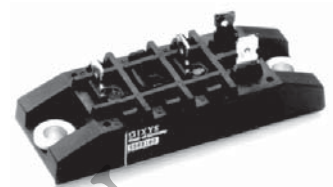
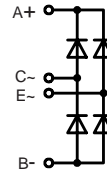


Single Phase Rectifier Bridge

$I_{dAV} = 55 \text{ A}$
 $V_{RRM} = 800-1600 \text{ V}$

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	Features	
I_{dAV} ①	$T_C = 100^\circ\text{C}$, module	55 A	<ul style="list-style-type: none"> • Package with copper base plate • Isolation voltage 3000 V~ • Planar passivated chips • Low forward voltage drop • 1/4" fast-on power terminals 	
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	t = 10 ms (50 Hz), sine		750 A
		t = 8.3 ms (60 Hz), sine		820 A
I^2t	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine		600 A
		t = 8.3 ms (60 Hz), sine		700 A
T_{VJ}	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine		2800 A ² s
		t = 8.3 ms (60 Hz), sine		2820 A ² s
T_{VJM}	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine	2200 A ² s	
		t = 8.3 ms (60 Hz), sine	2250 A ² s	
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 (M5) (10-32 UNF)		5 ±15% Nm	
			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
- 1/4" fast-on power terminals

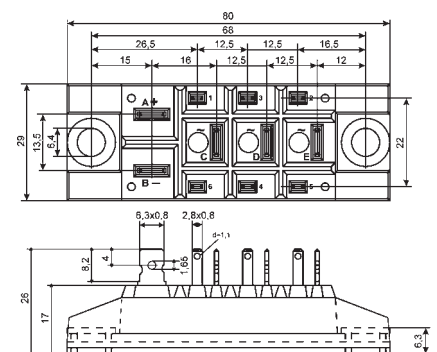
Applications

- 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	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 0.5 \text{ mA}$
	$V_R = V_{RRM}$; $T_{VJ} = T_{VJM}$	$\leq 10 \text{ mA}$
V_F	$I_F = 150 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	$\leq 1.6 \text{ V}$
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

**Recommended replacement:
VBO65-##NO7**

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

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

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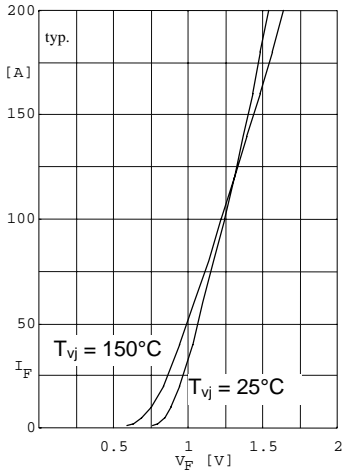


Fig. 1 Forward current versus voltage drop per diode

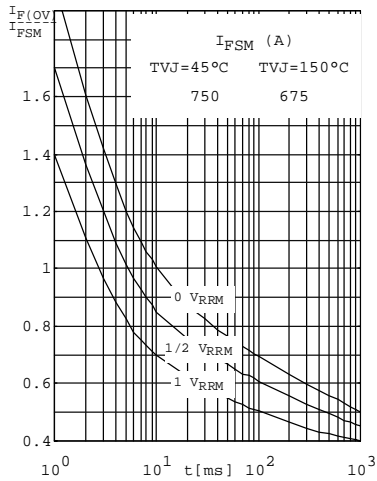


Fig. 2 Surge overload current per diode I_{FSM} : Crest value. t: duration

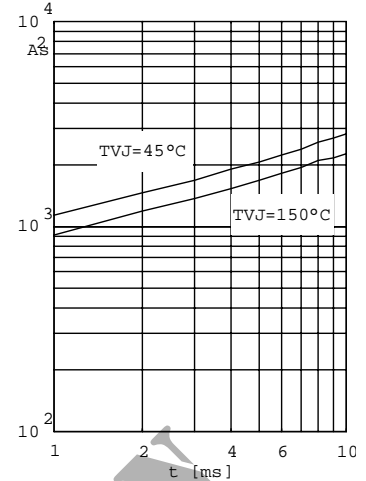


Fig. 3 $\int i^2 dt$ versus time (1-10ms) per diode or thyristor

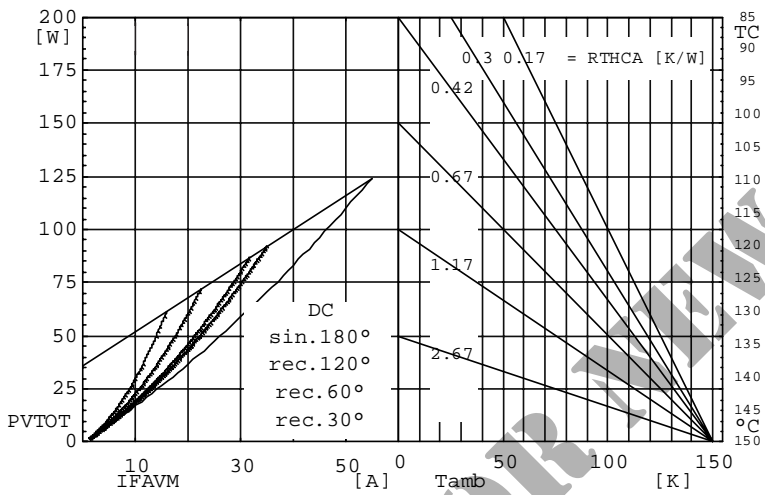


Fig. 4 Power dissipation versus direct output current and ambient temperature

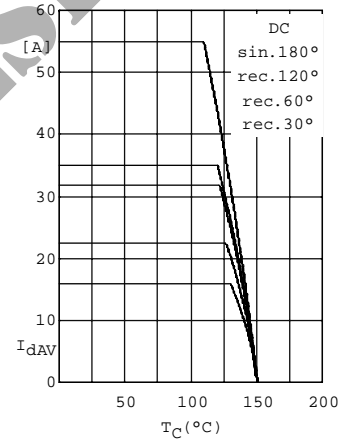


Fig.5 Maximum forward current at case temperature

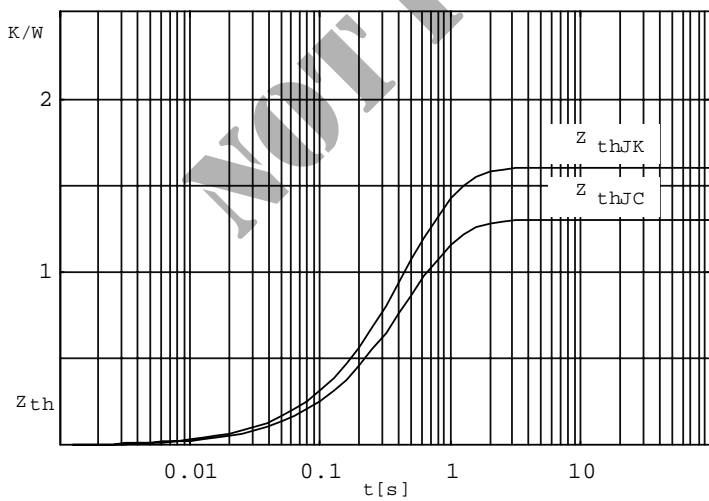


Fig. 6 Transient thermal impedance per diode or thyristor, calculated