

### Features

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

### Applications

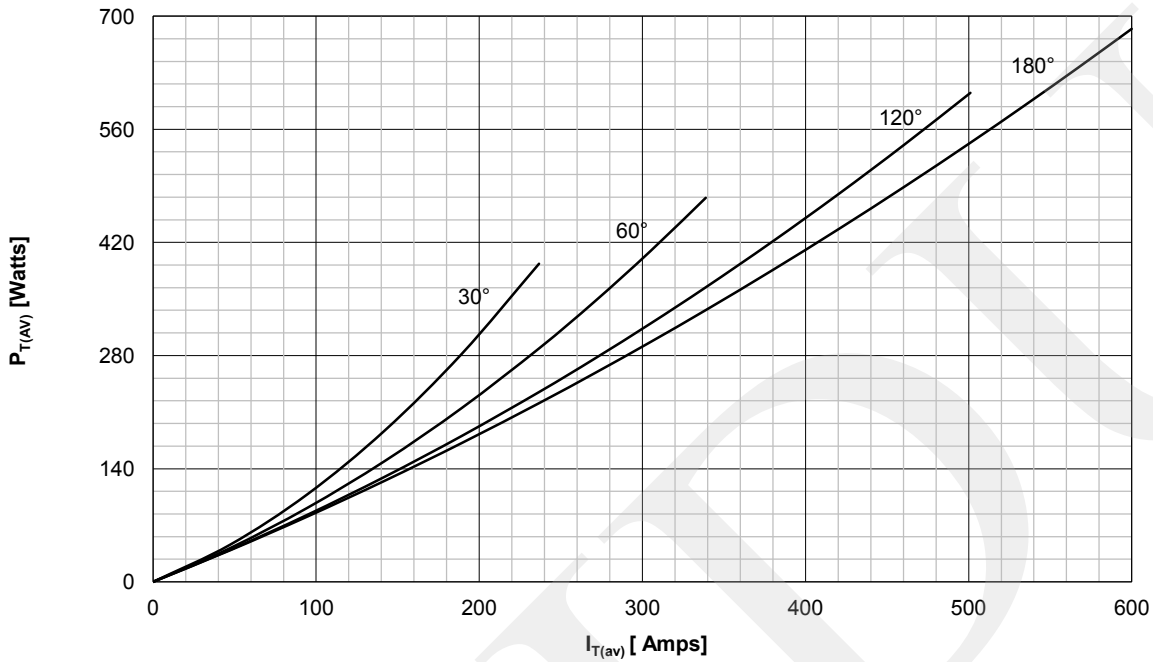
- Power Supplies
- DC motor control
- Controlled Rectifiers

### Key Parameters

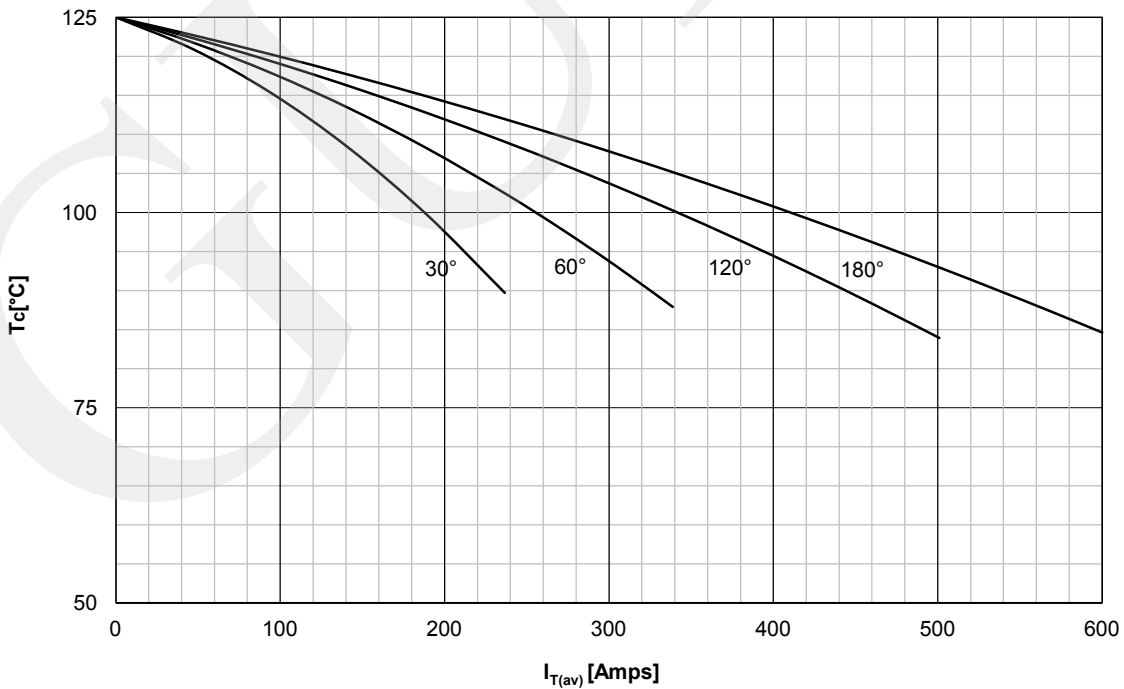
$V_{DRM} / V_{RRM}$	= 1600V
$I_{T(AV)}$	= 600A
$I_{TSM}$	= 17kA
$V_{T(TO)}$	= 0.80V
$r_T$	= 0.23mΩ

