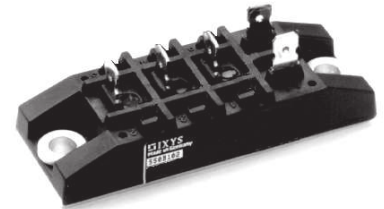
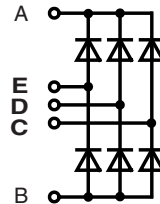


Three Phase Rectifier Bridge

$$I_{dAV} = 70 \text{ A}$$

$$V_{RRM} = 1600 \text{ V}$$

V_{RSM} V	V_{RRM} V	Types
1700	1600	VUO 70-16NO7



Symbol	Conditions	Maximum Ratings
I_{dAV}	$T_C = 100^\circ\text{C}$, module (for resistive load at bridge output)	70 A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	550 A
	$t = 8.3 \text{ ms}$ (60 Hz), sine	600 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	500 A
	$t = 8.3 \text{ ms}$ (60 Hz), sine	550 A
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	1520 A ² s
	$t = 8.3 \text{ ms}$ (60 Hz), sine	1520 A ² s
	$T_{VJ} = T_{VJM}$ $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	1250 A ² s
	$t = 8.3 \text{ ms}$ (60 Hz), sine	1250 A ² s
T_{VJ}		-40...+150 °C
T_{VJM}		150 °C
T_{stg}		-40...+125 °C
V_{ISOL}	50/60 Hz, RMS $t = 1 \text{ min}$	2500 V~
	$I_{ISOL} \leq 1 \text{ mA}$ $t = 1 \text{ s}$	3000 V~
M_d lb.in.	Mounting torque (M5) (10-32 UNF)	5 ±15% Nm 44 ±15%
Weight	typ.	110 g

Features

Package with copper base plate
Isolation voltage 3000 V~
Planar passivated chips
Low forward voltage drop
¼" fast-on power terminals

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 capability
Small and light weight

Symbol	Conditions	Characteristic Values
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$	≤ 0.5 mA
	$V_R = V_{RRM}$ $T_{VJ} = T_{VJM}$	≤ 10 mA
V_F	$I_F = 150 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$	≤ 1.7 V
V_{T0}	For power-loss calculations only	0.8 V
r_T		8 mΩ
R_{thJC}	per diode, DC current	1.45 K/W
	per module	0.242 K/W
R_{thJH}	per diode, DC current	1.9 K/W
	per module	0.317 K/W
d_s	Creeping distance on surface	16.1 mm
d_A	Creepage distance in air	7.5 mm
a	Max. allowable acceleration	50 m/s ²

Data according to IEC 60747 refer to a single diode unless otherwise stated

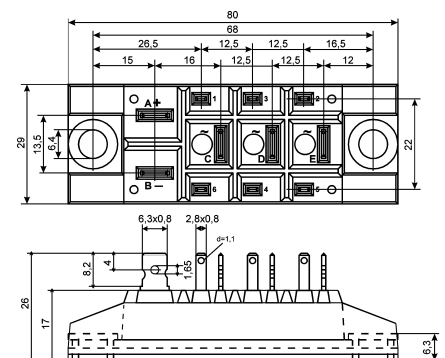
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IXYS reserves the right to change limits, test conditions and dimensions.

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Dimensions in mm (1 mm = 0.0394")



