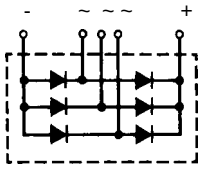
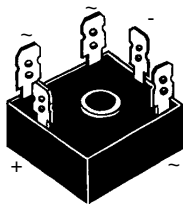
Three Phase Rectifier Bridges with Semi Fast Diodes

I_{dAVM} = 18 A
V_{RRM} = 1200-1600 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	
I_{dAV}	T_C = 85°C, module		14	A
I_{dAVM}	T_C = 63°C, module		18	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	300	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	330	A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	270	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	300	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	450	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	460	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	365	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	380	A^2s
T_{VJ}			-40...+150	°C
T_{VJM}			150	°C
T_{stg}			-40...+150	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min	2500	V~
	$I_{ISOL} \leq$ 1 mA	t = 1 s	3000	V~
M_d	Mounting torque	(M5)	2 ± 10 %	Nm
		(10-32 UNF)	18 ± 10 %	lb.in.
Weight	typ.		22	g

Symbol	Test Conditions	Characteristic Values	
I_R	T_{VJ} = 25°C; $V_R = V_{RRM}$	≤ 0.3	mA
	T_{VJ} = 125°C; $V_R = V_{RRM}$	≤ 5.0	mA
V_F	I_F = 55 A; T_{VJ} = 25°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°C; I_F = 10 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^2

Data according to IEC 60747

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

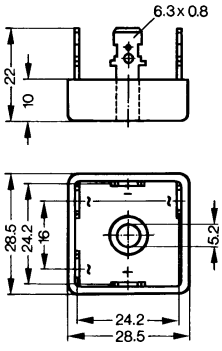
Applications

- 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")



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