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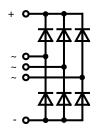


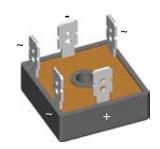


# **Three Phase Rectifier Bridge**

 $I_{dAV} = 25 A$  $V_{RRM} = 800-1800 V$ 

V <sub>RSM</sub>	V <sub>RRM</sub>	Туре
$\mathbf{V}_{DSM}$	$\mathbf{V}_{DRM}$	
V	V	
900	800	VUO 25-08NO8
1300	1200	VUO 25-12NO8
1500	1400	VUO 25-14NO8
1700	1600	VUO 25-16NO8
1900	1800	VUO 25-18NO8





77

Symbol	Conditions $T_{c} = 85^{\circ}C, \text{ module}$ $T_{c} = 63^{\circ}C, \text{ module}$			Maximum Ratings		
I <sub>dAV</sub>				20 25	A A	
I <sub>FSM</sub>	$T_{VJ} = 45^{\circ}C;$ $V_{B} = 0$	t = 10 ms t = 8.3 ms	(50 Hz) (60 Hz)	380 400	A A	
	$T_{VJ} = T_{VJM};$ $V_R = 0$	t = 10 ms t = 8.3 ms	(50 Hz) (60 Hz)	360 400	A A	
l²t	$T_{VJ} = 45^{\circ}C;$ $V_{R} = 0$	t = 10 ms t = 8.3 ms	(50 Hz) (60 Hz)	725 750	A <sup>2</sup> s A <sup>2</sup> s	
	$T_{VJ} = T_{VJM};$ $V_R = 0$	t = 10  ms t = 8.3  ms	(50 Hz) (60 Hz)	650 650	A <sup>2</sup> s A <sup>2</sup> s	
T <sub>VJ</sub> T <sub>VJM</sub> T <sub>stg</sub>				-40+150 150 -40+150	°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°	
V <sub>ISOL</sub>	50/60 Hz, RMS $t = 1 \text{ min}$ $I_{ISOL} \le 1 \text{ mA}$ $t = 1 \text{ s}$			2500 3000	V~ V~	
M <sub>d</sub>	Mounting torque (M5) (10-32 UNF)			2 ±10% 18 ±10%	Nm lb.in.	
Weight	Тур.			22	g	

Symbol	Conditions	Characteristic Values		
I <sub>R</sub>	$V_B = V_{BBM}$ $T_{VJ} = 25^{\circ}C$	0.3	mΑ	
	$T_{VJ} = T_{VJM}$	5.0	mΑ	
$V_{F}$	$I_F = 150 \text{ A}$ $T_{VJ} = 25^{\circ}\text{C}$	2.2	V	
$V_{T0}$	For power-loss calculations only	0.85	V	
r <sub>t</sub>		12	$m\Omega$	
R <sub>thJC</sub>	per diode; 120° el.	9.30	K/W	
	per module	1.55	K/W	
$R_{thJH}$	per diode; 120° el.	10.20	K/W	
	per module	1.70	K/W	
ds	Creeping distance on surface	12.7	mm	
$d_A$	Creepage distance in air	9.4	mm	
а	Max. allowable acceleration	50	m/s <sup>2</sup>	

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

#### **Features**

- Package with 1/4" fast-on terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 72873

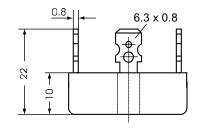
#### **Applications**

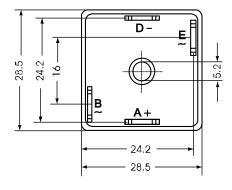
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

#### **Advantages**

- Easy to mount with one screw
- Space and weight savings
- Improved temperature & power cycling

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

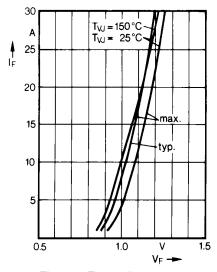


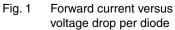


IXYS reserves the right to change limits, test conditions and dimensions.

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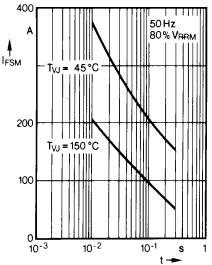


Fig. 2 Surge overload current per diode  $I_{\text{FSM}}$ : Crest value. t: duration

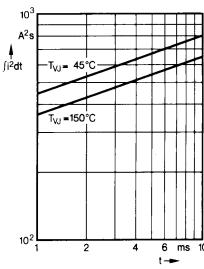


Fig. 3 I²t versus time (1-10 ms) per diode

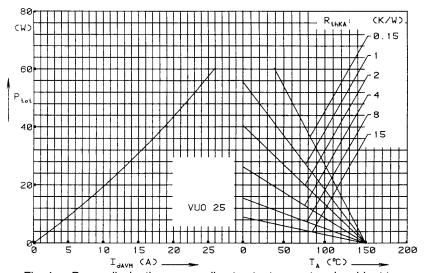


Fig. 4 Power dissipation versus direct output current and ambient temperature

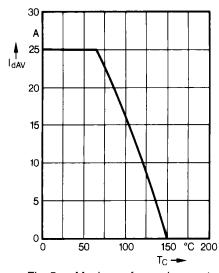


Fig. 5 Maximum forward current at case temperature

## Constants for $Z_{\text{thJC}}$ calculation:

i	R <sub>thi</sub> (K/W)	t <sub>i</sub> (s)
1	0.194	0.024
2	0.556	0.07
3	2.25	5.8
4	6.3	8.5

### Constants for $Z_{thJK}$ calculation:

i	R <sub>thi</sub> (K/W)	t <sub>i</sub> (s)
1	0.194	0.024
2	0.556	0.07
3	2.25	5.8
4	6.3	8.5
5	0.9	28

12	2	111111	1 1 1 1 1 1	<del>, , , , , , , , , , , , , , , , , , , </del>		
K/W	+++					
10	+				Z <sub>thJK</sub>	
$Z_{th}$						
8	3				Z <sub>thJC</sub>	
e						
C	'L					
4	<b>,</b>					
2	2					
				+111111		
Q	10 <sup>-3</sup>	10 <sup>-2</sup>	10 <sup>-1</sup>		10 <sup>1</sup> s 10	.2
1	10 -	10 -	10 '	1	10 <sup>1</sup> s 10 t →	ı

Fig. 6 Transient thermal impedance per diode

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