MS T435

Key Parameters

V_{DRM} / V_{RRM}	= 6500V
$I_{T(AV)}$	= 435A
I_{TSM}	= 7.5kA
$V_{T(TO)}$	= 1.108V
r_T	= 1.647mΩ

Features

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

Applications

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

Ordering Information

MS T	435	C	X X
Phase Control Thyristor	Current Code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS T435C65 : 6500V V_{DRM},V_{RRM}, 35mm clamp height capsule thyristor			

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MS T435

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		125	5500 - 6500	V
V_{RSM}	Non-repetitive peak reverse voltage		125	5600 - 6600	V
V_{DRM}	Repetitive peak off-state voltage		125	5500 - 6500	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	125	100	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	100	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		490 435	A
I_{RMS}	RMS on-state current	T_c=70°C, Double side cooled		769	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	7500	A
			125	6600	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	281 x 10^3	A^2s
			125	218 x 10^3	A^2s
V_T	On-state voltage	On-state current = 800A	125	2.45	V
$V_{T(TO)}$	Threshold voltage		125	1.108	V
r_T	On-state slope resistance		125	1.647	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current, Rep.	V_D=67% V_{DRM} to 2xI_{TAV}, Gate source 30V 10Ω, t_r<0.5µs	125	200	A/µs
dv/dt	Critical rate of rise of off-state voltage	V_{DR} = 67%V_{DRM}	125	1500	V/µs
GATE					
I_{gt}	Gate trigger current	V_D=6V	25	350	mA
V_{gt}	Gate trigger voltage	V_D=6V	25	1.5	V
I_H	Holding current	V_D=6V, gate open circuit	25	300	mA
I_L	Latching current	V_D=6V	25	3000	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, Double side cooled		0.038	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case, Double side cooled		0.044	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, Double side cooled		0.0072	°C/W
T_j	Max. junction temperature			125	°C
T_{stg}	Storage temperature			-40 125	°C
M	Clamping Force			10 - 13	kN
W	Weight (Approx.)			255	gm

