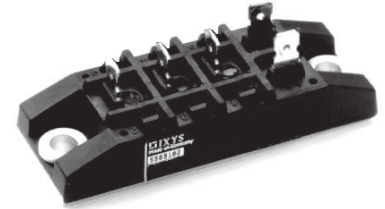
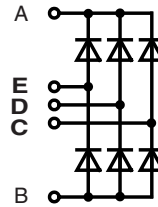


# Three Phase Rectifier Bridge

$$I_{dAV} = 70 \text{ A}$$

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

$V_{RSM}$	$V_{RRM}$	Types
V	V	
1700	1600	VUO 70-16NO7



Symbol	Conditions	Maximum Ratings	Features
$I_{dAV}$	$T_C = 100^\circ\text{C}$ , module (for resistive load at bridge output)	70 A	Package with copper base plate Isolation voltage 3000 V~ Planar passivated chips Low forward voltage drop 1/4" fast-on power terminals
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	550 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine	600 A
$I^2t$	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	500 A
		$t = 8.3 \text{ ms}$ (60 Hz), sine	550 A
$T_{VJ}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	1520 A <sup>2</sup> s
		$t = 8.3 \text{ ms}$ (60 Hz), sine	1520 A <sup>2</sup> s
		$T_{VJ} = T_{VJM}$ $V_R = 0$	1250 A <sup>2</sup> s
$T_{VJM}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms}$ (50 Hz), sine	1250 A <sup>2</sup> s
		$t = 8.3 \text{ ms}$ (60 Hz), sine	1250 A <sup>2</sup> s
$T_{stg}$		-40...+125	$^\circ\text{C}$
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	$t = 1 \text{ min}$	2500 V~
		$t = 1 \text{ s}$	3000 V~
$M_d$	Mounting torque (M5) (10-32 UNF)	5 ±15% 44 ±15%	Nm
lb.in.			
<b>Weight</b>	typ.	110	g

## Features

## 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

Symbol	Conditions	Characteristic Values	
$I_R$	$V_R = V_{RRM}$ $V_R = V_{RRM}$	$T_{VJ} = 25^\circ\text{C}$	≤ 0.5 mA
		$T_{VJ} = T_{VJM}$	≤ 10 mA
$V_F$	$I_F = 150 \text{ A}$	$T_{VJ} = 25^\circ\text{C}$	≤ 1.7 V
$V_{T0}$	For power-loss calculations only		0.8 V
$r_T$			8 mΩ
$R_{thJC}$	per diode, DC current		1.45 K/W
	per module		0.242 K/W
$R_{thJH}$	per diode, DC current		1.9 K/W
	per module		0.317 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

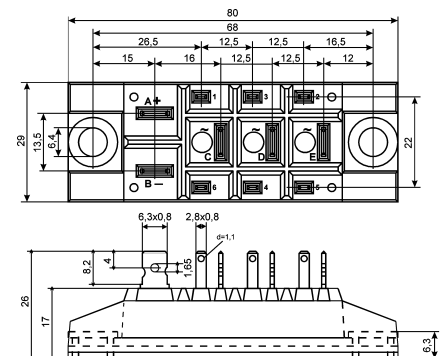
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## Dimensions in mm (1 mm = 0.0394")



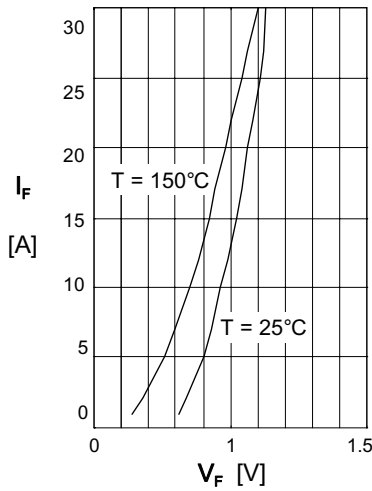


Fig. 1 Forward current vs. voltage drop per diode

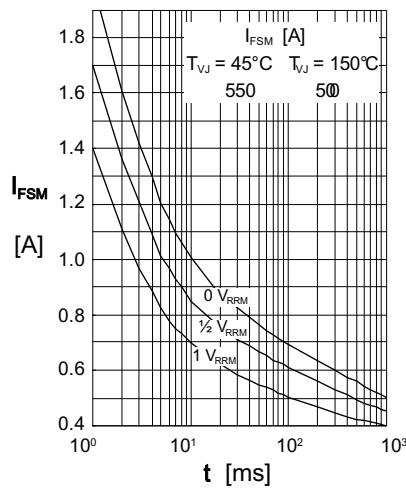


Fig. 2 Surge overload current per diode.  $t$  = duration  
 $I_{FSM}$  = Crest value

