

### Features

- Full blocking capability over wide temperature range
- Electrically insulated base plate
- Hard soldered joints for high reliability

### Key Parameters

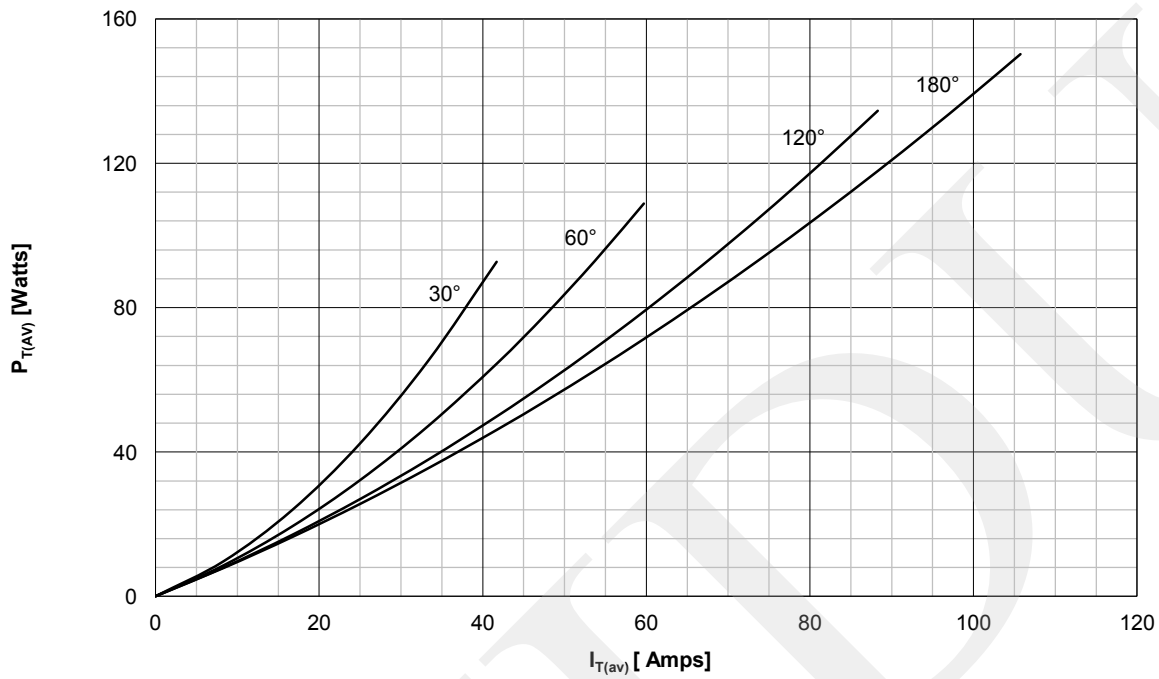
$V_{DRM} / V_{RRM}$	= 1800V
$I_{T(AV)}$	= 106A
$I_{TSM}$	= 2250A
$V_{T(TO)}$	= 0.90V
$r_T$	= 2.0mΩ

