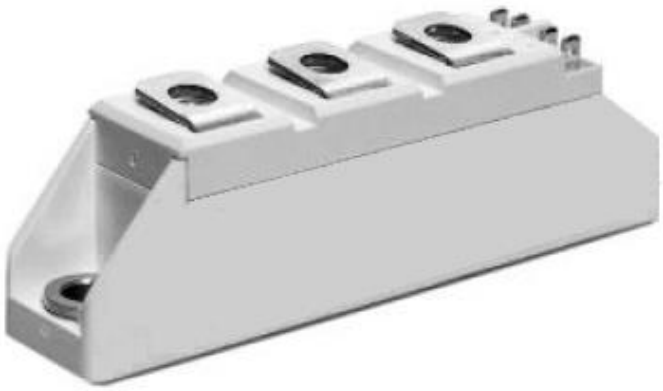
MS TT/TD71



Key Parameters

V_{DRM} / V_{RRM}	= 2200V
$I_{T(AV)}$	= 70A
I_{TSM}	= 1600A
$V_{T(TO)}$	= 0.9V
r_T	= 3.5mΩ

Features

- Full blocking capability over wide temperature range
- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Hard soldered joints for high reliability

Applications

- Power Supplies
- DC motor control
- Controlled Rectifiers
- Temperature control

Ordering Information

MS	TT	71	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 TT71S22 : 2200V 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 - 2200	V
V_{RSM}	Non-repetitive peak reverse voltage		125	2100 - 2300	V
V_{DRM}	Repetitive peak off-state voltage		125	2000 - 2200	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	125	20	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	20	mA
CONDUCTING					
$I_{T(AV)}$	Mean on state current	180° sin ,50 Hz, T_c=85°C		70	A
I_{RMS}	RMS on-state current			110	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	1600	A
			125	1450	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	12800	A^2s
			125	10512	A^2s
V_T	On-state voltage	On-state current = 300A	25	1.90	V
$V_{T(TO)}$	Threshold voltage		125	0.9	V
r_T	On-state slope resistance		125	3.5	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	250	mA
I_L	Latching current	V_D=6V	25	600	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, per arm per module		0.37 0.19	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case, per arm per module		0.39 0.20	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per arm per module		0.2 0.1	°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			5 ± 15%	Nm
M2	Terminal connection torque			3 ± 15%	Nm
W	Weight (Approx.)			105	gm

