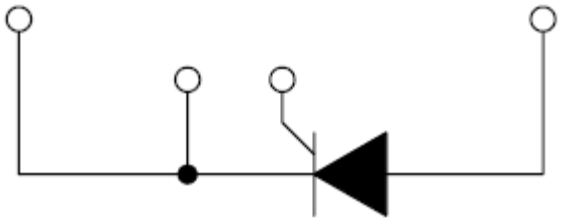
MS TZ400



TZ

Key Parameters

V_{DRM} / V_{RRM}	= 1800V
$I_{T(AV)}$	= 400A
I_{TSM}	= 14000A
$V_{T(TO)}$	= 0.92V
r_T	= 0.30mΩ

Features

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

Ordering Information

MS	TZ	400	K	X X
Fixed code	TZ - Thyristor Module	Current Code	Technology K = Pressure Contact Technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS TZ400K18 : 1800V V_{DRM},V_{RRM}, Thyristor Module				

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MS TZ400

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		130	200 - 1800	V
V_{RSM}	Non-repetitive peak reverse voltage		130	300 - 1900	V
V_{DRM}	Repetitive peak off-state voltage		130	200 - 1800	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	130	130	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	130	130	mA
CONDUCTING					
$I_{T(AV)}$	Mean on state current	180° sin ,50 Hz, T_c=84°C		400	A
I_{RMS}	RMS on-state current			628	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	14000	A
			130	12000	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	980×10^3	A^2s
			130	720×10^3	A^2s
V_T	On-state voltage	On-state current = 2400A	25	1.70	V
$V_{T(TO)}$	Threshold voltage		130	0.92	V
r_T	On-state slope resistance		130	0.30	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current	i_{GM}=1A, d_{iG}/dt=1A/µs, f=50Hz	130	125	A/µs
dv/dt	Critical rate of rise of off-state voltage	V_{DR} = 67%V_{DRM}	130	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	300	mA
I_L	Latching current	V_D=6V	25	1000	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, per module		0.095	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case, per module		0.11	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per module		0.02	°C/W
T_j	Max. junction temperature			130	°C
T_{stg}	Storage temperature			-40 130	°C
V_{ISOL}	Insulation test voltage,RMS	F=50Hz, 1min		3.0	KV
M1	Mounting torque			7 ± 15%	Nm
M2	Terminal connection torque			12 ± 15%	Nm
W	Weight (Approx.)			650	gm

