

Key Parameters

V_{DRM} / V_{RRM}	= 1600V
$I_{T(AV)}$	= 121A
I_{TSM}	= 3000A
$V_{T(TO)}$	= 0.90V
r_T	= 1.80m Ω

Features

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

Applications

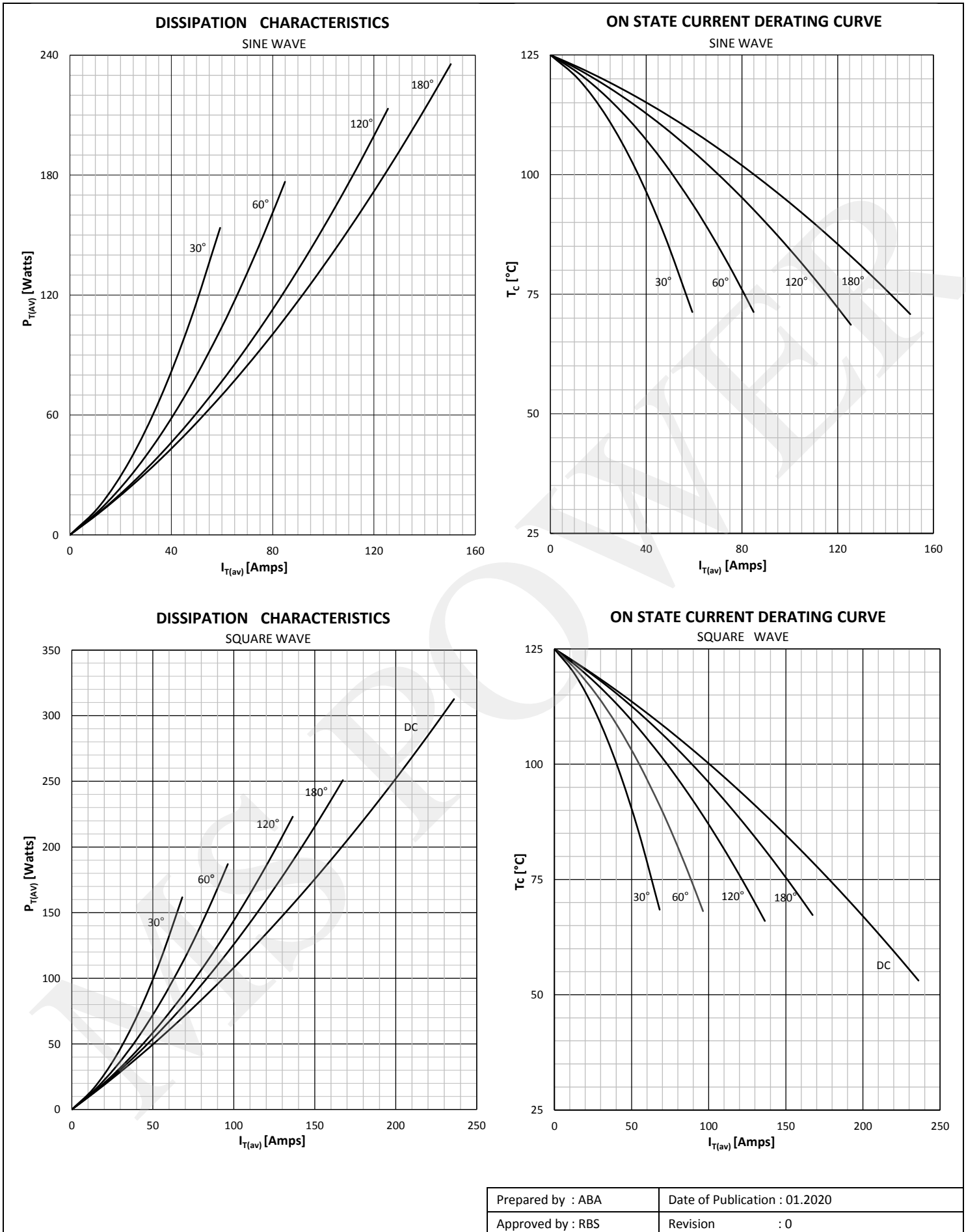
- Power Supplies
- DC motor control
- Controlled Rectifiers
- AC switch

Ordering Information

MS T	122	S	XX	U	B
Phase Control Thyristor	Current Code	Stud / Flat Base Version	Voltage Code Code X 100 = V_{DRM}/V_{RRM}	Stud Threads U = 1/2" UNF	Technology B = Solder Bond Technology
Order Code MS T122S16UB : 1600V V_{DRM}, V_{RRM} , Stud base Thyristor with 1/2" UNF threads					

