MS TT/TD164

Key Parameters

V_{DRM} / V_{RRM} = 1800V
$I_{T(AV)}$ = 164A
I_{TSM} = 5200A
$V_{T(TO)}$ = 0.85V
r_T = 0.95mΩ

Features

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

Applications

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

Ordering Information

MS	TT	164	S	X X
Fixed code	TT- Thyristor- Thyristor Module TD- Thyristor- Diode Module	Current Code	Technology S = Solder Bond Technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS TT164S18 : 1800V V_{DRM},V_{RRM}, Thyristor-Thyristor Module				

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Symbol	Characteristic	Conditions	Tj [°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	30	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	30	mA
CONDUCTING					
$I_{T(AV)}$	Mean on state current	180° sin ,50 Hz, T_c=85°C		164	A
I_{RMS}	RMS on-state current			254	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	5200	A
			125	4400	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	135000	A^2s
			125	96800	A^2s
V_T	On-state voltage	On-state current = 500A	25	1.53	V
$V_{T(TO)}$	Threshold voltage		125	0.85	V
r_T	On-state slope resistance		125	0.95	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	200	mA
V_{gt}	Gate trigger voltage	V_D=6V	25	3.0	V
I_H	Holding current	V_D=6V, gate open circuit	25	600	mA
I_L	Latching current	V_D=6V	25	1000	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, per arm per module		0.20 0.10	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case, per arm per module		0.23 0.12	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per arm per module		0.06 0.03	°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			6 ± 15%	Nm
M2	Terminal connection torque			6 ± 15%	Nm
W	Weight (Approx.)			165	gm

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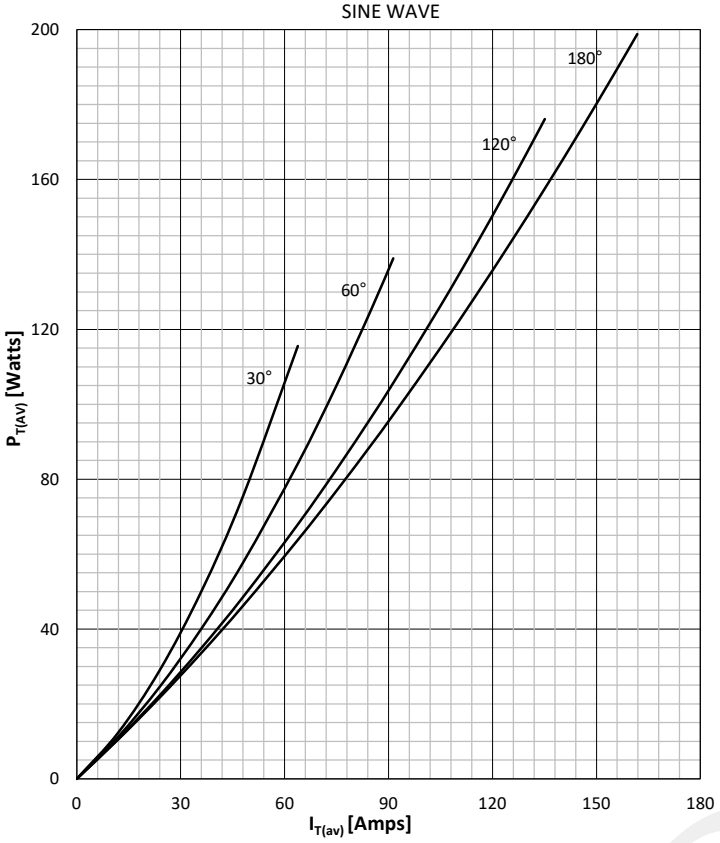
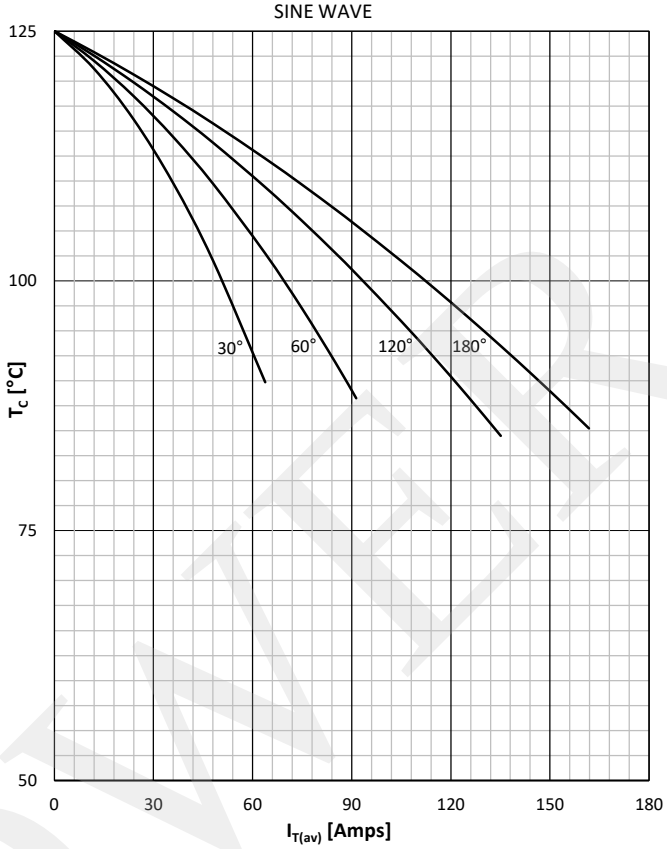
DISSIPATION CHARACTERISTICS

