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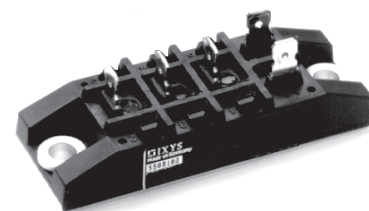
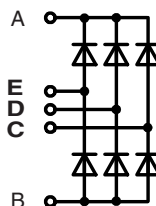
sales@integrated-circuit.com

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	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^2s
	$t = 8.3 \text{ ms}$ (60 Hz), sine	1520 A^2s
	$T_{VJ} = T_{VJM}$ $V_R = 0$ $t = 10 \text{ ms}$ (50 Hz), sine	1250 A^2s
	$t = 8.3 \text{ ms}$ (60 Hz), sine	1250 A^2s
T_{VJ}		-40...+150 $^\circ\text{C}$
T_{VJM}		150 $^\circ\text{C}$
T_{stg}		-40...+125 $^\circ\text{C}$
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	Mounting torque (M5) (10-32 UNF)	5 $\pm 15\%$ Nm
		44 $\pm 15\%$ lb.in.
Weight	typ.	110 g

Features

- Package with copper base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- 1/4" 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

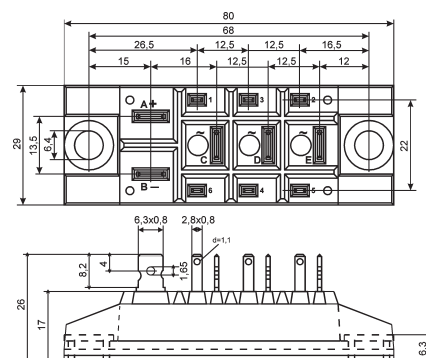
- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight

Symbol	Conditions	Characteristic Values
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 0.5 \text{ mA}$
	$V_R = V_{RRM}$ $T_{VJ} = T_{VJM}$	$\leq 10 \text{ mA}$
V_F	$I_F = 150 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 1.7 \text{ V}$
V_{T0}	For power-loss calculations only	0.8 V
r_T		8 m Ω
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

* for resistive load at bridge output

Dimensions in mm (1 mm = 0.0394")



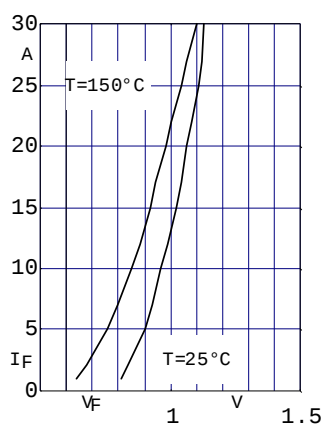


Fig. 1 Forward current versus voltage drop per diode

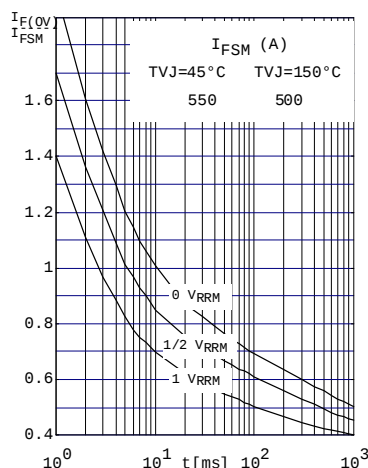


Fig. 2 Surge overload current per diode
 I_{FSM} : Crest value. t : duration

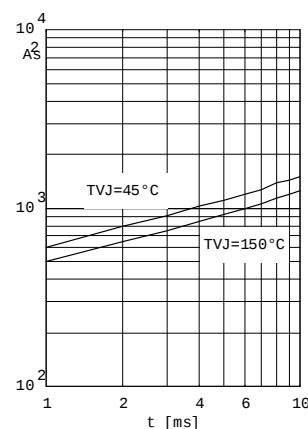


Fig. 3 I^2dt versus time (1-10ms) per diode or thyristor

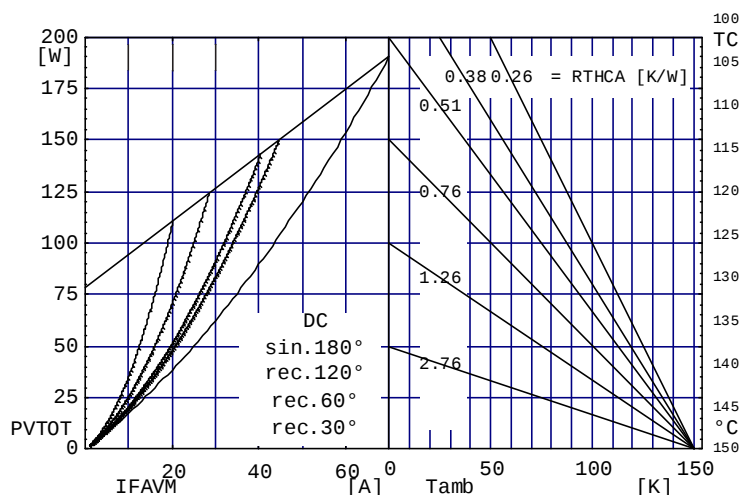


Fig. 4 Power dissipation versus direct output current and ambient temperature

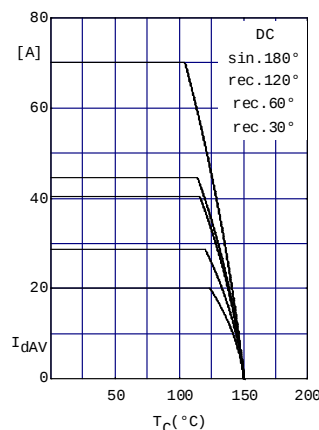


Fig. 5 Maximum forward current at case temperature

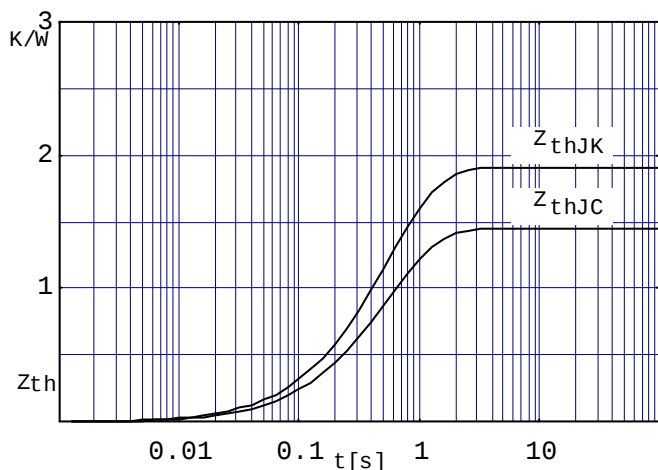


Fig. 6 Transient thermal impedance per diode/thyristor, calculated