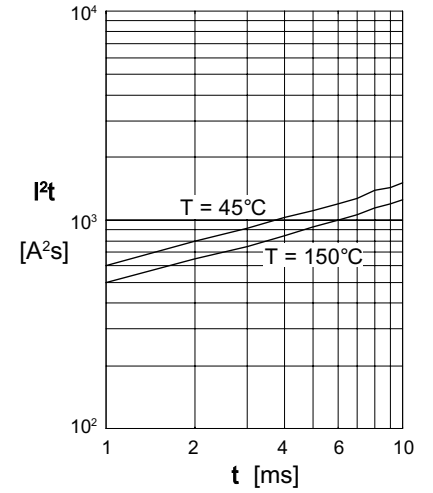


Fig. 3  $I^2t$  vs. time (1-10 ms) per diode/thyristor

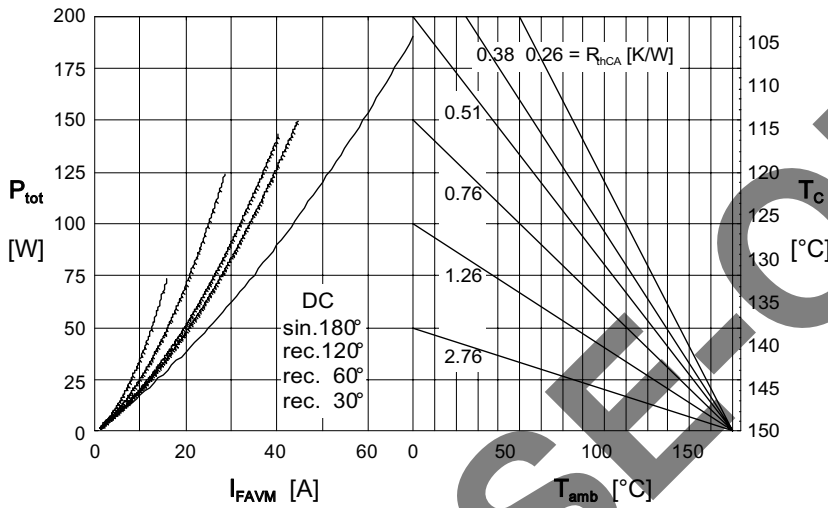


Fig. 4 Power dissipation versus direct output current and ambient temperature

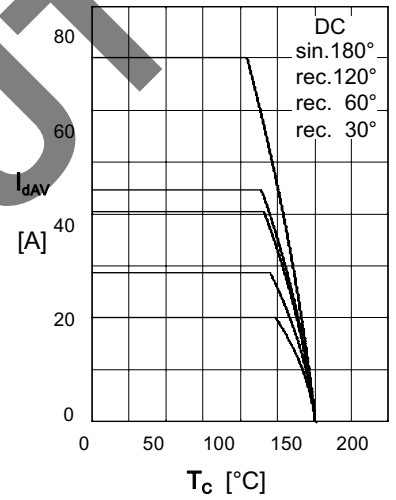


Fig. 5 Max. forward current at case temperature

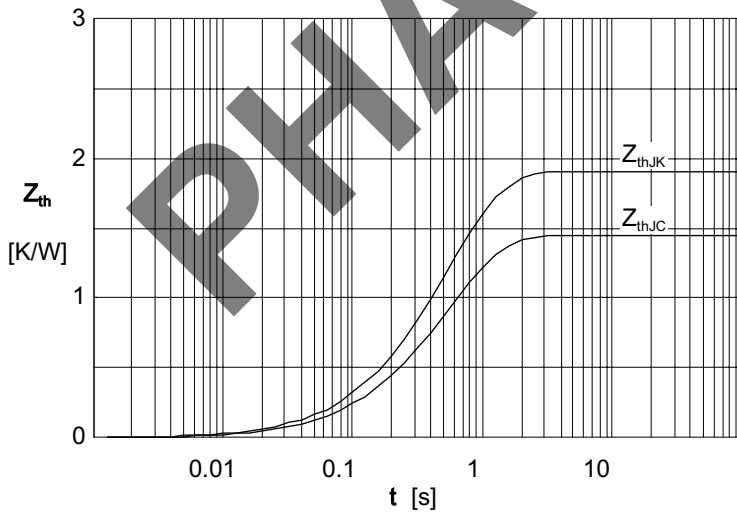


Fig. 6 Transient thermal impedance per diode/thyristor, calculated