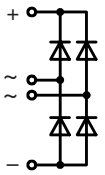
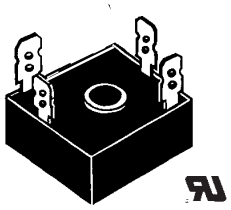
Single Phase Rectifier Bridge

I_{dAVM} = 21 A
V_{RRM} = 800-1800 V

V_{RSM} V	V_{RRM} V	Type
800	800	VBO 22-08NO8
1200	1200	VBO 22-12NO8
1400	1400	VBO 22-14NO8
1600	1600	VBO 22-16NO8
1800	1800	VBO 22-18NO8





Symbol	Conditions		Maximum Ratings	
I_{dAV}	T_C = 85°C, module		17	A
I_{dAVM}	T_C = 63°C, module		21	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	380	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	440	A
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	360	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	400	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	725	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	800	A^2s
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	650	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	650	A^2s
T_{VJ}			-40...+150	°C
T_{VJM}			150	°C
T_{stg}			-40...+150	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min	2500	V~
	$I_{ISOL} \leq$ 1 mA	t = 1 s	3000	V~
M_d	Mounting torque	(M5)	2 ±10%	Nm
		(10-32 UNF)	18 ±10%	lb.in.
Weight	typ.		22	g

Symbol	Conditions		Characteristic Values		
I_R	T_{VJ} = 25°C;	V_R = V_{RRM}	≤	0.3	mA
	T_{VJ} = T_{VJM};	V_R = V_{RRM}	≤	5.0	mA
V_F	I_F = 150 A;	T_{VJ} = 25°C	≤	2.2	V
V_{T0}	For power-loss calculations only			0.85	V
r_T				12	mΩ
R_{thJC}	per diode; DC current			8.2	K/W
	per module			2.05	K/W
R_{thJK}	per diode; DC current			9.4	K/W
	per module			2.35	K/W
d_S	Creeping distance on surface			12.7	mm
d_A	Creepage 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.

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

Features

- Package with ¼" fast-on terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 72873

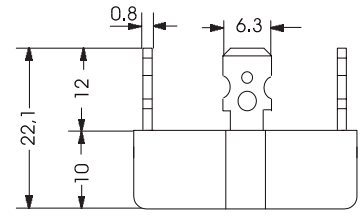
Applications

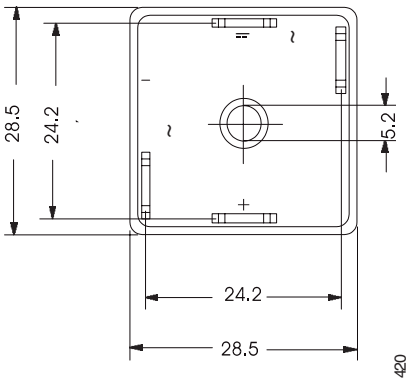
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Advantages

- Easy to mount with one screw
- Space and weight savings
- Improved temperature and power cycling

Dimensions in mm (1 mm = 0.0394")





