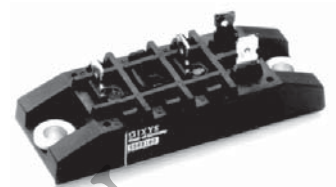
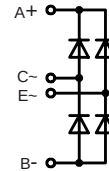


Single Phase Rectifier Bridge

$$I_{dAV} = 55 \text{ A}$$

$$V_{RRM} = 800-1600 \text{ V}$$

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



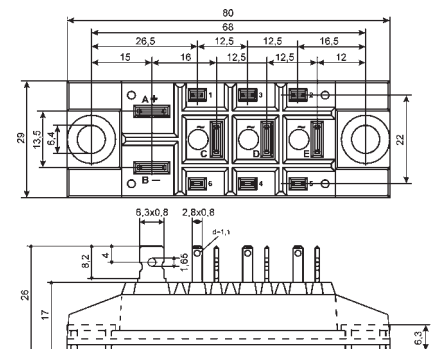
Symbol	Conditions	Maximum Ratings		Features
I_{dAV} ①	$T_C = 100^\circ\text{C}$, module	55	A	- Package with copper base plate - Isolation voltage 3000 V~ - Planar passivated chips - Low forward voltage drop 1/4" fast-on power terminals
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	750	A	
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	820	A	
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz), sine	600	A	
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	700	A	
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	2800	A ² s	Applications - Supplies for DC power equipment - Input rectifiers for PWM inverter - Battery DC power supplies - Field supply for DC motors
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	2820	A ² s	
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz), sine	2200	A ² s	
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz), sine	2250	A ² s	
T_{VJ} T_{VJM} T_{stg}		-40...+150	°C	
		150	°C	
		-40...+125	°C	
V_{ISOL}	50/60 Hz, RMS; $t = 1 \text{ min}$	2500	V~	Advantages - Easy to mount with two screws - Space and weight savings - Improved temperature and power cycling capability - Small and light weight
	$I_{ISOL} \leq 1 \text{ mA}$; $t = 1 \text{ s}$	3000	V~	
M_d	Mounting torque (M5)	5 ±15%	Nm	
	(10-32 UNF)	44 ±15%	lb.in.	
Weight	typ.	110	g	

Symbol	Conditions	Characteristic Values	
I_R	$V_R = V_{RRM1}$; $T_{VJ} = 25^\circ\text{C}$	≤	0.5 mA
	$V_R = V_{RRM1}$; $T_{VJ} = T_{VJM}$	≤	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 ²

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

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

Dimensions in mm (1 mm = 0.0394")