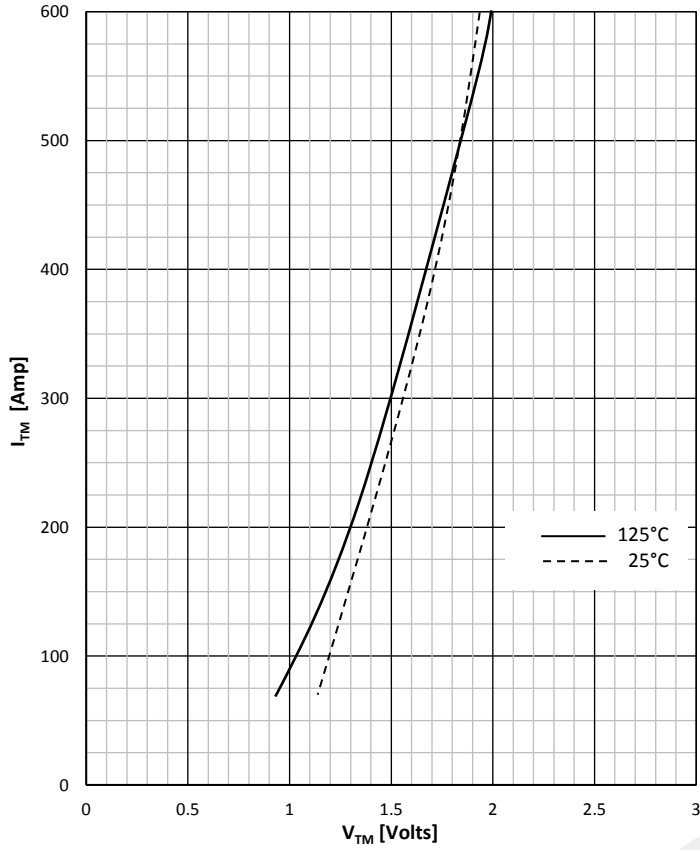
Prepared by : ABA	Date of Publication : 01.2020
Approved by : RBS	Revision : 0

Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		125	200 - 1600	V
V _{RSM}	Non-repetitive peak reverse voltage		125	300 - 1700	V
V _{DRM}	Repetitive peak off-state voltage		125	200 - 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 _c =85°C 180° sin ,50 Hz, T _c =70°C		121 150	A
I _{RMS}	RMS on-state current	T _c =70°C		236	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	3000	A
			125	2200	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	45000	A ² s
			125	24200	A ² s
V _T	On-state voltage	On-state current = 470A	125	1.80	V
V _{T(TO)}	Threshold voltage		125	0.90	V
r _T	On-state slope resistance		125	1.80	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	400	mA
I _L	Latching current	V _D =6V	25	600	mA
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case		0.23	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case		0.26	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink		0.08	°C/W
T _j	Max. junction temperature			125	°C
T _{stg}	Storage temperature			-40 125	°C
M	Mounting torque			14	NM
W	Weight (Approx.)			200	gm
			Prepared by : ABA	Date of Publication : 01.2020	
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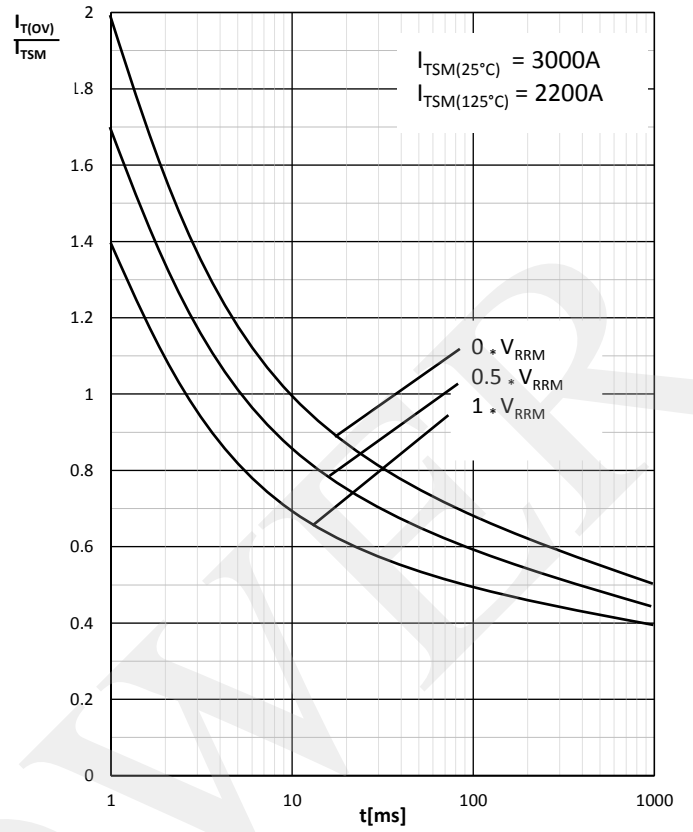


