POWER BLOCK
Thyristor / Diode Module
GDTT/TD140

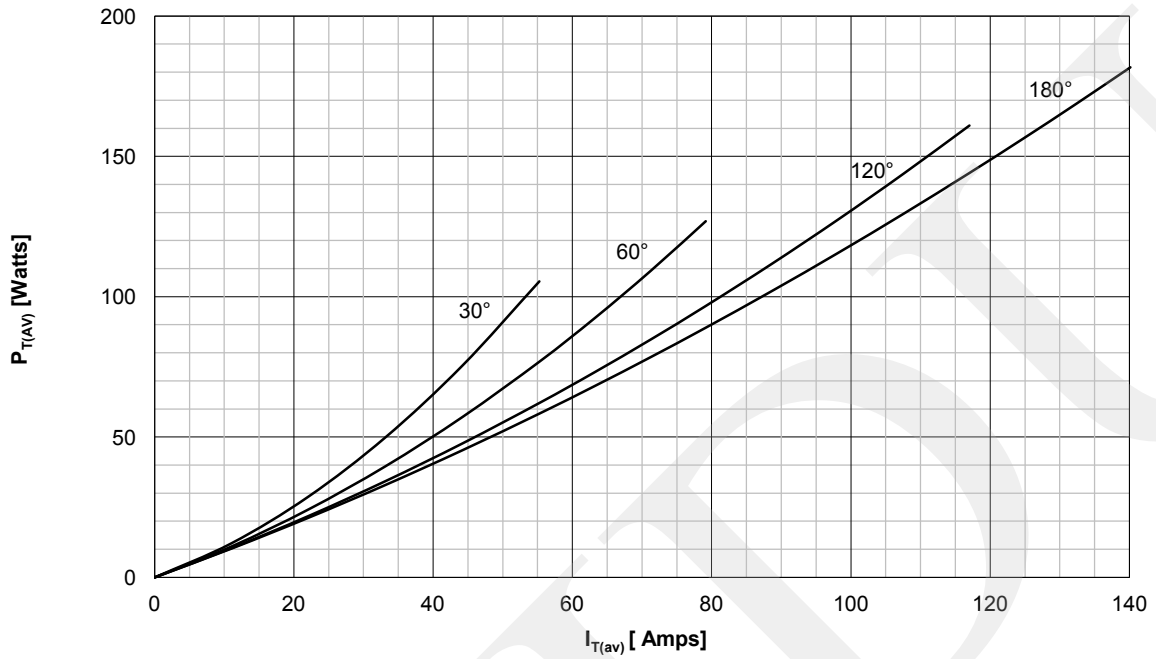
Features
- Full blocking capability over wide temperature range
- Electrically insulated base plate
- Pressure contacts technology for high reliability
- Highest robustness and reliability

Key Parameters
V_{DRM} /V_{RRM} = 1800V
$I_{T(AV)}$ = 140A
I_{TSM} = 4800A
$V_{T(TO)}$ = 0.90V
r_T = 1.15mΩ