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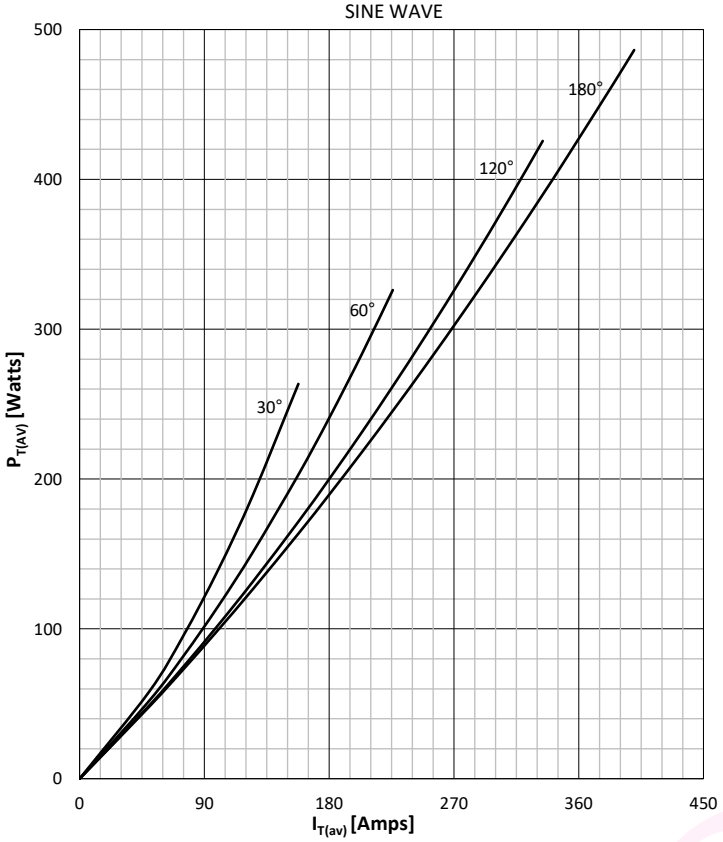
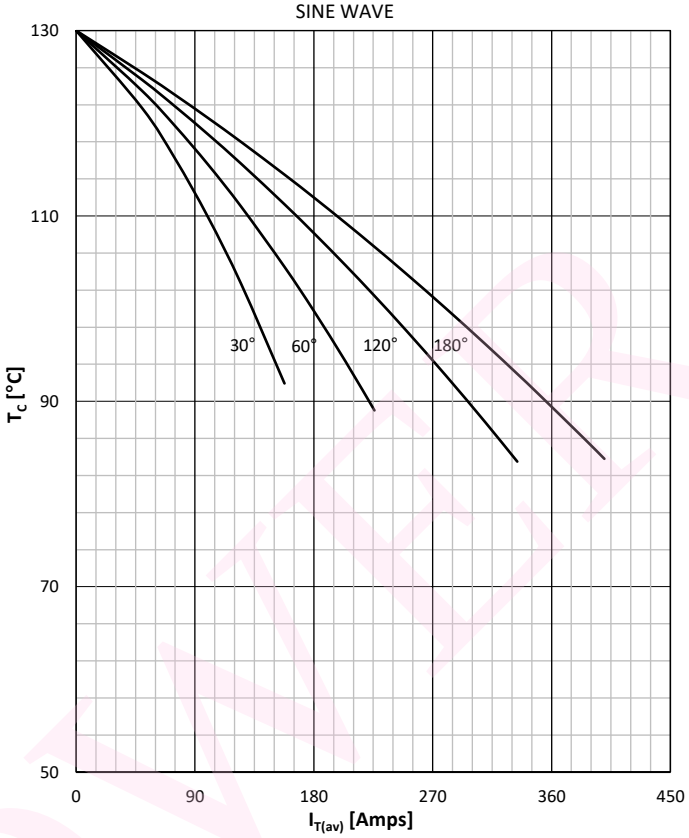
DISSIPATION CHARACTERISTICS

