MS T55

Key Parameters

V_{DRM} / V_{RRM}	= 1600V
$I_{T(AV)}$	= 55A
I_{TSM}	= 1100A
$V_{T(TO)}$	= 0.95V
r_T	= 4.7mΩ

Features

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

Applications

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

Ordering Information

MS T	55	S	X X	U	B
Phase Control Thyristor	Current Code	Stud / Flat Base Version	Voltage Code Code X 100 = V_{DRM}/V_{RRM}	Stud Threads U = 1/4" UNF M = M8 x 1.25 M1 = M6 x 1.0	Technology B = Solder Bond Technology
Order Code MS T55S16UB : 1600V V_{DRM},V_{RRM}, Stud base Thyristor with 1/4" UNF threads					

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Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		125	200 - 1600	V
V_{RSM}	Non-repetitive peak reverse voltage		125	300 - 1700	V
V_{DRM}	Repetitive peak off-state voltage		125	200 - 1600	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	125	10	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	10	mA
CONDUCTING					
$I_{T(AV)}$	Mean on state current	180° sin ,50 Hz, T_c=85°C 180° sin ,50 Hz, T_c=75°C		55 65	A
I_{RMS}	RMS on-state current	T_c=75°C		102	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	1100	A
			125	1000	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	6050	A^2s
			125	5000	A^2s
V_T	On-state voltage	On-state current = 200A	125	1.95	V
$V_{T(TO)}$	Threshold voltage		125	0.95	V
r_T	On-state slope resistance		125	4.7	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	200	mA
I_L	Latching current	V_D=6V	25	400	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case		0.45	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case		0.52	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink		0.20	°C/W
T_j	Max. junction temperature			125	°C
T_{stg}	Storage temperature			-40 125	°C
M	Mounting torque			4	NM
W	Weight (Approx.)			25	gm

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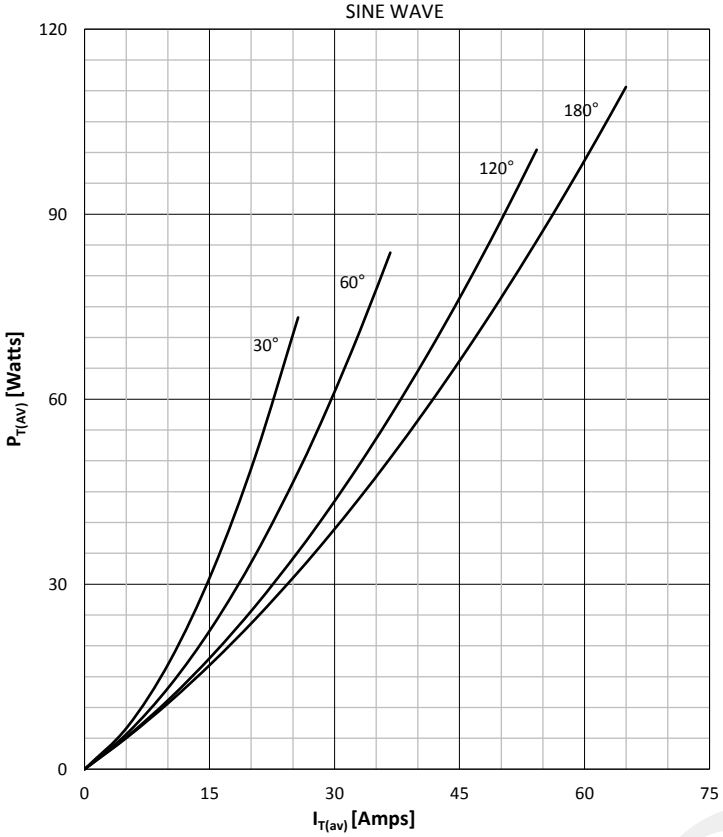
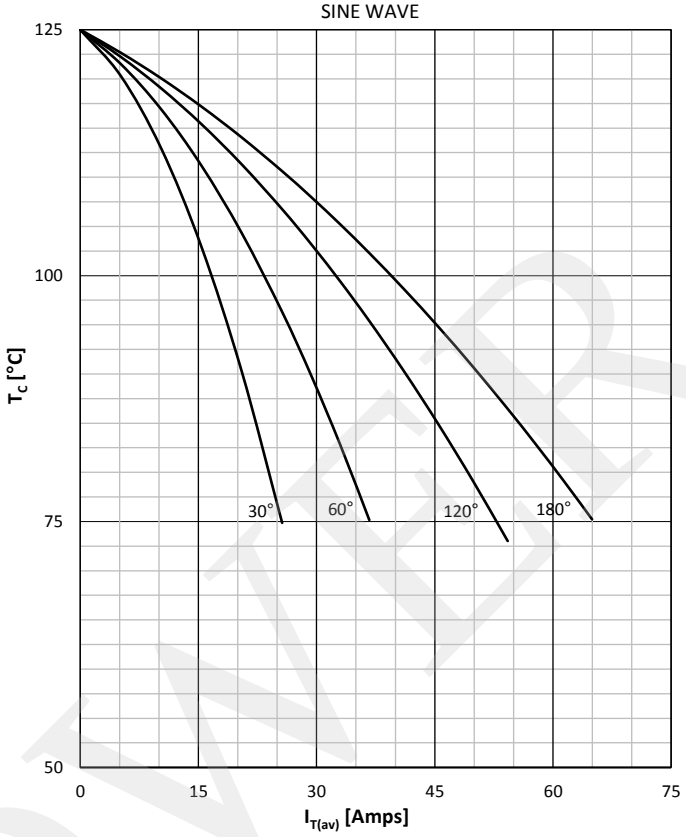
DISSIPATION CHARACTERISTICS