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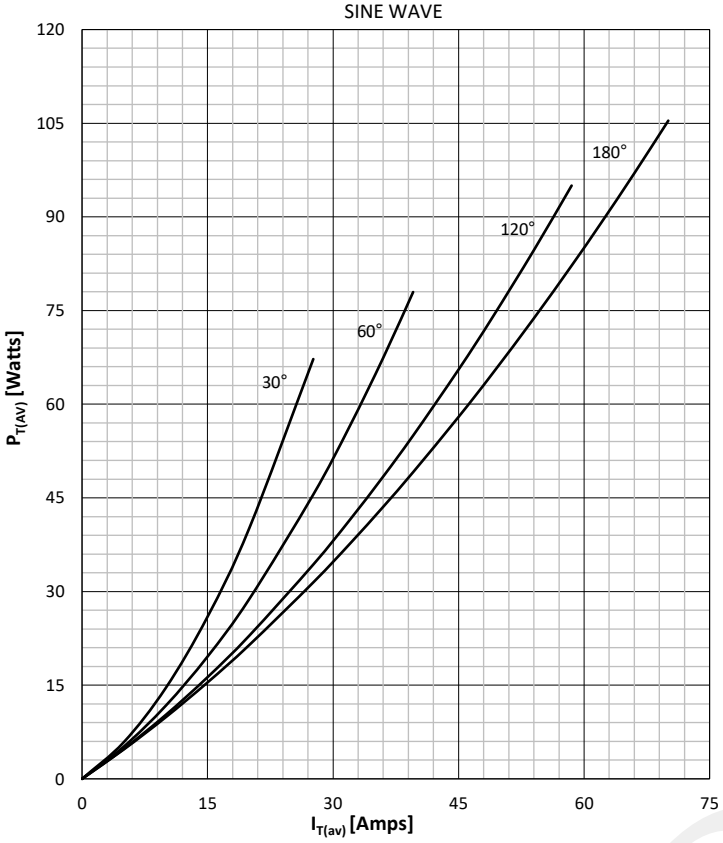
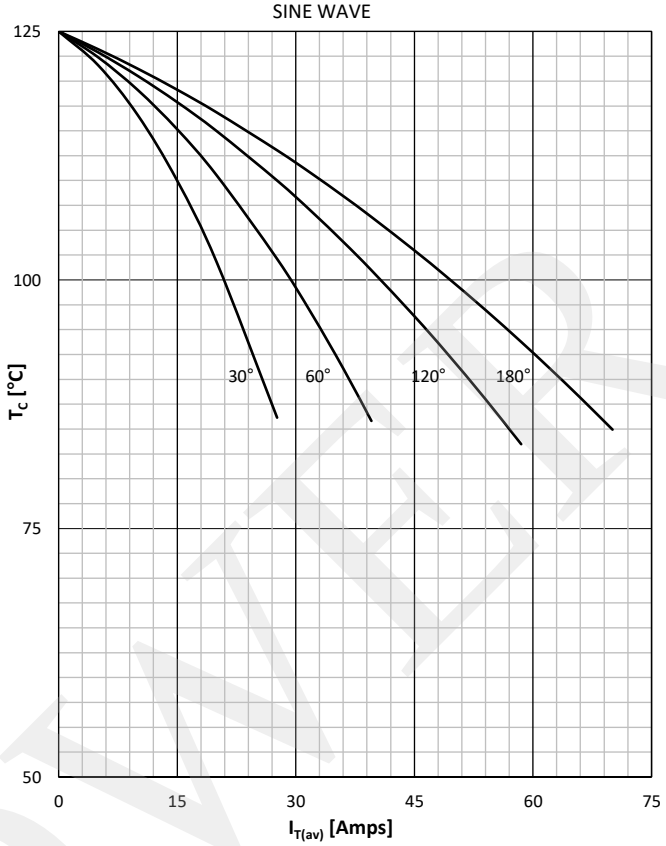
DISSIPATION CHARACTERISTICS