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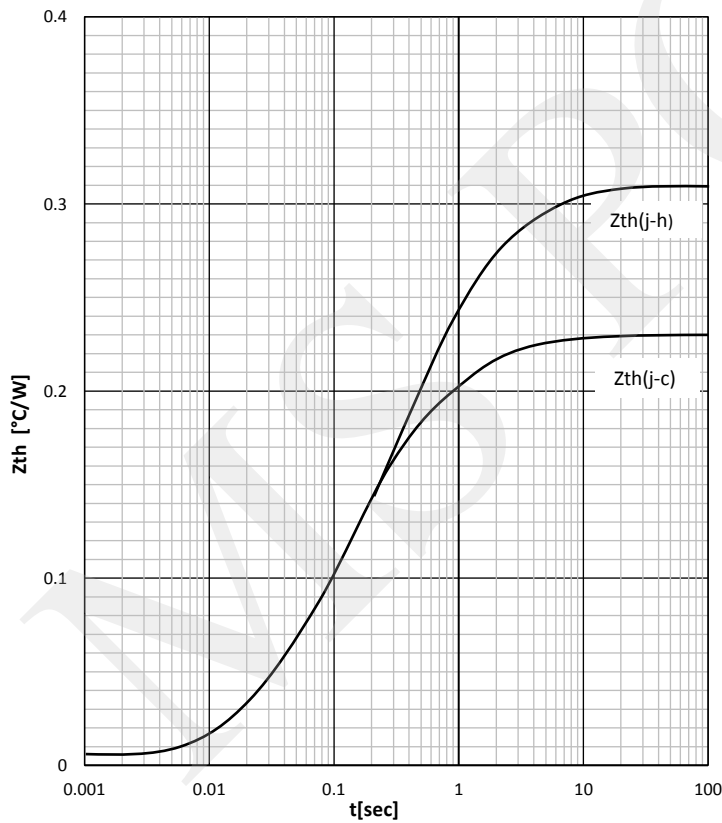
ON STATE CHARACTERISTIC



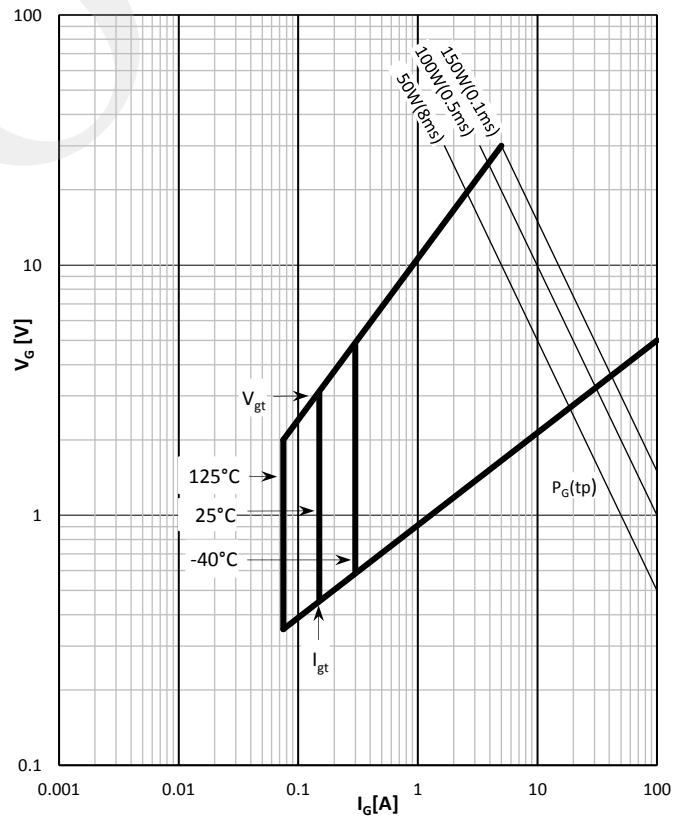
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE

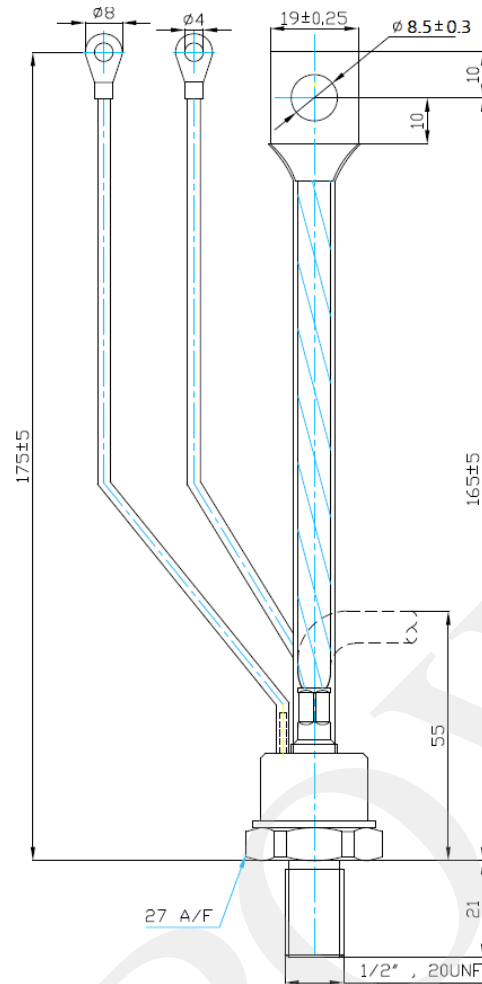


GATE TRIGGER CHARACTERISTICS



Prepared by : ABA	Date of Publication : 01.2020
Approved by : RBS	Revision : 0

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