SINE WAVE



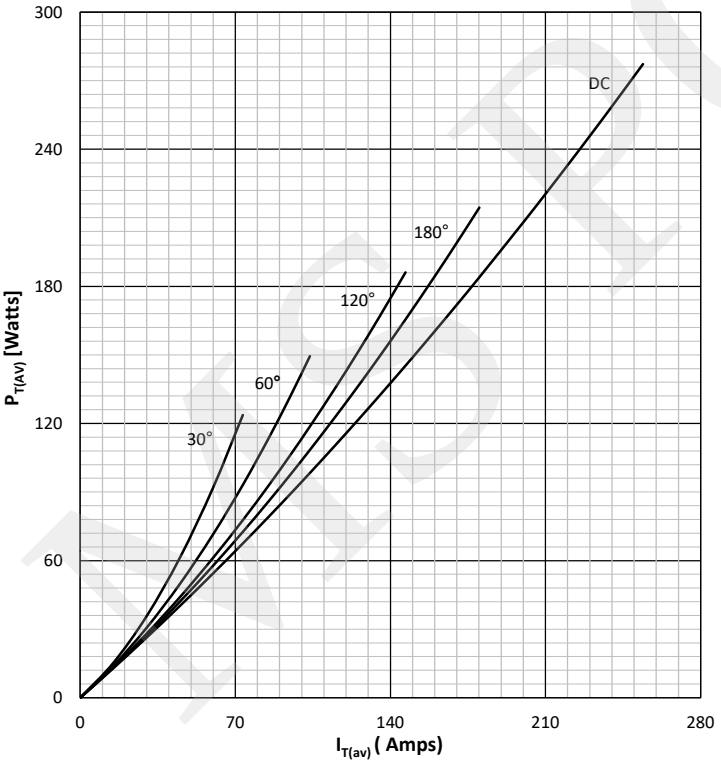
ON STATE CURRENT DERATING CURVE

SINE WAVE



DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

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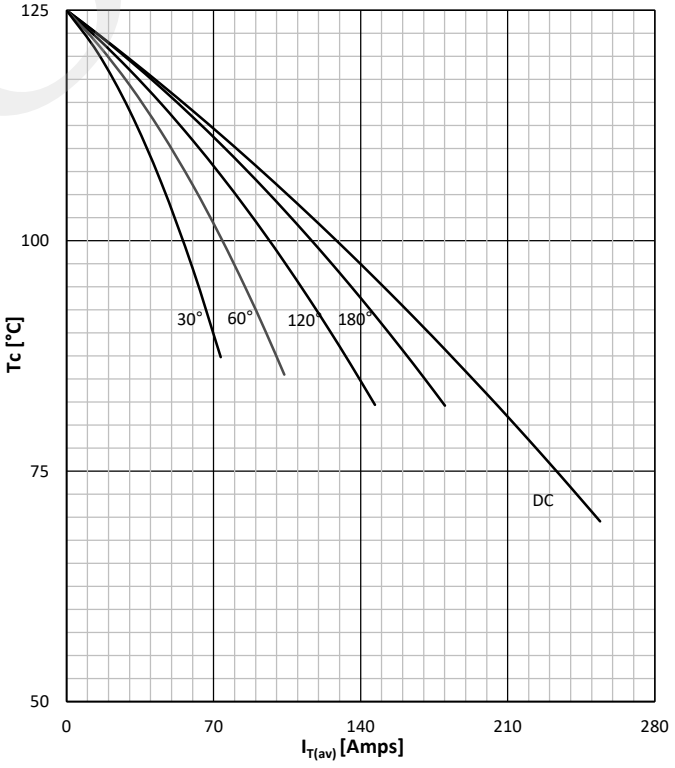

