



Ruttonsha International Rectifier Ltd.

THYRISTORS MODULE (NON ISOLATED TYPE)

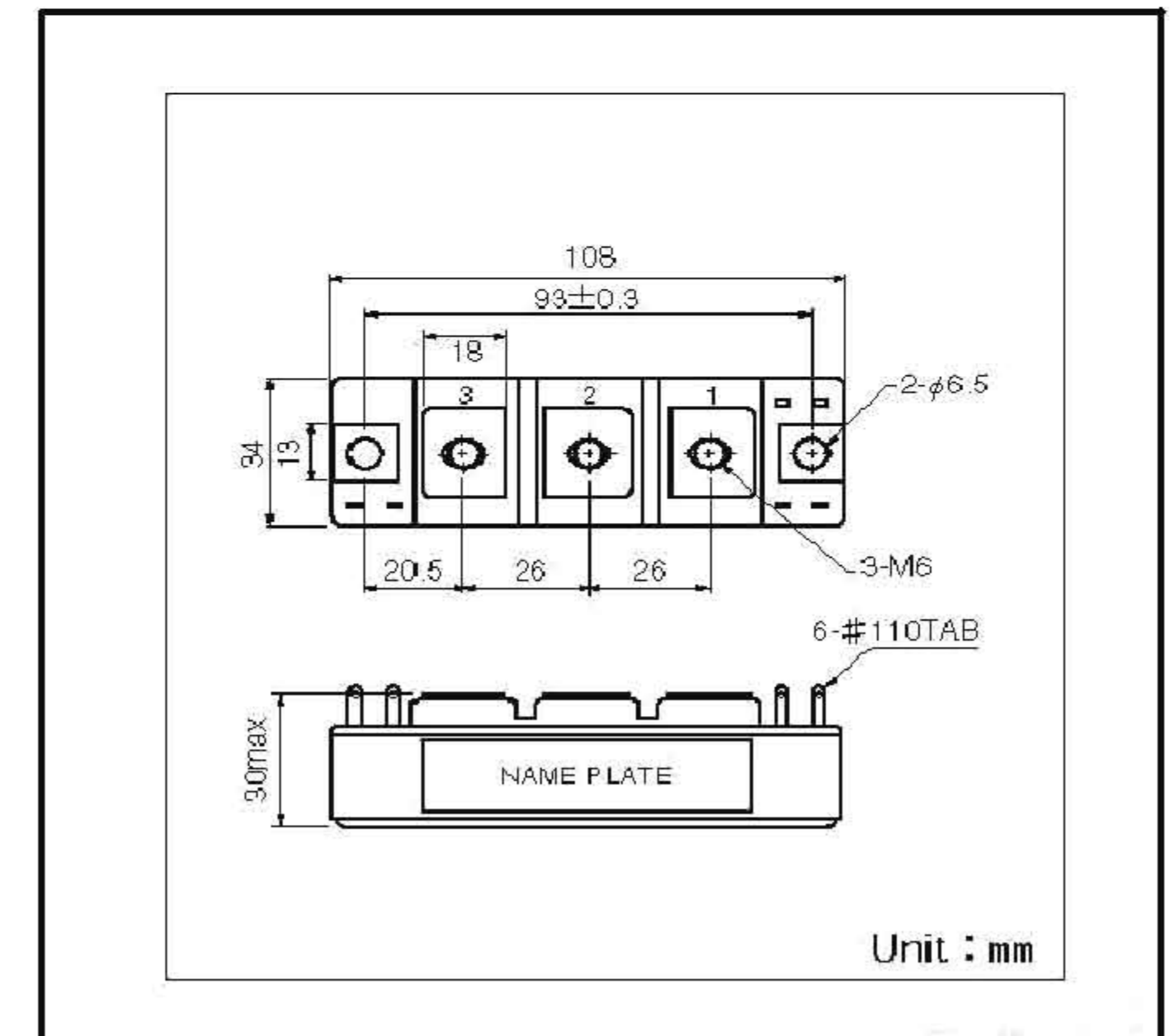
Type : RHTT 200 A 40

Features

- $I_{T(AV)}$ 200A(each device)
- High Surge Current 5400 A
- Easy Construction
- Non-isolated. Mounting base as common Anode terminal