SINE WAVE



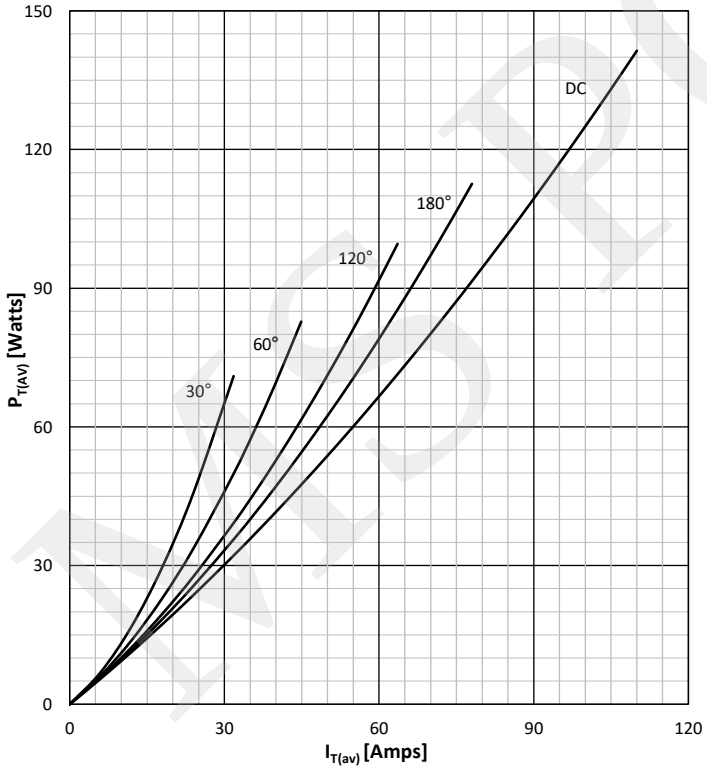
ON STATE CURRENT DERATING CURVE

SINE WAVE



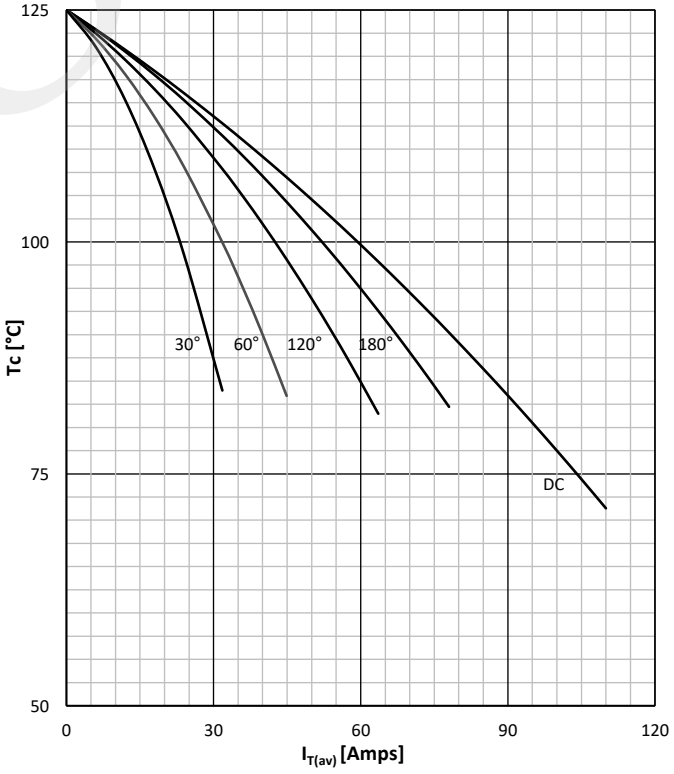
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



