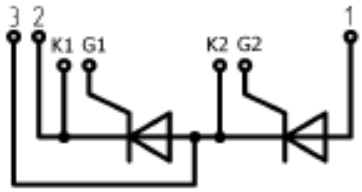
MSTT/TD740



Key Parameters

V_{DRM} / V_{RRM}	= 2400V
$I_{T(AV)}$	= 740A
I_{TSM}	= 28000A
$V_{T(TO)}$	= 0.90V
r_T	= 0.21mΩ

Features

- Full blocking capability over wide temperature range
- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Pressure contacts technology for high reliability

Applications

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

Ordering Information

MS	TT	740	K	X X
Fixed code	TT- Thyristor- Thyristor Module TD- Thyristor- Diode Module	Current Code	Technology K = Pressure Contact Technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS TT740K24 : 2400V 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	2000 - 2400	V
V_{RSM}	Non-repetitive peak reverse voltage		125	2100 - 2500	V
V_{DRM}	Repetitive peak off-state voltage		125	2000 - 2400	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	125	150	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	150	mA
CONDUCTING					
$I_{T(AV)}$	Mean on state current	180° sin ,50 Hz, T_c=77°C		740	A
I_{RMS}	RMS on-state current			1162	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	28000	A
			125	24500	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	3920×10^3	A^2s
			125	3001×10^3	A^2s
V_T	On-state voltage	On-state current = 3140A	25	1.55	V
$V_{T(TO)}$	Threshold voltage		125	0.91	V
r_T	On-state slope resistance		125	0.21	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current non repetitive (f=1Hz)	V_D = 67%V_{DRM}, I_{TM}=2I_{TAV}, Gate pulse I_G=2A, t_{GP}=50µs, d_{iG}/dt≥1A/µs	125	400	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	250	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	1500	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, per arm per module		0.050 0.025	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case, per arm per module		0.0575 0.0285	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per arm per module		0.016 0.008	°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		3.0	KV
M1	Mounting torque			9 ± 15%	Nm
M2	Terminal connection torque			18 ± 15%	Nm
W	Weight (Approx.)			3500	gm

