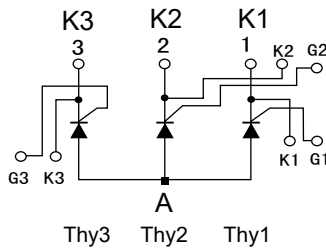
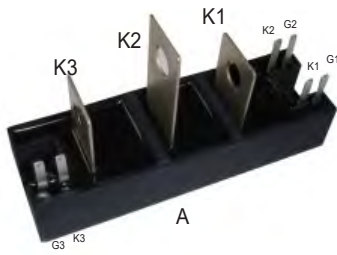
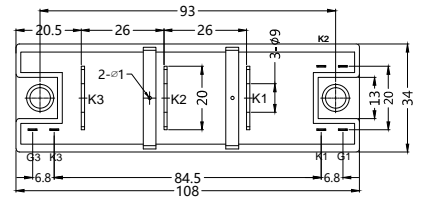
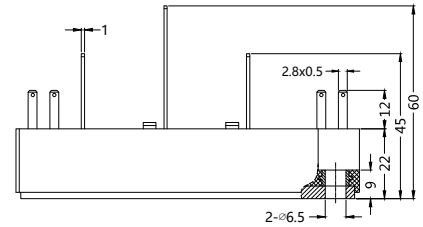


# 3TA151GKXXNB

## Three Phase Thyristor Module (Half Bridge)



Dimensions in mm (1mm = 0.0394")



Type	V <sub>RSM</sub> V	V <sub>RSM</sub> V
3TA151GK03NB	400	300
3TA151GK04NB	500	400
3TA151GK06NB	700	600



Symbol	Test Conditions	Maximum Ratings	Unit
I <sub>T(AV)</sub> I <sub>T(RMS)</sub>	Single phase, half wave, 180° conduction, T <sub>c</sub> =121°C	150 230	A
I <sub>TSM</sub>	1/2cycle, 50Hz/60Hz, peak value, non-repetitive	3000/3400	A
I <sup>2</sup> t		38000	A <sup>2</sup> s
P <sub>GM</sub> P <sub>G(AV)</sub>		5 0.5	W
I <sub>FGM</sub>		2	A
V <sub>FGM</sub> V <sub>RGM</sub>		10 5	V
di/dt	I <sub>G</sub> =200mA, T <sub>j</sub> =25°C, V <sub>D</sub> =1/2V <sub>DRM</sub> , di <sub>G</sub> /dt=1A/us	100	A/us
T <sub>vj</sub> T <sub>vJM</sub> T <sub>stg</sub>		-40...+125 125 -40...+125	°C
M <sub>s</sub> M <sub>t</sub>	to heatsink M6 to terminals M8	1.96 ~ 2.94 2.50 ~ 5.00	Nm
Weight		200	g

**Sirectifier**<sup>®</sup>

# 3TA151GKXXNB

## Three Phase Thyristor Module (Half Bridge)

Symbol	Test Conditions	min.	typ.	max.	Unit
<b>I<sub>DRM</sub></b> <b>I<sub>RRM</sub></b>	at V <sub>DRM</sub> , single phase, half wave, T <sub>j</sub> =125°C			40 40	mA
<b>V<sub>TM</sub></b>	On-State Current 450A, T <sub>j</sub> =25°C Inst. measurement			1.20	V
<b>I<sub>GT</sub></b>	T <sub>j</sub> =25°C, I <sub>T</sub> =1A, V <sub>D</sub> =6V			150	mA
<b>V<sub>GD</sub></b>	T <sub>j</sub> =125°C, V <sub>D</sub> =1/2V <sub>DRM</sub>			0.25	V
<b>t<sub>gt</sub></b>	I <sub>T</sub> =200A, I <sub>G</sub> =200mA, T <sub>j</sub> =25°C, V <sub>D</sub> =1/2V <sub>DRM</sub> , dI <sub>G</sub> /dt=1A/us			10	us
<b>dv/dt</b>	T <sub>j</sub> =125°C, V <sub>D</sub> =2/3V <sub>DRM</sub> , Exponential wave			200	V/us
<b>I<sub>H</sub></b>	T <sub>j</sub> =25°C			70	mA
<b>R<sub>thJC</sub></b>	Junction to case (1/3 Module)			0.15	°C/W

### FEATURES

- \* International standard package
- \* Copper base plate
- \* Glass passivated chips
- \* RoHS compliant

