

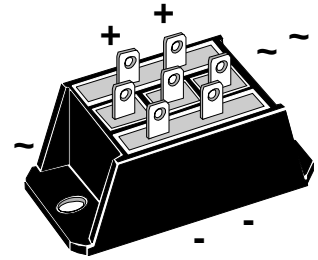
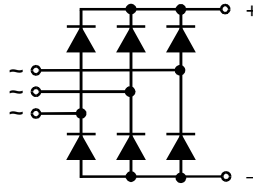
Three Phase Rectifier Bridge

$$I_{dAV} = 58 \text{ A}$$

$$V_{RRM} = 800-1800 \text{ V}$$

V_{RSM} V	V_{RRM} V	Type
900	800	VUO 50-08NO3
1300	1200	VUO 50-12NO3
1500	1400	VUO 50-14NO3
1700	1600	VUO 50-16NO3
1900	1800	VUO 50-18NO3*

* delivery time on request



Symbol	Test Conditions		Maximum Ratings	
I_{dAV} ①	$T_C = 85^{\circ}\text{C}$, module		58	A
I_{dAVM} ①	module		75	A
I_{FSM}	$T_{VJ} = 45^{\circ}\text{C}$;	$t = 10\text{ ms}$ (50 Hz), sine	500	A
	$V_R = 0$	$t = 8.3\text{ ms}$ (60 Hz), sine	525	A
	$T_{VJ} = T_{VJM}$	$t = 10\text{ ms}$ (50 Hz), sine	415	A
	$V_R = 0$	$t = 8.3\text{ ms}$ (60 Hz), sine	440	A
I^2t	$T_{VJ} = 45^{\circ}\text{C}$	$t = 10\text{ ms}$ (50 Hz), sine	1250	A^2s
	$V_R = 0$	$t = 8.3\text{ ms}$ (60 Hz), sine	1160	A^2s
	$T_{VJ} = T_{VJM}$	$t = 10\text{ ms}$ (50 Hz), sine	860	A^2s
	$V_R = 0$	$t = 8.3\text{ ms}$ (60 Hz), sine	810	A^2s
T_{VJ}			-40...+125	$^{\circ}\text{C}$
T_{VJM}			125	$^{\circ}\text{C}$
T_{stg}			-40...+125	$^{\circ}\text{C}$
V_{ISOL}	50/60 Hz, RMS	$t = 1\text{ min}$	3000	V~
	$I_{ISOL} \leq 1\text{ mA}$	$t = 1\text{ s}$	3600	V~
M_d	Mounting torque	(M5)	2-2.5	Nm
		(10-32 UNF)	18-22	lb.in.
Weight	typ.		50	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
- ¼" fast-on terminals
- UL registered E 72873

Applications

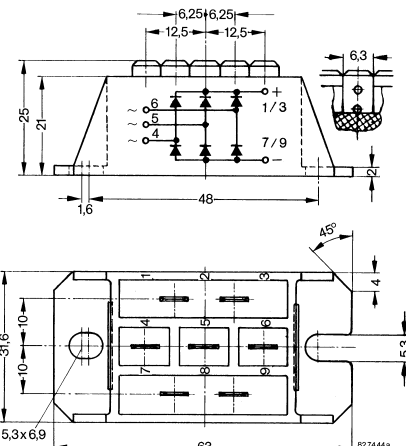
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Rectifier for DC motors field current

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	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$	0.3 mA
	$V_R = V_{RRM}$; $T_{VJ} = T_{VJM}$	5 mA
V_F	$I_F = 150 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	1.9 V
V_{T0}	For power-loss calculations only	0.9 V
r_T		6.0 mΩ
R_{thJC}	per diode, DC current	1.62 K/W
	per module	0.27 K/W
R_{thJH}	per diode, DC current	2.22 K/W
	per module	0.37 K/W
d_s	Creeping distance on surface	10 mm
d_a	Creepage distance in air	9.4 mm
a	Max. allowable acceleration	50 m/s ²



Use output terminals in parallel connection!

Data according to IEC 60747 and refer to a single diode unless otherwise stated.
① for resistive load at bridge output
IXYS reserves the right to change limits, test conditions and dimensions.

