

Features

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

Key Parameters

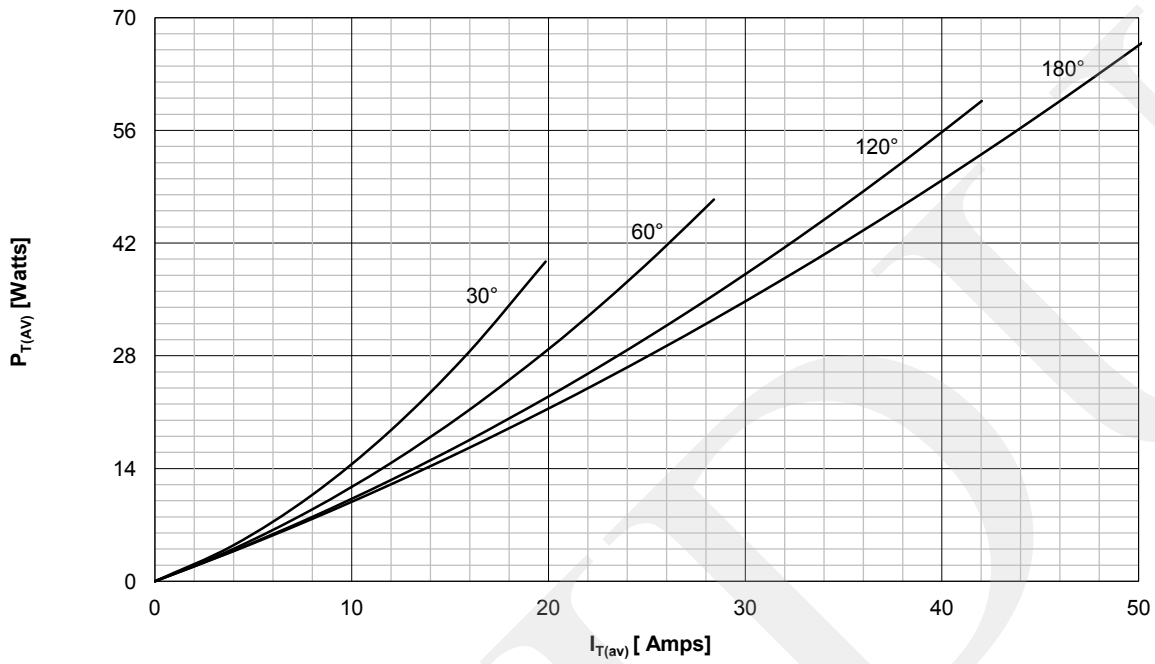
V_{DRM} / V_{RRM}	= 1800V
$I_{T(AV)}$	= 50A
I_{TSM}	= 1500A
$V_{T(TO)}$	= 0.90V
r_T	= 3.5mΩ

Applications

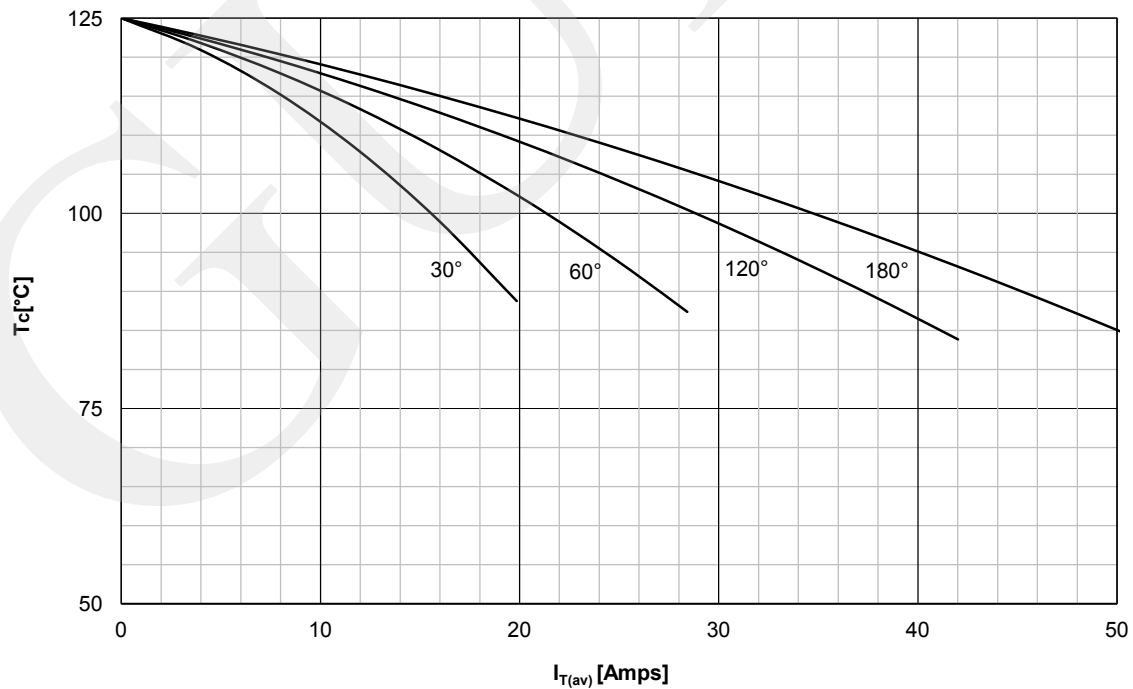
- Power Supplies
- DC motor control
- Controlled Rectifiers