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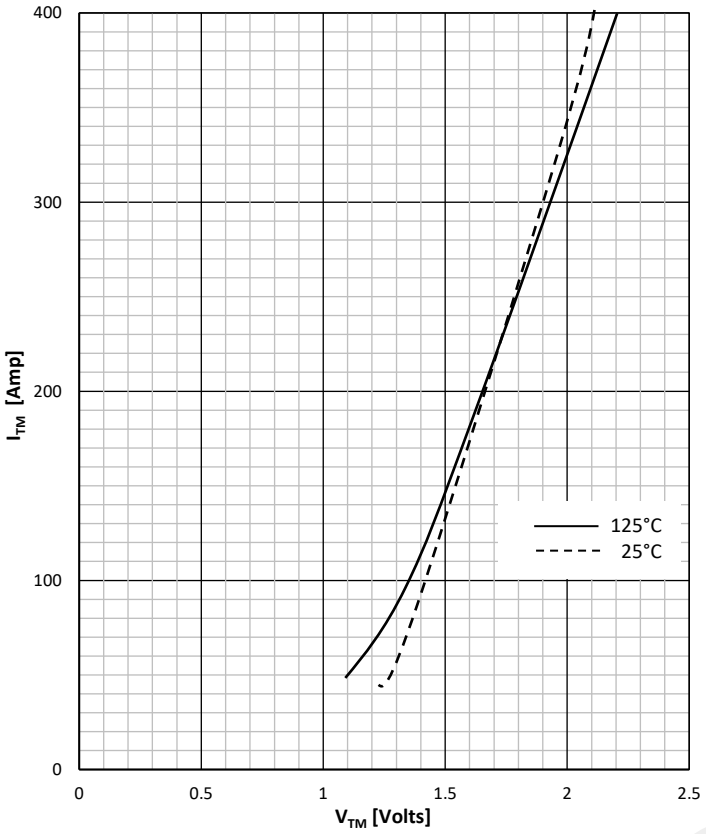
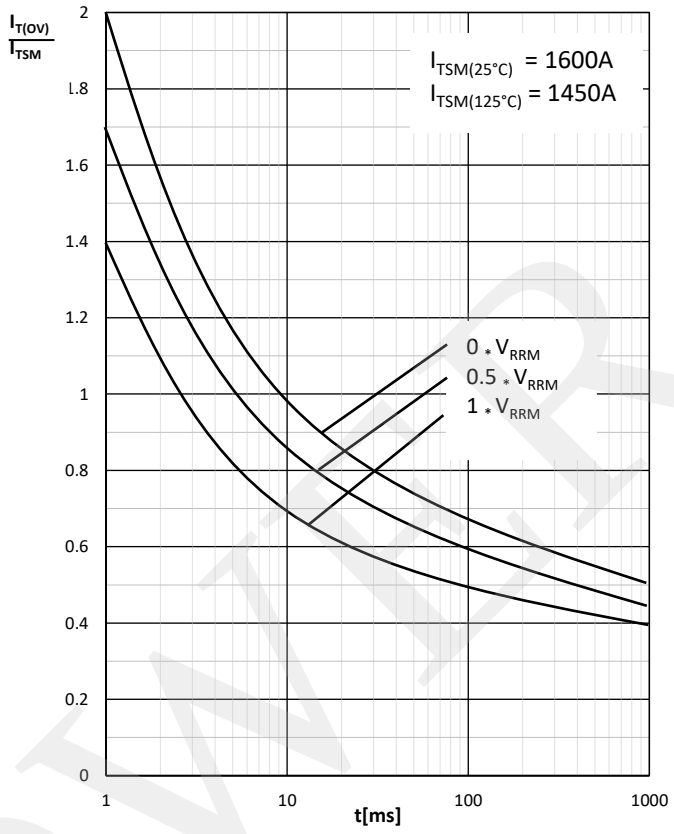
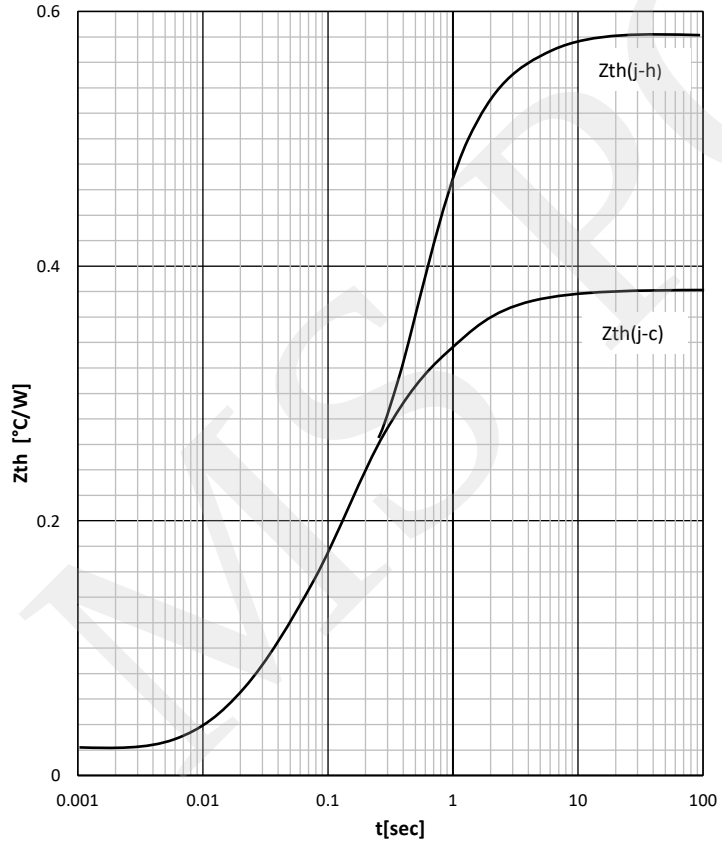
ON -STATE CHARACTERISTIC



