

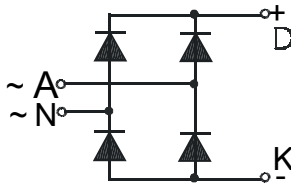
Single Phase Rectifier Bridge

PSB 53

I_{dAV} = 54 A
 V_{RRM} = 600-1600 V

Preliminary Data Sheet

V_{RSM} V_{DSM} (V)	V_{RRM} V_{DRM} (V)	Type
700	600	PSB 53/06
900	800	PSB 53/08
1300	1200	PSB 53/12
1500	1400	PSB 53/14
1700	1600	PSB 53/16



Symbol	Test Conditions	Maximum Ratings
I_{dAV}	$T_C = 100\text{ }^{\circ}\text{C}$, (per module)	54 A
I_{FSM}	$T_{VJ} = 45\text{ }^{\circ}\text{C}$ $t = 10\text{ ms}$ (50 Hz), sine	300 A
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	320 A
	$T_{VJ} = T_{VJM}$ $t = 10\text{ ms}$ (50 Hz), sine	260 A
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	280 A
$\int i^2 dt$	$T_{VJ} = 45\text{ }^{\circ}\text{C}$ $t = 10\text{ ms}$ (50 Hz), sine	450 A ² s
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	425 A ² s
	$T_{VJ} = T_{VJM}$ $t = 10\text{ ms}$ (50 Hz), sine	340 A ² s
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	325 A ² s
T_{VJ}		-40... + 150 $^{\circ}\text{C}$
T_{VJM}		150 $^{\circ}\text{C}$
T_{stg}		-40... + 125 $^{\circ}\text{C}$
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 (M4)	1.5 - 1.8 Nm
		14 - 16 lb.in.
Weight	typ.	10 g

Symbol	Test Conditions	Characteristic Value
I_R	$V_R = V_{RRM}$, $T_{VJ} = T_{VJM}$	$\leq 3.0\text{ mA}$
	$V_R = V_{RRM}$, $T_{VJ} = 25\text{ }^{\circ}\text{C}$	$\leq 0.5\text{ mA}$
V_F	$I_F = 55\text{ A}$, $T_{VJ} = 25\text{ }^{\circ}\text{C}$	$\leq 1.46\text{ V}$
V_{TO}	For power-loss calculations only	0.8 V
r_T		13 m Ω
R_{thJC}	per diode; DC	1.1 K/W
	per module	0.28 K/W
R_{thJK}	per diode; DC	1.6 K/W
	per module	0.4 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 ²

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")