### Applications

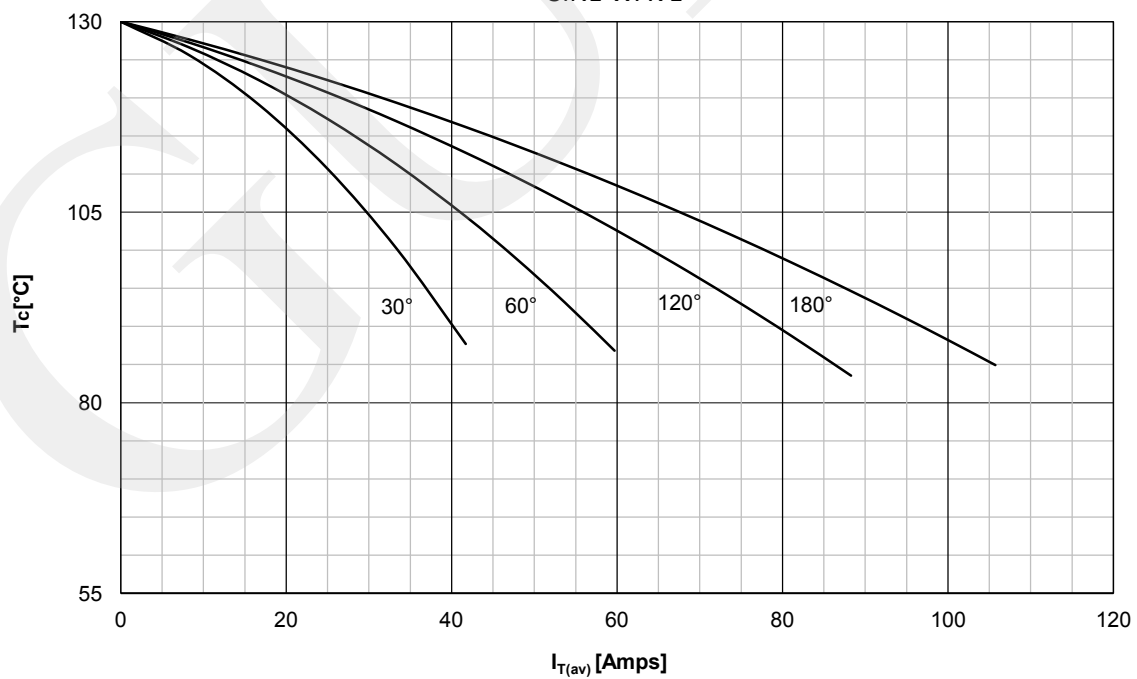
- Power Supplies
- DC motor control
- Controlled Rectifiers

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		130	800 - 1800	V
V <sub>DRM</sub>	Repetitive peak off-state voltage		130	800 - 1800	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	130	20	mA
I <sub>DRM</sub>	Repetitive peak off-state current	V = V <sub>DRM</sub>	130	20	mA
<b>CONDUCTING</b>					
I <sub>T(AV)</sub>	Mean on-state current	180° sin ,50 Hz, T <sub>CASE</sub> =85°C		106	A
I <sub>RMS</sub>	RMS on-state current			166	A
I <sub>TSM</sub>	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	2250	A
			130	1900	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	25312	A <sup>2</sup> s
			130	18050	A <sup>2</sup> s
V <sub>T</sub>	On-state voltage	On-state current = 300A	25	1.65	V
V <sub>T(TO)</sub>	Threshold voltage		130	0.9	V
r <sub>T</sub>	On-state slope resistance		130	2.0	mΩ
<b>SWITCHING</b>					
di/dt	Critical rate of rise of on-state current		130	150	A/μs
dv/dt	Critical rate of rise of off-state voltage	V <sub>DR</sub> = 67%V <sub>DRM</sub>	130	1000	V/μs
<b>GATE</b>					
I <sub>gt</sub>	Gate trigger current	V <sub>D</sub> =5V	25	150	mA
I <sub>H</sub>	Holding current	V <sub>D</sub> =5V, gate open circuit	25	250	mA
I <sub>L</sub>	Latching current	V <sub>D</sub> =5V	25	600	mA
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, 180°sine	Junction to case, per arm per module		0.30 0.15	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, per arm per module		0.2 0.1	°C/W
T <sub>j</sub>	Max. junction temperature			130	°C
T <sub>stg</sub>	Storage temperature			-40 .... 130	°C
V <sub>ISOL</sub>	Insulation test voltage,RMS	F=50Hz, 1min		2.5	KV
M1	Mounting torque			5 ± 15%	Nm
M2	Terminal connection torque			3 ± 15%	Nm
	Weight			105	g