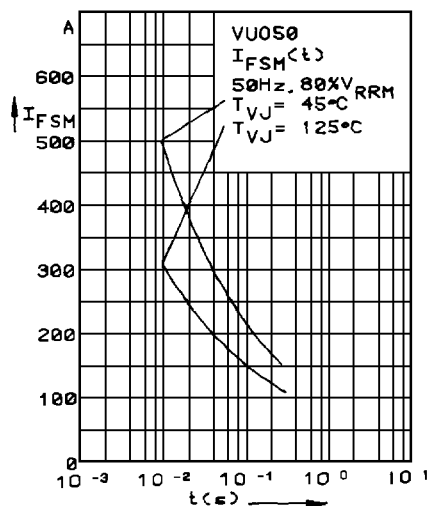


Fig. 1 Surge overload current
 I_{FSM} : Crest value, t : duration

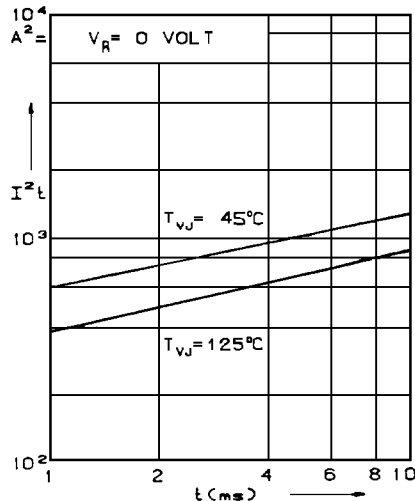


Fig. 2 I^2t versus time (1-10 ms)

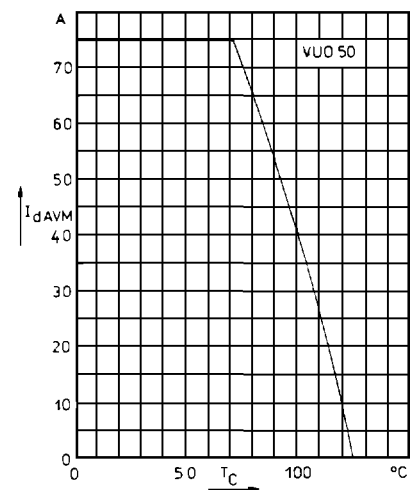


Fig. 3 Max. forward current at case temperature

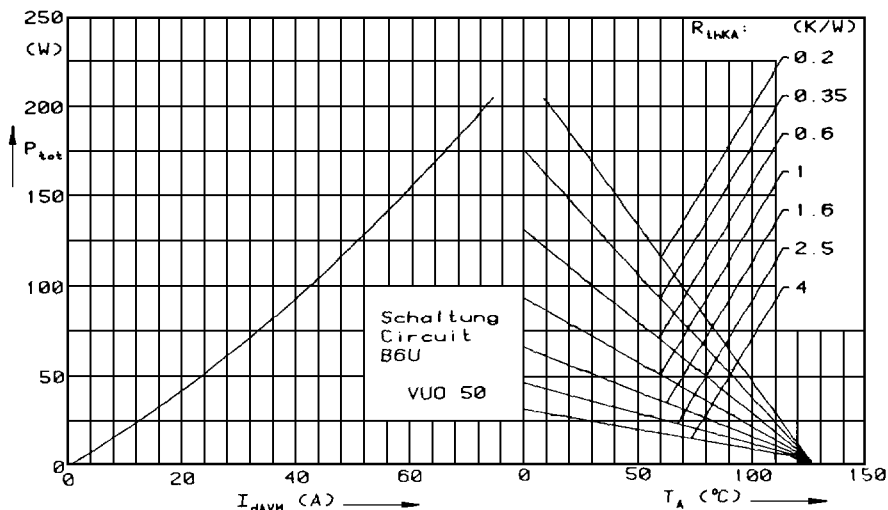


Fig. 4 Power dissipation versus forward current and ambient temperature

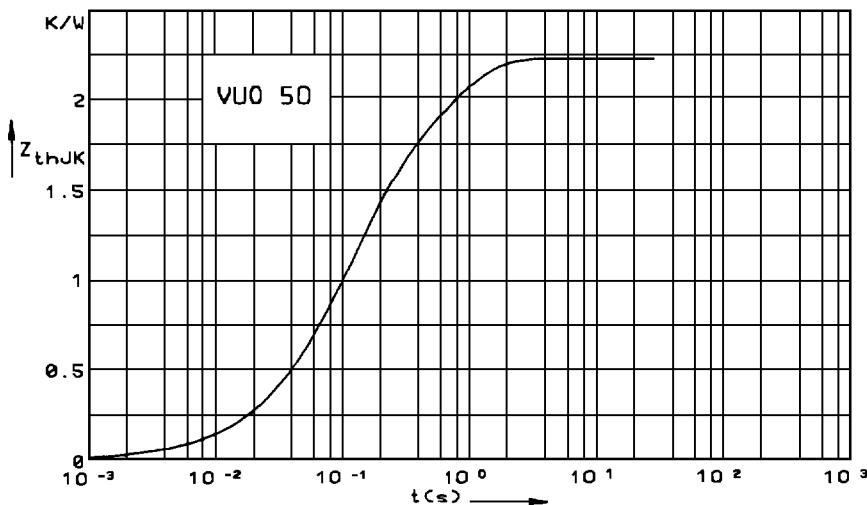


Fig. 5 Transient thermal impedance junction to heatsink per diode

Constants for Z_{thJK} calculation:

i	R_{thi} (K/W)	t_i (s)
1	1.21	0.1015
2	0.1339	0.1026
3	0.2763	0.4919
4	0.600	0.620

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