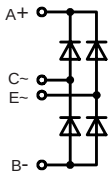
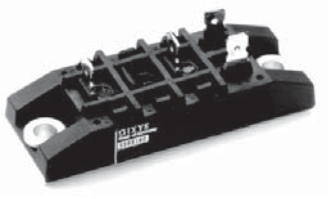
Single Phase Rectifier Bridge

I_{dAV} = 55 A
V_{RRM} = 800-1600 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°C, module		55	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	750	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	820	A
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	600	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	700	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	2800	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	2820	A^2s
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	2200	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	2250	A^2s
T_{VJ}			-40...+150	°C
T_{VJM}			150	°C
T_{stg}			-40...+125	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min	2500	V~
	I_{ISOL} ≤ 1 mA	t = 1 s	3000	V~
M_d	Mounting torque	(M5)	5 ±15%	Nm
		(10-32 UNF)	44 ±15%	lb.in.
Weight	typ.		110	g

Symbol	Conditions		Characteristic Values		
I_R	V_R = V_{RRM};	T_{VJ} = 25°C	≤	0.5	mA
	V_R = V_{RRM};	T_{VJ} = T_{VJM}	≤	10	mA
V_F	I_F = 150 A;	T_{VJ} = 25°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.

Features

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

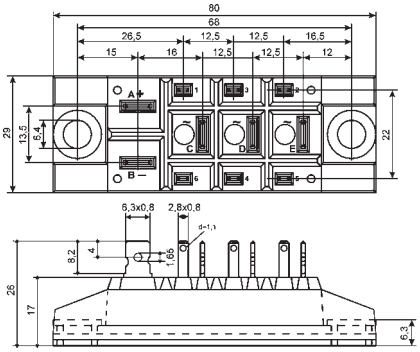
Applications

- 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")



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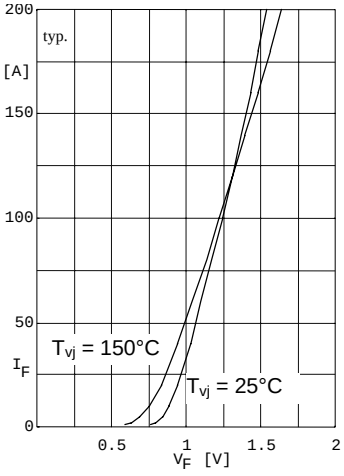

Fig. 1 Forward current versus voltage drop per diode

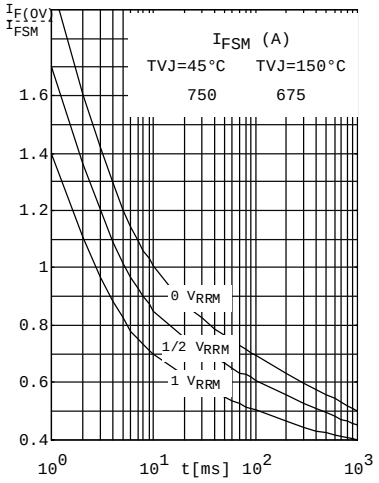

Fig. 2 Surge overload current per diode I_{FSM}: Crest value. t: duration

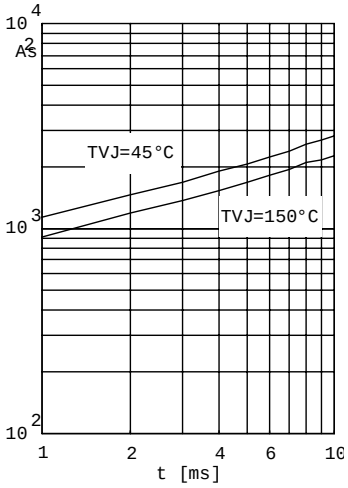

Fig. 3 $\int i^2dt$ versus time (1-10ms) per diode or thyristor

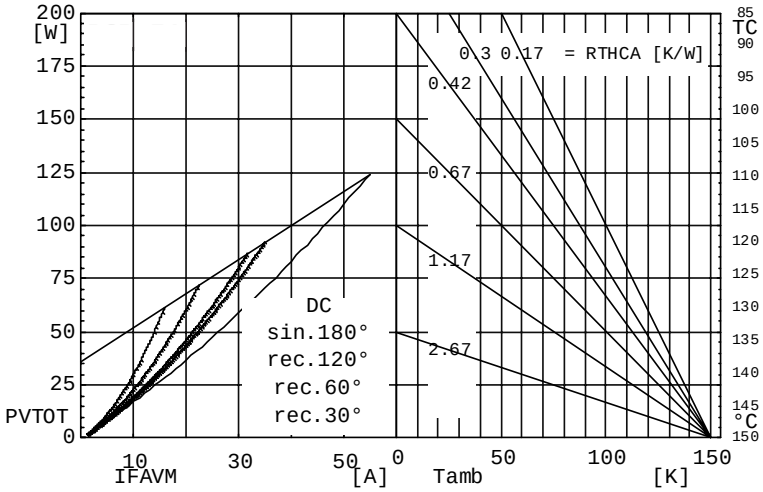

Fig. 4 Power dissipation versus direct output current and ambient temperature

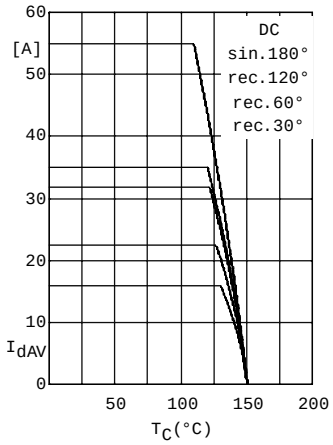

Fig.5 Maximum forward current at case temperature

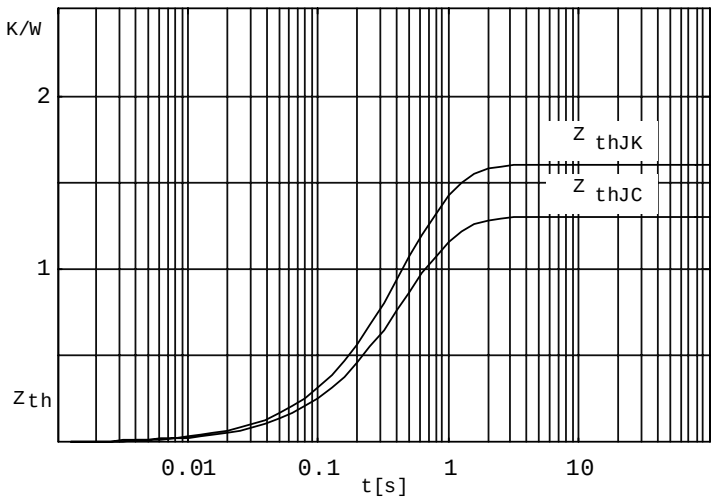

Fig. 6 Transient thermal impedance per diode or thyristor, calculated