

Single Phase Full Controlled Rectifier Bridge

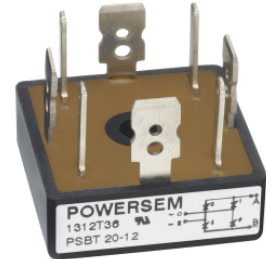
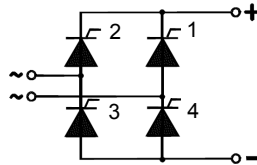
PSBT 20

PRELIMINARY DATA SHEET

$I_{dAVM} = 20 \text{ A}$

$V_{RRM} = 600 \text{ V to } 1200 \text{ V}$

V_{RSM} V	V_{RRM} V	Type Number
300	200	PSBT 20/02
500	400	PSBT 20/04
700	600	PSBT 20/06
900	800	PSBT 20/08
1100	1000	PSBT 20/10
1300	1200	PSBT 20/12



Symbol	Test Conditions	Maximum Ratings
I_{dAVM}	$T_c = 62^\circ\text{C}$ per module	20 A
I_{TAVM}	$T_c = 62^\circ\text{C}$, $V_R = 0 \text{ V}$ (per thyristor) $t = 10 \text{ ms}$	10 A
I_{TSM}	$T_{vj} = T_{vjM}$, $V_R = 0 \text{ V}$ $t = 10 \text{ ms}$	170 A
$\int i^2 dt$	$T_{vj} = T_{vjM}$, $V_R = 0 \text{ V}$ $t = 10 \text{ ms}$	140 A ² s
$(dv/dt)_{cr}$	$T_{vj} = T_{vjM}$, $V_D = 2/3 V_{RDM}$ $t = 10 \text{ ms}$	500 V/ μs
V_{TM}		1.4 V
P_{GM}	$T_{vj} = T_{vjM}$, $t_P = 30 \mu\text{s}$	8 W
I_{GM}		1.5 A
T_{vj}		-40 ... +125 °C
T_{vjM}		125 °C
T_{stg}		-40 ... +125 °C
V_{isol}	50/60 Hz, RMS $I_{isol} \leq 1 \text{ mA}$ $t = 1 \text{ min}$	2500 V~
	$t = 1 \text{ s}$	3000 V~
M_d	Mounting torque (M5)	2±10% Nm
Weight	typ.	22 g

Features

- ¼" nickel-plated FASTON terminals
- Isolation voltage 3000 V~
- Mesa glass-passivated chips
- Blocking voltage up to 1200 V
- Low forward voltage drop
- UL registered E 148688

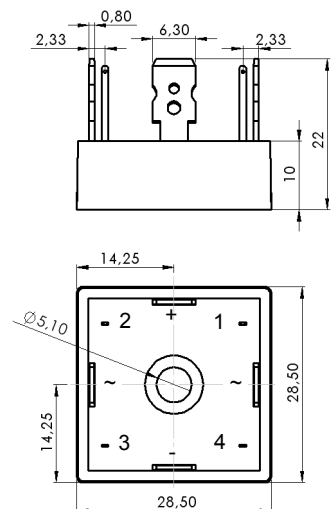
Applications

- Supplies for DC power equipment
- DC motor control
- Light and temperature control
- Soft start of AC motors

Advantages

- Easy to mount with one screw
- Space and weight savings
- Improved temperature and power cycling capability
- High power density
- Small and lightweight

Package style and outline



Dimensions in mm (1mm = 0.0394")

Symbol	Test Conditions	Characteristic Value
I_H	$V_{AK} = 6 \text{ V}$, $I_T = 1 \text{ A}$	≤ 150 mA
I_L	$V_{AK} = 6 \text{ V}$, $T_{vj} = 25^\circ\text{C}$	≤ 220 mA
V_{GT}	$V_{AK} = 6 \text{ V}$	1.5 V
I_{GT}		60 mA
I_{DRM} , I_{RRM}	$V_R = V_{DRM}$	0.5 mA
$R_{th(j-c)}$	per diode; DC current	8.2 K/W
	per module	2.05 K/W