

Three Phase Rectifier Bridge

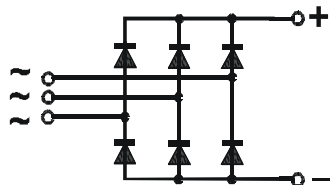
PSD 63

$$I_{dAV} = 75 \text{ A}$$

$$V_{RRM} = 800-1800 \text{ V}$$

Preliminary Data Sheet

V_{RSM} V_{DSM} (V)	V_{RRM} V_{DRM} (V)	Type
800	800	PSD 63/08
1200	1200	PSD 63/12
1400	1400	PSD 63/14
1600	1600	PSD 63/16
1800	1800	PSD 63/18



Symbol	Test Conditions	Maximum Ratings
I_{dAVM}	$T_C = 100^\circ\text{C}$, (per module)	75 A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine	1000 A
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	1100 A
	$T_{VJ} = T_{VJM}$ $t = 10 \text{ ms}$ (50 Hz), sine	900 A
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	990 A
$\int i^2 dt$	$T_{VJ} = 45^\circ\text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine	5000 A^2s
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	5020 A^2s
	$T_{VJ} = T_{VJM}$ $t = 10 \text{ ms}$ (50 Hz), sine	4050 A^2s
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	4050 A^2s
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)	5 Nm
	Terminal connection torque (M5)	5 Nm
Weight	typ.	160 g

Symbol	Test Conditions	Characteristic Value
I_R	$V_R = V_{RRM}$, $T_{VJ} = 25^\circ\text{C}$	$\leq 0.3 \text{ mA}$
	$V_R = V_{RRM}$, $T_{VJ} = T_{VJM}$	$\leq 5 \text{ mA}$
V_F	$I_F = 75 \text{ A}$, $T_{VJ} = 25^\circ\text{C}$	$\leq 1.3 \text{ V}$
V_{TO}	For power-loss calculations only	0.8 V
r_T		8 $\text{m}\Omega$
R_{thJC}	per diode; DC current	0.58 K/W
	per module	0.097 K/W
R_{thJK}	per diode; DC current	0.825 K/W
	per module	0.138 K/W
d_s	Creeping distance on surface	10.0 mm
d_A	Creeping distance in air	9.4 mm
a	Max. allowable acceleration	50 m/s^2

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

Features

- Package with screw terminals
- Isolation voltage 3000 V~
- Planar glass passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop
- UL registered E 148688

Applications

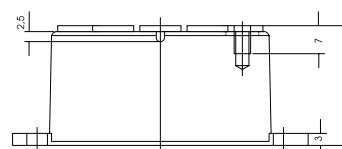
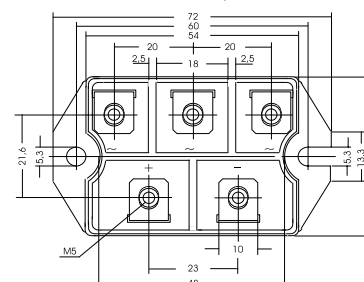
- Supplies for DC power equipment
- Input rectifier for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

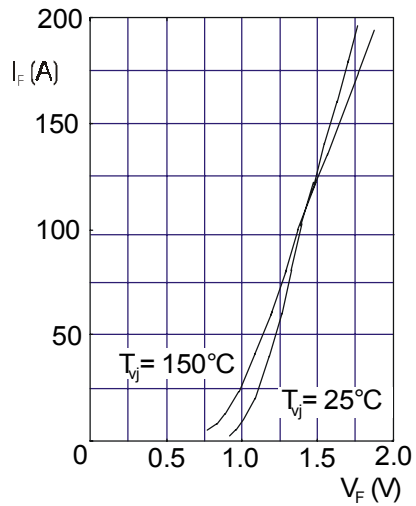
Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability

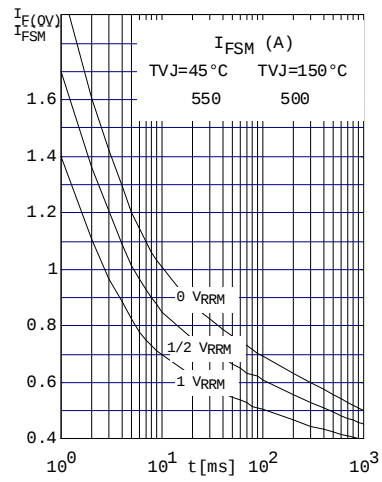
Package style and outline

Dimensions in mm (1mm = 0.0394")

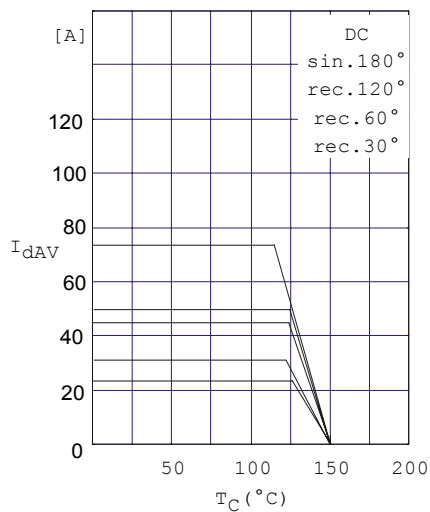




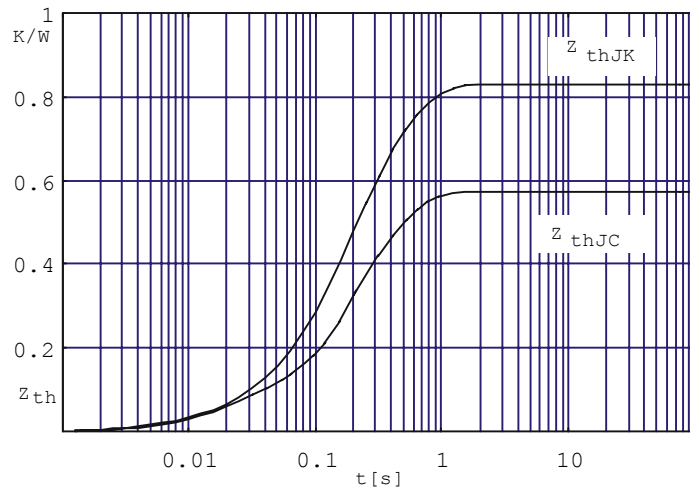
Forward current versus voltage drop per diode



Surge overload current per diode I_{FSM} : Crest value
 t : duration



Maximum forward current at case temperature



Transient thermal impedance per diode