Symbol	Characteristic	Conditions	T _j [°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	15	mA
I _{DRM}	Repetitive peak off-state current	V = V _{DRM}	125	15	mA
CONDUCTING					
I _{T(AV)}	Mean on-state current	180° sin, 50 Hz, T _{CASE} =85°C		50	A
I _{RMS}	RMS on-state current			79	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	1500	A
			125	1250	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	11250	A ² s
			125	7812	A ² s
V _T	On-state voltage	On-state current = 200A	25	1.65	V
V _{T(TO)}	Threshold voltage		125	0.90	V
r _T	On-state slope resistance		125	3.5	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	250	mA
I _L	Latching current	V _D =5V	25	600	mA
MOUNTING					
R _{th(j-c)}	Thermal impedance, 180°sine	Junction to case, per arm per module		0.60 0.30	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, per arm per module		0.2 0.1	°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			5 ± 15%	Nm
M2	Terminal connection torque			3 ± 15%	Nm
	Weight			105	g

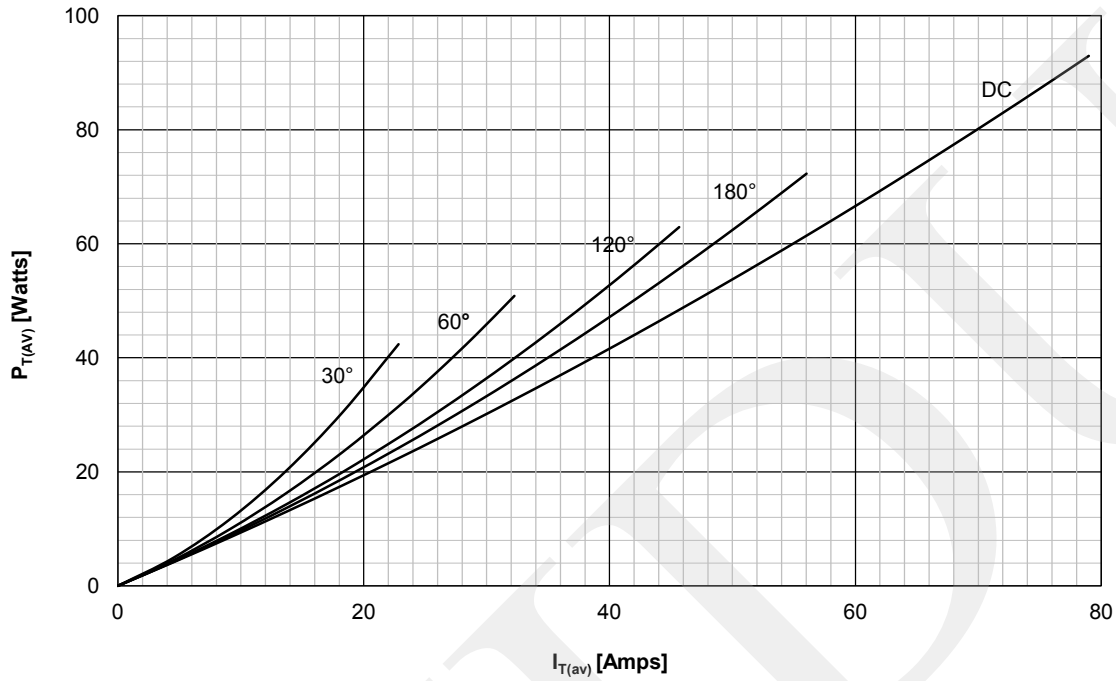
DISSIPATION CHARACTERISTICS PER ARM
SINE WAVE



