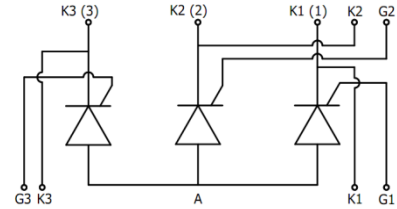


Non-isolated Thyristor Module, 130A

Features

- Low voltage three-phase
- High surge current capability
- Easy construction
- Non-isolated
- Mounting base as common anode



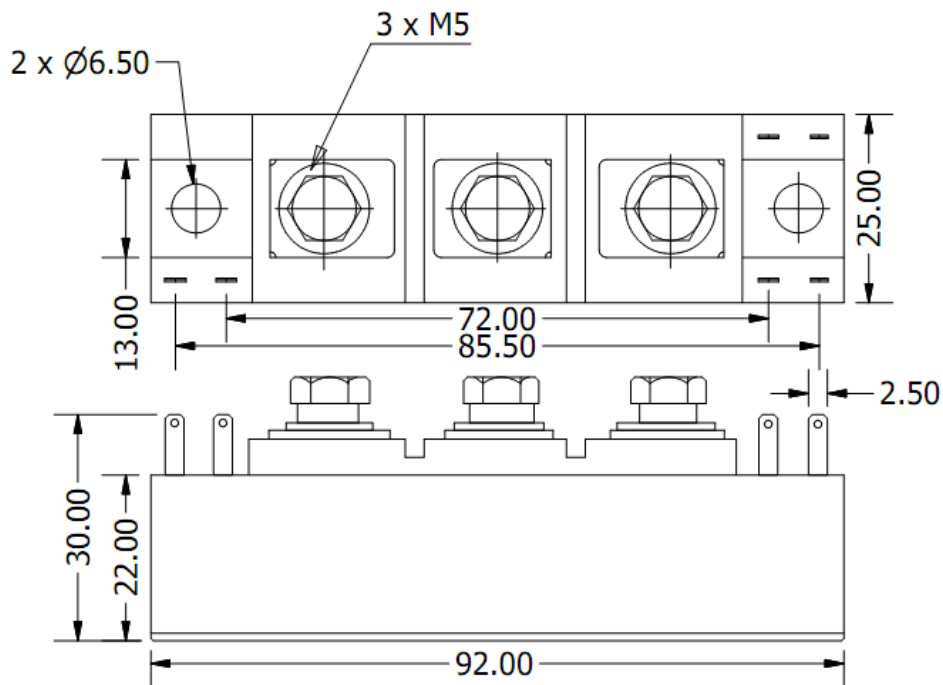
Voltage Ratings ($T_C = 25^{\circ}\text{C}$ unless otherwise specified)				
Parameter	Symbol	PWB130A30	PWB130A40	Units
Maximum repetitive peak reverse voltage	V_{RRM}	300	400	V
Maximum non-repetitive peak reverse voltage	V_{RSM}	360	480	V
Maximum repetitive peak off-state voltage	V_{DRM}	300	400	V

Electrical Characteristics ($T_C = 25^{\circ}\text{C}$ unless otherwise specified)				
Parameter	Conditions	Symbol	Values	Units
Average on-state current	Single phase, half-wave, 180° conduction @ $T_C = 112^{\circ}\text{C}$	$I_{T(AV)}$	130	A
R.M.S. on-state current		$I_{T(RMS)}$	204	A
On-state surge current	half cycle, 50Hz/60Hz, peak value, non-repetitive	I_{TSM}	3500	A
I^2t required for fusing		I^2t	61250	A^2S
Peak gate power dissipation		P_{GM}	10	W
Average gate power dissipation		$P_{GM(AV)}$	1	W
Peak gate current		I_{GM}	3	A
Peak gate voltage (forward)		V_{FGM}	10	V
Peak gate voltage (reverse)		V_{RGM}	5	V
Critical rate of rise of on-state current	$I_G = 200\text{mA}$, $V_D = \frac{1}{2} V_{DRM}$, $di_G/dt = 1 \text{ A}/\mu\text{s}$, $T_J = 25^{\circ}\text{C}$	di/dt	50	$\text{A}/\mu\text{s}$
Critical rate of rise of off-state voltage	$T_J = 150^{\circ}\text{C}$, $V_D = \frac{2}{3} V_{DRM}$, exponential wave	dv/dt	50	$\text{V}/\mu\text{s}$
Holding current	$T_J = 25^{\circ}\text{C}$	I_H	70	mA
Peak on-state voltage	$T_J = 25^{\circ}\text{C}$	V_{TM}	1.20	V
Repetitive Peak Reverse Current	$T_J = 150^{\circ}\text{C}$, single phase, half wave	I_{RRM}	30	mA
Gate Trigger Current	$T_J = 25^{\circ}\text{C}$, $I_T = 1\text{A}$, $V_D = 6\text{V}$	I_{GT}	150	mA
Gate Trigger Voltage	$T_J = 25^{\circ}\text{C}$, $I_T = 1\text{A}$, $V_D = 6\text{V}$	V_{GT}	2	V

Thermal & Mechanical Specifications ($T_C = 25^{\circ}\text{C}$ unless otherwise specified)			
Parameter	Symbol	Values	Units
Operating junction temperature range	T_J	-40 to +150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-40 to +125	$^{\circ}\text{C}$
Thermal resistance, junction to case	$R_{th(JC)}$	0.20	$^{\circ}\text{C}/\text{W}$

Package Outline

(All dimensions in mm)



Ordering Table

PWB	130	A	40
1	2	3	4

- 1 – Half-bridge Thyristor Module
- 2 - Current Rating = $I_{F(AV)}$
- 3 – Package type
- 4 – Voltage = V_{RRM} (Voltage Ratings Table)