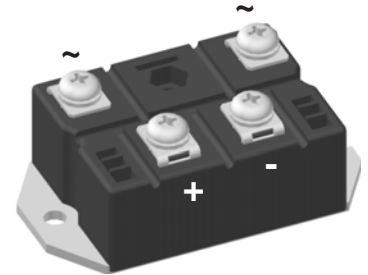
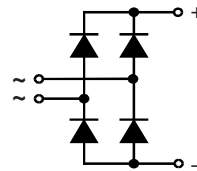


# Single Phase Rectifier Bridge

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

## Preliminary data

$V_{RSM}$ V	$V_{RRM}$ V	Type
900	800	VBO 160-08NO7
1300	1200	VBO 160-12NO7
1700	1600	VBO 160-16NO7
1900	1800	VBO 160-18NO7



Symbol	Conditions	Maximum Ratings	
$I_{dAV}$	$T_C = 100^\circ\text{C}$ , module	174	A
$I_{dAV}$	$T_A = 35^\circ\text{C}$ ( $R_{thCA} = 0.2 \text{ K/W}$ ), module	139	A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine	2800 A
		t = 8.3 ms (60 Hz), sine	3300 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine	2500 A
		t = 8.3 ms (60 Hz), sine	2750 A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine	39 200 A <sup>2</sup> s
		t = 8.3 ms (60 Hz), sine	45 000 A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine	31 200 A <sup>2</sup> s
		t = 8.3 ms (60 Hz), sine	31 300 A <sup>2</sup> s
$T_{VJ}$		-40...+150	°C
$T_{VJM}$		150	°C
$T_{stg}$		-40...+125	°C
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	t = 1 min	2500 V~
		t = 1 s	3000 V~
$M_d$	Mounting torque (M6)	5 ±15%	Nm
	Terminal connection torque (M6)	5 ±15%	Nm
Weight	typ.	270	g

## Features

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

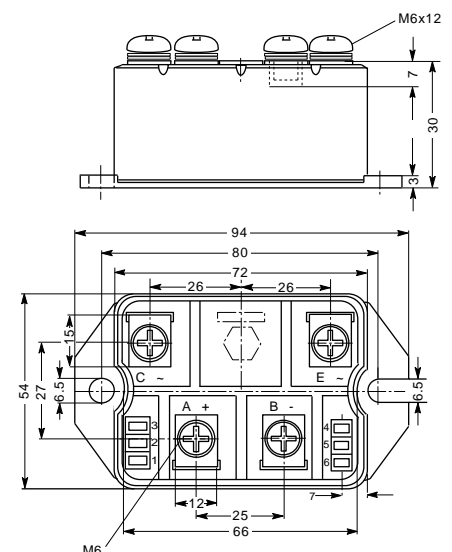
## Applications

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

## Advantages

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

## Dimensions in mm (1 mm = 0.0394")



Symbol	Test Conditions	Characteristic Values	
$I_R$	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 0.3$	mA
	$V_R = V_{RRM}$ $T_{VJ} = T_{VJM}$	$\leq 5$	mA
$V_F$	$I_F = 300 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$	$\leq 1.43$	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	KW
	per module	0.11	KW
$R_{thJK}$	per diode, 180°	0.6	KW
	per module	0.15	KW
$d_S$	Creeping distance on surface	10	mm
$d_A$	Creepage distance in air	9.4	mm
$a$	Max. allowable acceleration	50	m/s <sup>2</sup>

Data according to IEC 60747 refer to a single diode unless otherwise stated.

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

20100706b