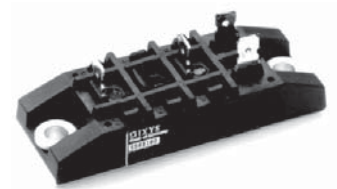
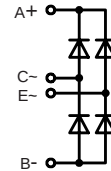


Single Phase Rectifier Bridge

$$I_{dAV} = 55 \text{ A}$$

$$V_{RRM} = 800-1600 \text{ V}$$

V_{RSM} V	V_{RRM} V	Types
900	800	VBO 55-08NO7
1300	1200	VBO 55-12NO7
1500	1400	VBO 55-14NO7
1700	1600	VBO 55-16NO7
1900	1800	VBO 55-18NO7



Symbol	Conditions	Maximum Ratings	
I_{dAV} ①	$T_C = 100^\circ\text{C}$, module	55	A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	750	A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	820	A
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz), sine	600	A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	700	A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	2800	A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	2820	A ² s
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz), sine	2200	A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	2250	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	Mounting torque (M5)	5 ±15%	Nm
	(10-32 UNF)	44 ±15%	lb.in.
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

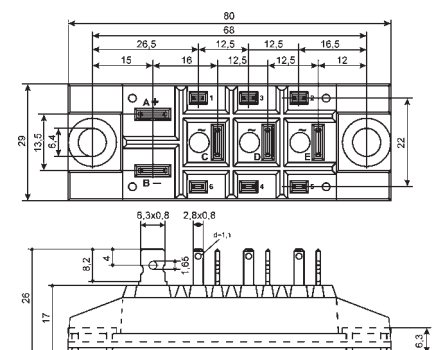
- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight

Dimensions in mm (1 mm = 0.0394")

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	$I_F = 150 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	≤ 1.6	V
V_{T0}	For power-loss calculations only	0.8	V
r_T	$T_{VJ} = T_{VJM}$	6	mΩ
R_{thJC}	per diode; DC current	1.3	K/W
	per module	0.325	K/W
R_{thJK}	per diode; DC current	1.6	K/W
	per module	0.4	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.

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



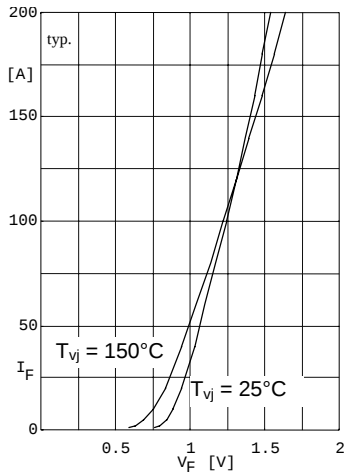


Fig. 1 Forward current versus voltage drop per diode

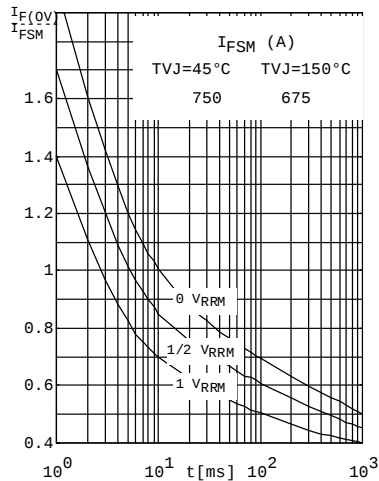


Fig. 2 Surge overload current per diode I_{FSM} : Crest value. t : duration

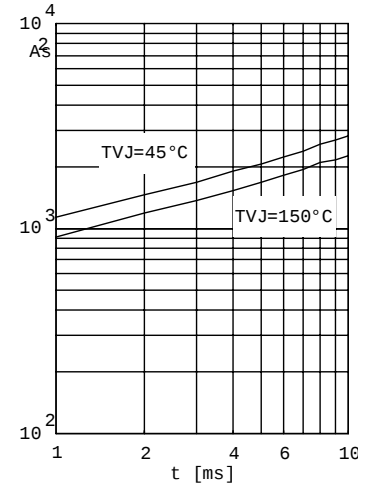


Fig. 3 $\int i^2 dt$ versus time (1-10ms) per diode or thyristor

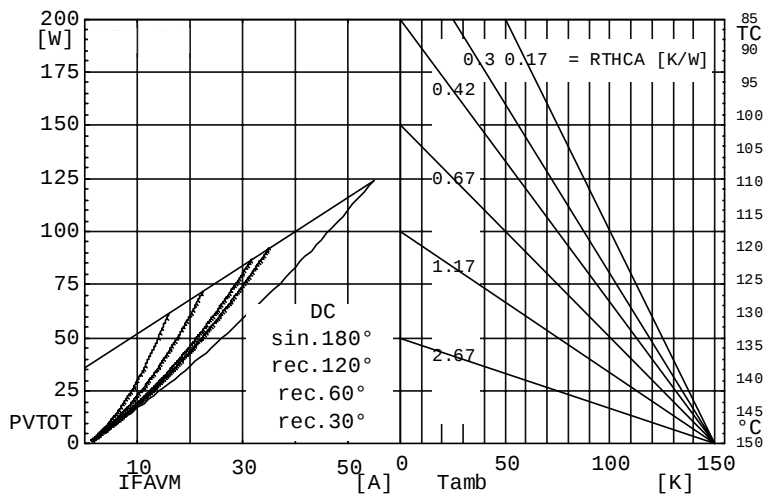


Fig. 4 Power dissipation versus direct output current and ambient temperature

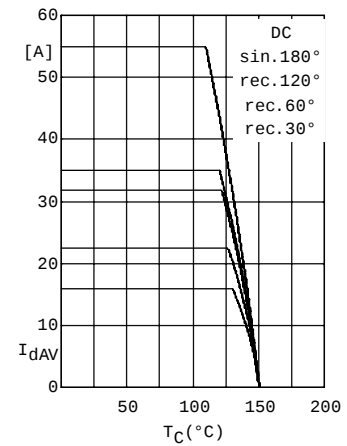


Fig.5 Maximum forward current at case temperature

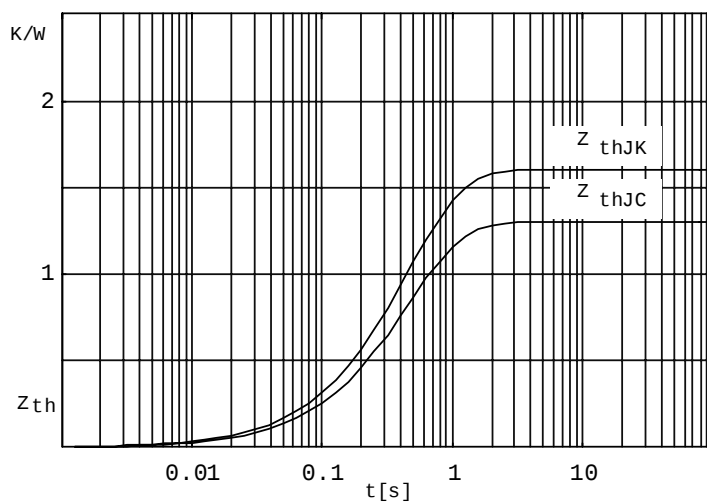


Fig. 6 Transient thermal impedance per diode or thyristor, calculated