THYRISTOR MODULE
(Non isolated type)
MTG151

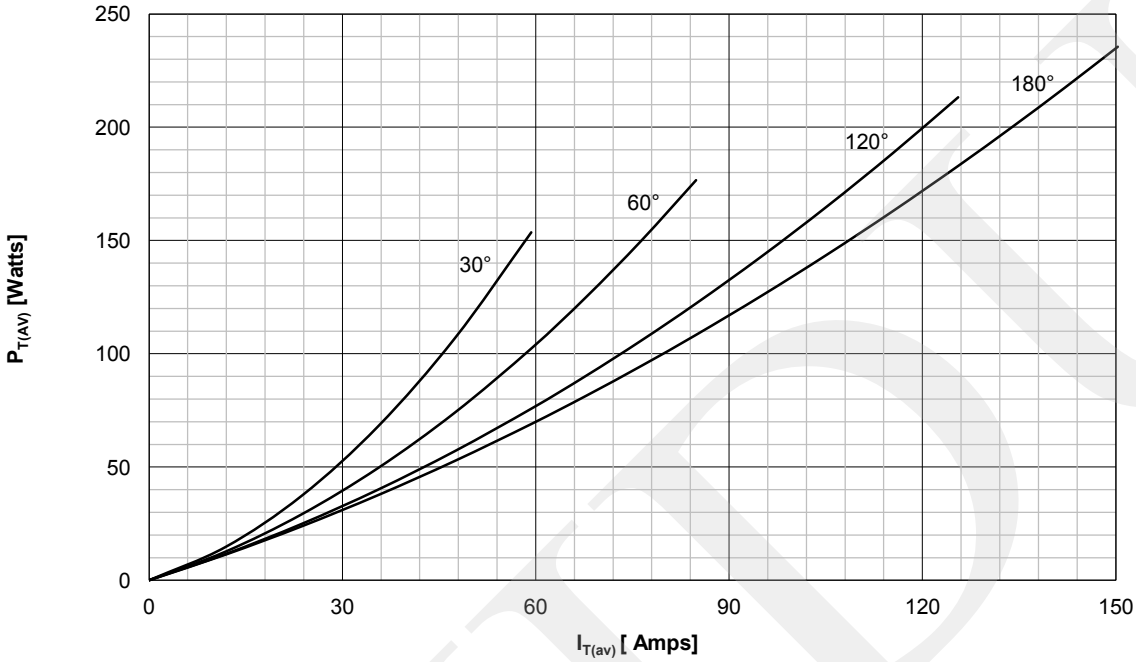
Features
- Full blocking capability over wide temperature range
- Hard soldered joints for high reliability

Key Parameters
V_{DRM} /V_{RRM} = 1600V
$I_{T(AV)}$ = 150A
I_{TSM} = 3000A
$V_{T(TO)}$ = 0.9V
r_T = 1.8mΩ

