

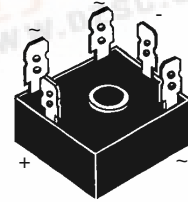
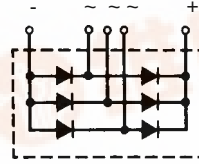
IXYS

VUO 18

Three Phase Rectifier Bridges with Semi Fast Diodes

Preliminary Data

V_{RSM} V	V_{RRM} V	Type
1200	1200	VUO 18-12DT8
1400	1400	VUO 18-14DT8
1600	1600	VUO 18-16DT8



$$I_{dAVM} = 18 \text{ A}$$

$$V_{RRM} = 1200-1600 \text{ V}$$

Symbol	Test Conditions		Maximum Ratings	
I_{dAV} I_{dAVM}	$T_C = 85^{\circ}\text{C}$, module		14	A
	$T_C = 63^{\circ}\text{C}$, module		18	A
I_{FSM}	$T_{VJ} = 45^{\circ}\text{C};$ $V_R = 0$	$t = 10\text{ ms}$ (50 Hz), sine	300	A
		$t = 8.3\text{ ms}$ (60 Hz), sine	330	A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10\text{ ms}$ (50 Hz), sine	270	A
		$t = 8.3\text{ ms}$ (60 Hz), sine	300	A
I^2t	$T_{VJ} = 45^{\circ}\text{C}$ $V_R = 0$	$t = 10\text{ ms}$ (50 Hz), sine	450	A ² s
		$t = 8.3\text{ ms}$ (60 Hz), sine	460	A ² s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10\text{ ms}$ (50 Hz), sine	365	A ² s
		$t = 8.3\text{ ms}$ (60 Hz), sine	380	A ² s
T_{VJ}			-40...+150	$^{\circ}\text{C}$
T_{VJM}			150	$^{\circ}\text{C}$
T_{stg}			-40...+150	$^{\circ}\text{C}$
V_{ISOL}	50/60 Hz, RMS	$t = 1\text{ min}$	2500	V~
	$I_{ISOL} \leq 1\text{ mA}$	$t = 1\text{ s}$	3000	V~
M_d	Mounting torque	(M5) (10-32 UNF)	$2 \pm 10\%$	Nm
			$18 \pm 10\%$	lb.in.
Weight	typ.		22	g

Features

- Package with 1/4" fast-on terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1600 V
- Low forward voltage drop
- UL registered E 72873

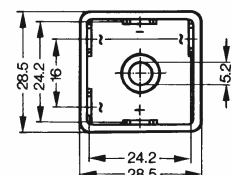
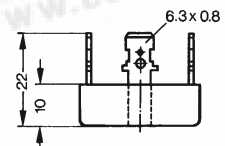
Applications

- 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 and power cycling
- Up to 10 dB lower EMI/RFI compared to standard rectifier

Dimensions in mm (1 mm = 0.0394")



Symbol	Test Conditions	Characteristic Values
I_R	$T_{VJ} = 25^\circ\text{C}$; $V_R = V_{RRM}$ $T_{VJ} = 125^\circ\text{C}$; $V_R = V_{RRM}$	≤ 0.3 mA ≤ 5.0 mA
V_F	$I_F = 55 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	≤ 1.85 V
V_{T0}	For power-loss calculations only	1.2 V
r_T	$T_{VJ} = T_{VJM}$	16 mΩ
t_{rr}	$T_{VJ} = 25^\circ\text{C}$; $I_F = 10 \text{ A}$; -di/dt = 10 A/μs, $V_R = 1/2 V_{RRM}$	≤ 1.5 μs
R_{thJC}	per diode; 120° el per module	9.3 K/W 1.55 K/W
R_{thJK}	per diode; 120° e per module	10.2 K/W 1.7 K/W
d_s	Creeping distance on surface	12.7 mm
d_A	Creepage distance in air	9.4 mm
a	Max. allowable acceleration	50 m/s ²

Data according to IEC 60747

© 2000 IXYS All rights reserved