### APPLICATIONS

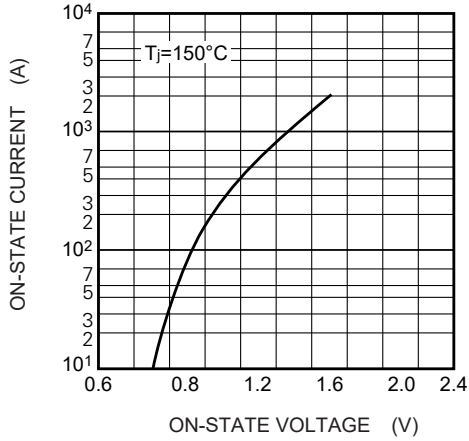
- \* Welding Machine Power Supply
- \* DC Power Supply

### ADVANTAGES

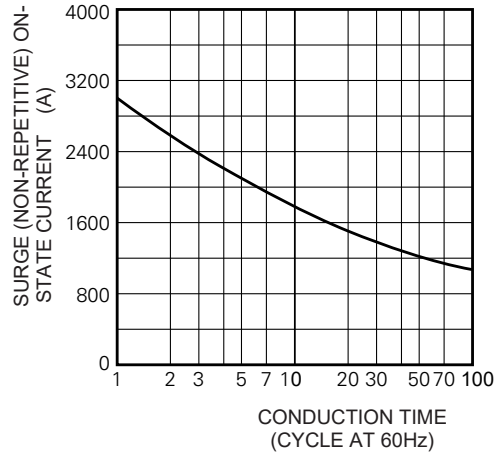
- \* Space and weight savings
- \* Simple mounting with two screws
- \* Improved temperature and power cycling
- \* Reduced protection circuits

# 3TA151GKXXNB

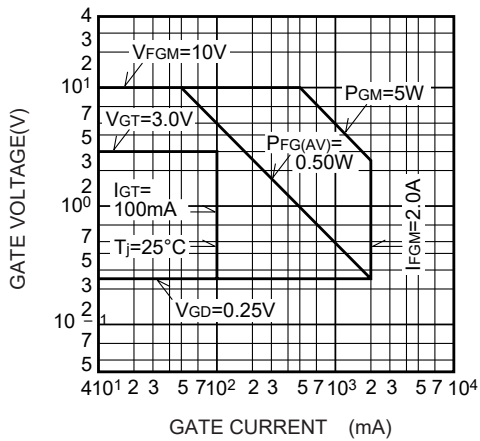
## Three Phase Thyristor Module (Half Bridge)



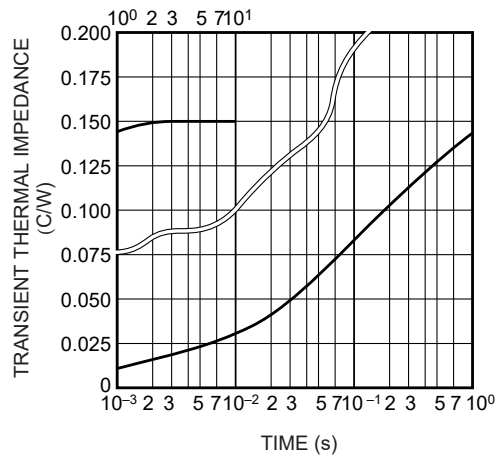
MAXIMUM ON-STATE CHARACTERISTIC



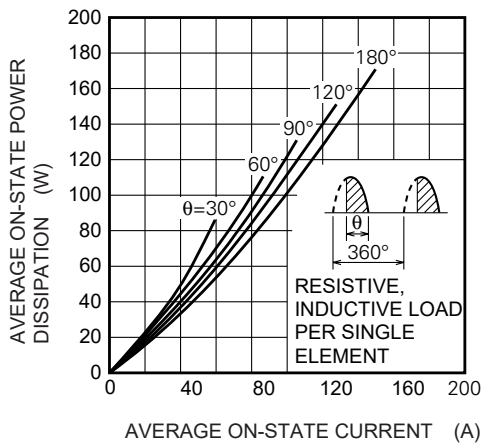
RATED SURGE (NON-REPETITIVE) ON-STATE CURRENT



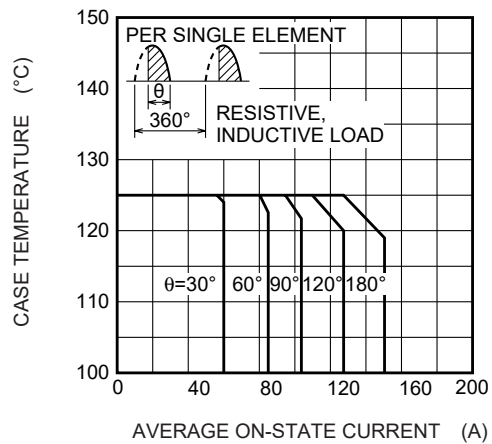
GATE CHARACTERISTICS



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM AVERAGE ON-STAGE POWER DISSIPATION (SINGLE PHASE HALF WAVE)



LIMITING VALUE OF THE AVERAGE ON-STATE CURRENT (SINGLE PHASE HALF WAVE)