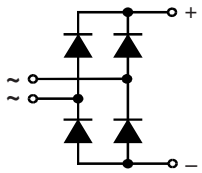
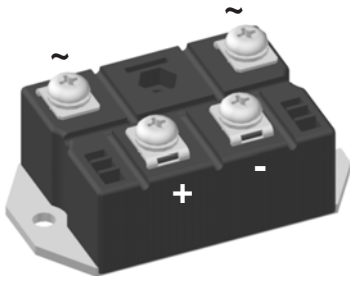
Single Phase Rectifier Bridge

I_{dAV} = 174 A
V_{RRM} = 800-1800 V

Preliminary data

V_{RSM} V	V_{RRM} V	Type
800	800	VBO 160-08NO7
1200	1200	VBO 160-12NO7
1400	1400	VBO 160-14NO7
1600	1600	VBO 160-16NO7
1800	1800	VBO 160-18NO7





Symbol	Test Conditions		Maximum Ratings	
I_{dAV}	T_C = 100°C, module		174	A
I_{dAV}	T_A = 35°C (R_{thCA} = 0.2 K/W), module		139	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	2800	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	3300	A
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	2500	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	2750	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	39 200	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	45 000	A^2s
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	31 200	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	31 300	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~
	$I_{ISOL} \leq$ 1 mA	t = 1 s	3000	V~
M_d	Mounting torque (M6)		5 ± 15 %	Nm
	Terminal connection torque (M6)		5 ± 15 %	Nm
Weight	typ.		270	g

Symbol	Test Conditions		Characteristic Values		
I_R	V_R = V_{RRM};	T_{VJ} = 25°C	≤	0.3	mA
	V_R = V_{RRM};	T_{VJ} = T_{VJM}	≤	5	mA
V_F	I_F = 300 A;	T_{VJ} = 25°C	≤	1.43	V
V_{T0}	For power-loss calculations only			0.8	V
r_T	T_{VJ} = T_{VJM}			2.2	mΩ
R_{thJC}	per diode, 180°			0.45	K/W
	per module			0.11	K/W
R_{thJK}	per diode, 180°			0.6	K/W
	per module			0.15	K/W
d_S	Creeping distance on surface			10	mm
d_A	Creepage distance in air			9.4	mm
a	Max. allowable acceleration			50	m/s^2

Features

- Package with screw terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL applied

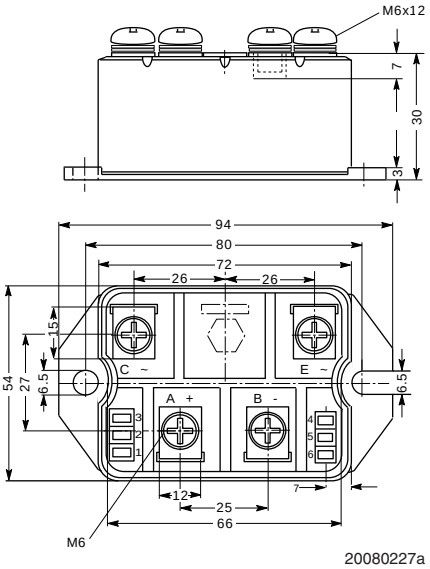
Applications

- 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

Dimensions in mm (1 mm = 0.0394")



20080227a

Data according to IEC 60747 refer to a single diode unless otherwise stated
IXYS reserves the right to change limits, test conditions and dimensions.

© 2008 IXYS All rights reserved