Applications

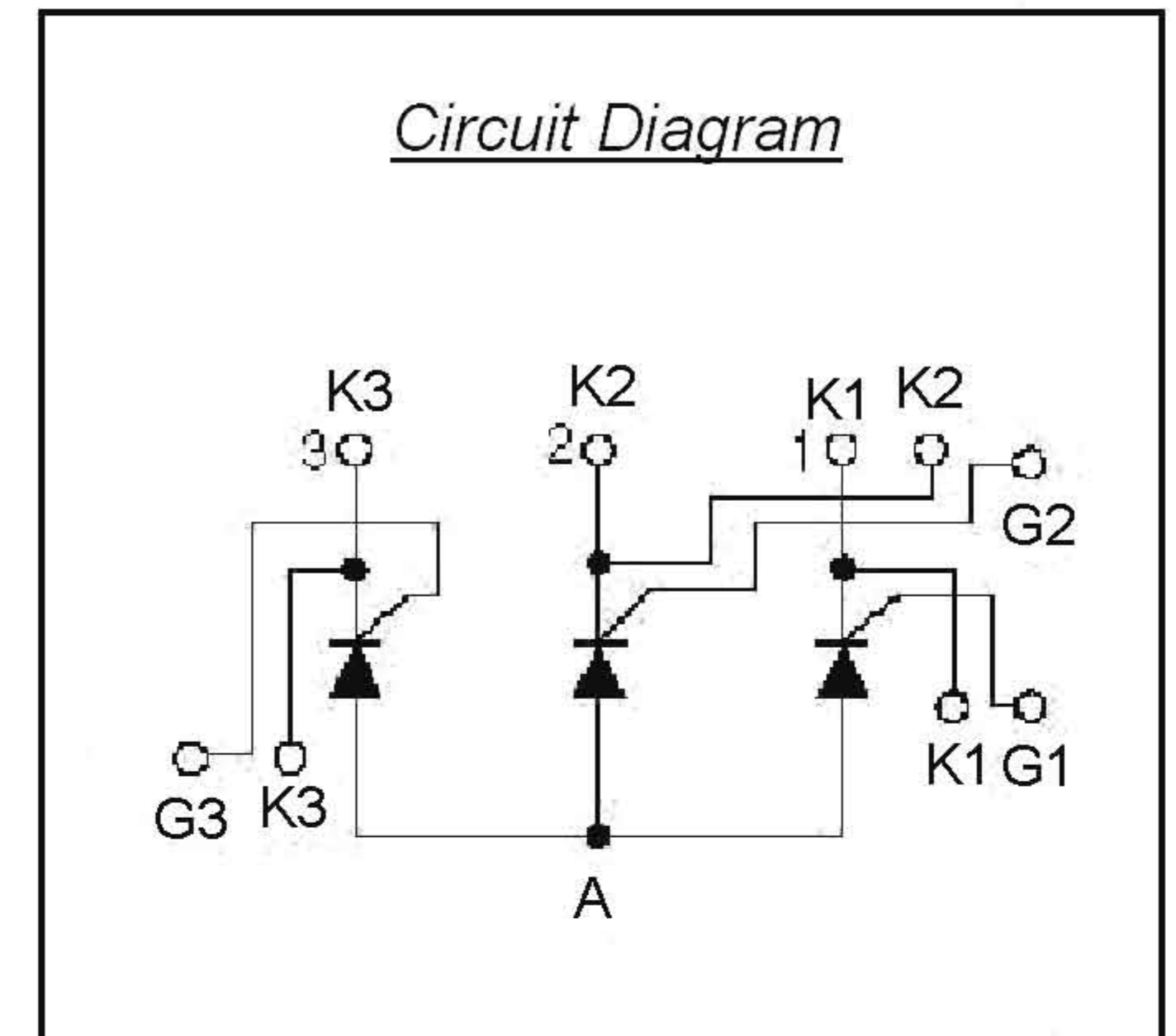
- Welding power Supply
- Various DC power Supply



