



Key Parameters

V_{DRM} / V_{RRM}	= 1800V
$I_{T(AV)}$	= 410A
I_{TSM}	= 7500A
$V_{T(TO)}$	= 1.05V
r_T	= 0.80mΩ

Features

- Full blocking capability over wide temperature range
- High Surge current capability
- Hermetic metal case with ceramic insulator

Applications

- Battery Chargers
- Medical Equipments
- UPS
- Power Supplies
- Motor control
- Controlled Rectifiers
- Transportation
- Induction Heating
- Welding

Ordering Information

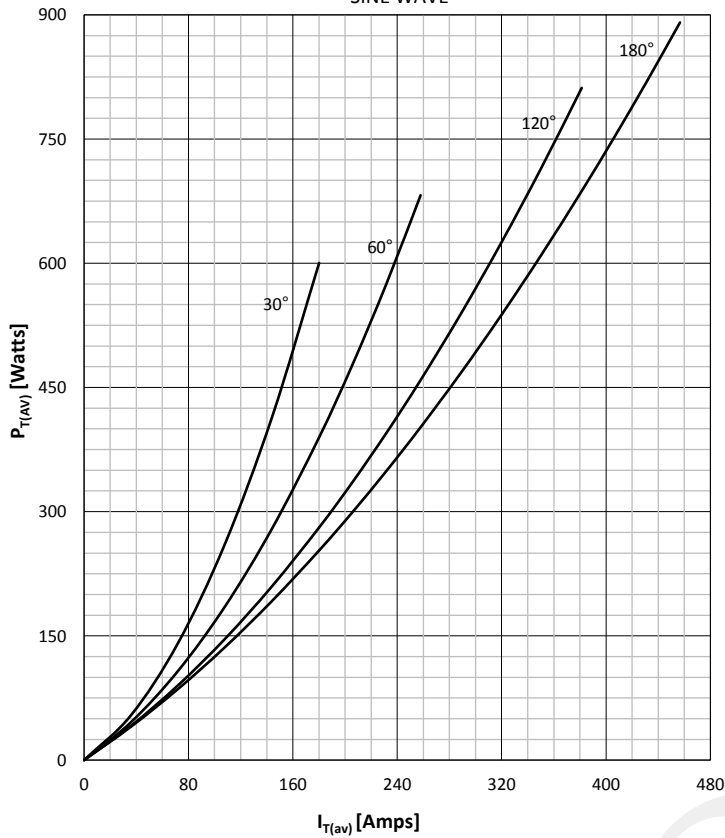
MS T	410	C	XX
Phase Control Thyristor	Current Code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS T410C18 : 1800V V_{DRM}, V_{RRM} , 14mm clamp height capsule thyristor			