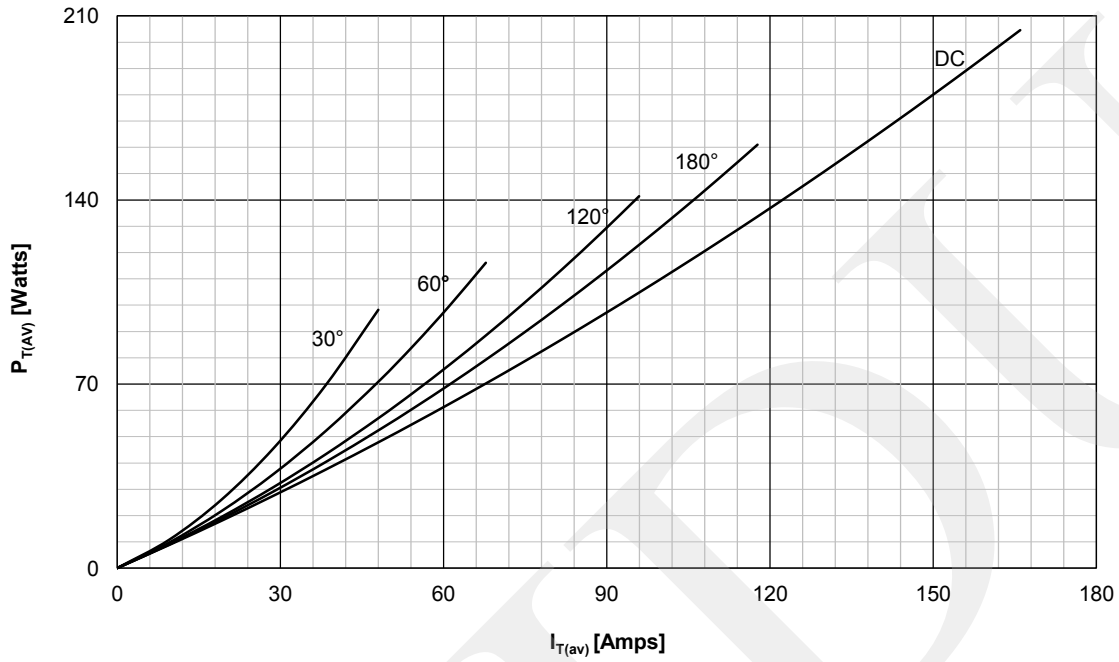
DISSIPATION CHARACTERISTICS PER ARM  
SINE WAVE



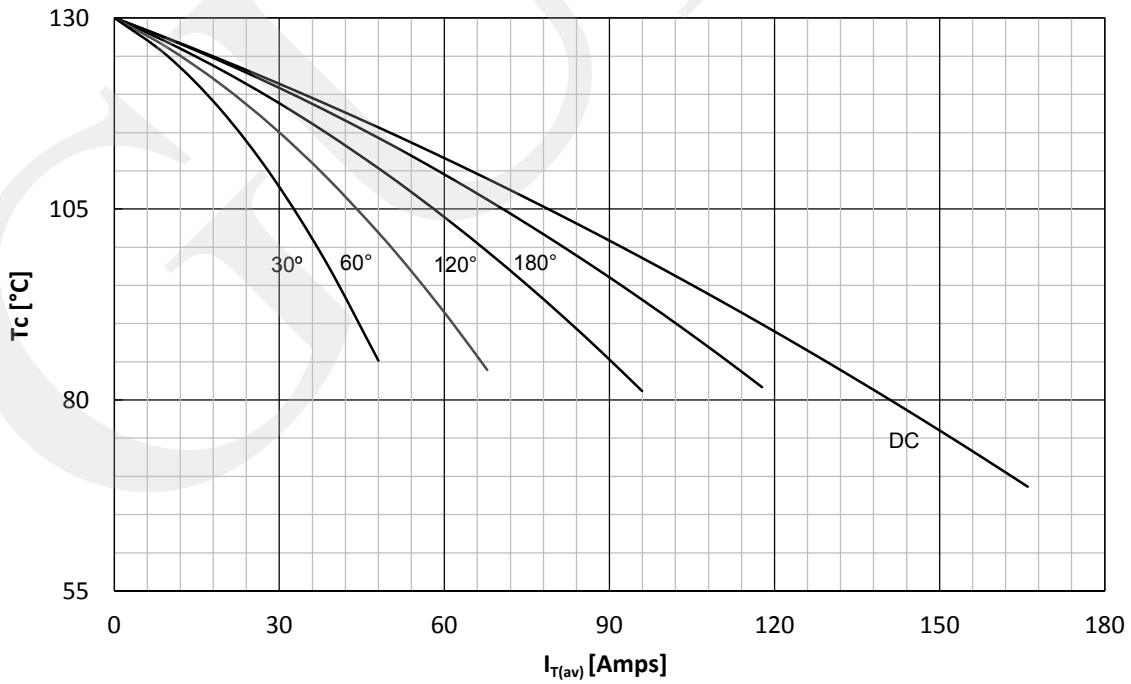
ON STATE CURRENT DERATING CURVE PER ARM  
SINE WAVE