SINE WAVE



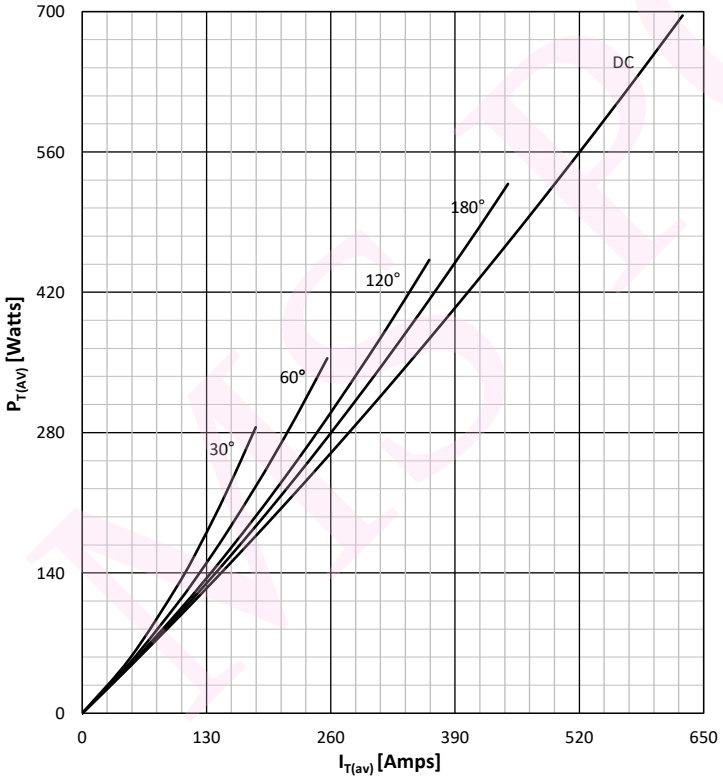
ON STATE CURRENT DERATING CURVE

SINE WAVE



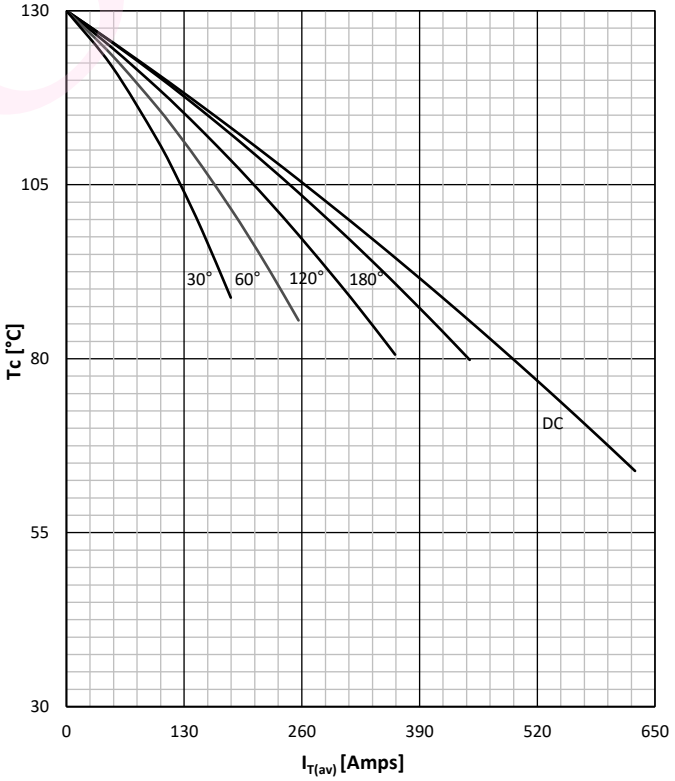
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