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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		125	200 - 1800	V
V _{RSM}	Non-repetitive peak reverse voltage		125	300 - 1900	V
V _{DRM}	Repetitive peak off-state voltage		125	200 - 1800	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	125	50	mA
I _{DRM}	Repetitive peak off-state current	V = V _{DRM}	125	50	mA
CONDUCTING					
I _{T(AV)}	Mean on state current	180° sin ,50 Hz, T _c =60°C, Double side cooled 180° sin ,50 Hz, T _c =70°C, Double side cooled		456 410	A
I _{RMS}	RMS on-state current			717	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	7500	A
			125	6800	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	281 x 10 ³	A ² s
			125	231 x 10 ³	A ² s
V _T	On-state voltage	On-state current = 1000A	125	1.85	V
V _{T(TO)}	Threshold voltage		125	1.05	V
r _T	On-state slope resistance		125	0.80	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 =6V	25	150	mA
V _{gt}	Gate trigger voltage	V _D =6V	25	3.0	V
I _H	Holding current	V _D =6V, gate open circuit	25	300	mA
I _L	Latching current	V _D =6V	25	600	mA
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, Double side cooled		0.072	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case, Double side cooled		0.082	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, Double side cooled		0.02	°C/W
T _j	Max. junction temperature			125	°C
T _{stg}	Storage temperature			-40 ... 125	°C
M	Clamping Force			4 - 5	kN
W	Weight (Approx.)			60	gm
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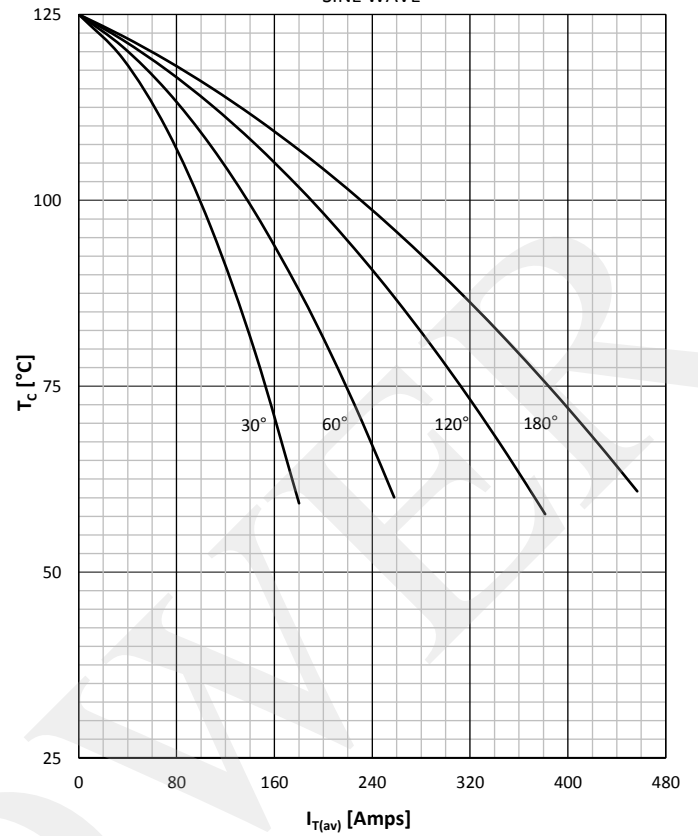
DISSIPATION CHARACTERISTICS

