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IXYS Corporation
VUO60-16NO3

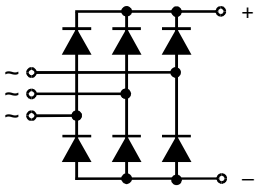
For any questions, you can email us directly:
sales@integrated-circuit.com

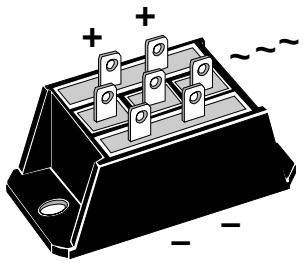
Three Phase Rectifier Bridge

I_{dAV} = 72 A
V_{RRM} = 1200-1800 V

V_{RSM} V	V_{RRM} V	Type
1300	1200	VUO 60-12NO3
1500	1400	VUO 60-14NO3
1700	1600	VUO 60-16NO3
1900	1800	VUO 60-18NO3*

* delivery time on request





Symbol	Test Conditions		Maximum Ratings	
I_{dAV} ①	T_C = 85°C, module		72	A
I_{dAVM} ①	module		75	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	600	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	650	A
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	540	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	600	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	1800	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	1770	A^2s
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	1460	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	1510	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	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 = 150 A;	T_{VJ} = 25°C	1.9	V
V_{T0}	For power-loss calculations only		0.8	V
r_T			6.5	mΩ
R_{thJC}	per diode, DC current		1.2	K/W
	per module		0.2	K/W
R_{thJH}	per diode, DC current		1.6	K/W
	per module		0.27	K/W
d_S	Creep distance on surface		10	mm
d_A	Strike distance in air		9.4	mm
a	Max. allowable acceleration		50	m/s^2

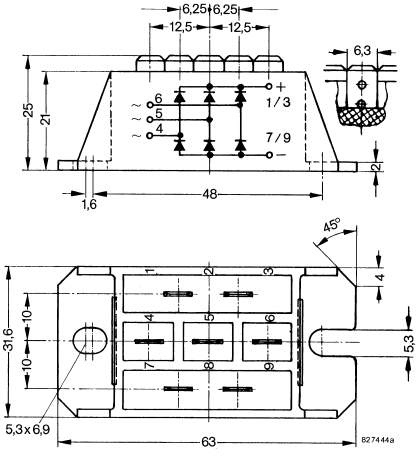
Data according to IEC 60747 and refer to a single diode unless otherwise stated.
① for resistive load at bridge output
IXYS reserves the right to change limits, test conditions and dimensions.

Features
- Package with DCB ceramic base plate
- Isolation voltage 3600 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- 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!