DISSIPATION CHARACTERISTICS PER ARM  
SQUARE WAVE

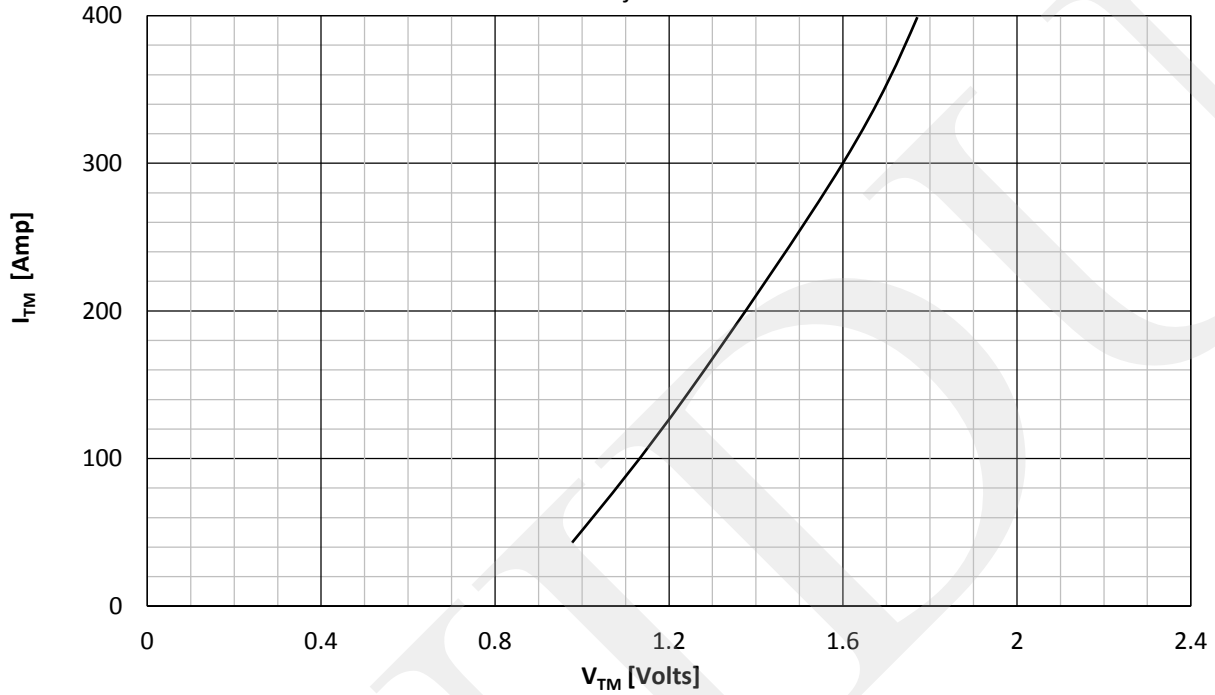


ON STATE CURRENT DERATING CURVE PER ARM  
SQUARE WAVE

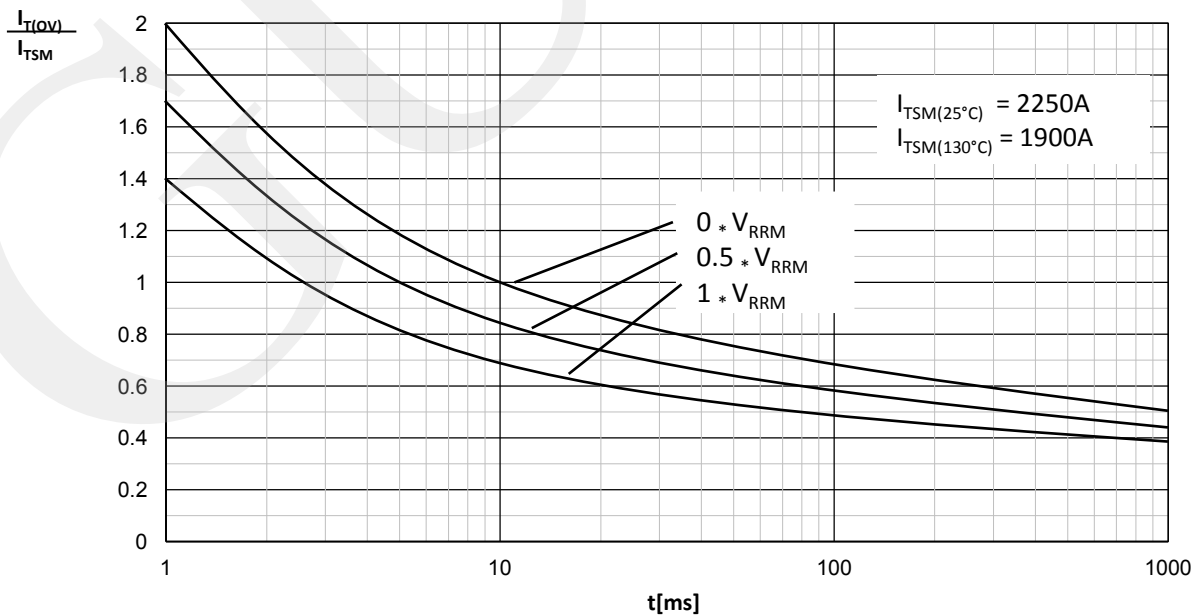


ON STATE CHARACTERISTICS

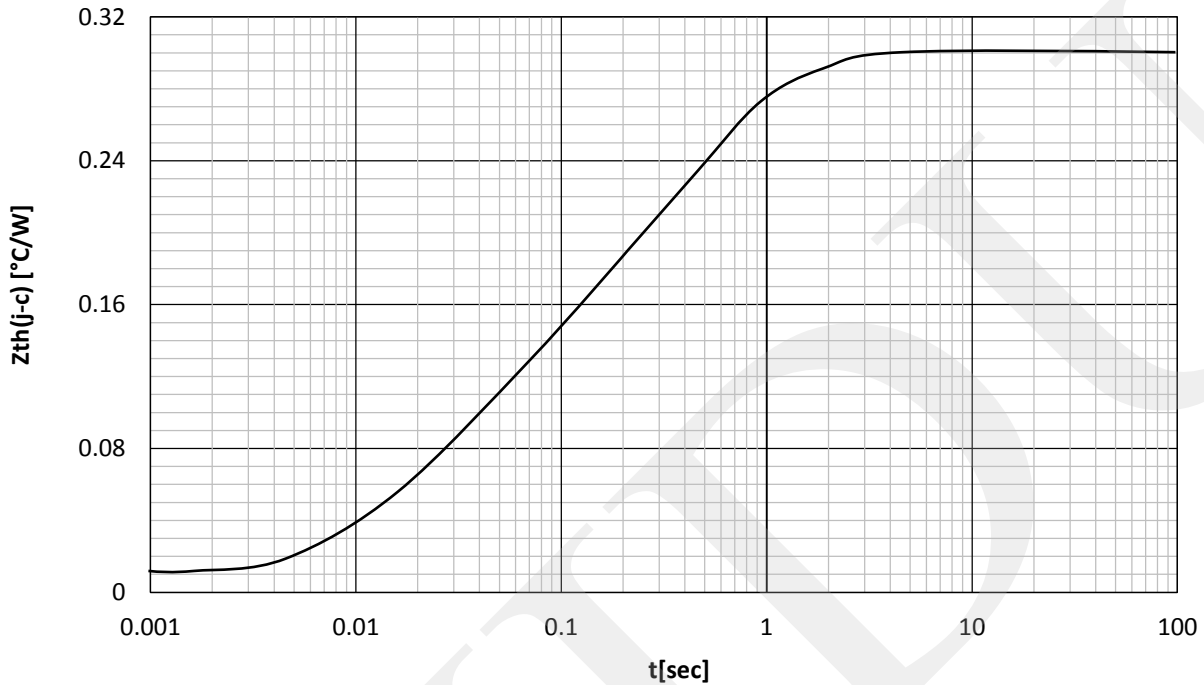
$T_j = 130^\circ\text{C}$



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



**ORDERING INFORMATION**

GD	TT	106	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 GDTT106-18 – 1800V  $V_{DRM}/V_{RRM}$ , thyristor module

Outline