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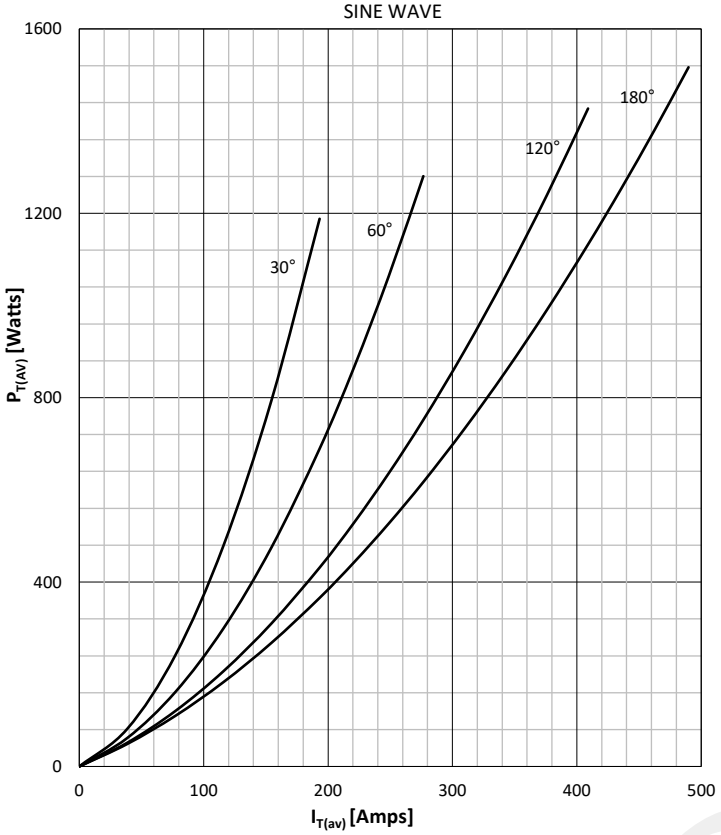
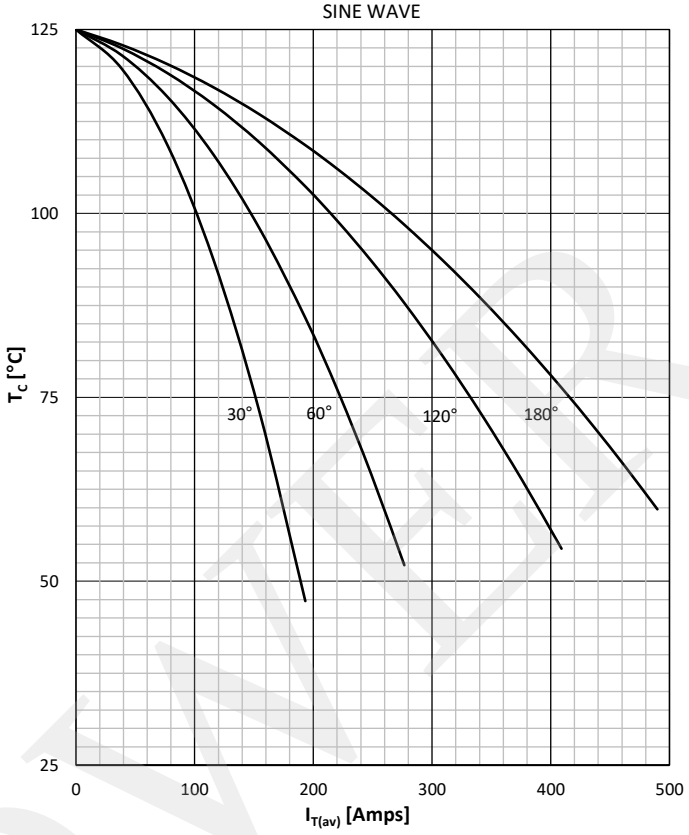
DISSIPATION CHARACTERISTICS

