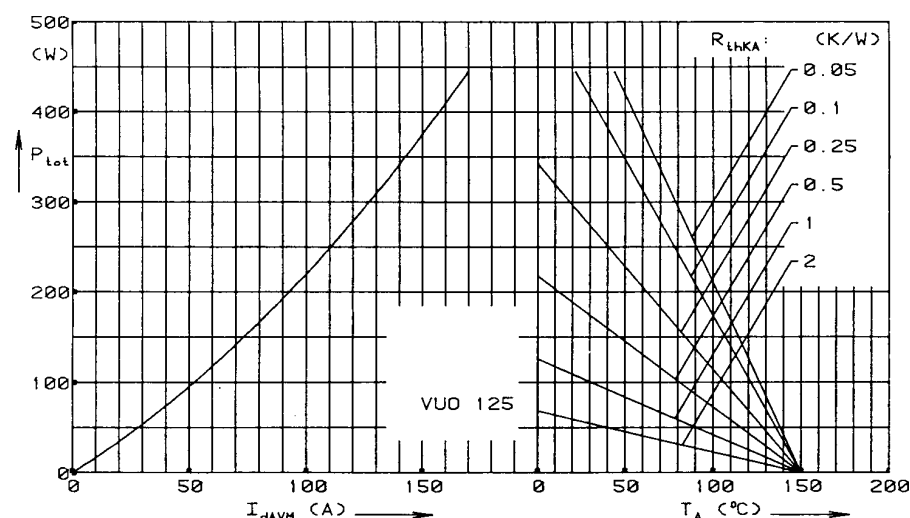


Fig. 4 Power dissipation versus direct output current and ambient temperature

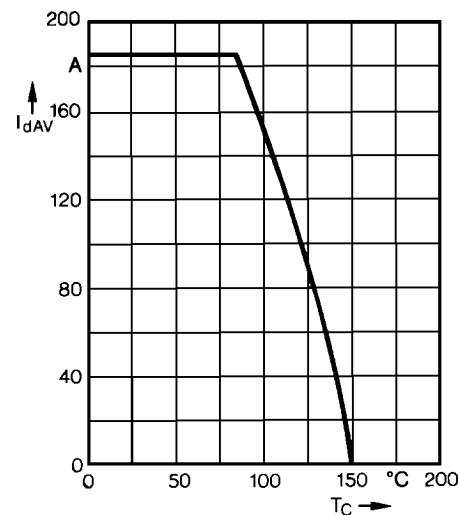


Fig. 5 Maximum forward current at case temperature

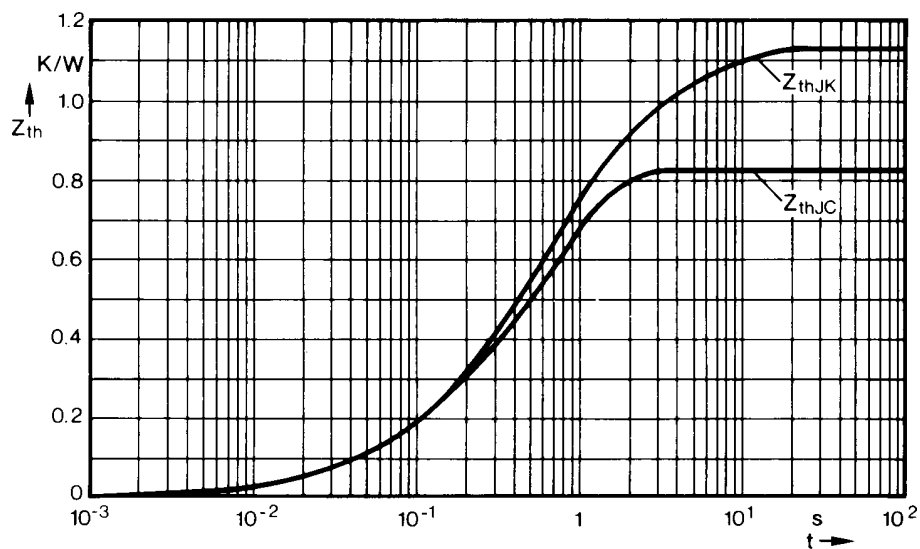


Fig. 6 Transient thermal impedance per diode

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