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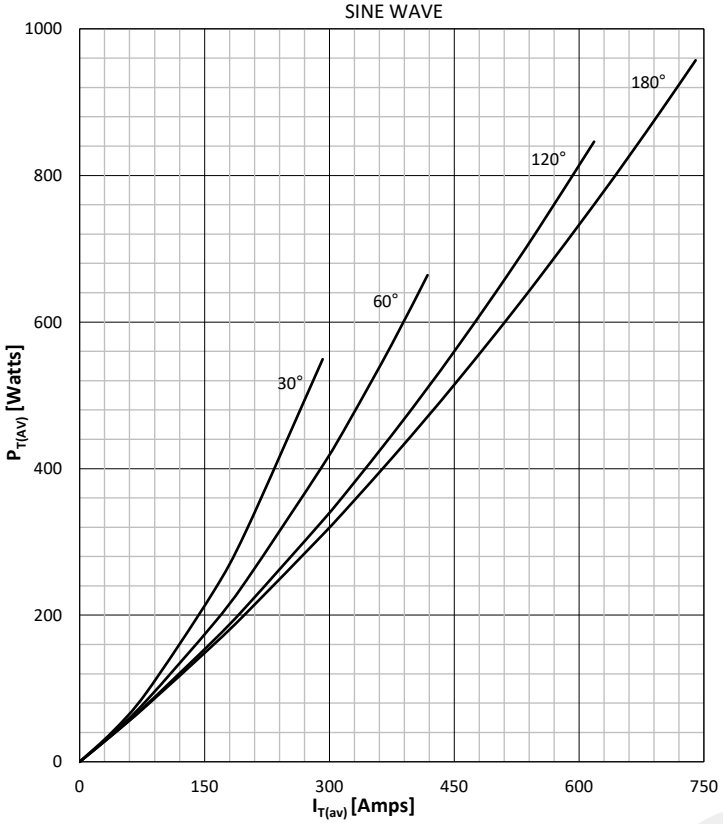
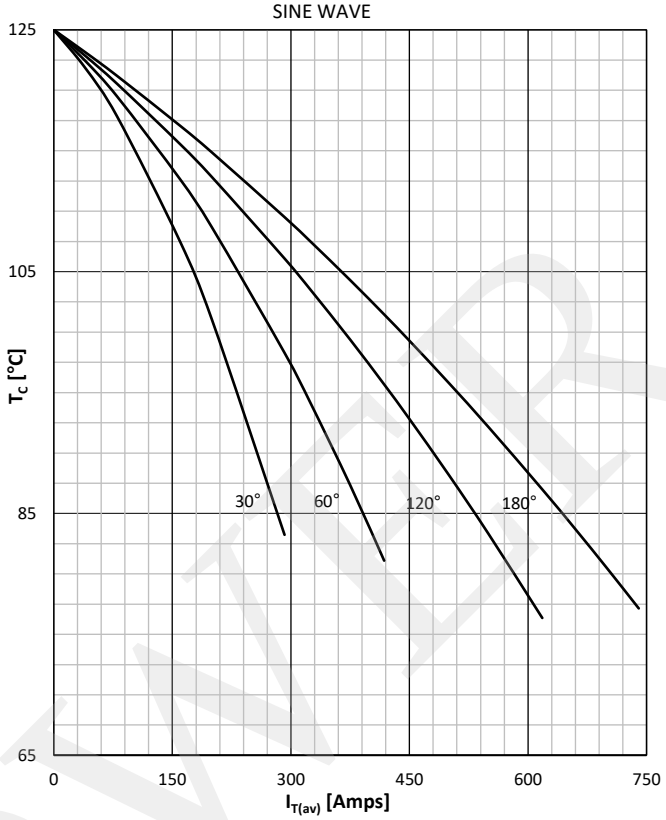
DISSIPATION CHARACTERISTICS