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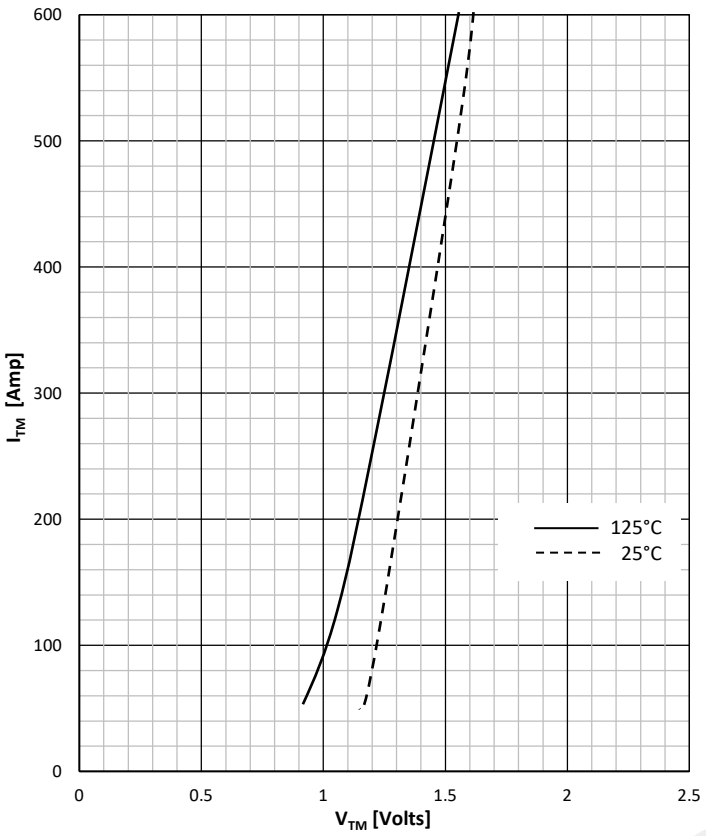