SINE WAVE



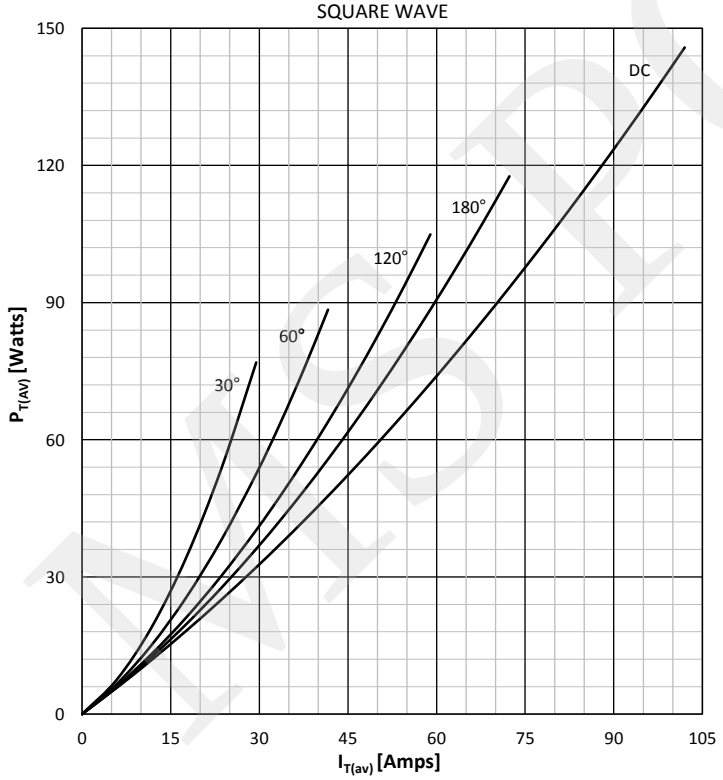
ON STATE CURRENT DERATING CURVE

SINE WAVE



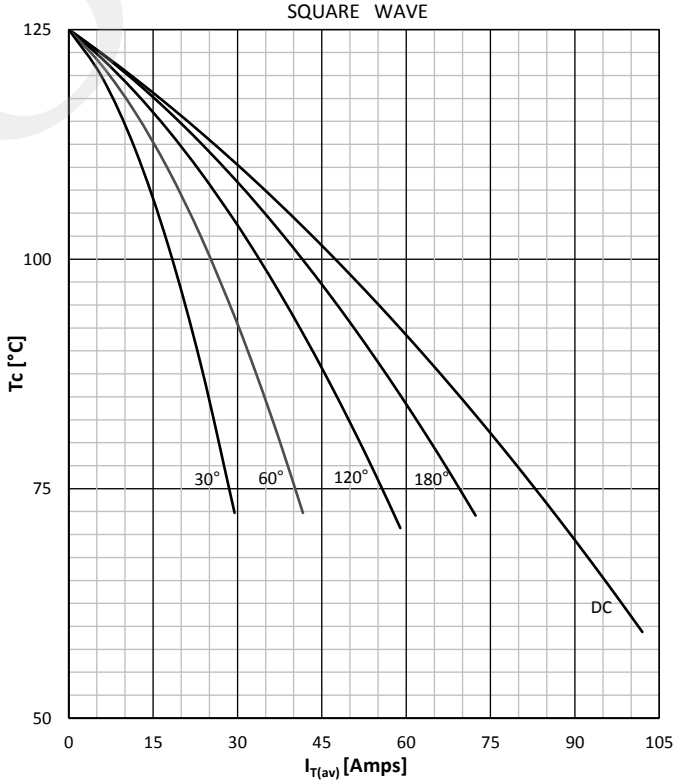
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