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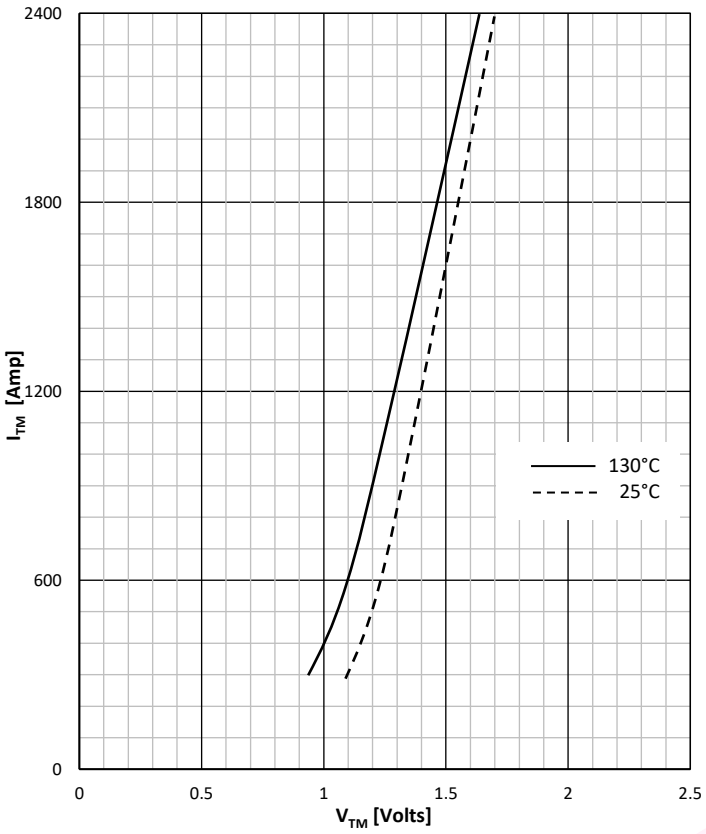
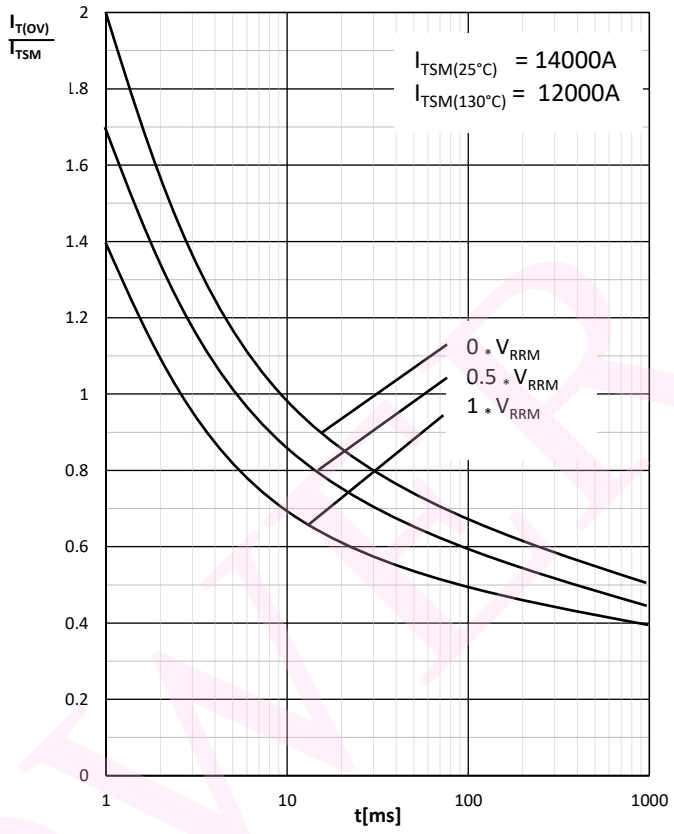
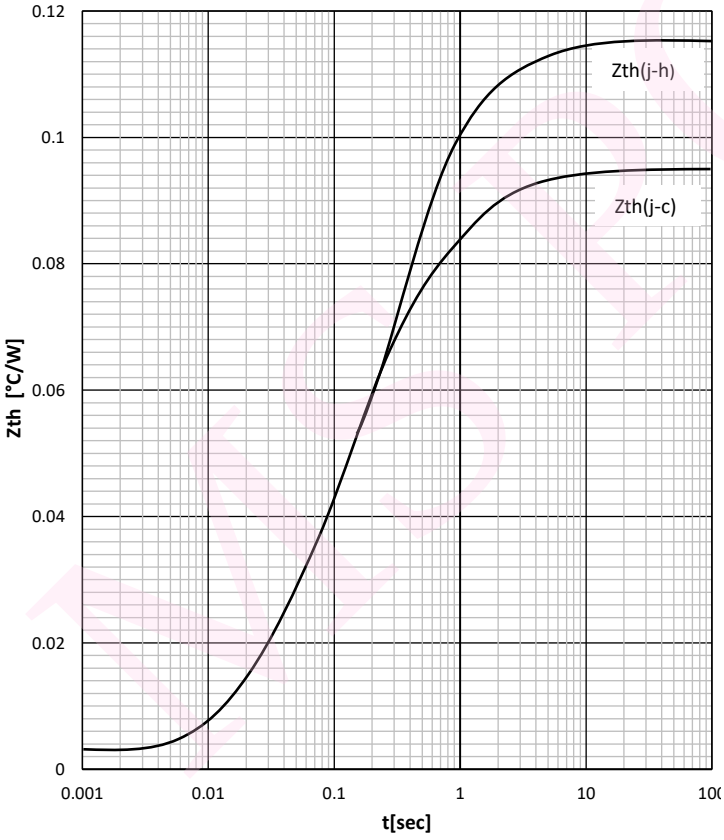
ON -STATE CHARACTERISTIC