SINE WAVE



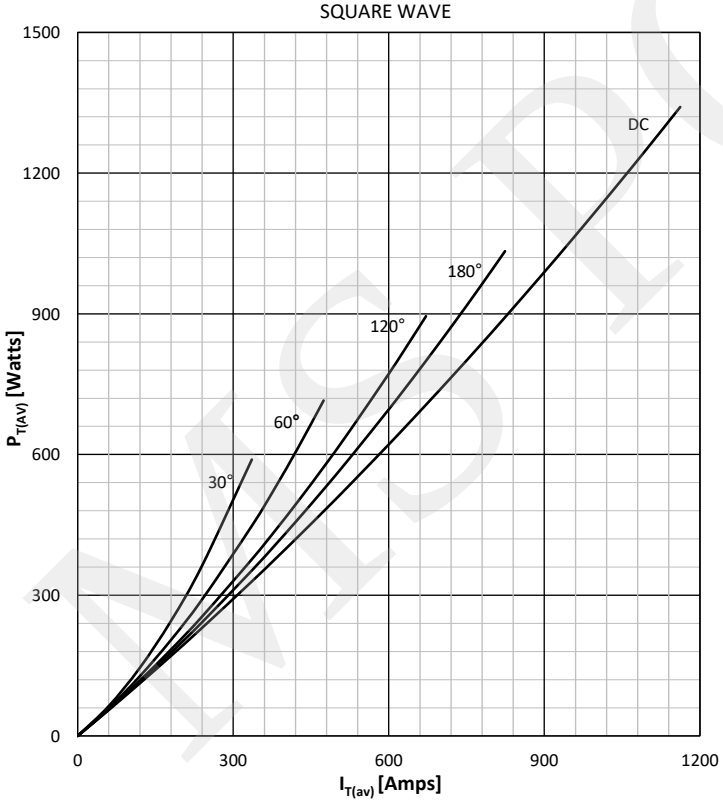
ON STATE CURRENT DERATING CURVE

SINE WAVE



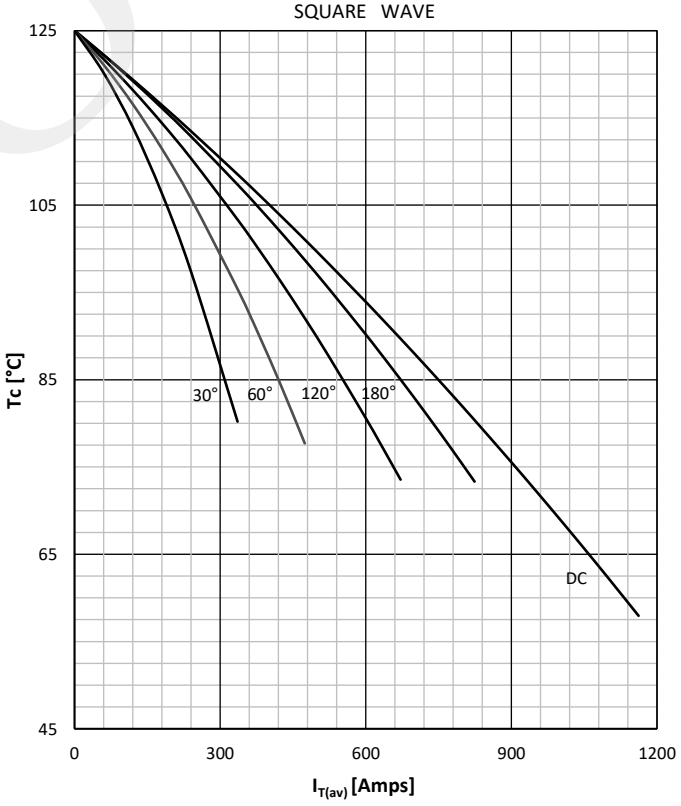
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