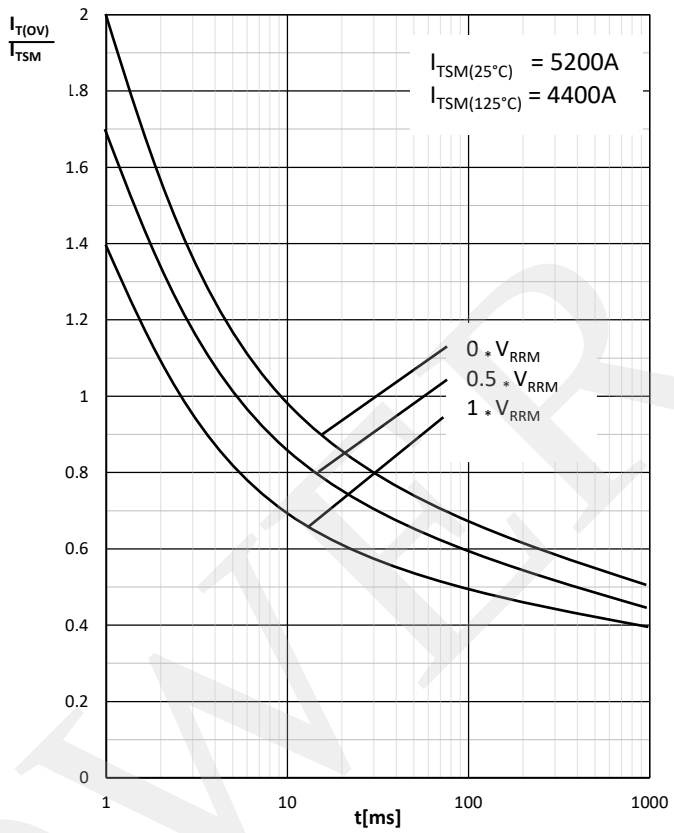
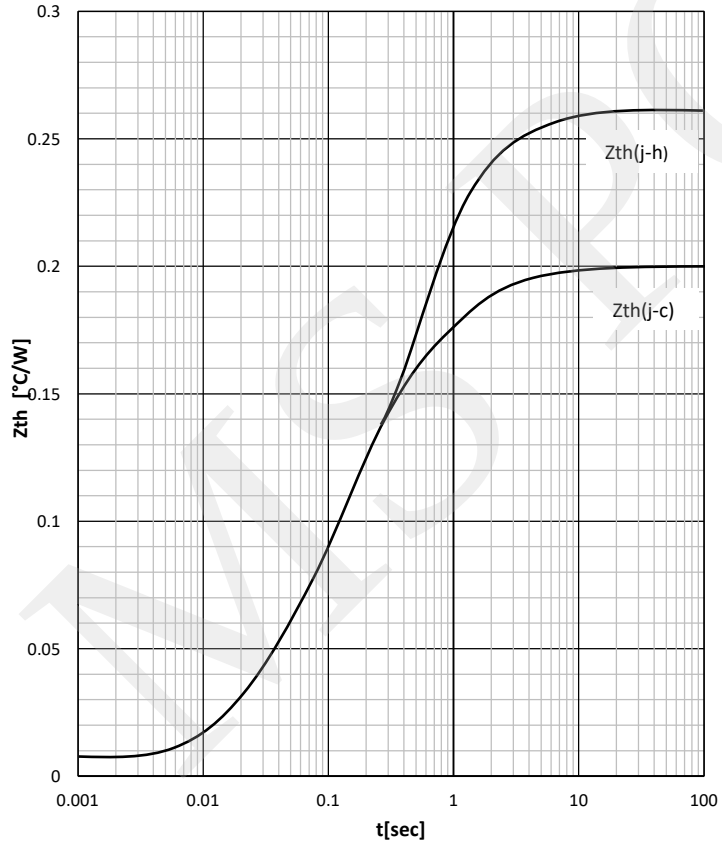
ON -STATE CHARACTERISTIC