SINE WAVE



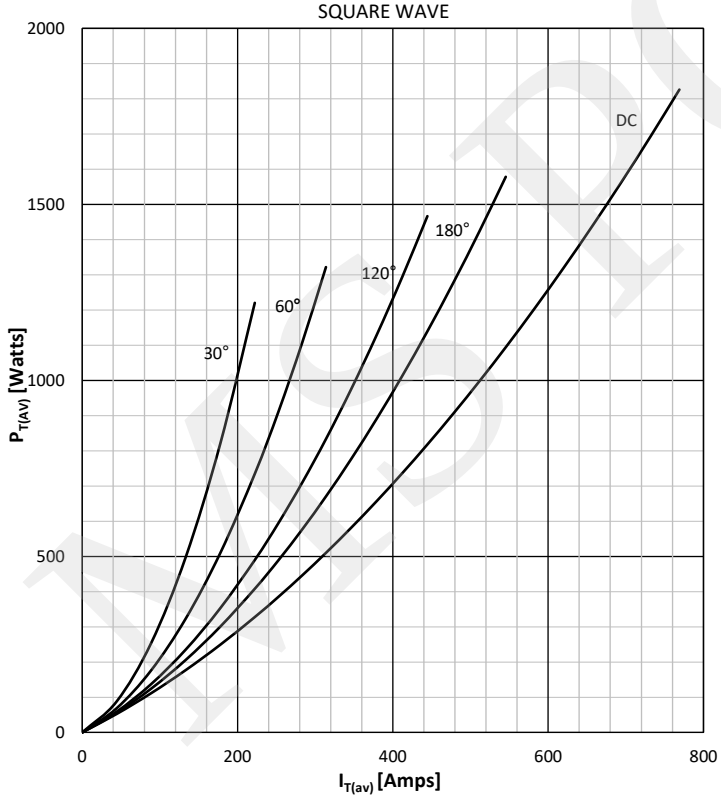
ON STATE CURRENT DERATING CURVE

SINE WAVE



DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

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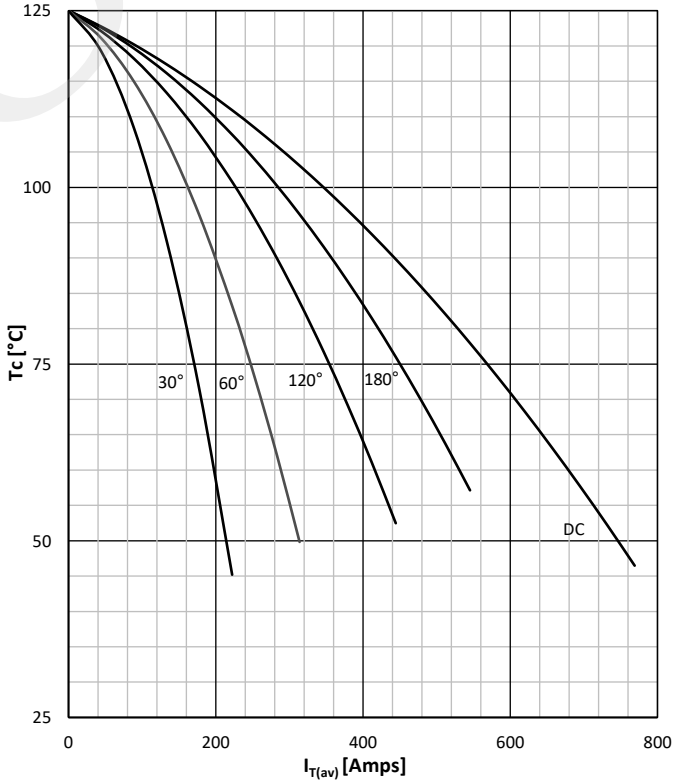