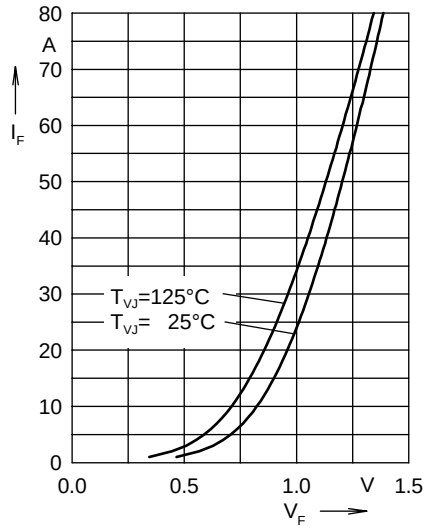


Fig. 4 Forward current versus voltage drop per diode

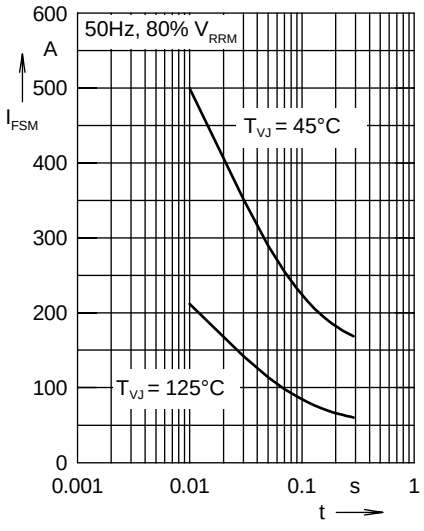


Fig. 5 Surge overload current

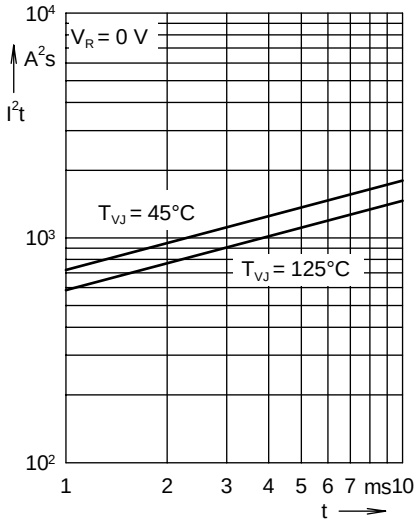


Fig. 6 I^2t versus time per diode

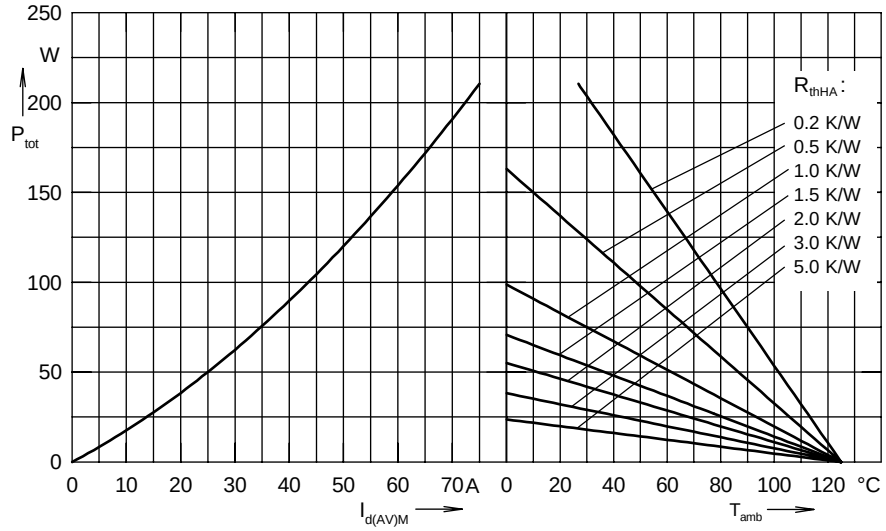


Fig. 7 Power dissipation versus direct output current and ambient temperature

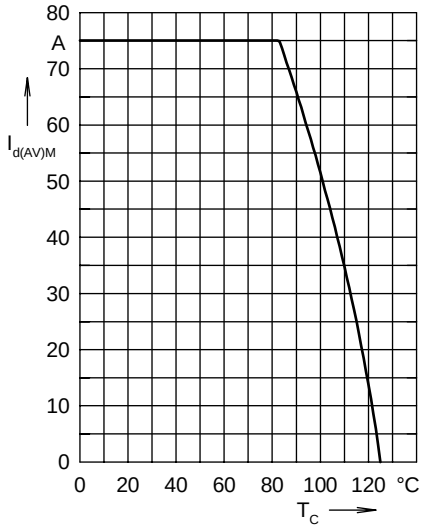


Fig. 8 Max. forward current versus case temperature

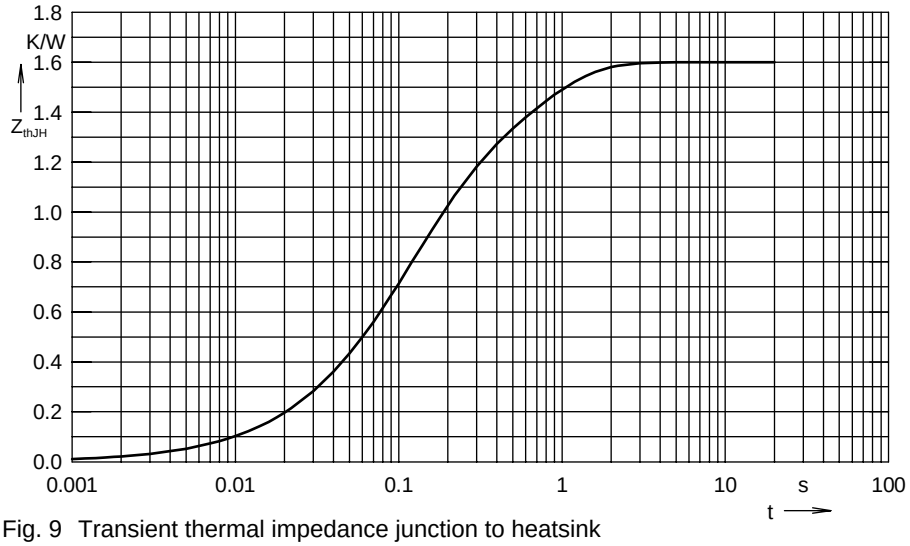


Fig. 9 Transient thermal impedance junction to heatsink

Constants for Z_{thJH} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.883	0.102
2	0.098	0.103
3	0.202	0.492
4	0.417	0.62