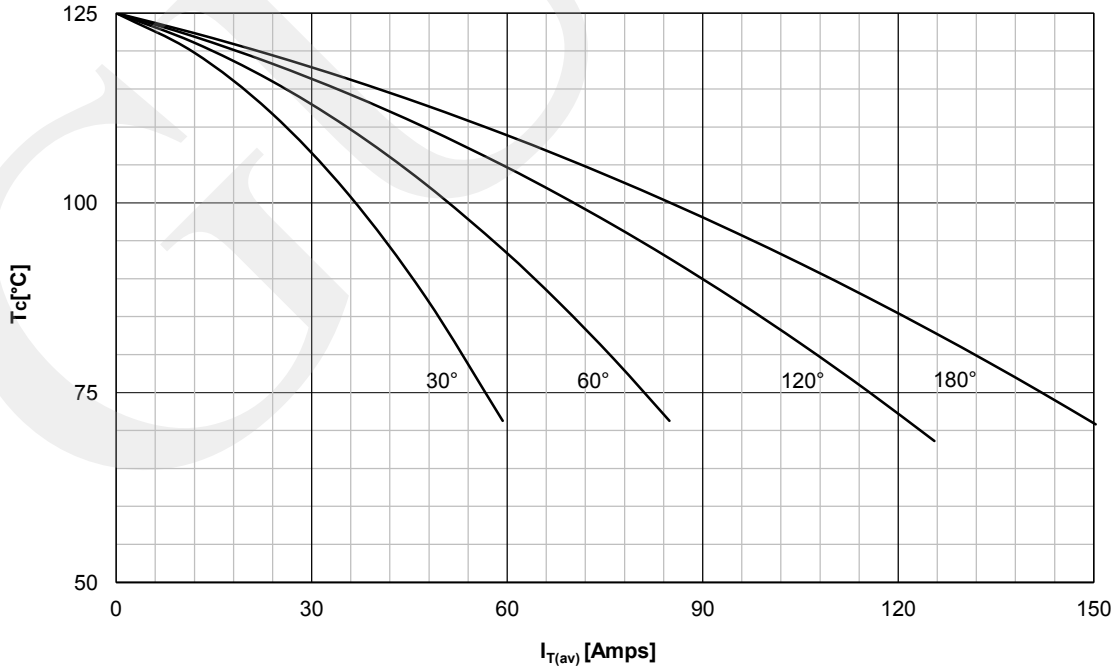
Applications
- Power Supplies
- DC motor control
- Controlled Rectifiers

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		125	800 - 1600	V
V_{DRM}	Repetitive peak off-state voltage		125	800 - 1600	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	125	25	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	25	mA
CONDUCTING					
$I_{T(AV)}$	Mean on-state current	180° sin ,50 Hz, T_{CASE}=70°C		150	A
I_{RMS}	RMS on-state current			236	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	3000	A
			125	2200	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	45000	A^2s
			125	24200	A^2s
V_T	On-state voltage	On-state current = 470A	25	1.75	V
$V_{T(TO)}$	Threshold voltage		125	0.9	V
r_T	On-state slope resistance		125	1.80	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current		125	100	A/μs
dv/dt	Critical rate of rise of off-state voltage	V_{DR} = 67%V_{DRM}	125	800	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	100	mA
I_L	Latching current	V_D=5V	25	400	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, 180°sine	Junction to case, per chip		0.23	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per module		0.03	°C/W
T_j	Max. junction temperature			125	°C
T_{stg}	Storage temperature			-40 125	°C
M1	Mounting torque			5 - 6	Nm
M2	Terminal connection torque			12	Nm
	Weight			300	g

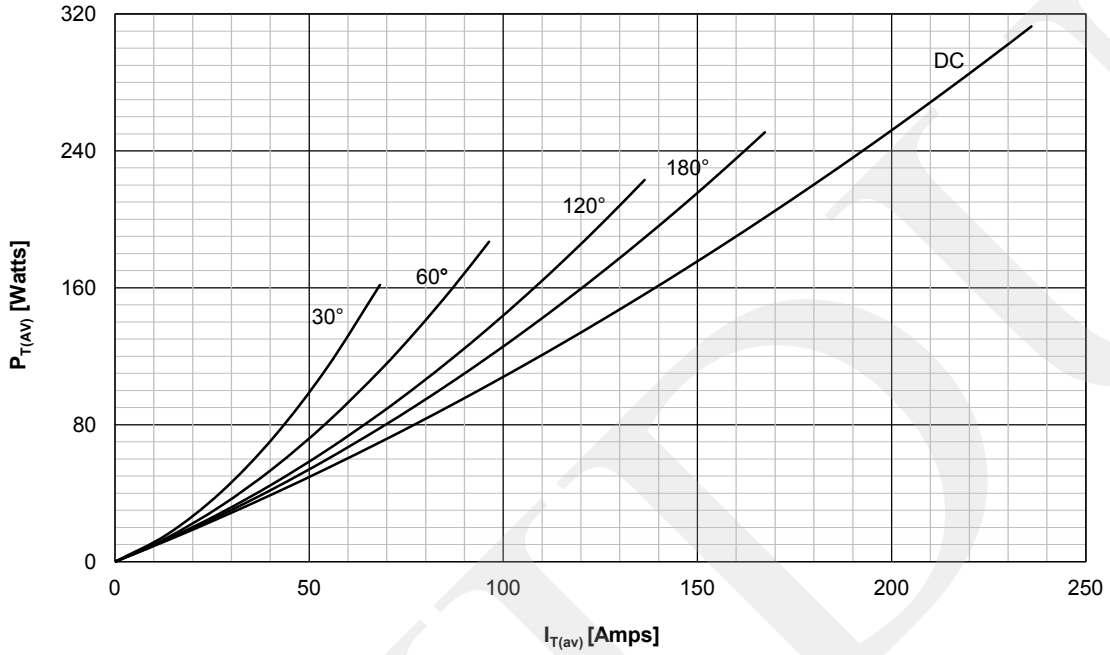
DISSIPATION CHARACTERISTICS PER ARM
SINE WAVE