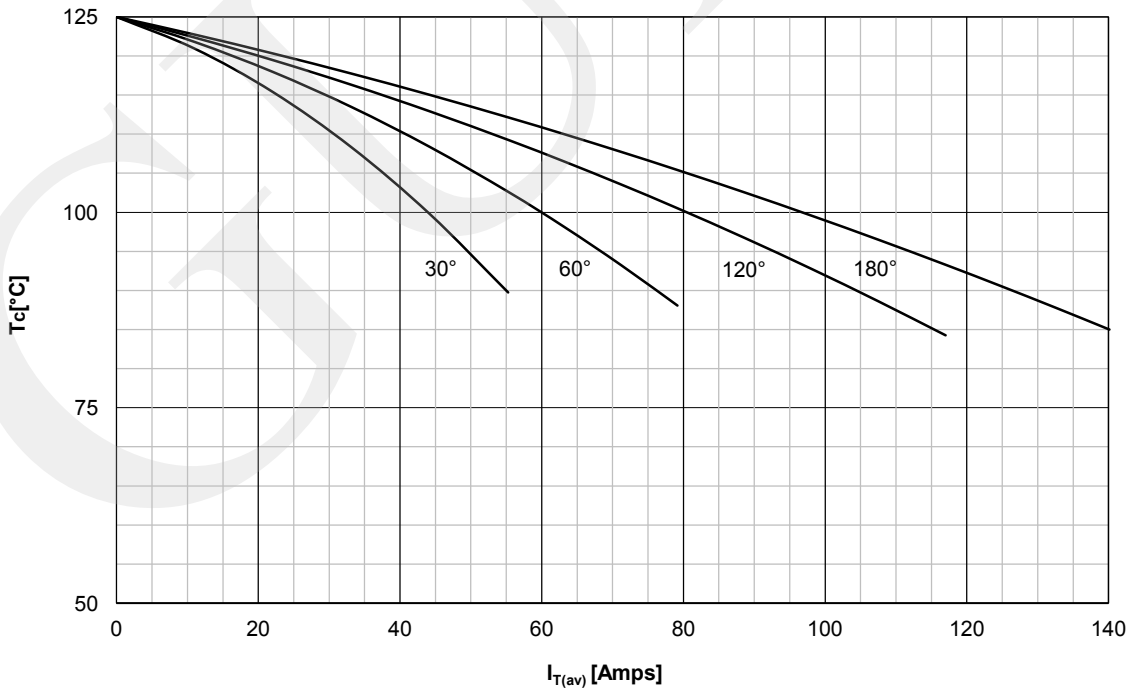
Applications
- Power Supplies
- DC motor control
- Controlled Rectifiers

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		125	800 - 1800	V
V_{DRM}	Repetitive peak off-state voltage		125	800 - 1800	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	125	40	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	40	mA
CONDUCTING					
$I_{T(AV)}$	Mean on-state current	180° sin ,50 Hz, T_{CASE}=85°C		140	A
I_{RMS}	RMS on-state current			220	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	4800	A
			125	4400	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	115×10^3	A^2s
			125	97×10^3	A^2s
V_T	On-state voltage	On-state current = 450A	25	1.47	V
$V_{T(TO)}$	Threshold voltage		125	0.90	V
r_T	On-state slope resistance		125	1.15	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current		125	150	A/µs
dv/dt	Critical rate of rise of off-state voltage	V_{DR} = 67%V_{DRM}	125	1000	V/µs
GATE					
I_{gt}	Gate trigger current	V_D=5V	25	150	mA
I_H	Holding current	V_D=5V, gate open circuit	25	200	mA
I_L	Latching current	V_D=5V	25	800	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, 180°sine	Junction to case, per arm per module		0.22 0.11	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per arm per module		0.06 0.03	°C/W
T_j	Max. junction temperature			125	°C
T_{stg}	Storage temperature			-40 125	°C
V_{ISOL}	Insulation test voltage,RMS	F=50Hz, 1min		2.5	KV
M1	Mounting torque			6 ± 15%	Nm
M2	Terminal connection torque			6 ± 15%	Nm
	Weight			300	g