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		125	800 - 1600	V
V <sub>DRM</sub>	Repetitive peak off-state voltage		125	800 - 1600	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	125	200	mA
I <sub>DRM</sub>	Repetitive peak off-state current	V = V <sub>DRM</sub>	125	200	mA
<b>CONDUCTING</b>					
I <sub>T(AV)</sub>	Mean on-state current	180° sin ,50 Hz, T <sub>CASE</sub> =85°C		600	A
I <sub>RMS</sub>	RMS on-state current			942	A
I <sub>TSM</sub>	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	17000	A
			125	14000	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	1445 X 10 <sup>3</sup>	A <sup>2</sup> s
			125	980 X 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>T</sub>	On-state voltage	On-state current = 1500 A	25	1.27	V
V <sub>T(TO)</sub>	Threshold voltage		125	0.80	V
r <sub>T</sub>	On-state slope resistance		125	0.23	mΩ
<b>SWITCHING</b>					
di/dt	Critical rate of rise of on-state current		125	200	A/μs
dv/dt	Critical rate of rise of off-state voltage	V <sub>DR</sub> = 67%V <sub>DRM</sub>	125	1000	V/μs
<b>GATE</b>					
I <sub>gt</sub>	Gate trigger current	V <sub>D</sub> =5V	25	200	mA
I <sub>H</sub>	Holding current	V <sub>D</sub> =5V, gate open circuit	25	300	mA
I <sub>L</sub>	Latching current	V <sub>D</sub> =5V	25	1500	mA
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, 180°sine	Junction to case, per arm per module		0.059 0.029	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, per arm per module		0.02 0.01	°C/W
T <sub>j</sub>	Max. junction temperature			125	°C
T <sub>stg</sub>	Storage temperature			-40 .... 125	°C
V <sub>ISOL</sub>	Insulation test voltage,RMS	F=50Hz, 1min		3.0	KV
M1	Mounting torque			6 ± 15%	Nm
M2	Terminal connection torque			12 ± 15%	Nm
	Weight (Approx.)			1400	g

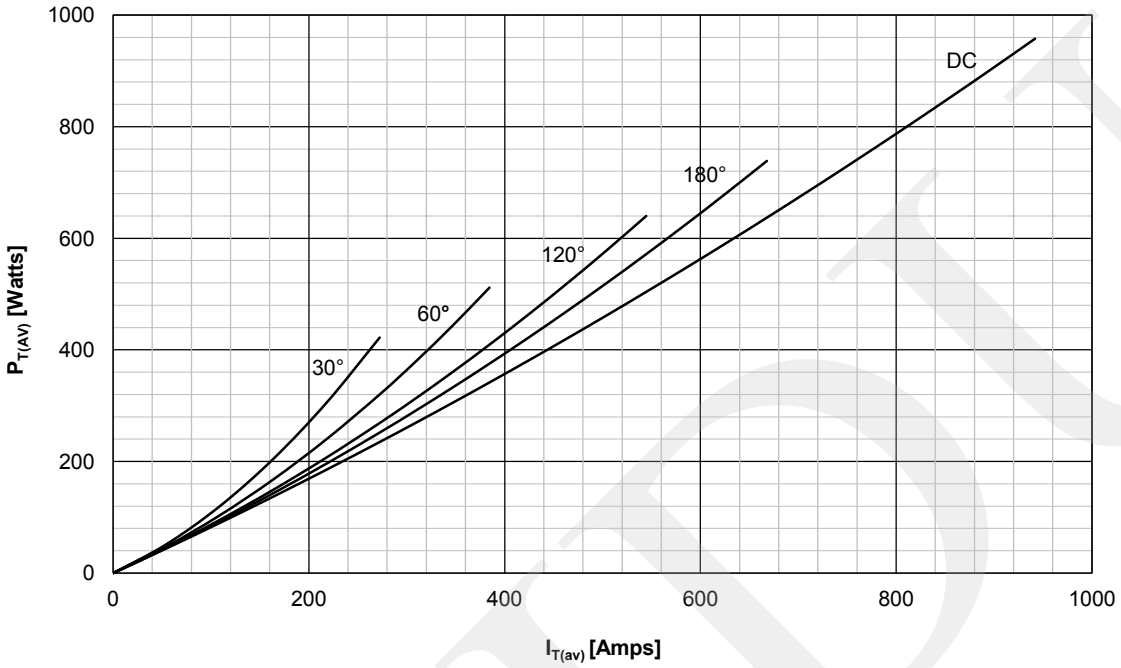
DISSIPATION CHARACTERISTICS PER ARM  
SINE WAVE