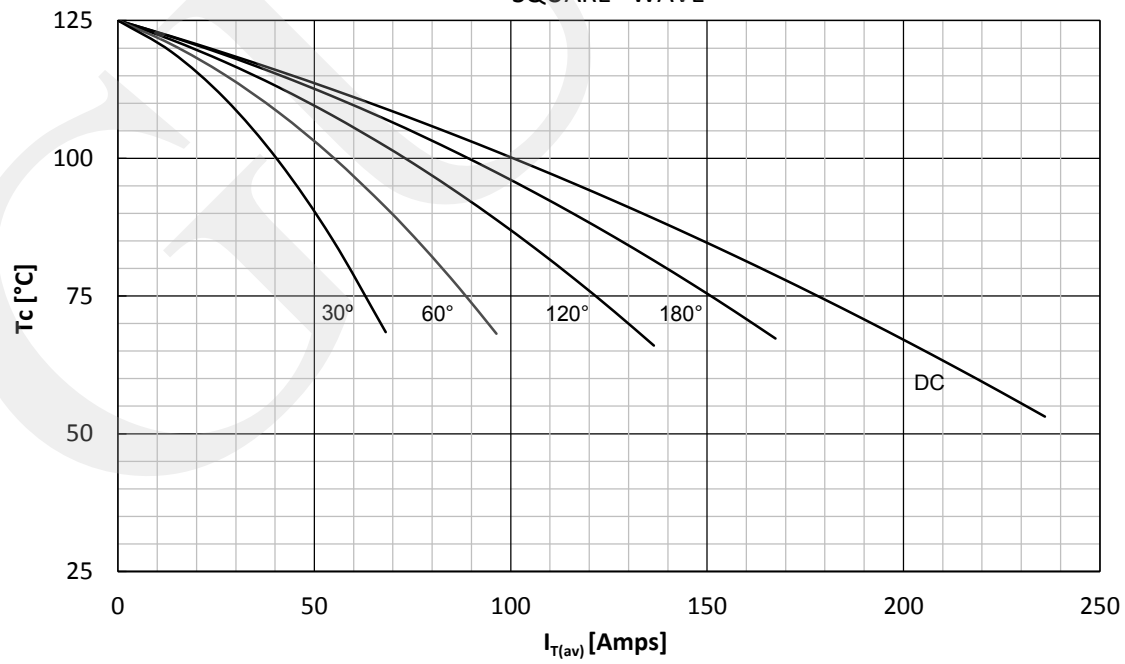
ON STATE CURRENT DERATING CURVE PER ARM
SINE WAVE



