

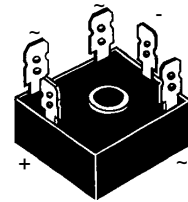
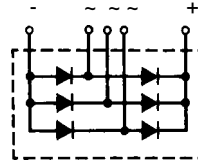
# Three Phase Rectifier Bridges with Semi Fast Diodes

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

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

## Preliminary Data

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



Symbol	Test Conditions	Maximum Ratings	Features
$I_{dAV}$	$T_C = 85^\circ\text{C}$ , module	14 A	<ul style="list-style-type: none"> <li>Package with 1/4" fast-on terminals</li> <li>Isolation voltage 3000 V~</li> <li>Planar passivated chips</li> <li>Blocking voltage up to 1600 V</li> <li>Low forward voltage drop</li> <li>UL registered E 72873</li> </ul>
$I_{dAVM}$	$T_C = 63^\circ\text{C}$ , module	18 A	
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ ; $V_R = 0$	t = 10 ms (50 Hz), sine	300 A
		t = 8.3 ms (60 Hz), sine	330 A
$I^2t$	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine	270 A
		t = 8.3 ms (60 Hz), sine	300 A
$I^2t$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine	450 A <sup>2</sup> s
		t = 8.3 ms (60 Hz), sine	460 A <sup>2</sup> s
$T_{VJ}$	$V_R = 0$	t = 10 ms (50 Hz), sine	365 A <sup>2</sup> s
		t = 8.3 ms (60 Hz), sine	380 A <sup>2</sup> s
$T_{VJM}$		-40...+150 °C	
$T_{stg}$		150 °C	
$V_{ISOL}$	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	t = 1 min	2500 V~
		t = 1 s	3000 V~
$M_d$	Mounting torque (M5) (10-32 UNF)	2 ± 10 % Nm 18 ± 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

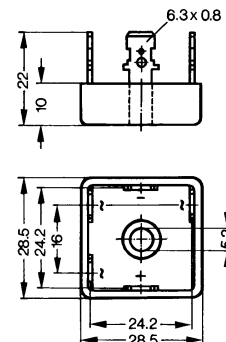
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

## 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**

Symbol	Test Conditions	Characteristic Values
$I_R$	$T_{VJ} = 25^\circ\text{C}$ ; $V_R = V_{RRM}$	≤ 0.3 mA
	$T_{VJ} = 125^\circ\text{C}$ ; $V_R = V_{RRM}$	≤ 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	9.3 K/W
	per module	1.55 K/W
$R_{thJK}$	per diode; 120° e	10.2 K/W
	per module	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 <sup>2</sup>

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



Data according to IEC 60747