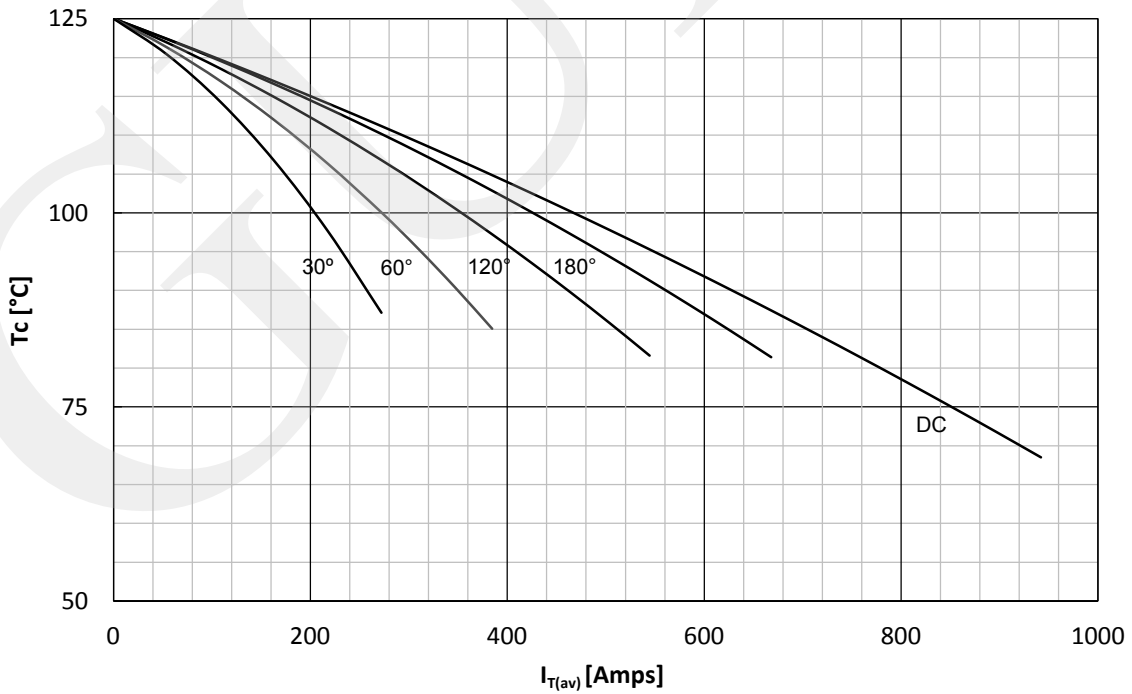
ON STATE CURRENT DERATING CURVE PER ARM  
SINE WAVE