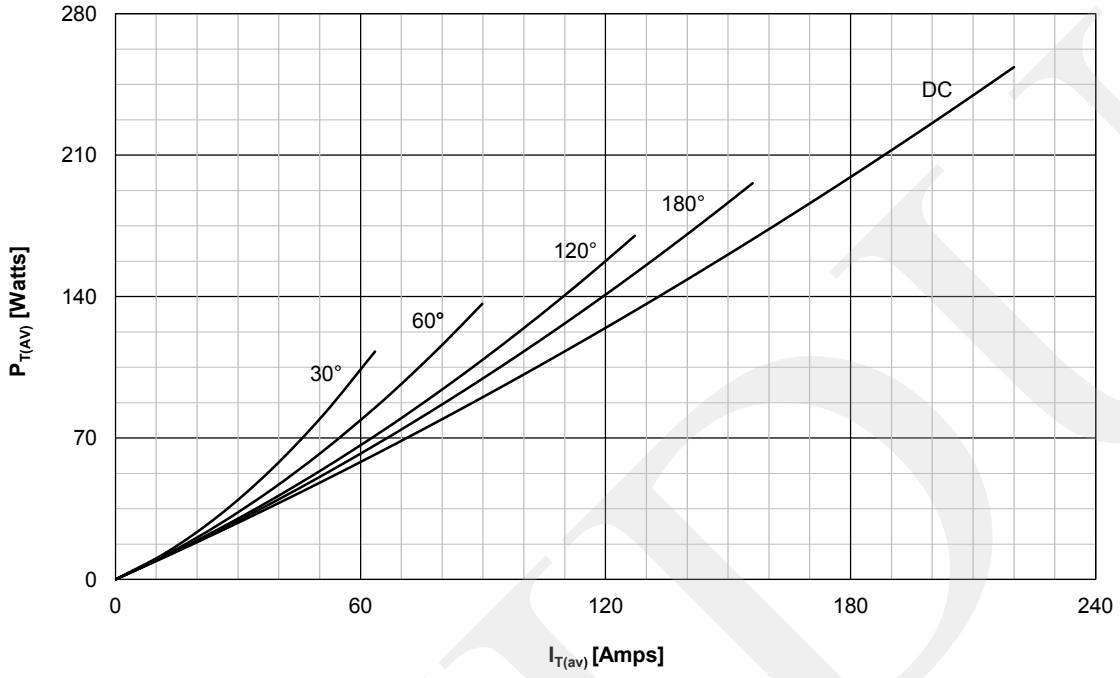
DISSIPATION CHARACTERISTICS PER ARM
SINE WAVE



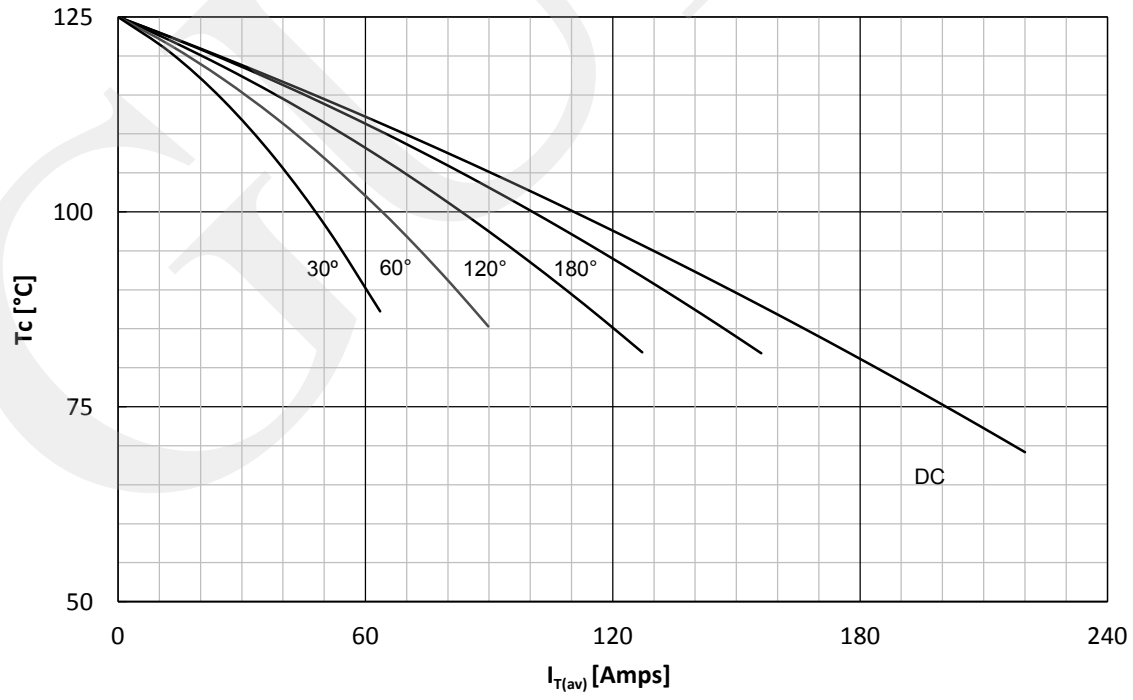
ON STATE CURRENT DERATING CURVE PER ARM
SINE WAVE