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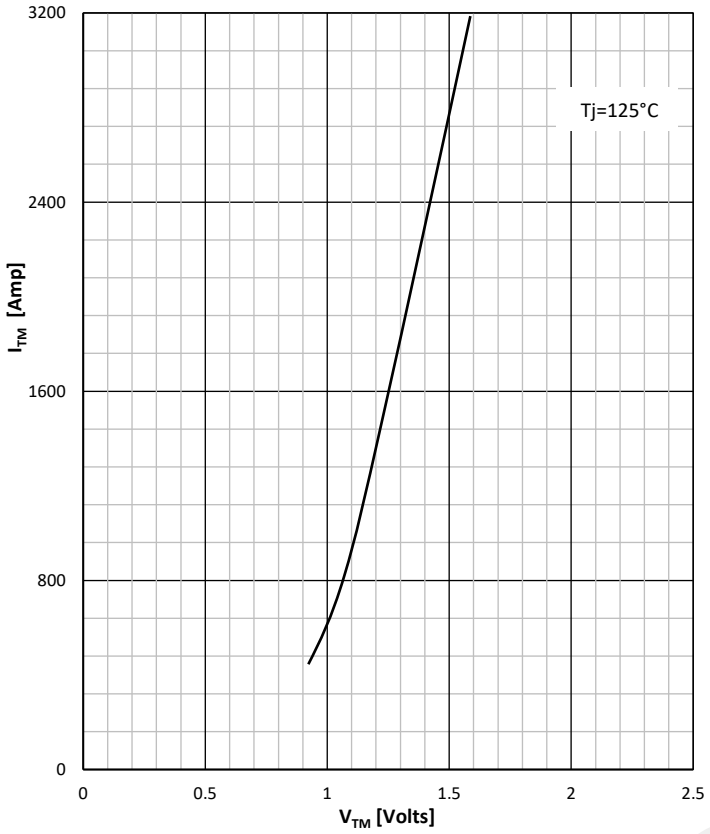
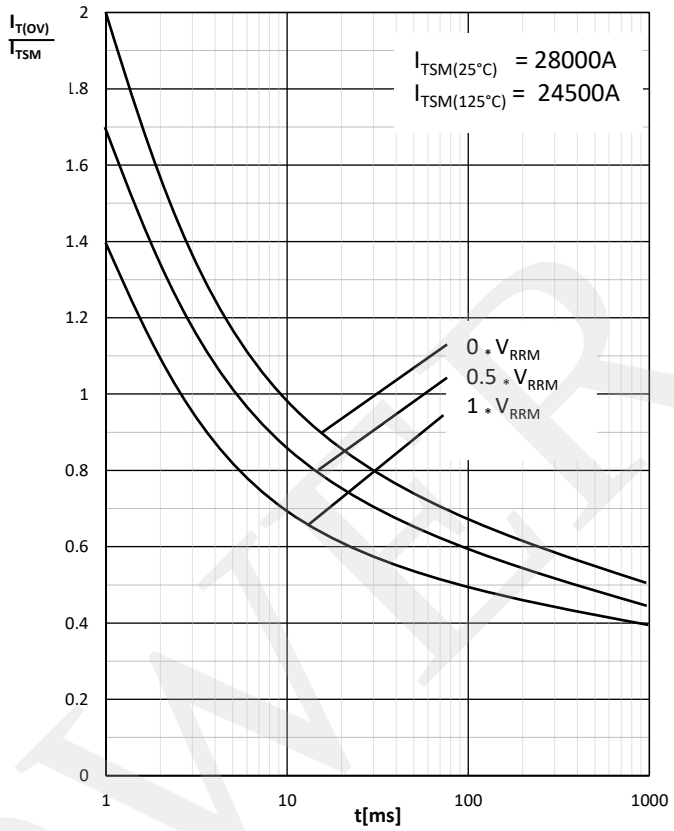
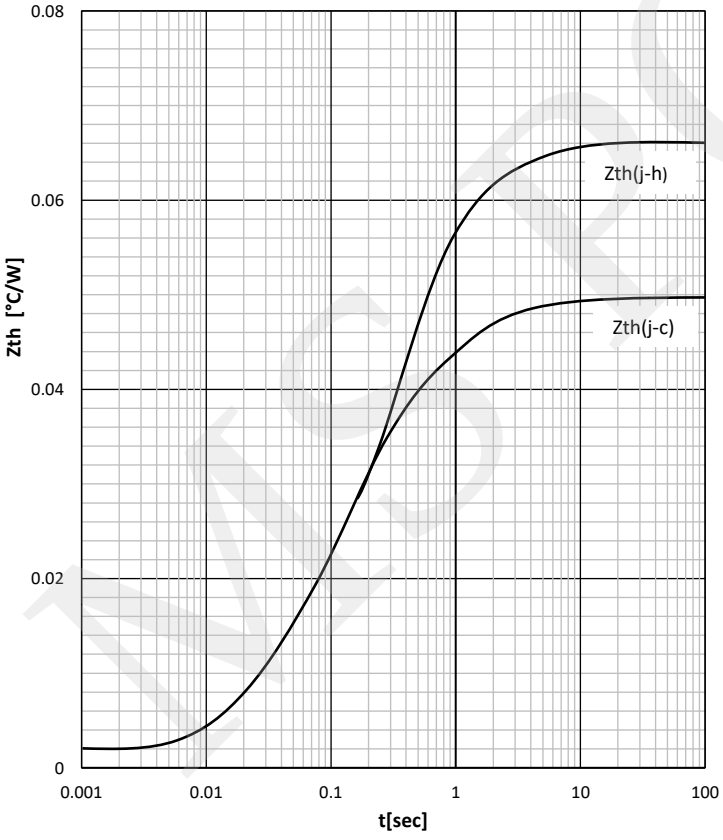
ON -STATE CHARACTERISTIC