SINE WAVE



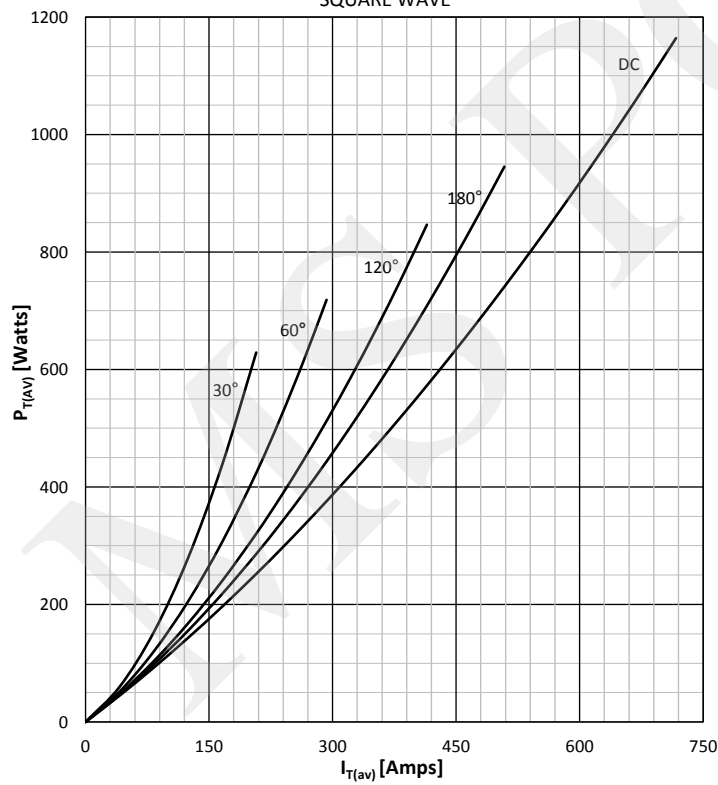
ON STATE CURRENT DERATING CURVE

SINE WAVE



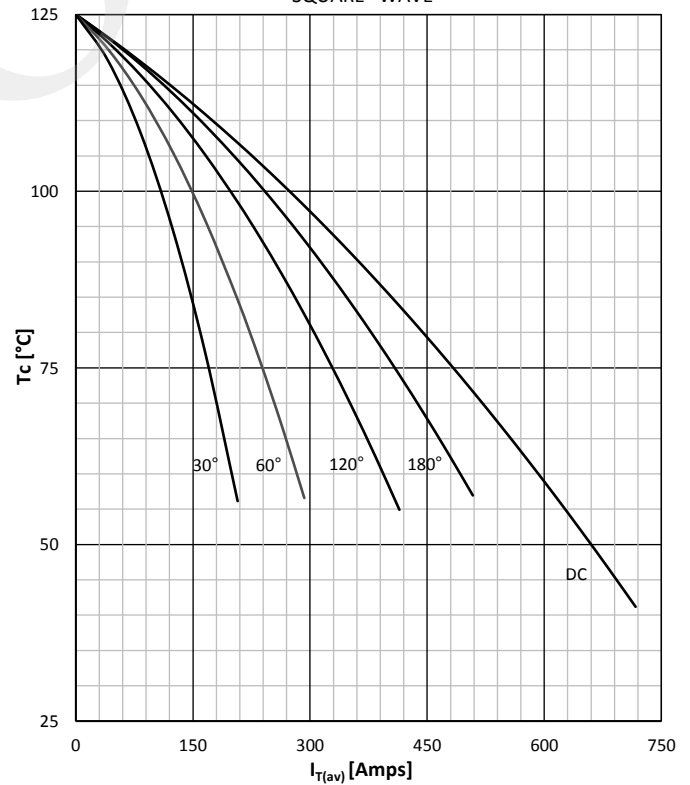
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