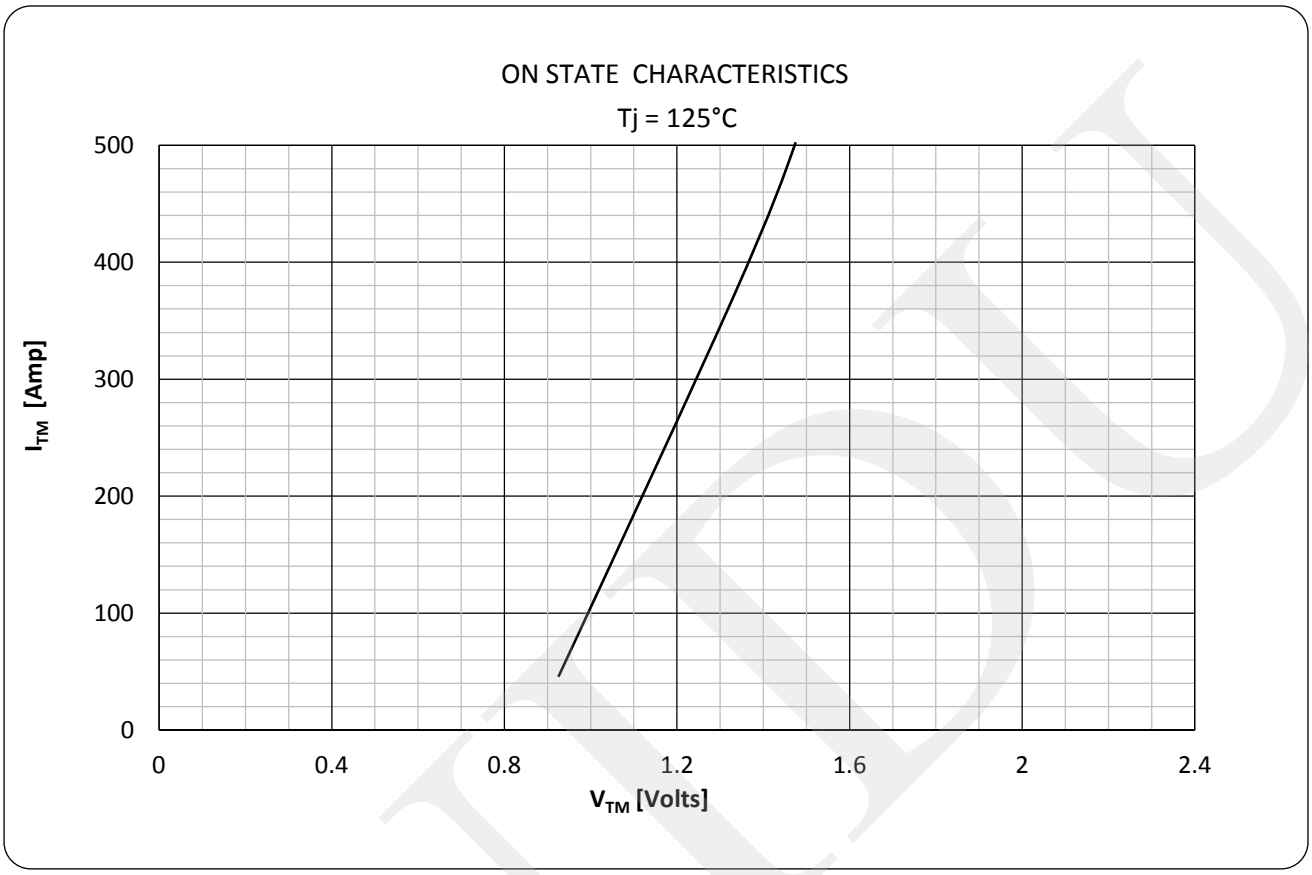


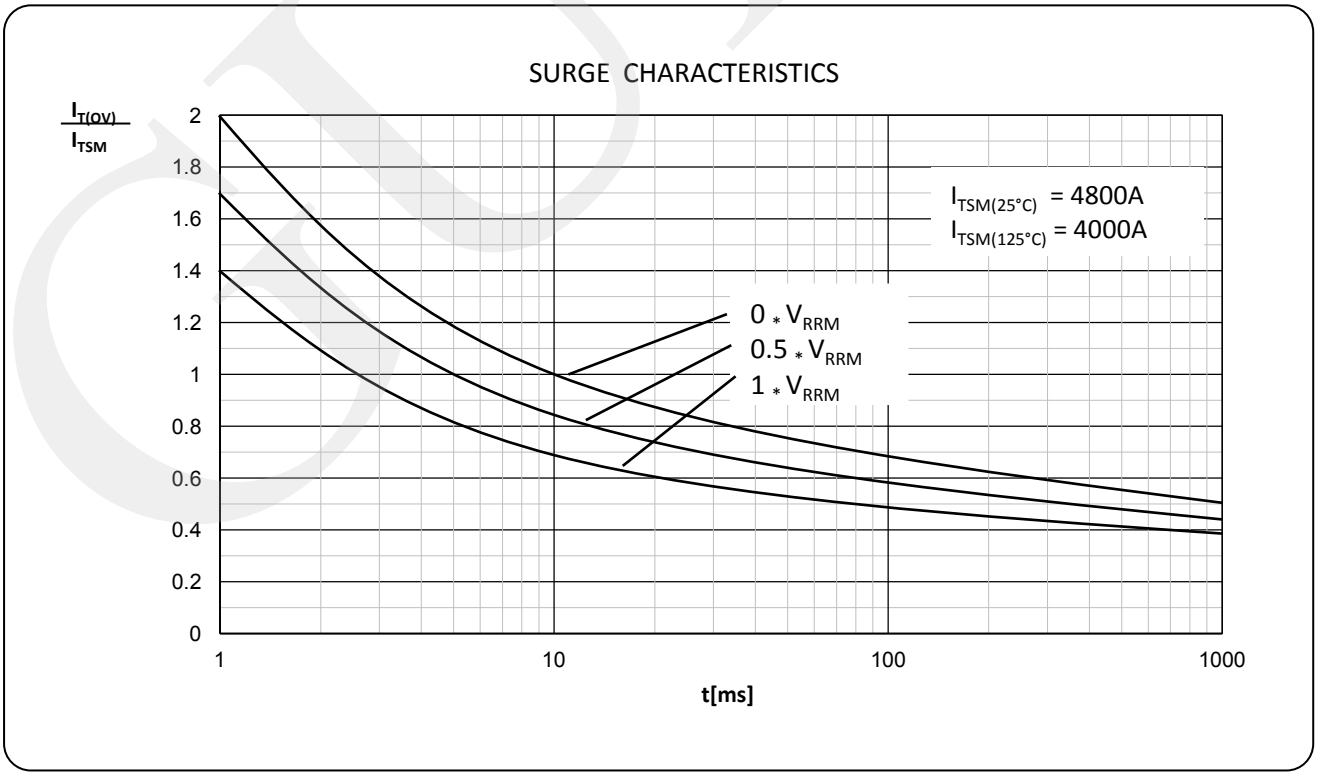
DISSIPATION CHARACTERISTICS PER ARM
SQUARE WAVE