Major Ratings and Characteristics :-

PARAMETERS	RHTT 200A 40	UNITS
$I_{T(AV)}$ or $I_{F(AV)}$	200	A
@ T_C	121	°C
$I_{T(RMS)}$	314	A
@ T_C	121	°C
I_{TSM} @50Hz	5400	A
I^2t @50Hz	1499400	A ² s
V_{DRM} / V_{RRM}	400	V
T_J	- 30 to 150	°C
T_{STG}	- 30 to 125	°C

Circuit Diagram



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ELECTRICAL SPECIFICATIONS

Type : RHTT 200 A

Voltage Ratings

Type number	Voltage Code	V_{DRM}/V_{RRM} , max repetitive peak and off-state voltage V	V_{RSM} , maximum non-repetitive peak voltage V	I_{DRM}/I_{RRM} max. @ $T_C = 125^\circ\text{C}$ mA
RHTT 200A 40	04	400	480	60

On - state Conduction

Parameter	RHTT 200A40	Units	Conditions
$I_{T(AV)}$ Max. average on-state current @ case temperature	200	A	Single phase, half wave, 180° conduction
	121	$^\circ\text{C}$	
$I_{T(RMS)}$ Max RMS on-state current	314	A	Single phase, half wave, 180° conduction, $T_C = 121^\circ\text{C}$
I_{TSM} or I_{FSM} Max. peak, half-cycle non-repetitive surge current	5400	A	$t = 10\text{ms}$ $T_J = 25^\circ\text{C}$ No voltage reapplied
I^2t Maximum I^2t for fusing	1499400	A^2s	$t = 10\text{ms}$ $T_J = 25^\circ\text{C}$ No voltage reapplied
V_{TM} Max peak on state voltage	1.2	V	630 A_{Peak} $T_J = 25^\circ\text{C}$ 180° conduction
di/dt Max. non-repetitive rate of rise of turned on current	50	$\text{A}/\mu\text{s}$	$I_G = 200\text{mA}$, $T_J = 25^\circ\text{C}$, $V_D = \frac{1}{2}V_{DRM}$, $dI_G/dt = 1\text{A}/\mu\text{s}$
I_H Maximum holding current typ.	70	mA	$T_J = 25^\circ\text{C}$, anode supply = 6V, resistive load, gate open circuit

BLOCKING

I_{RRM} or I_{DRM} Max. peak reverse and off-state leakage current at V_{RRM} , V_{DRM}	60	mA	$T_C = 125^\circ\text{C}$, gate open circuit
dv/dt Max. critical rate of rise of off-state Voltage	200	$\text{V}/\mu\text{s}$	$T_J = 125^\circ\text{C}$ linear to $0.67V_{DRM}$, gate open circuit

THERMAL AND MECHANICAL SPECIFICATIONS

T_J Junction operating temperature range	- 40 to 150	$^\circ\text{C}$	
T_{stg} Storage temp. range	- 40 to 125	$^\circ\text{C}$	
R_{thJC} Max. internal thermal resistance, junction to case	0.12	$^\circ\text{C}/\text{W}$	$\frac{1}{3}$ module
T Mounting torque $\pm 10\%$ Module to heatsink Busbar to module	4.7	Nm	A mounting compound is recommended and the torque should be rechecked after a period of 3 hours to allow for the spread of the compound.
	4.7	Nm	
Wt Approximate weight	280	g	

ELECTRICAL SPECIFICATION

TRIGGERING

V_{GT} Max. gate voltage required to trigger	2.0	V	$T_J = 25^\circ\text{C}$, anode supply 6 V resistive load
I_{GT} Max. gate current required to trigger	150	mA	
P_{GM} Max. peak gate power	10	W	
$P_{G(AV)}$ Max. average gate power	1.0	W	
I_{GM} Max. peak gate current	3.0	A	
$-V_{GM}$ Max. peak negative gate voltage	5.0	V	

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