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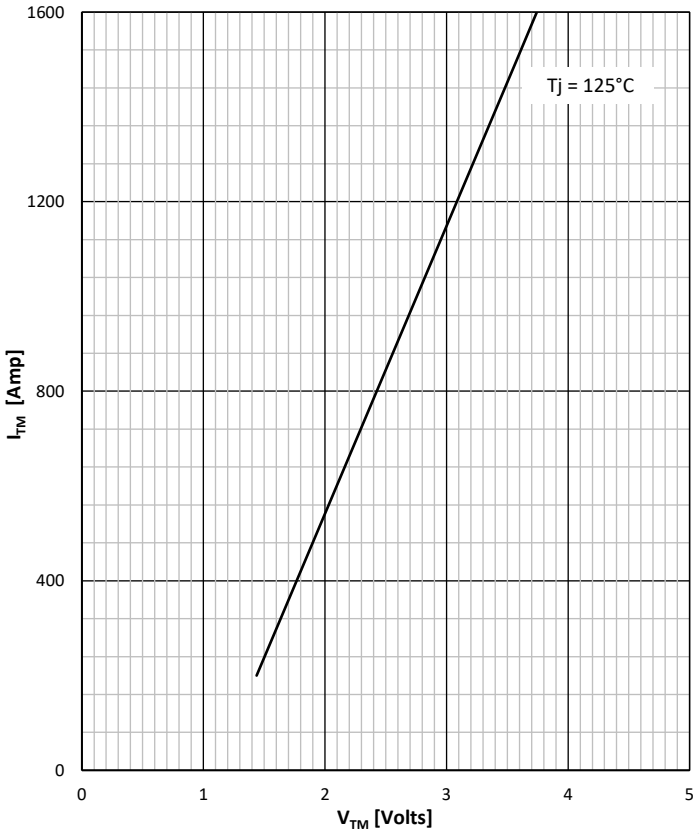
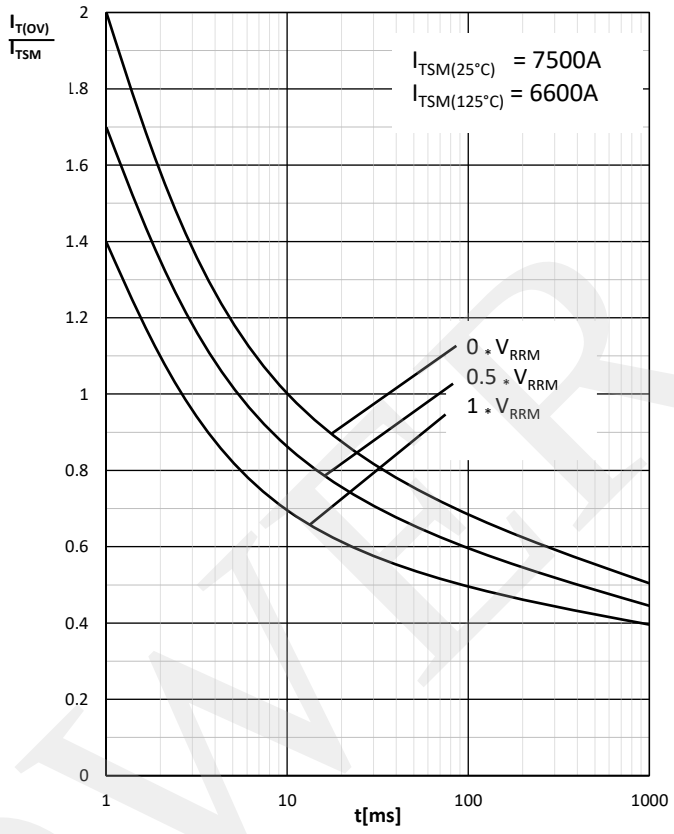
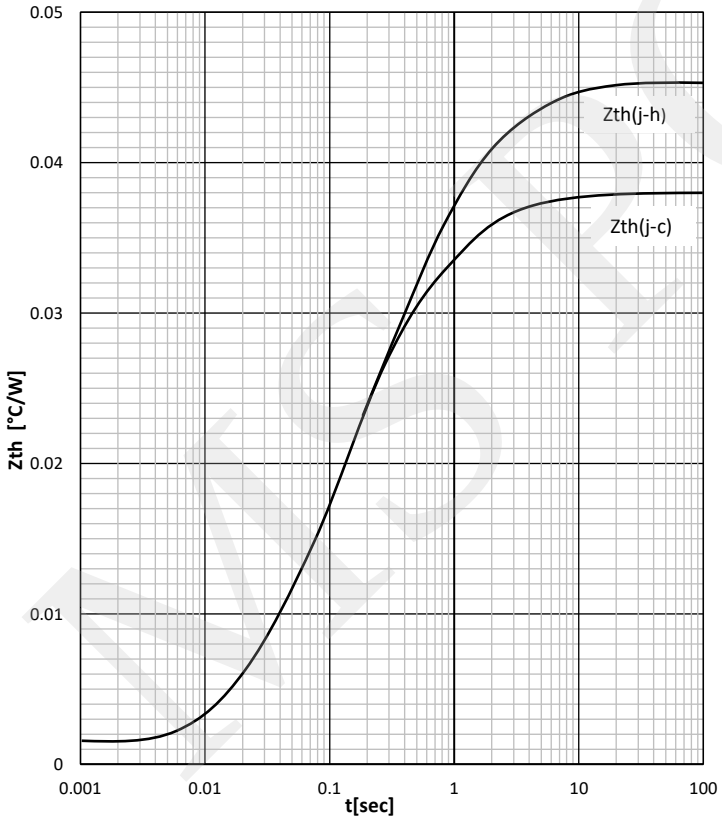
ON STATE CHARACTERISTIC



