

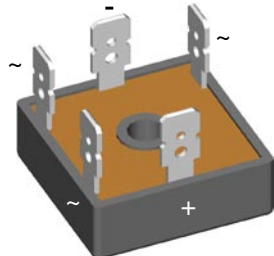
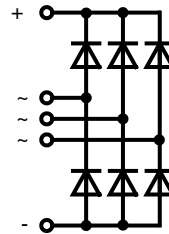
Three Phase Rectifier Bridge with Semi Fast Diodes

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

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

Preliminary data

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
1200	1200	VUO 18-12DT8
1400	1600	VUO 18-14DT8
1600	1800	VUO 18-16DT8



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Symbol	Conditions	Maximum Ratings	
I_{dAV}	$T_C = 85^\circ\text{C}$, module	14	A
I_{dAVM}	$T_C = 63^\circ\text{C}$, module	18	A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz)	300	A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	330	A
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz)	270	A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	300	A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz)	450	A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	460	A ² s
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz)	365	A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	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 ¼" fast-on terminals
- Isolation voltage 3000 V~
- Planar passivated chips
- Blocking voltage up to 1600 V
- Low forward voltage drop
- UL registered E 72873

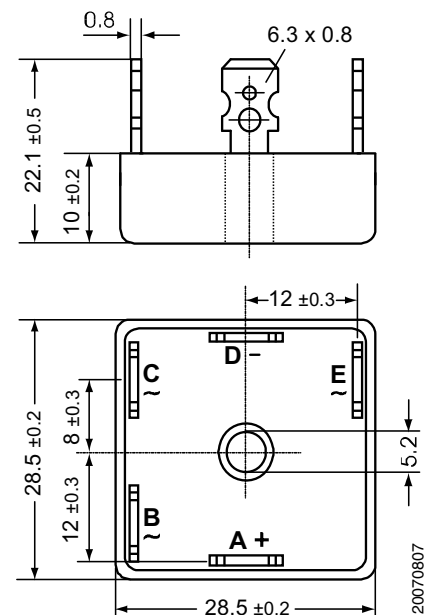
Applications

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

Dimensions in mm (1 mm = 0.0394")



Symbol	Conditions	Characteristic Values	
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = T_{VJM}$	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		16	m Ω
t_{rr}	$I_C = 10 \text{ A}$ $T_{VJ} = 25^\circ\text{C}$ $-di/dt = 10 \text{ A}/\mu\text{s}$, $V_R = \frac{1}{2} V_{RRM}$	1.5	μs
R_{thJC}	per diode; 120° el.	9.30	K/W
	per module	1.55	K/W
R_{thCH}	per diode; 120° el.	10.20	K/W
	per module	1.70	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 and refer to a single diode unless otherwise stated.

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

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