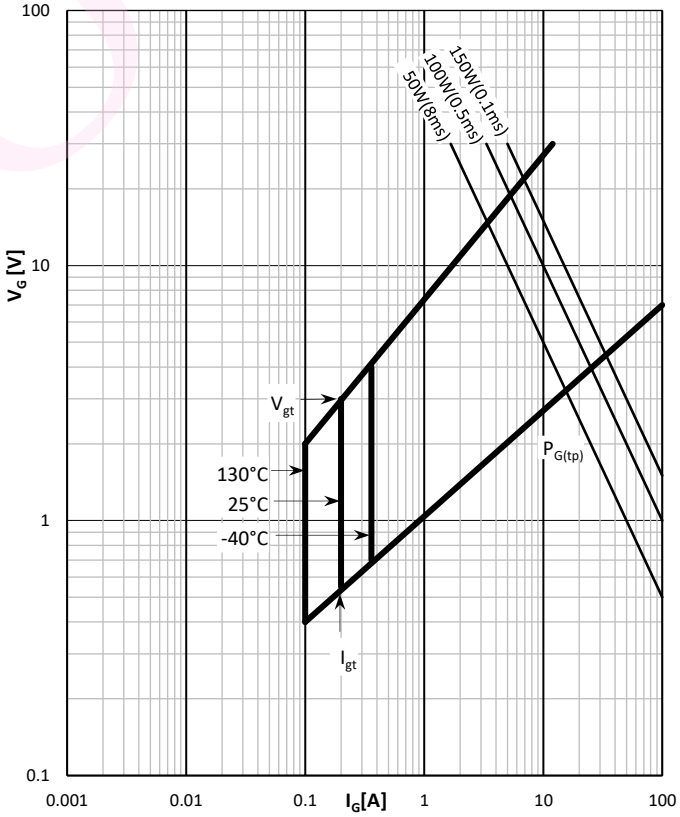
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



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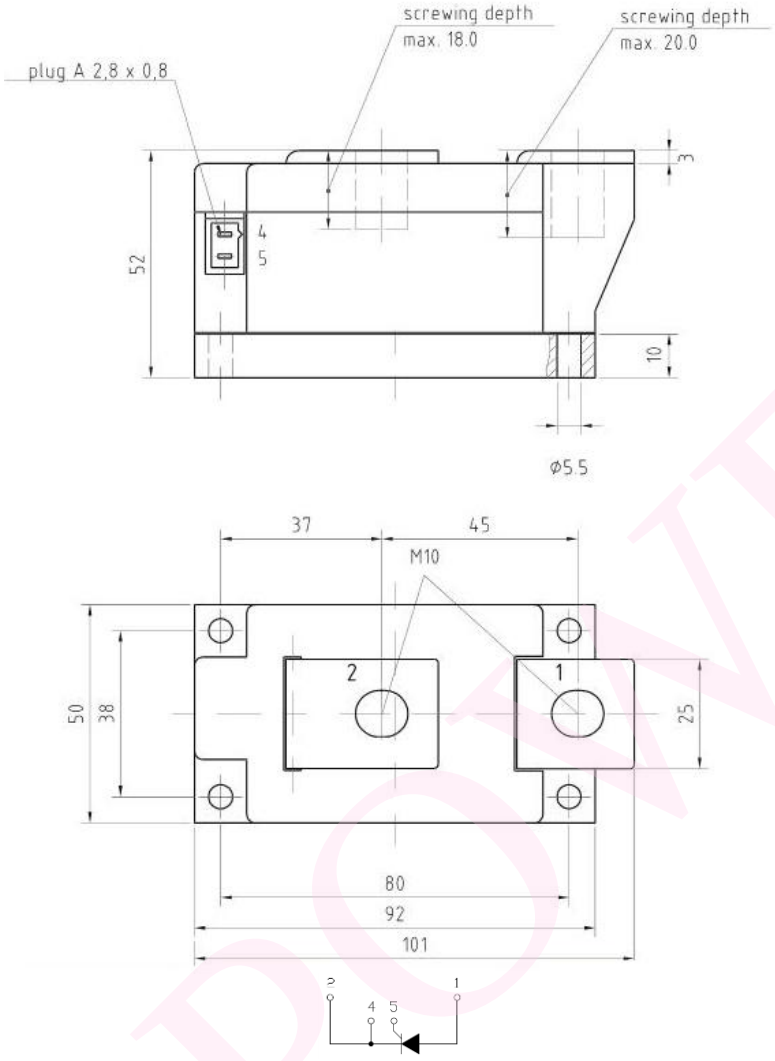
Outline



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