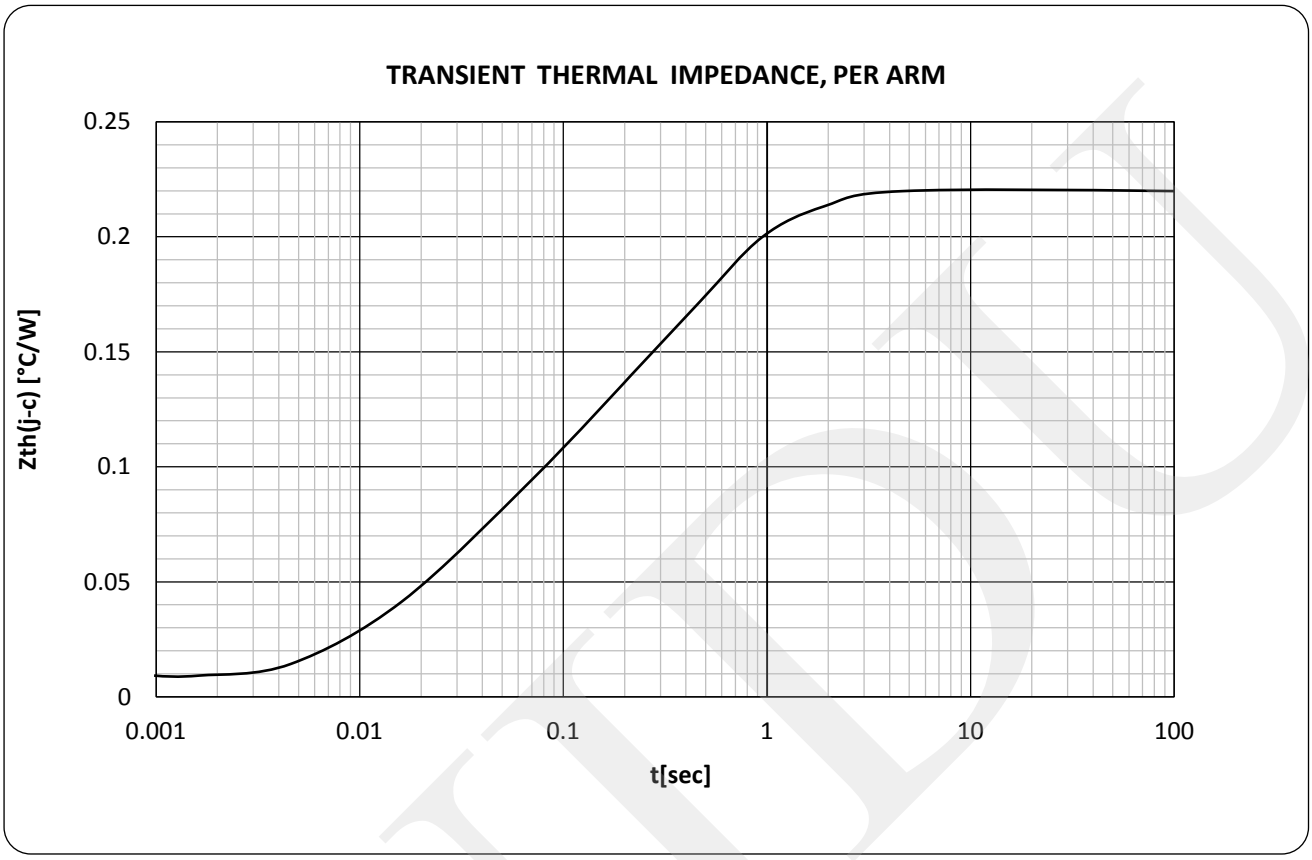


ON STATE CURRENT DERATING CURVE PER ARM
SQUARE WAVE




ON STATE CHARACTERISTICS
Tj = 125°C
500
400
300
200
100
0
I_{TM} [Amp]
0
0.4
0.8
1.2
1.6
2
2.4
V_{TM} [Volts]


SURGE CHARACTERISTICS
$\frac{I_{T(OV)}}{I_{TSM}}$
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
$I_{TSM(25°C)}$ = 4800A
$I_{TSM(125°C)}$ = 4000A
$0 * V_{RRM}$
$0.5 * V_{RRM}$
$1 * V_{RRM}$
1
10
100
1000
t[ms]