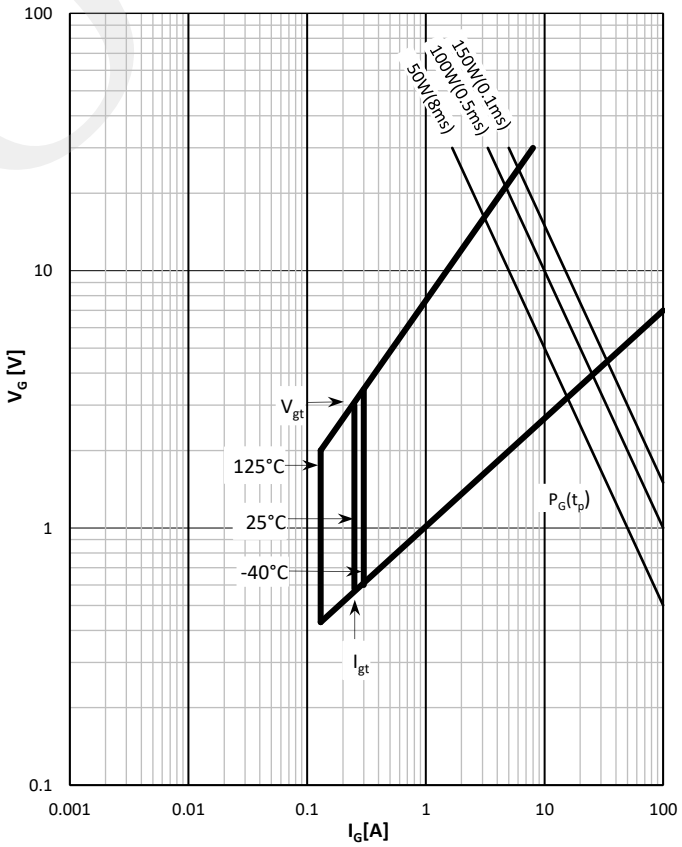
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



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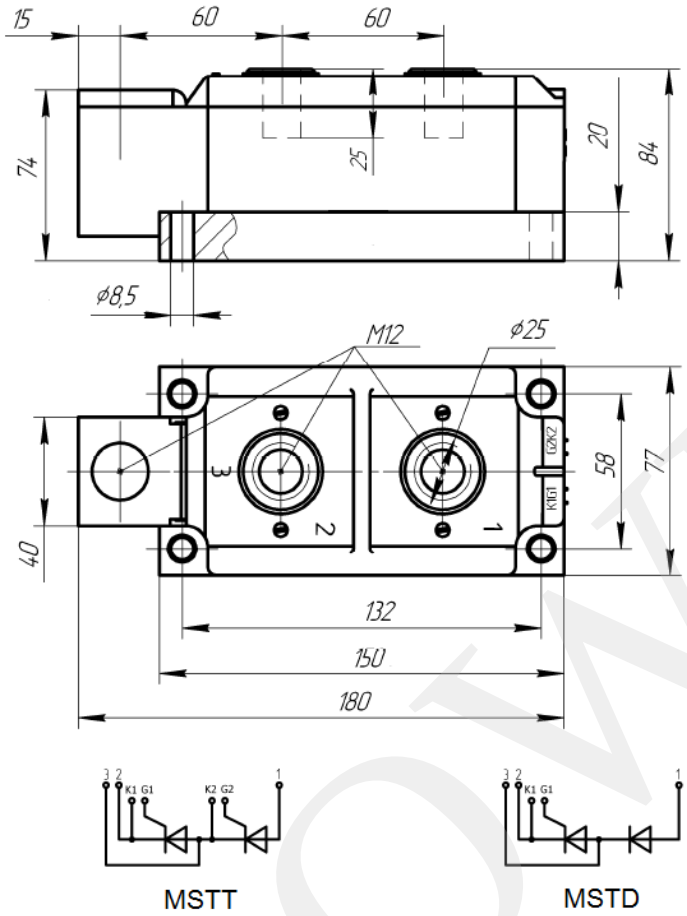
Outline



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