DISSIPATION CHARACTERISTICS PER ARM
SQUARE WAVE

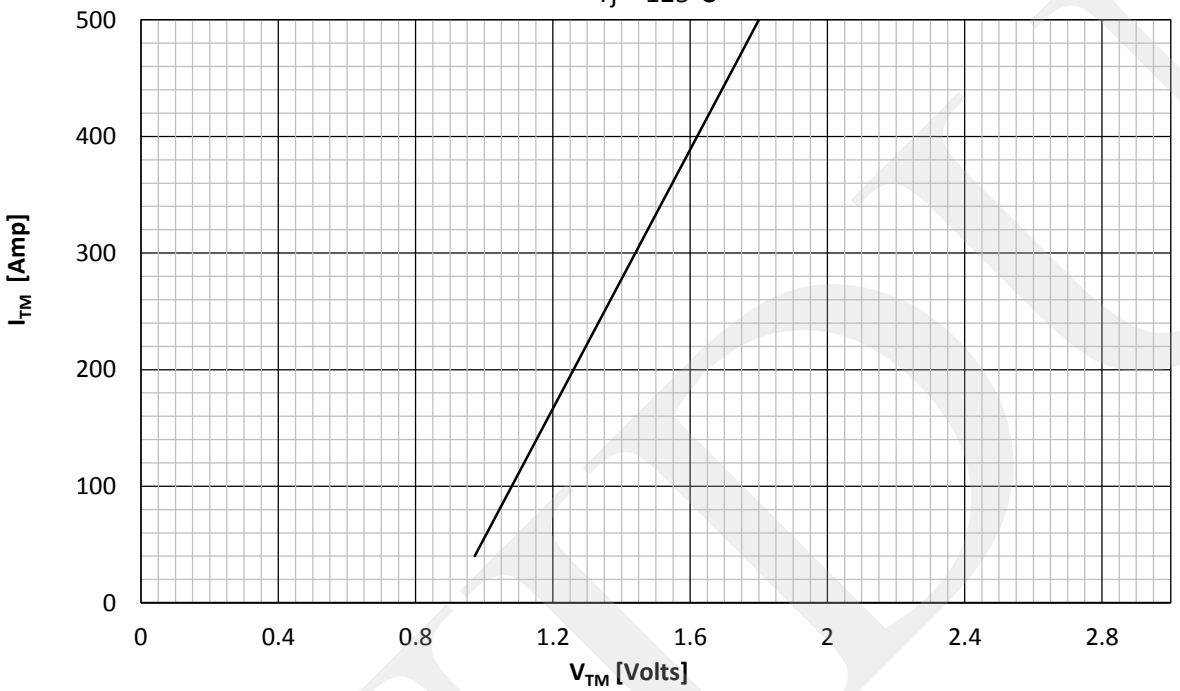


ON STATE CURRENT DERATING CURVE PER ARM
SQUARE WAVE

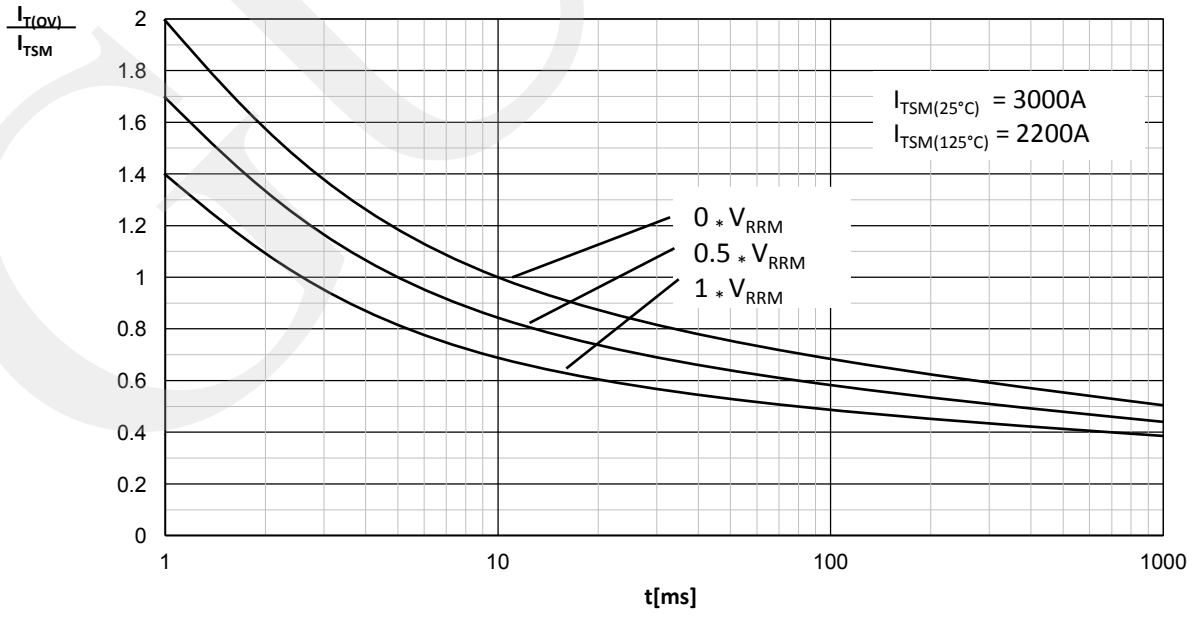


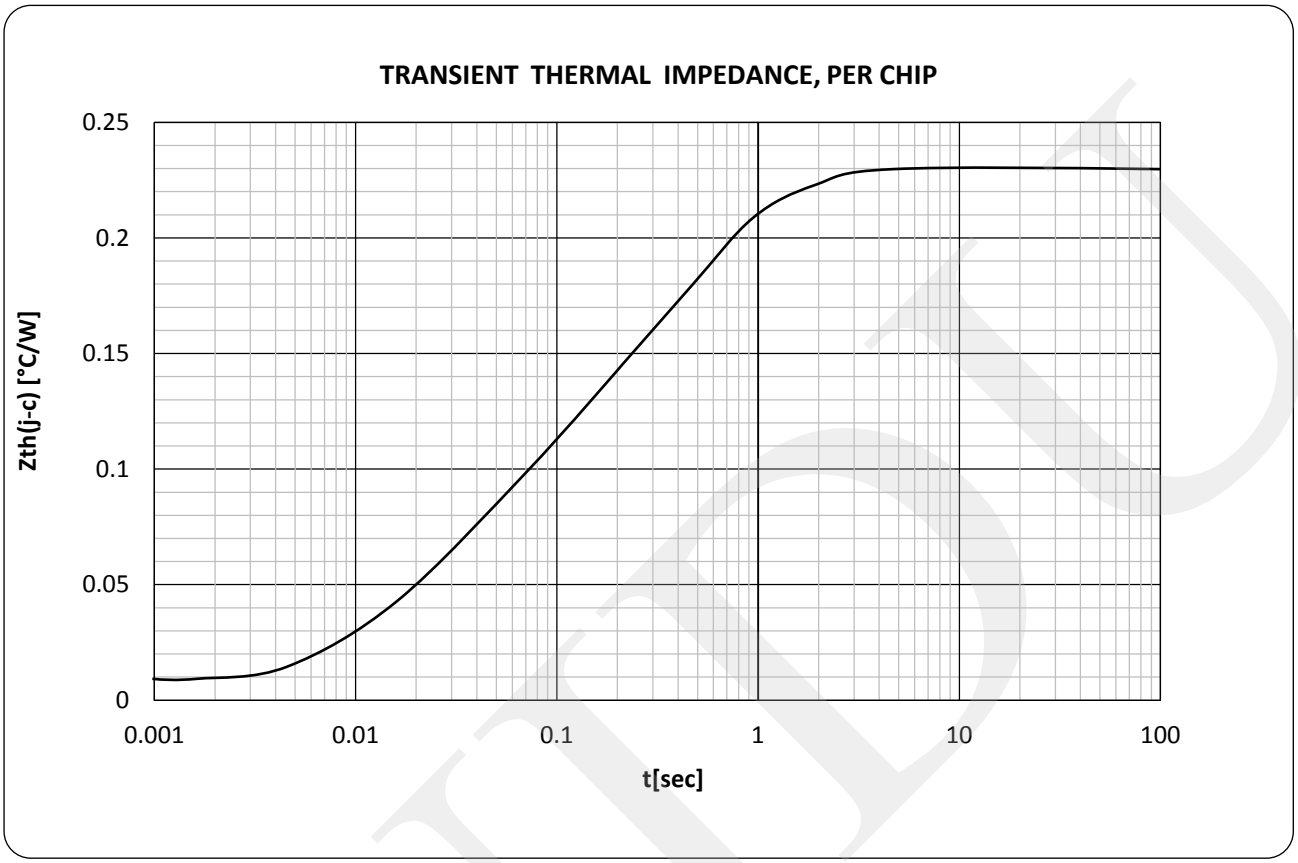