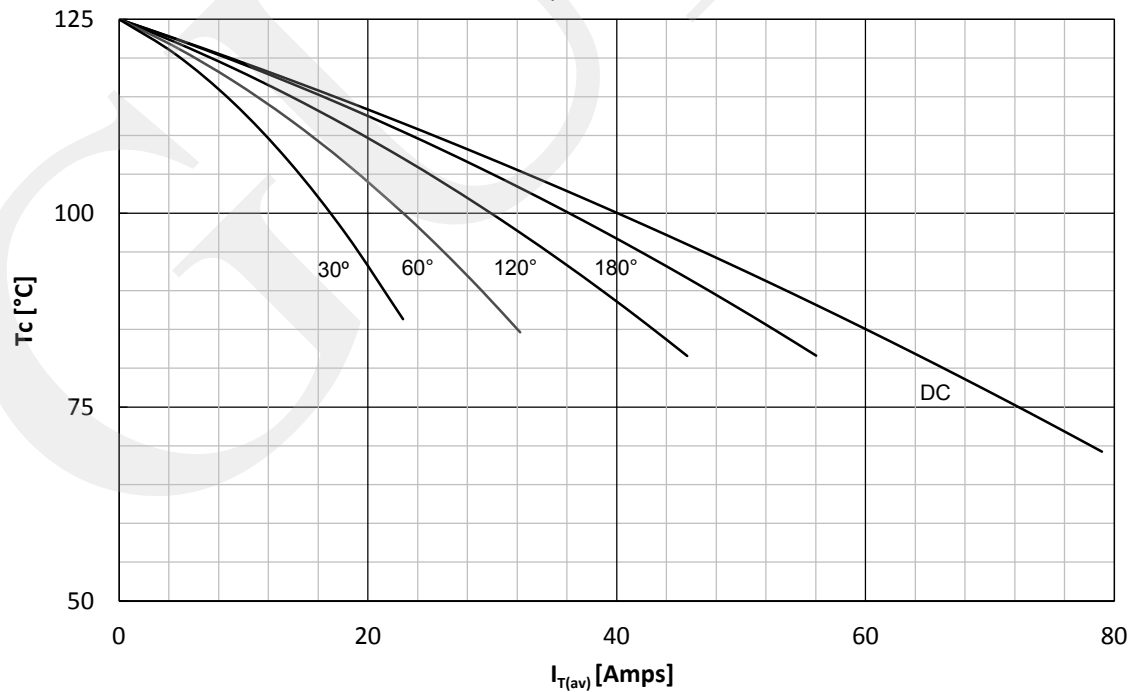
ON STATE CURRENT DERATING CURVE PER ARM
SINE WAVE



