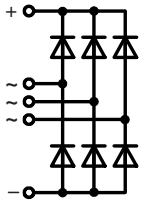
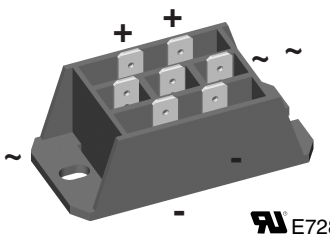
Three Phase Rectifier Bridge

I_{dAV} = 58 A
V_{RRM} = 800-1800 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	Conditions		Maximum Ratings	
I_{dAV} ①	T_C = 85°C, module		58	A
I_{dAVM} ①	module		75	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	500	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	525	A
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	415	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	440	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	1250	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	1160	A^2s
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	860	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	810	A^2s
T_{VJ}			-40...+125	°C
T_{VJM}			125	°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
		(10-32 UNF)	18-22	lb.in.
Weight	typ.		50	g

Symbol	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 = 150 A;	T_{VJ} = 25°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

Data according to IEC 60747 and refer to a single diode unless otherwise stated.
① for resistive load at bridge output

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

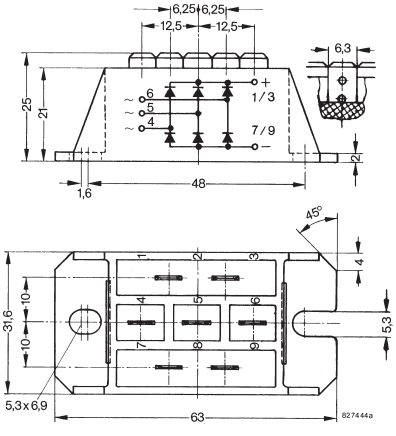
Applications

- 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")



Use output terminals in parallel connection!

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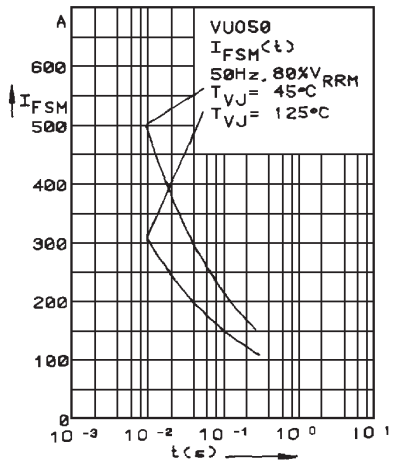

Fig. 1 Surge overload current
I_{FSM}: Crest value, t: duration

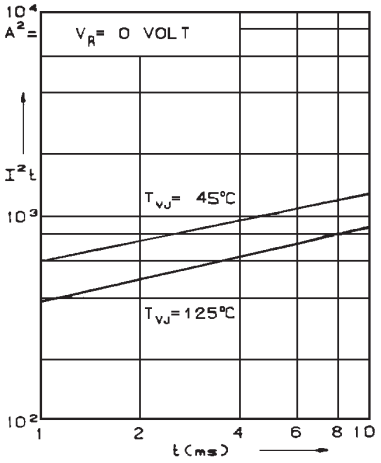

Fig. 2 I^2t versus time (1-10 ms)

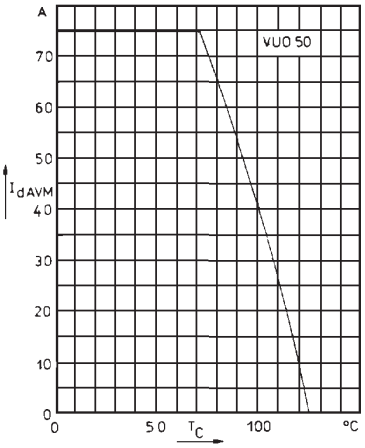

Fig. 3 Max. forward current at case temperature

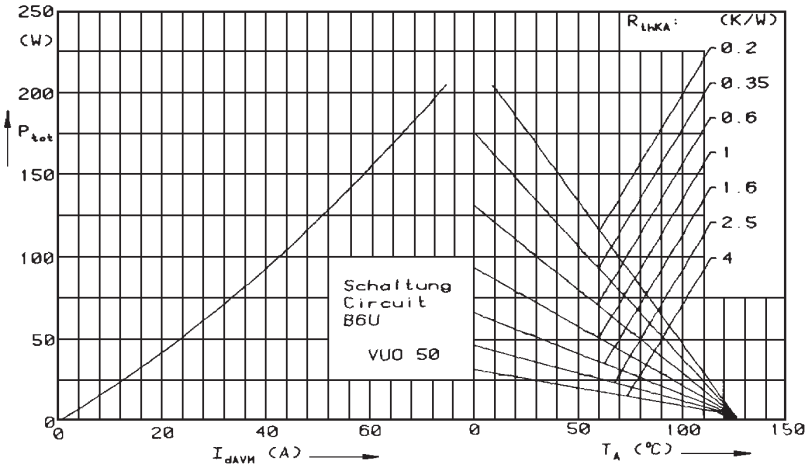

Fig. 4 Power dissipation versus forward current and ambient temperature

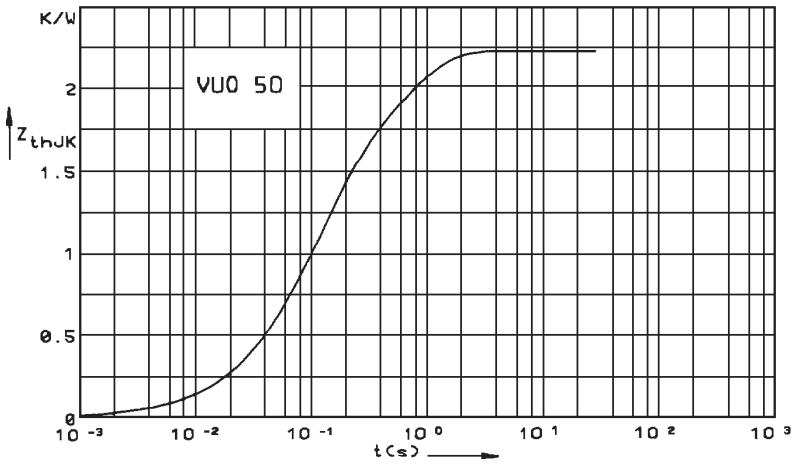

Fig. 5 Transient thermal impedance junction to heatsink per diode

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