DISSIPATION CHARACTERISTICS PER ARM  
SQUARE WAVE

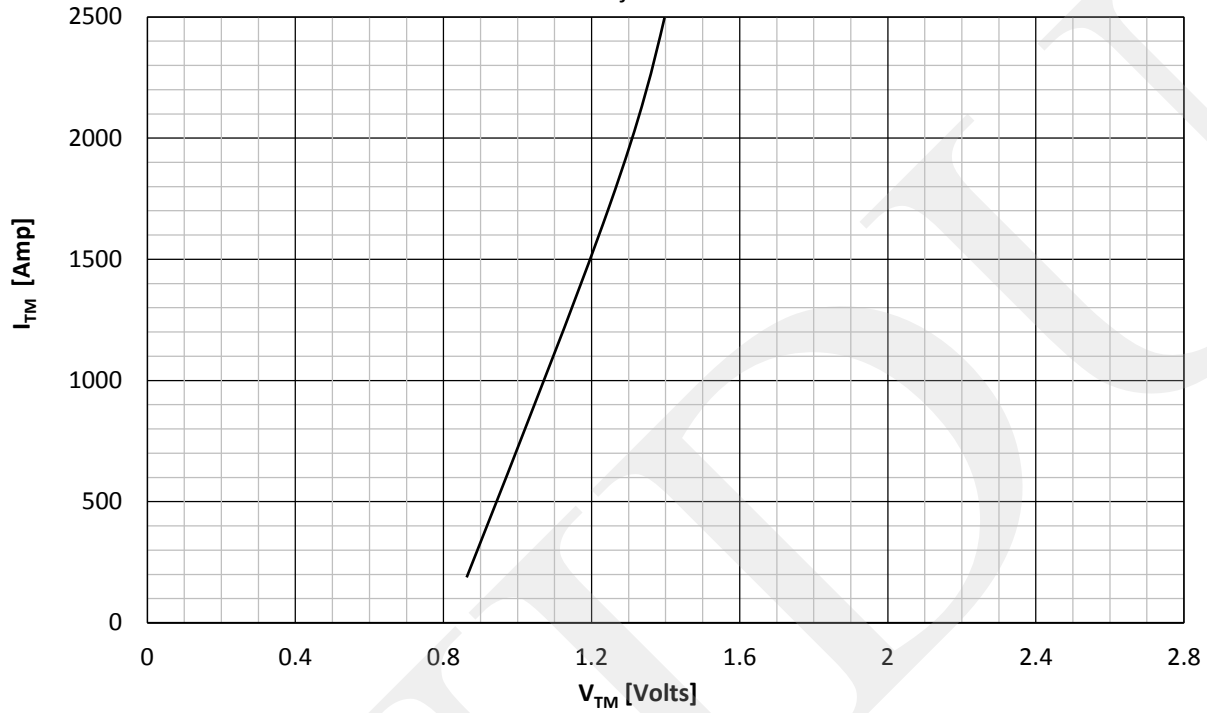


ON STATE CURRENT DERATING CURVE PER ARM  
SQUARE WAVE

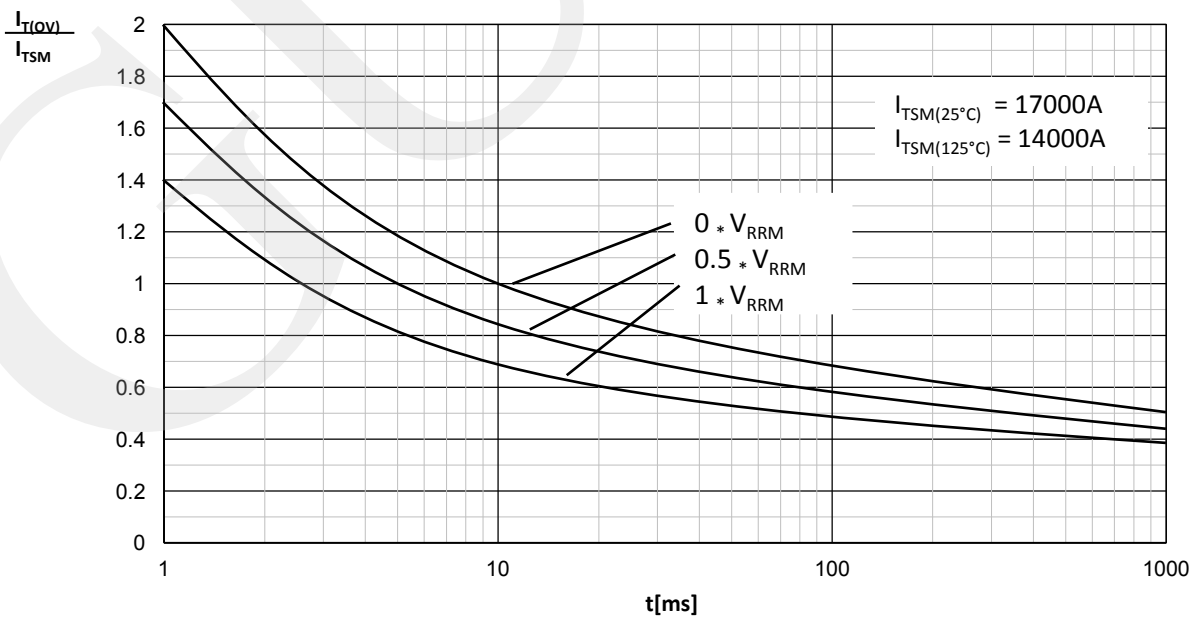


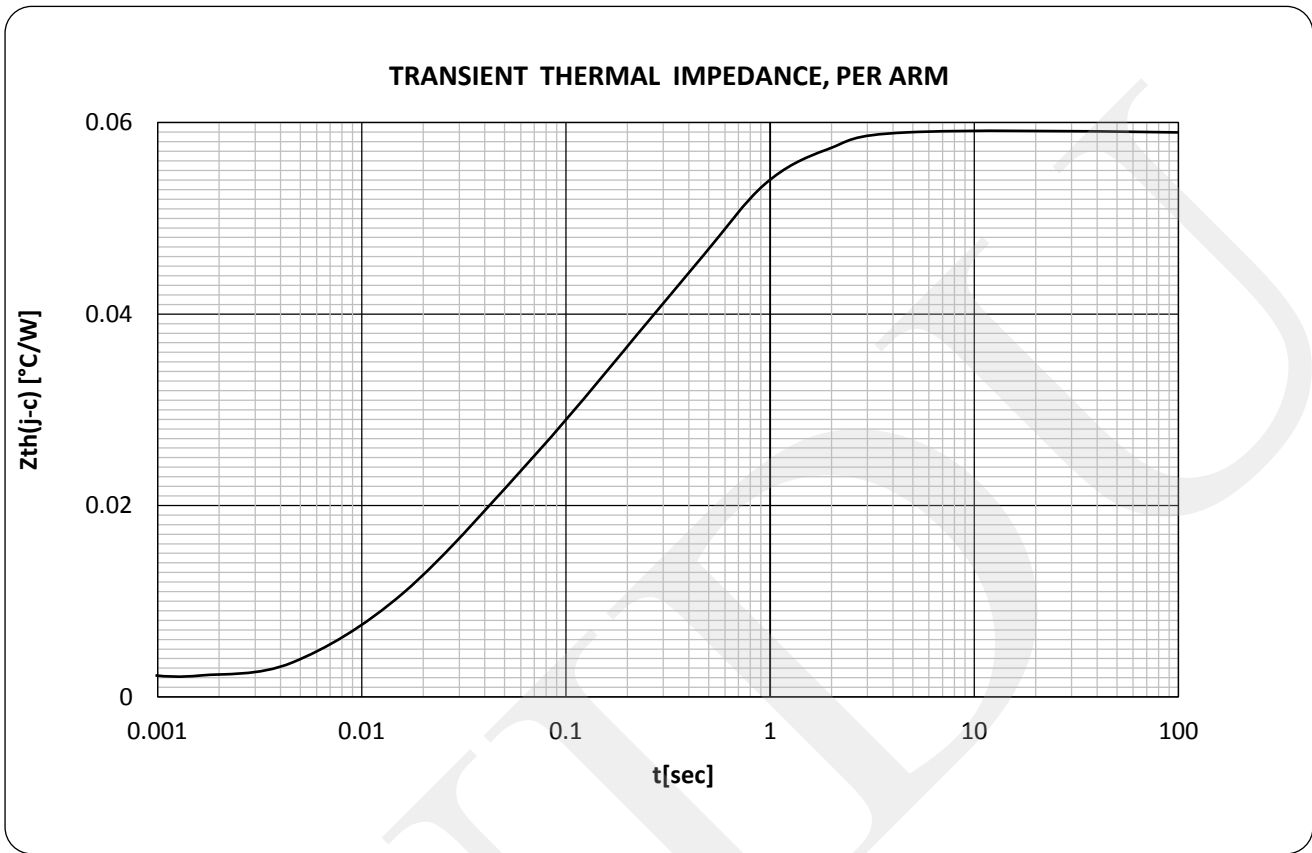
ON STATE CHARACTERISTICS

$T_j = 125^\circ\text{C}$



SURGE CHARACTERISTICS





**ORDERING INFORMATION**

GD	TT	600	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 GDTT600-16 – 1600V  $V_{DRM}/V_{RRM}$ , Thyristor module

Outline