DISSIPATION CHARACTERISTICS PER ARM
SQUARE WAVE

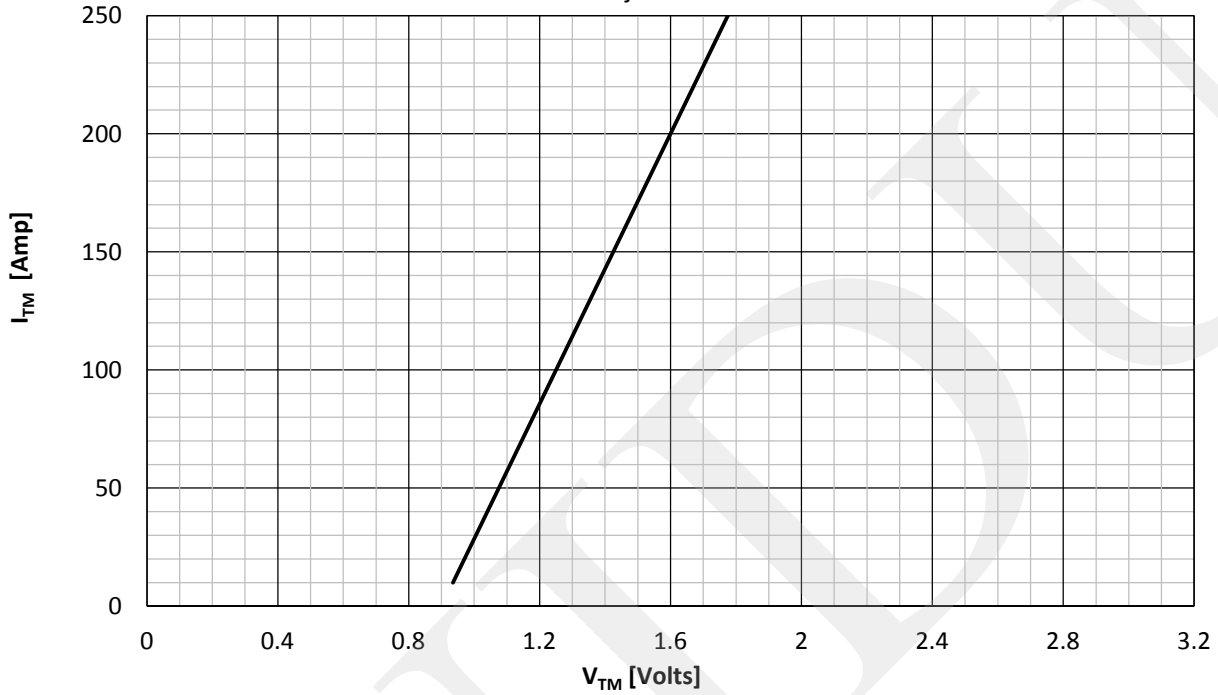


ON STATE CURRENT DERATING CURVE PER ARM
SQUARE WAVE

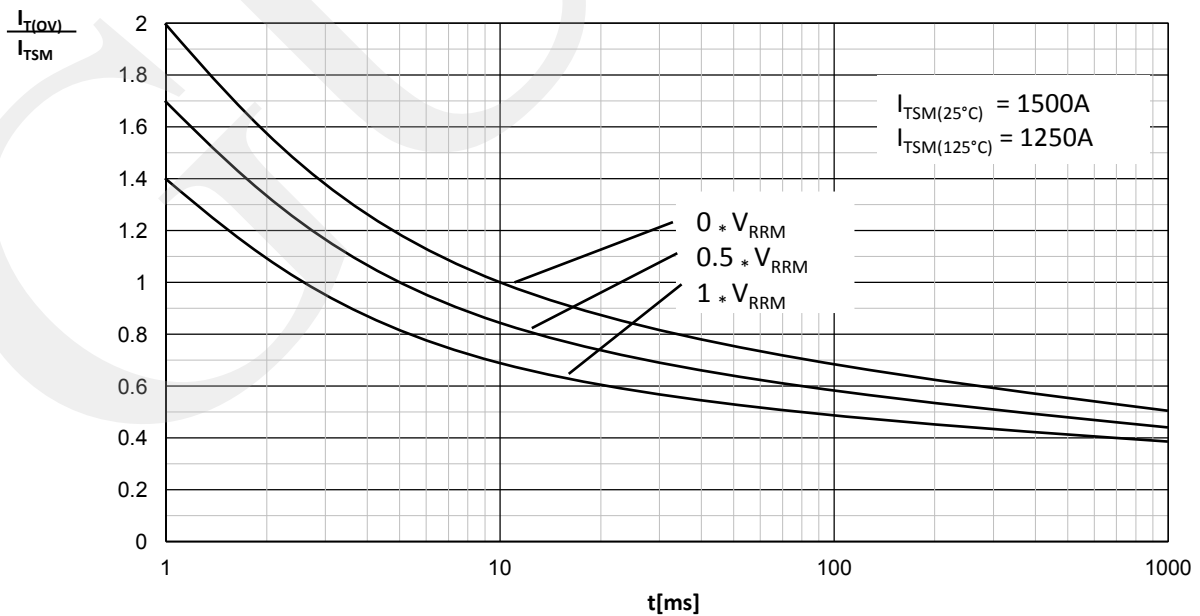


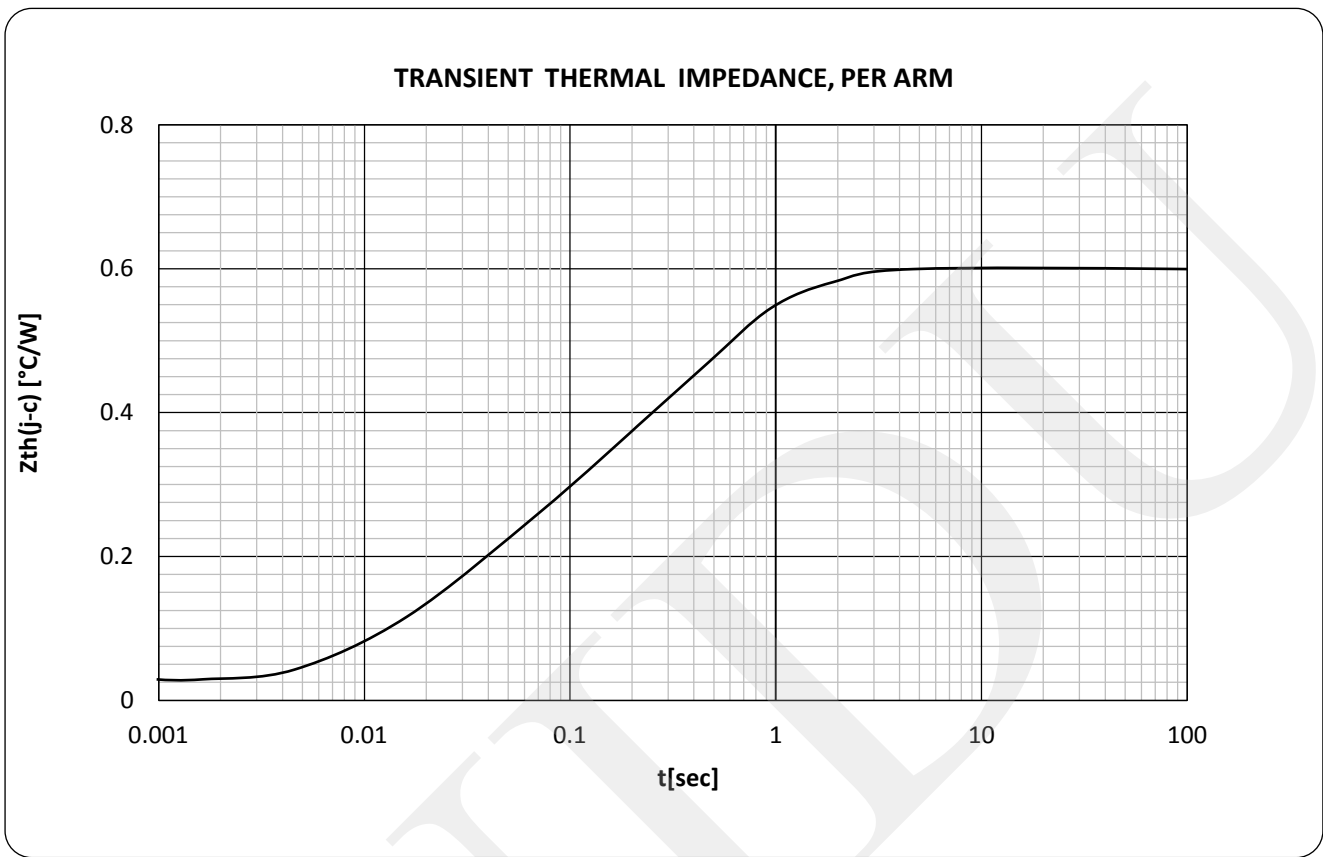
ON STATE CHARACTERISTICS

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



SURGE CHARACTERISTICS





ORDERING INFORMATION

GD	TT	50	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 GDTT50-18 – 1800V V_{DRM}/V_{RRM} , thyristor module

Outline