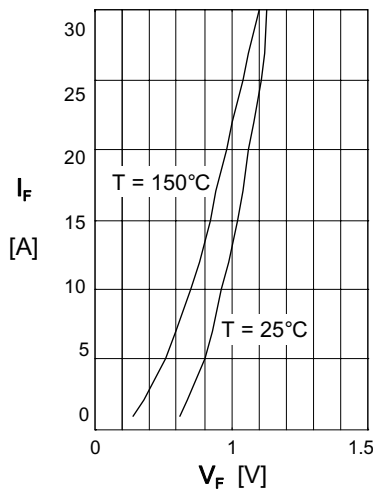


Fig. 1 Forward current vs. voltage drop per diode

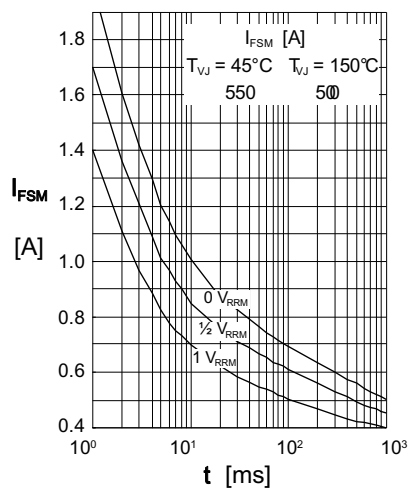


Fig. 2 Surge overload current per diode. t = duration
 I_{FSM} = Crest value

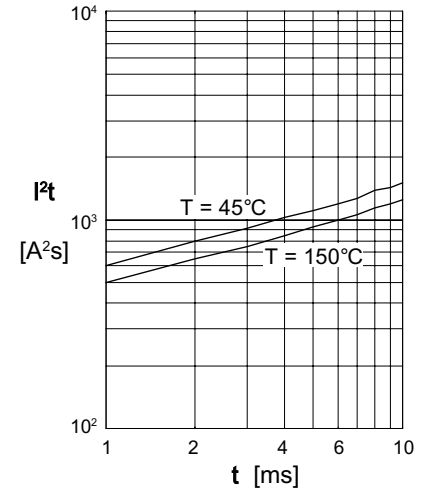


Fig. 3 I^2t vs. time (1-10 ms) per diode/thyristor

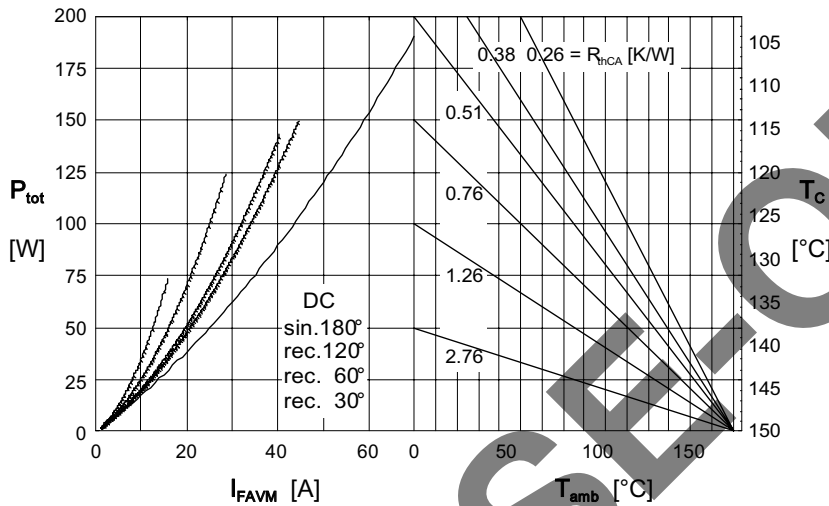


Fig. 4 Power dissipation versus direct output current and ambient temperature

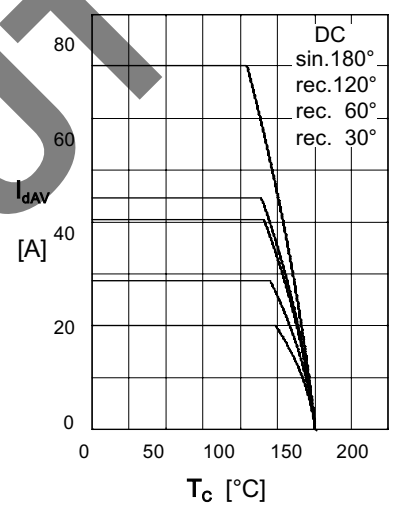


Fig. 5 Max. forward current at case temperature

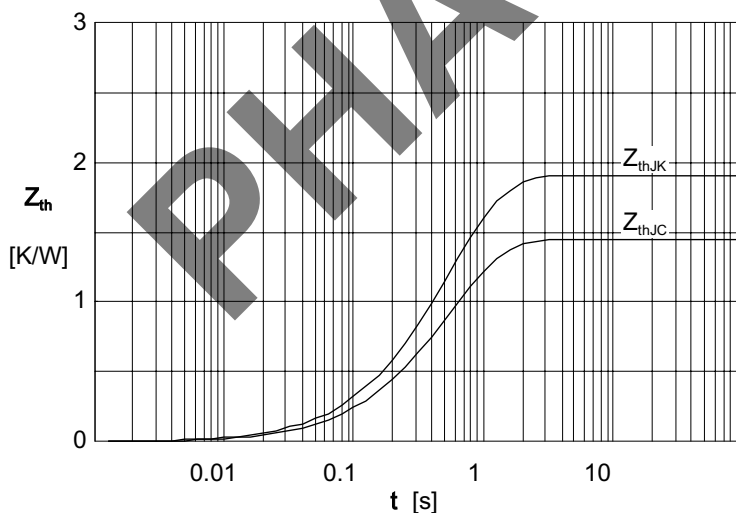


Fig. 6 Transient thermal impedance per diode/thyristor, calculated