ON STATE CHARACTERISTICS

Tj = 125°C



SURGE CHARACTERISTICS



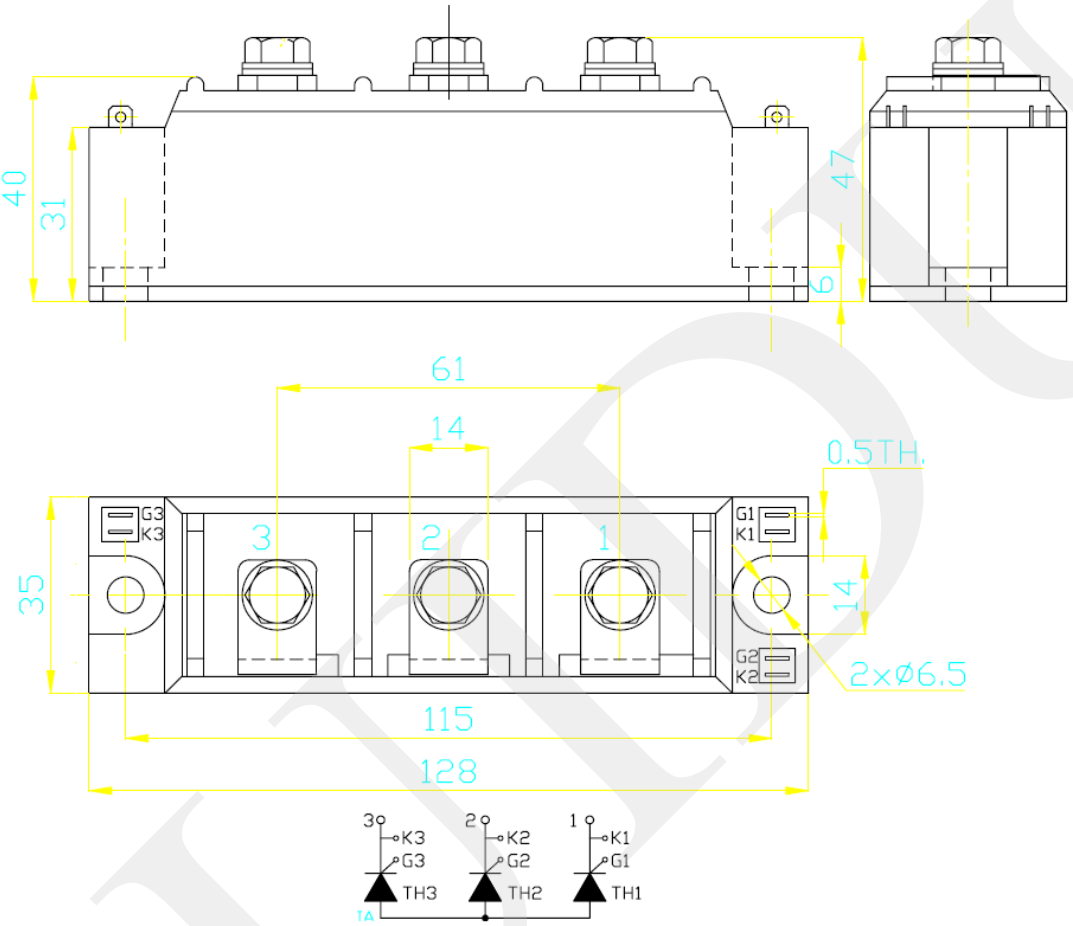


ORDERING INFORMATION

MT	G	- AA	- 151	X X
Three Thyristor Module	Circuit Configuration G - Common Anode Y - Common Cathode	Welder class	Current Code	Voltage Code Code X 100 = V_{DRM}/V_{RRM}

Order Code MTG-AA-151-16 : 1600V V_{DRM}/V_{RRM}, Three thyristor module with common Anode configuration.

Outline



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