

## Three Phase Rectifier Bridge

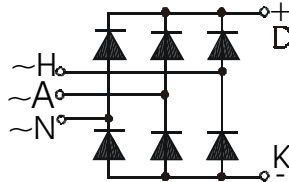
## PSD 86

$$I_{dAV} = 86 \text{ A}$$

$$V_{RRM} = 600-1600 \text{ V}$$

Preliminary Data Sheet

$V_{RSM}$ $V_{DSM}$ (V)	$V_{RRM}$ $V_{DRM}$ (V)	Type
700	600	PSD 86/06
900	800	PSD 86/08
1300	1200	PSD 86/12
1500	1400	PSD 86/14
1900	1600	PSD 86/16



Symbol	Test Conditions	Maximum Ratings
$I_{dAV}^*$	$T_C = 90^\circ\text{C}$ , (per module)	86 A
$I_{FSM}$	$T_{VJ} = 45^\circ\text{C}$ t = 10 ms (50 Hz), sine	530 A
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	570 A
	$T_{VJ} = T_{VJM}$ t = 10 ms (50 Hz), sine	480 A
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	520 A
$\int i^2 dt$	$T_{VJ} = 45^\circ\text{C}$ t = 10 ms (50 Hz), sine	1400 A <sup>2</sup> s
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	1360 A <sup>2</sup> s
	$T_{VJ} = T_{VJM}$ t = 10 ms (50 Hz), sine	1150 A <sup>2</sup> s
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	1140 A <sup>2</sup> s
$T_{VJ}$		-40... + 150 °C
$T_{VJM}$		150 °C
$T_{stg}$		-40... + 125 °C
$V_{ISOL}$	50/60 Hz, RMS t = 1 min	2500 V~
	$I_{ISOL} \leq 1 \text{ mA}$ t = 1 s	3000 V~
$M_d$	Mounting torque (M4)	1.5 - 2.0 Nm
		14 - 18 lb.in.
Weight	typ.	18 g

Symbol	Test Conditions	Characteristic Value
$I_R$	$V_R = V_{RRM}$ , $T_{VJ} = T_{VJM}$	$\leq 3$ mA
	$V_R = V_{RRM}$ , $T_{VJ} = 25^\circ\text{C}$	$\leq 0.5$ mA
$V_F$	$I_F = 80 \text{ A}$ , $T_{VJ} = 25^\circ\text{C}$	$\leq 1.50$ A
$V_{TO}$	For power-loss calculations only	0.8 V
$r_T$		7.5 mΩ
$R_{thJC}$	per Diode; DC	1.2 K/W
	per module	0.2 K/W
$R_{thJK}$	per Diode; DC	1.5 K/W
	per module	0.25 K/W
$d_s$	Creeping distance on surface	11.2 mm
$d_A$	Creeping distance in air	9.7 mm
$a$	Max. allowable acceleration	50 m/s <sup>2</sup>

Data according to IEC 60747 refer to a single diode unless otherwise stated  
\*- for resistive load at bridge output

### Features

- Package with DCB ceramic base plate
- Isolation voltage 3000 V~
- Planar glass passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering
- 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
- High power density
- Small and light weight

### Package style and outline

Dimensions in mm (1mm = 0.0394")

