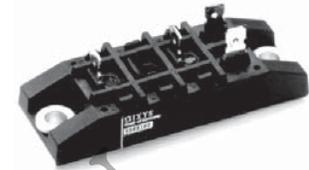
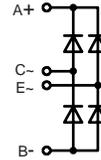


## Single Phase Rectifier Bridge

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

$V_{RSM}$ 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"> <li>• Package with copper base plate</li> <li>• Isolation voltage 3000 V~</li> <li>• Planar passivated chips</li> <li>• Low forward voltage drop</li> <li>• 1/4" fast-on power terminals</li> </ul>	
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		750 A 820 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		600 A 700 A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		2800 A <sup>2</sup> s 2820 A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		2200 A <sup>2</sup> s 2250 A <sup>2</sup> s
$T_{VJ}$ $T_{VJM}$ $T_{stg}$		-40...+150 °C 150 °C -40...+125 °C		
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	t = 1 min t = 1 s	2500 V~ 3000 V~	
	$M_d$	Mounting torque (M5) (10-32 UNF)	5 ±15% Nm 44 ±15% lb.in.	
Weight	typ.	110 g		

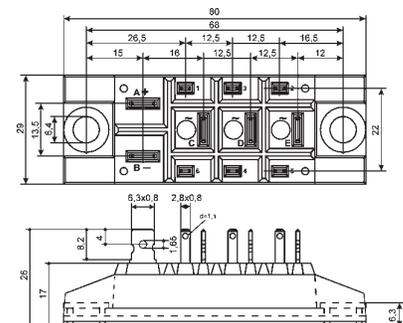
### Applications

- 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")



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

Symbol	Conditions	Characteristic Values
$I_R$	$V_R = V_{RRM}$ ; $T_{VJ} = 25^\circ\text{C}$	≤ 0.5 mA
	$V_R = V_{RRM}$ ; $T_{VJ} = T_{VJM}$	≤ 10 mA
$V_F$	$I_F = 150 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	≤ 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 <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.

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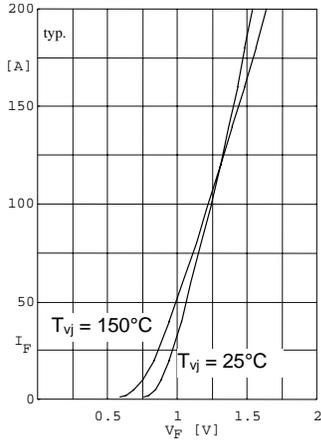


Fig. 1 Forward current versus voltage drop per diode

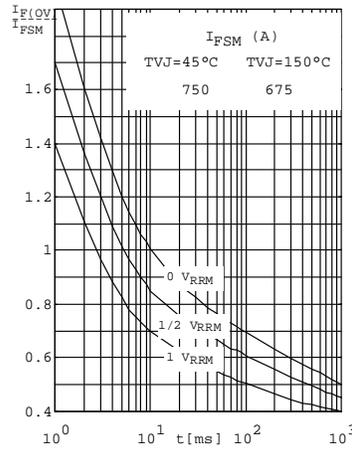


Fig. 2 Surge overload current per diode  $I_{FSM}$ : Crest value.  $t$ : duration

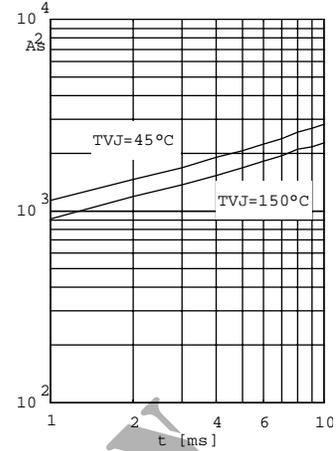


Fig. 3  $j^2dt$  versus time (1-10ms) per diode or thyristor

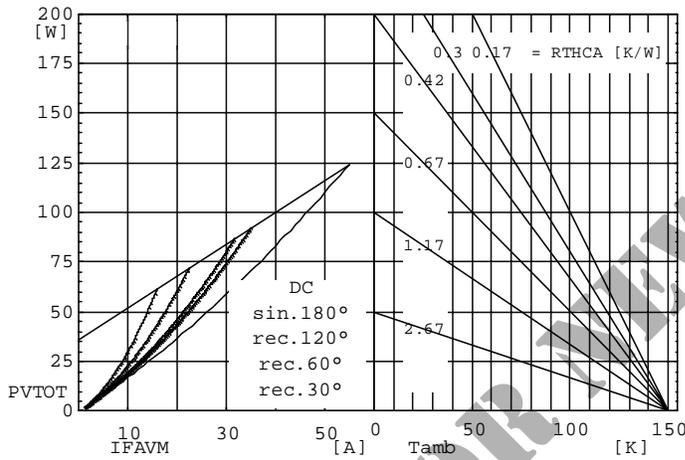


Fig. 4 Power dissipation versus direct output current and ambient temperature

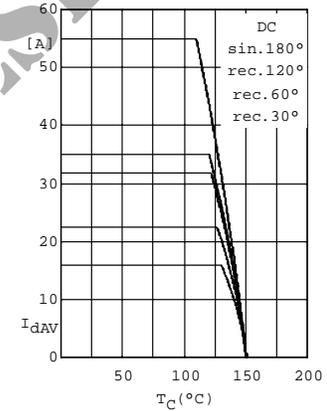


Fig.5 Maximum forward current at case temperature

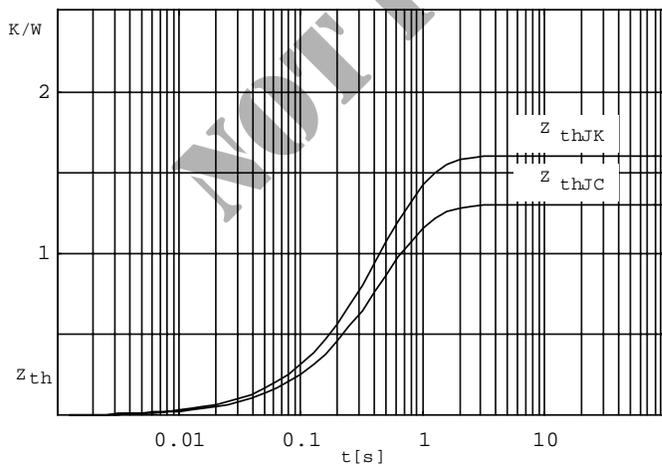


Fig. 6 Transient thermal impedance per diode or thyristor, calculated