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

20070731a

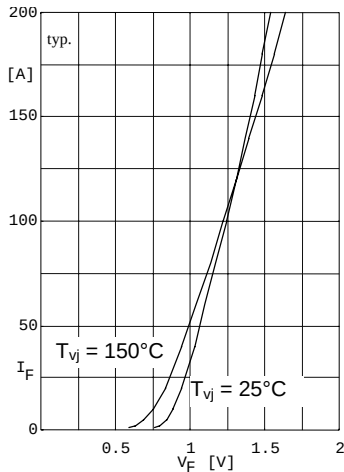


Fig. 1 Forward current versus voltage drop per diode

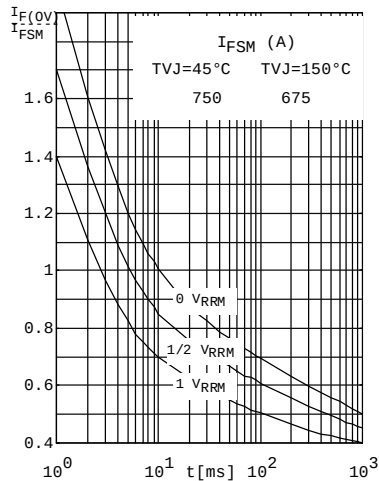


Fig. 2 Surge overload current per diode I_{FSM} : Crest value. t : duration

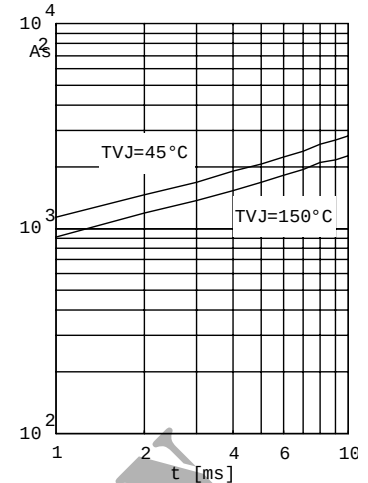


Fig. 3 $\int i^2 dt$ versus time (1-10ms) per diode or thyristor

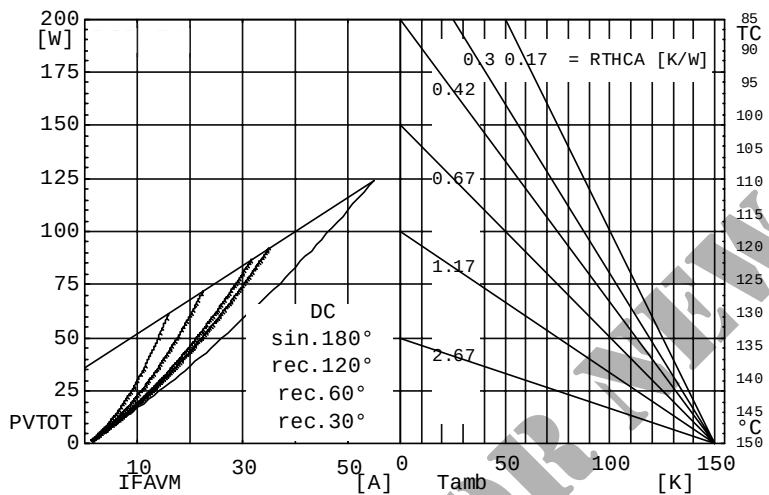


Fig. 4 Power dissipation versus direct output current and ambient temperature

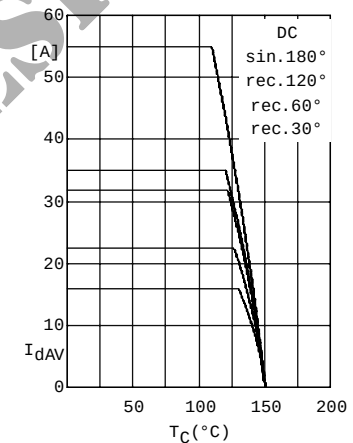


Fig. 5 Maximum forward current at case temperature

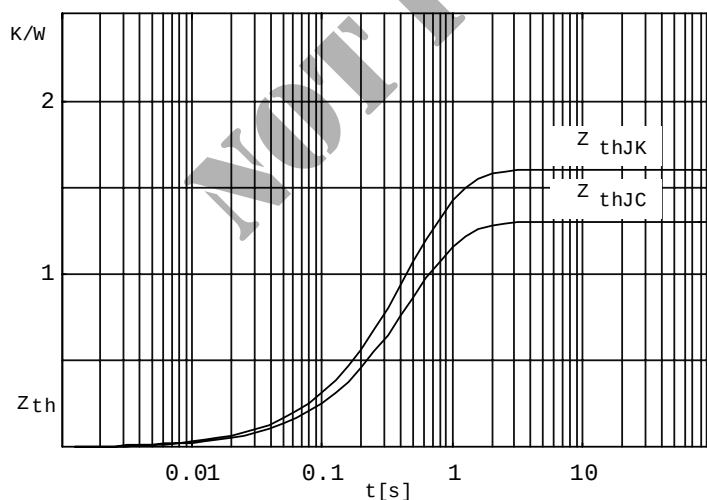


Fig. 6 Transient thermal impedance per diode or thyristor, calculated