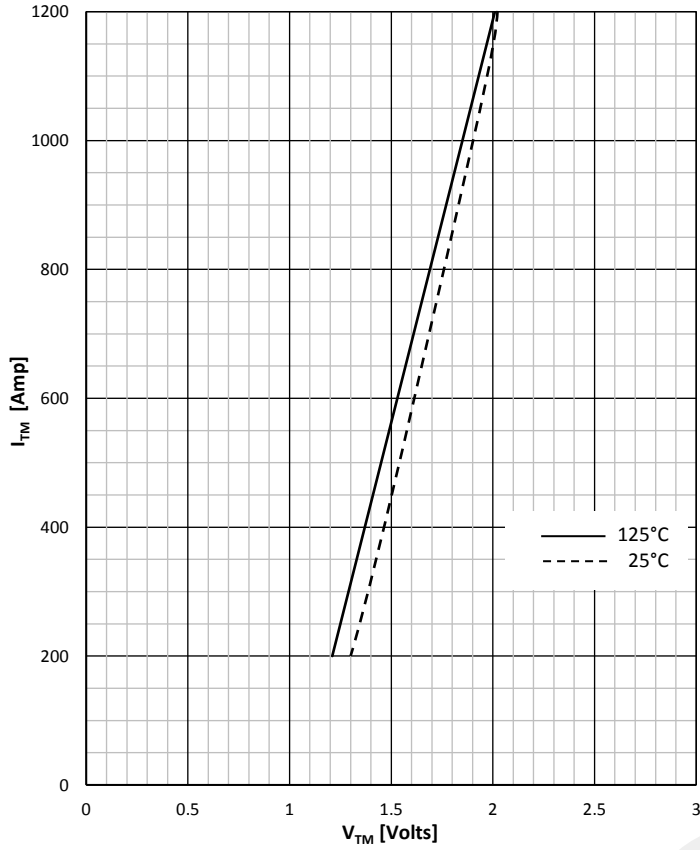
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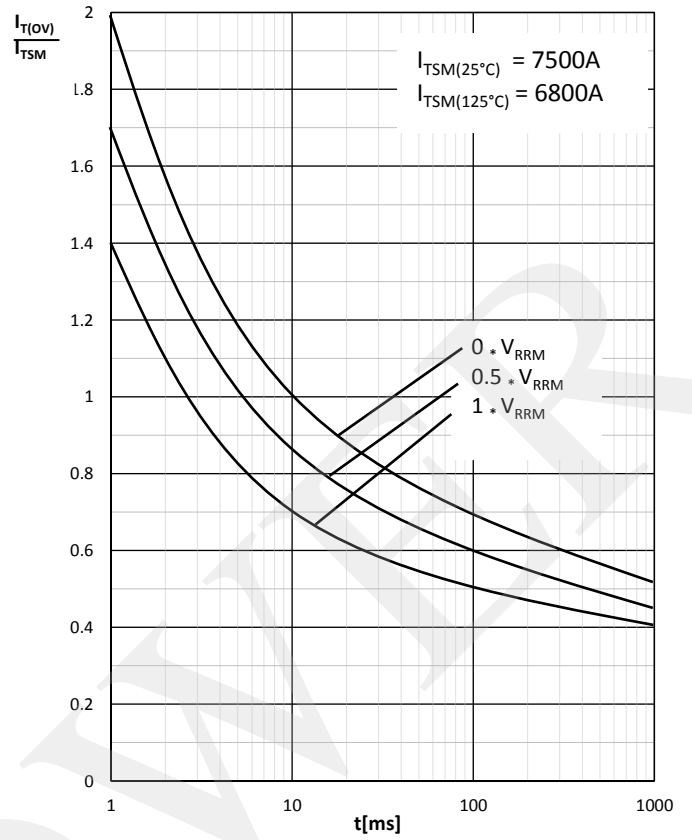
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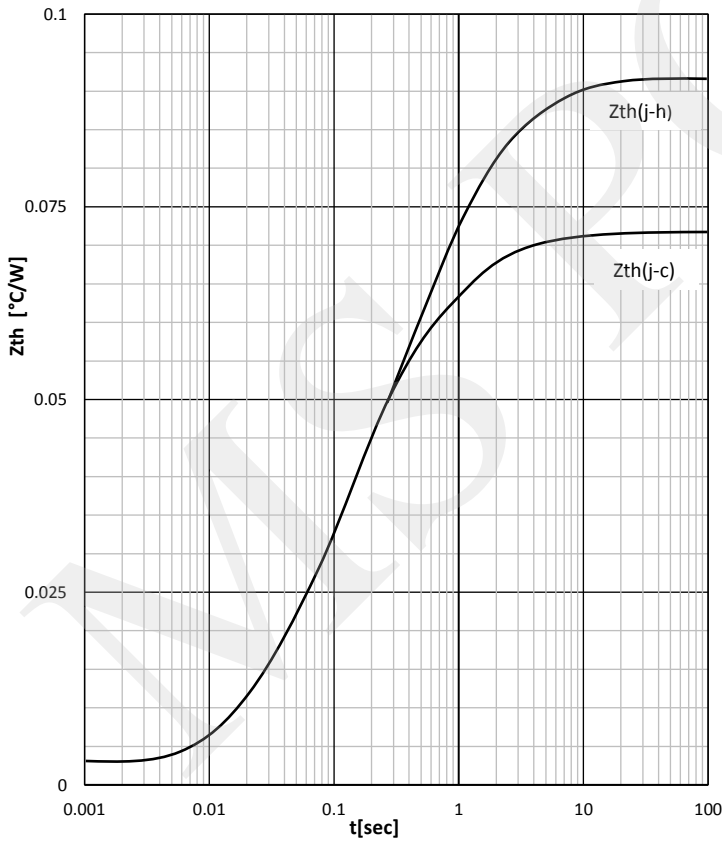
ON STATE CHARACTERISTICS