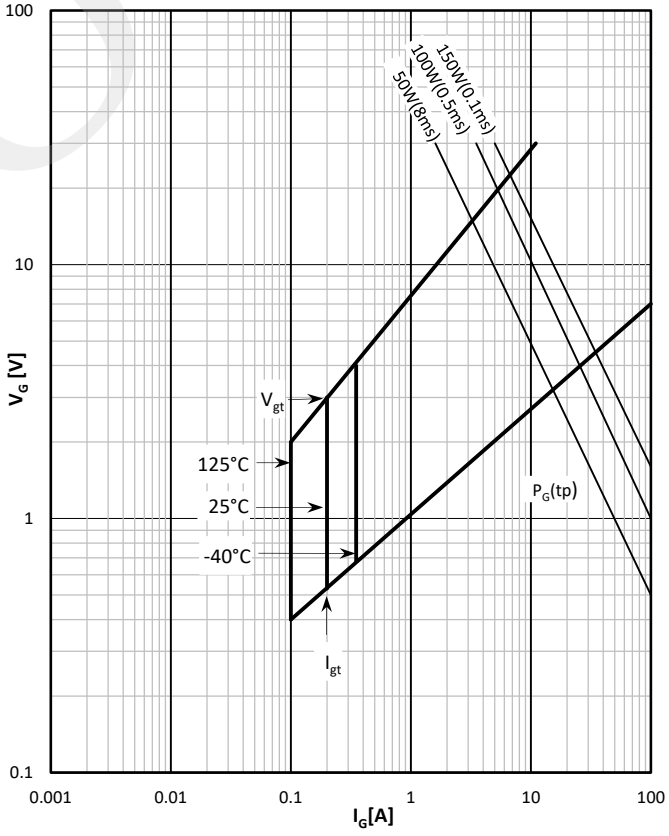
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



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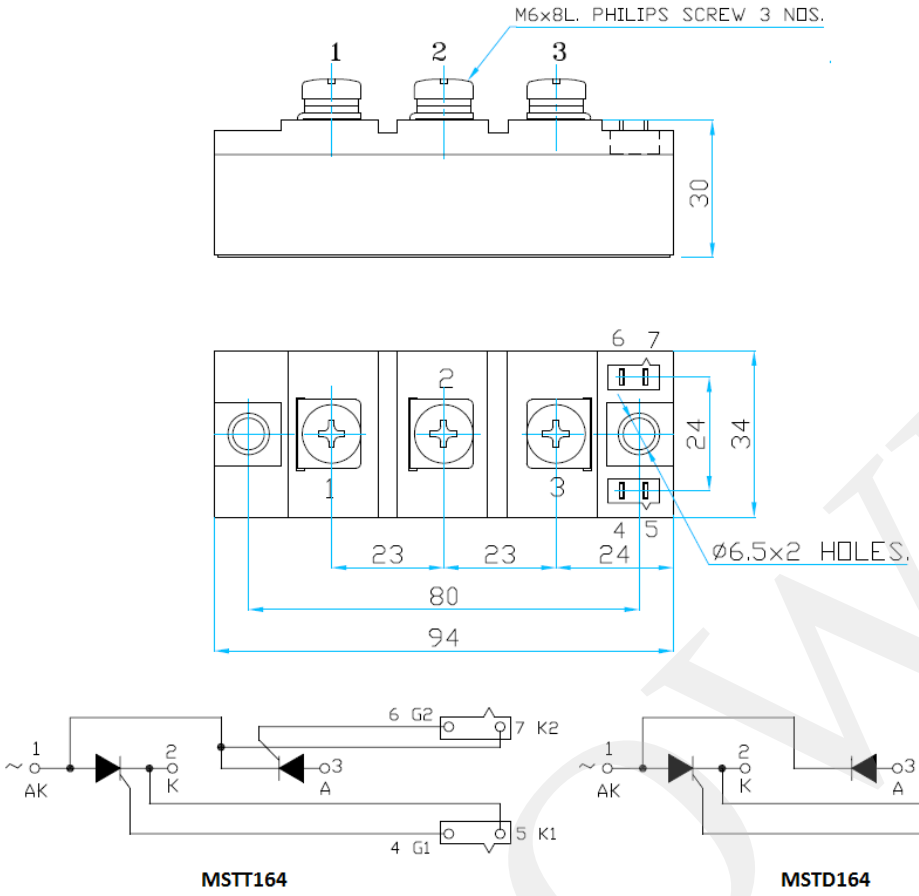
Outline



MSTT164

MSTD164

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