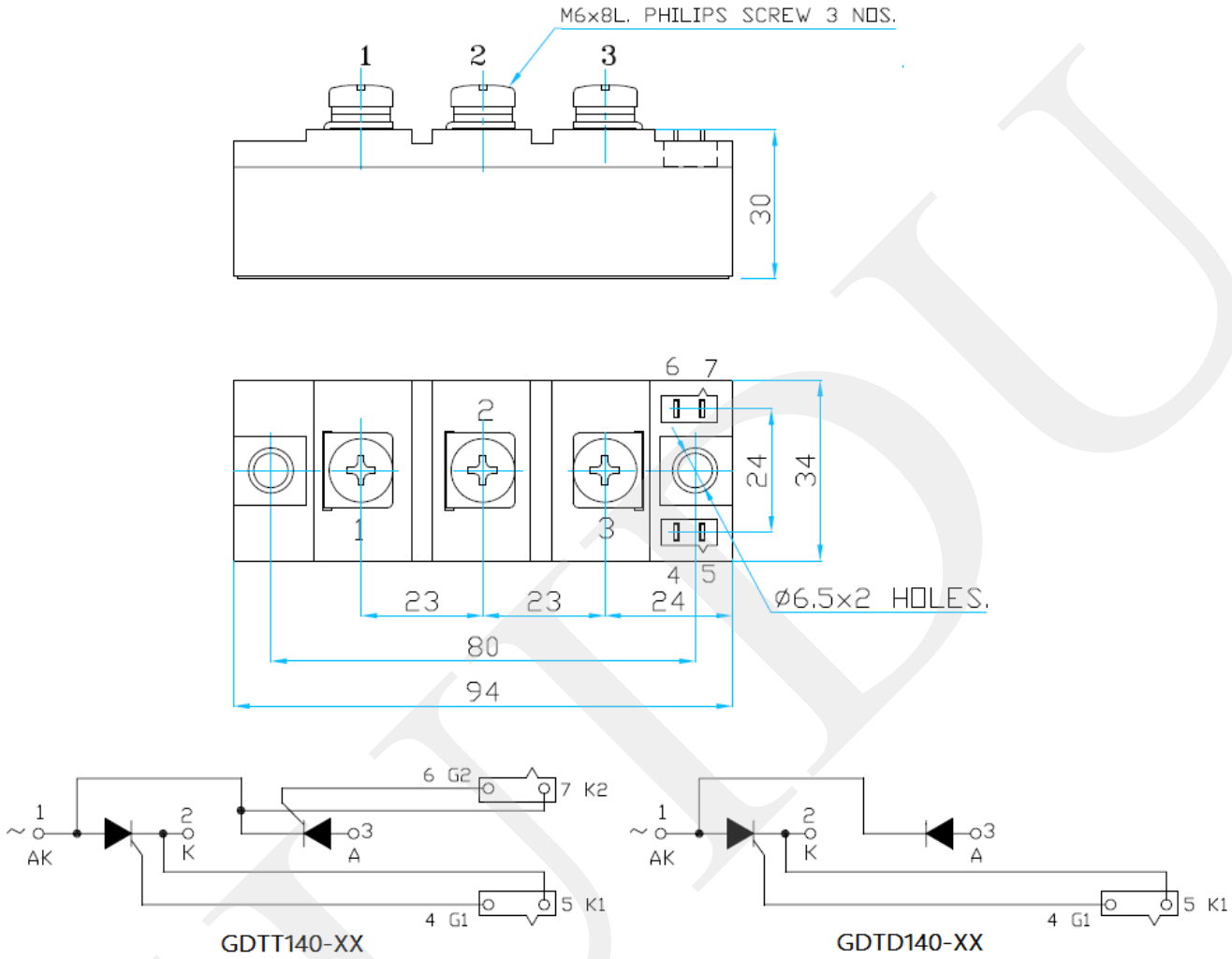


ORDERING INFORMATION

GD	TT	140	X X
Fixed code	TT- Thyristor- Thyristor Module TD- Thyristor- Diode Module	Current Code	Voltage Code Code X 100 = V_{DRM}/V_{RRM}

Order Code GDTT140-18 – 1800V V_{DRM}/V_{RRM}, thyristor module

Outline



GDTT140-XX

GDTD140-XX

SHANGHAI GUIDU TECHNOLOGY CO., LTD.
No. 3398,Huqingping Rd., Qingpu,
Dist., Shanghai 201703, China

www.guidutech.com

Tel.: +86 573 84828286
Fax.: +86 573 84828278

E-mail : sales@guidutech.com