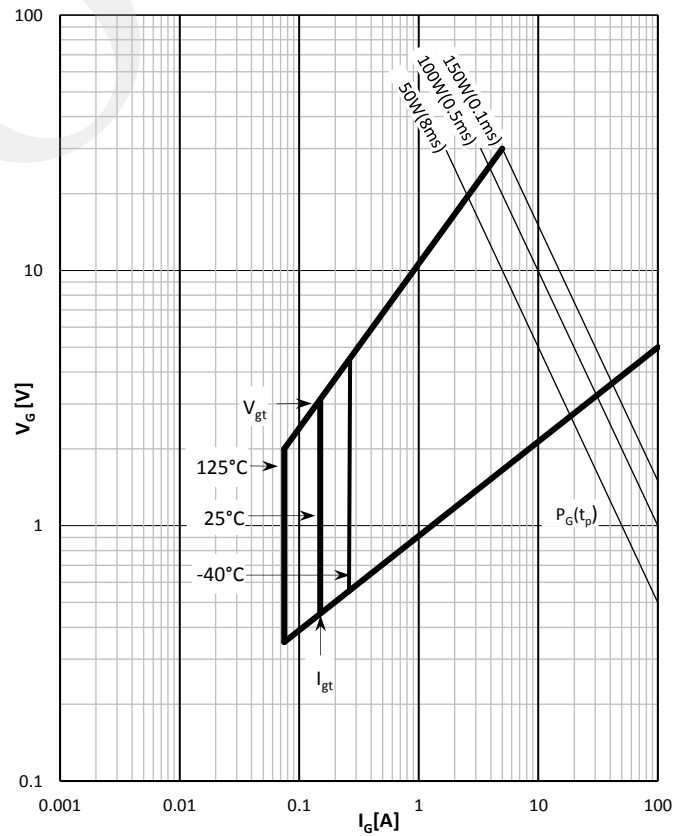
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



GATE TRIGGER CHARACTERISTICS



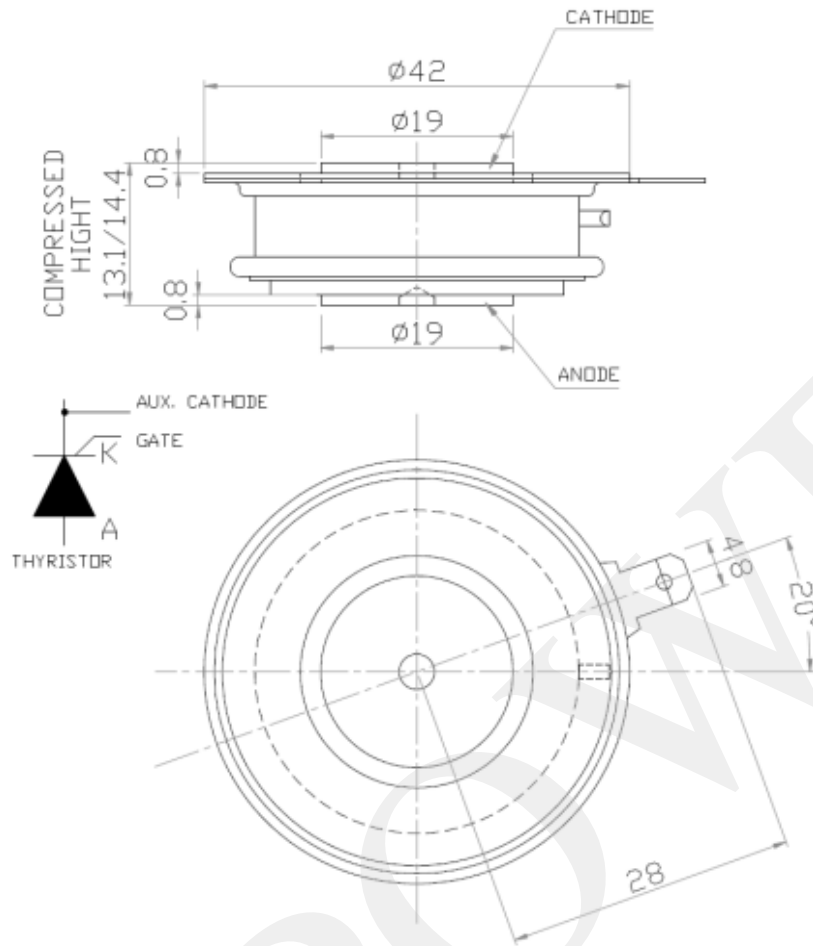
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