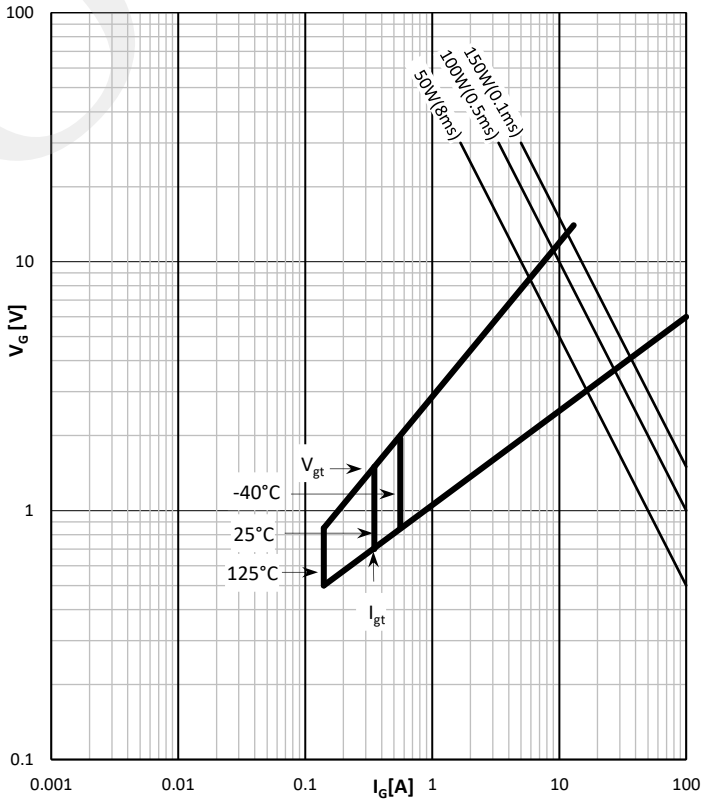
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



GATE TRIGGER CHARACTERISTICS



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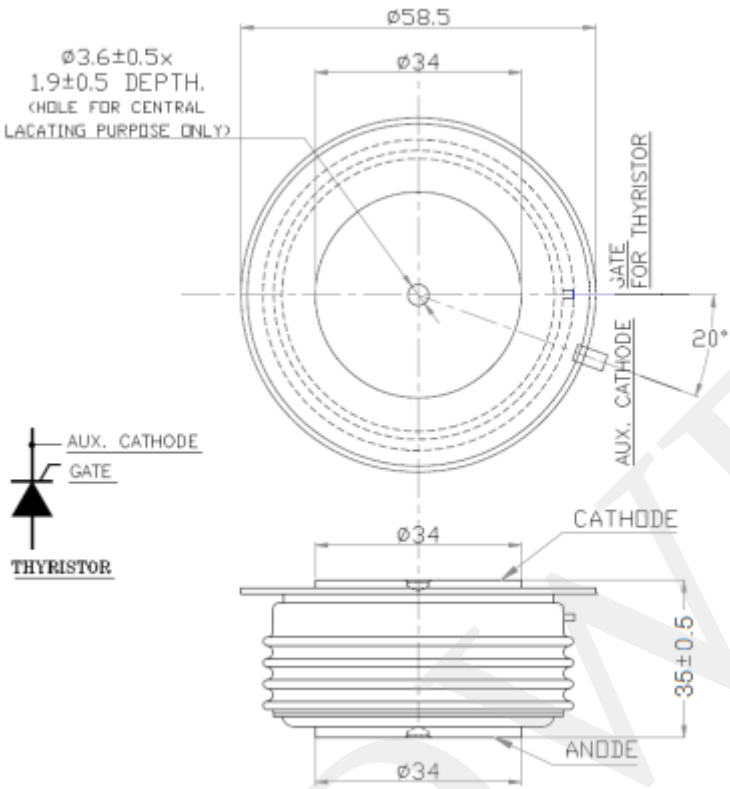
Outline



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