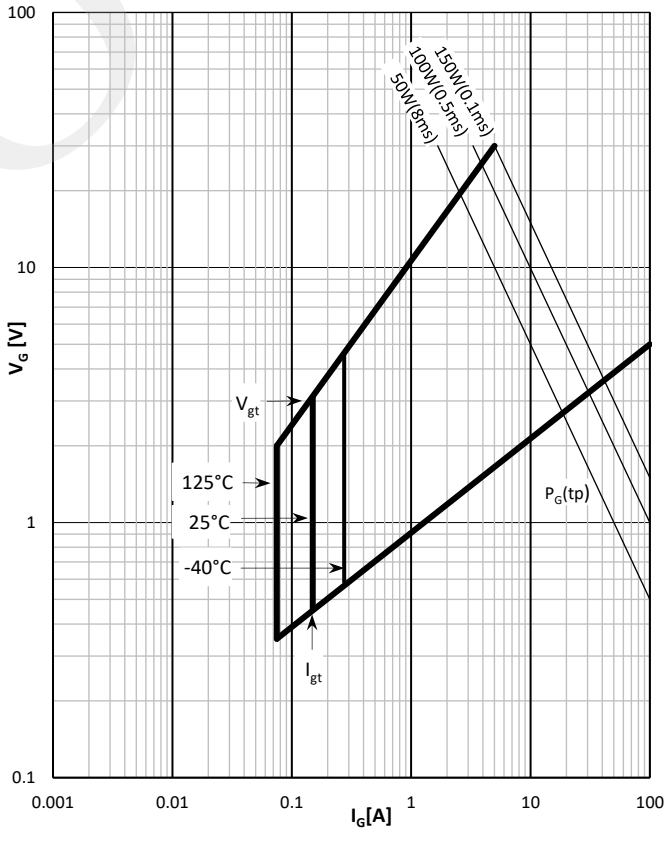
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



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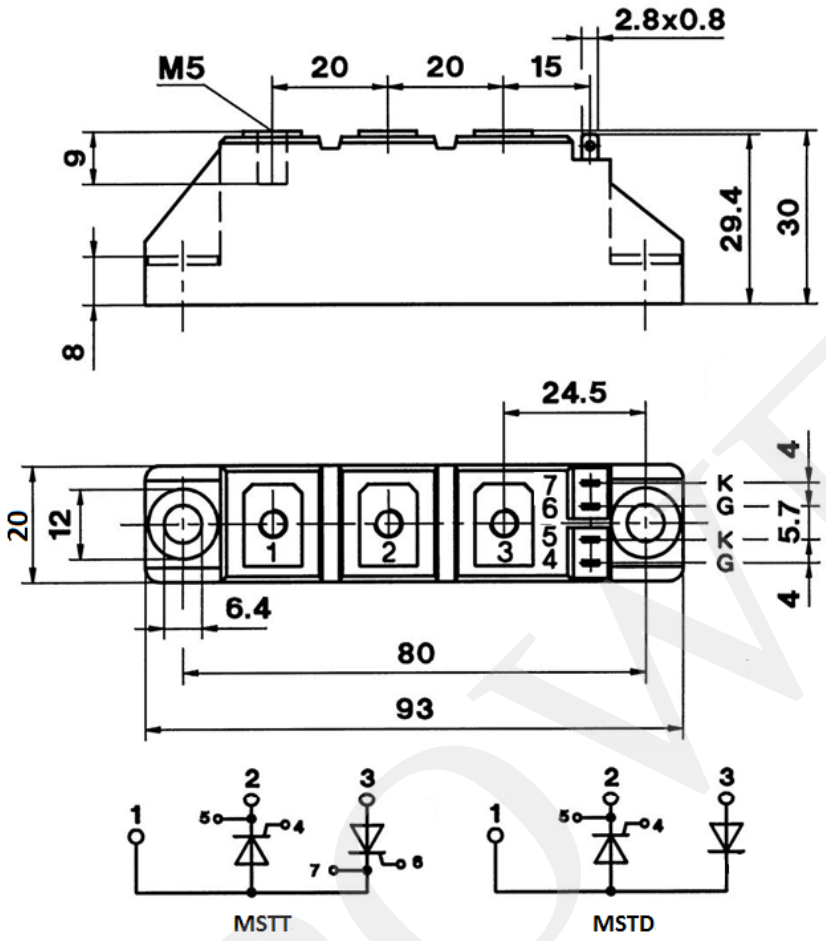
Outline



MS Power GmbH
Mergenthalerallee 79-81
65760 Eschborn, Germany
Web: www.mspowergroup.com
Mail: info@mspowergroup.de

Sales & Enquiry:
sales@mspowergroup.de
Technical Support:
solution@mspowergroup.de
After sales Service:
service@mspowergroup.de

Phone: +49 (0) 6196/7768 666
Fax: +49 (0) 6196/7757 888

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