420

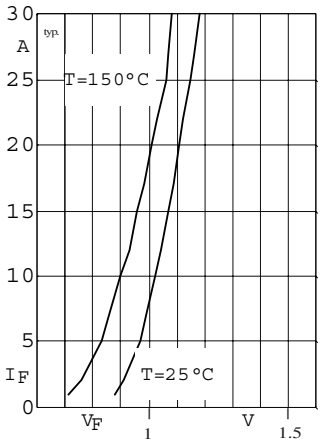


Fig. 1 Forward current versus voltage drop per diode

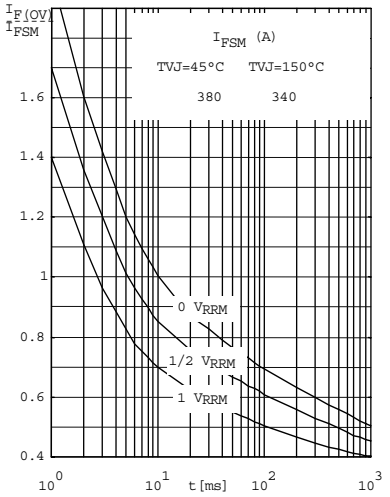


Fig. 2 Surge overload current per diode
I_{FSM}: Crest value. t: duration

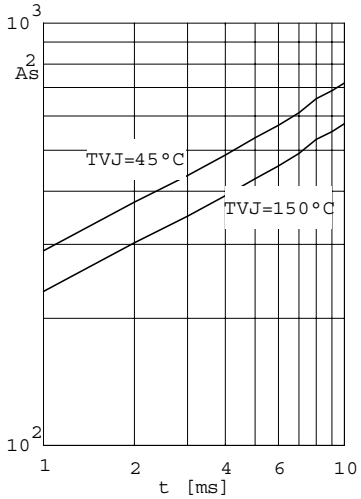


Fig. 3 ∫i²dt versus time (1-10ms) per diode or thyristor

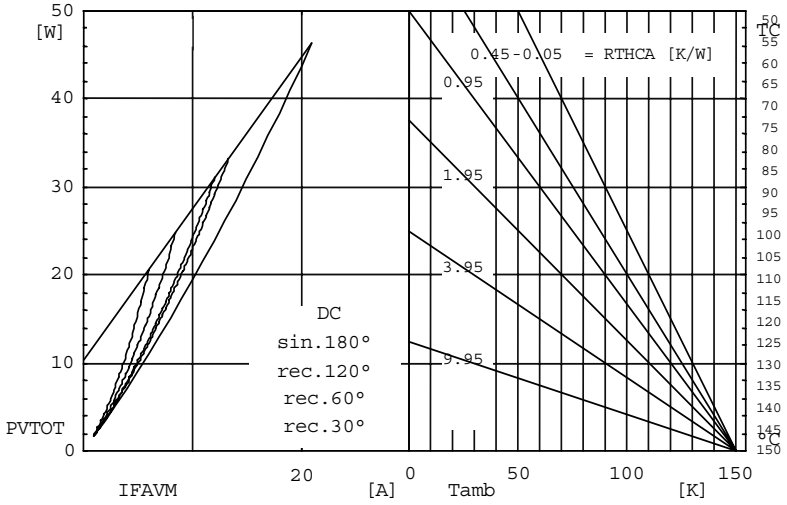


Fig. 4 Power dissipation versus direct output current and ambient temperature

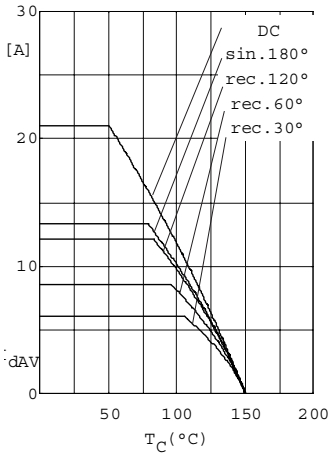


Fig.5 Maximum forward current at case temperature

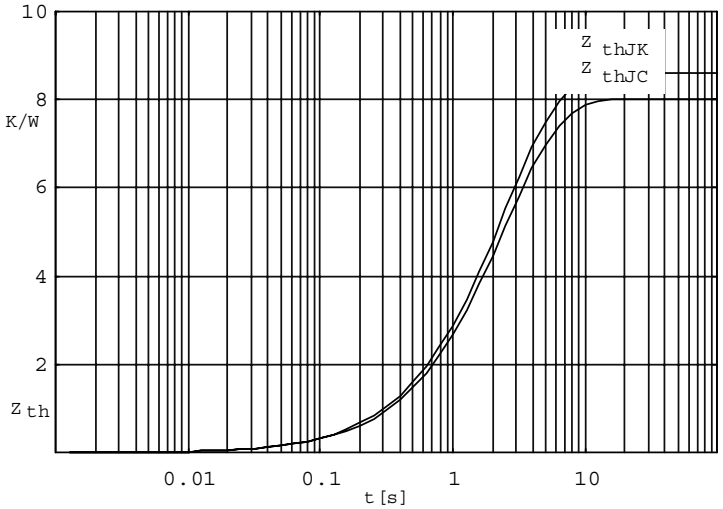


Fig. 6 Transient thermal impedance per diode or thyristor, calculated