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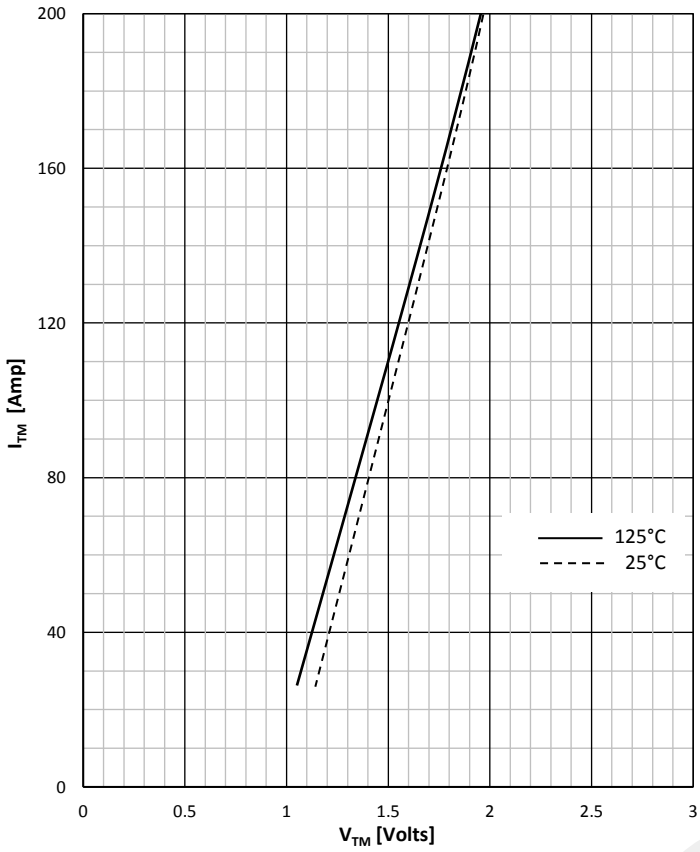
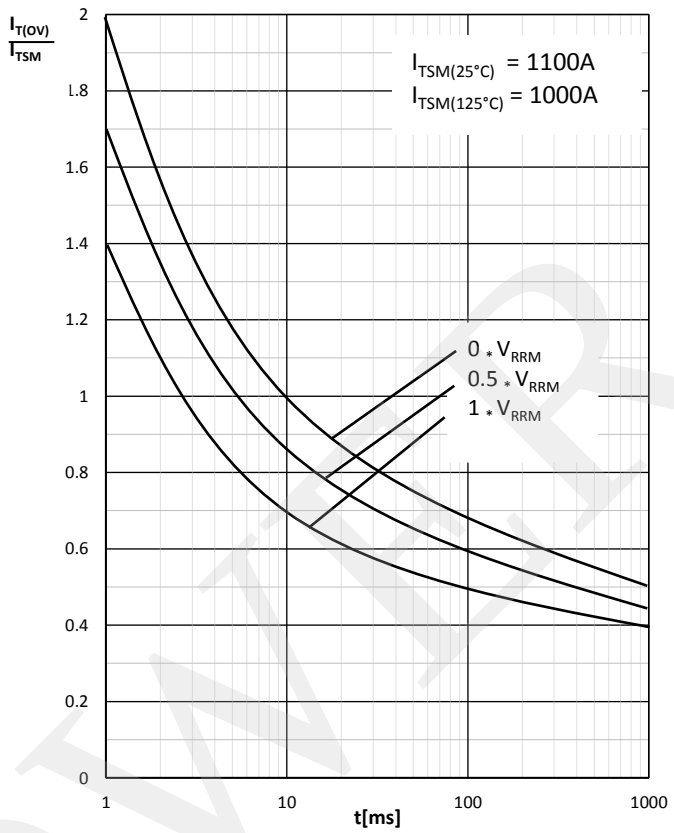
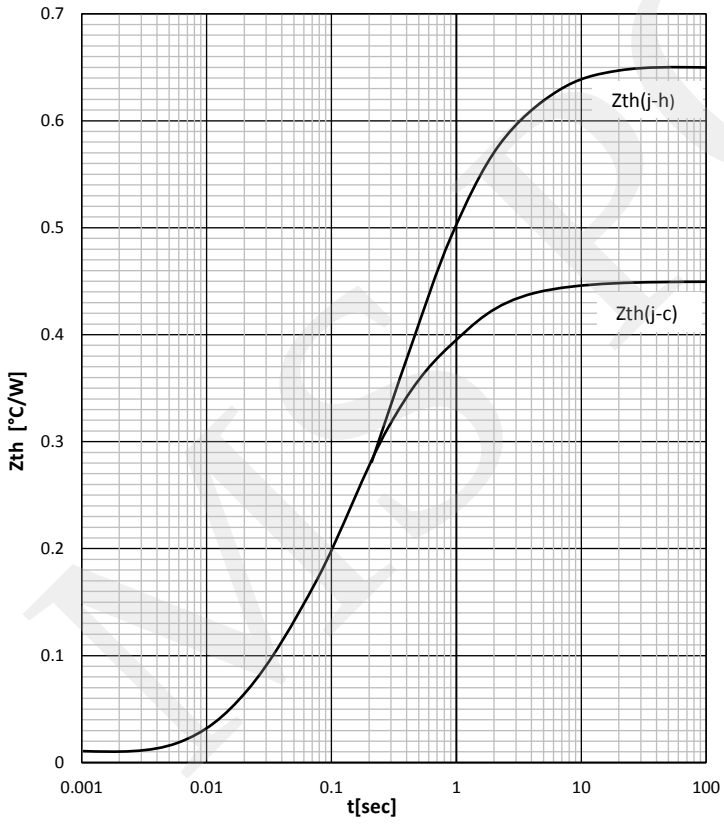
ON STATE CHARACTERISTIC



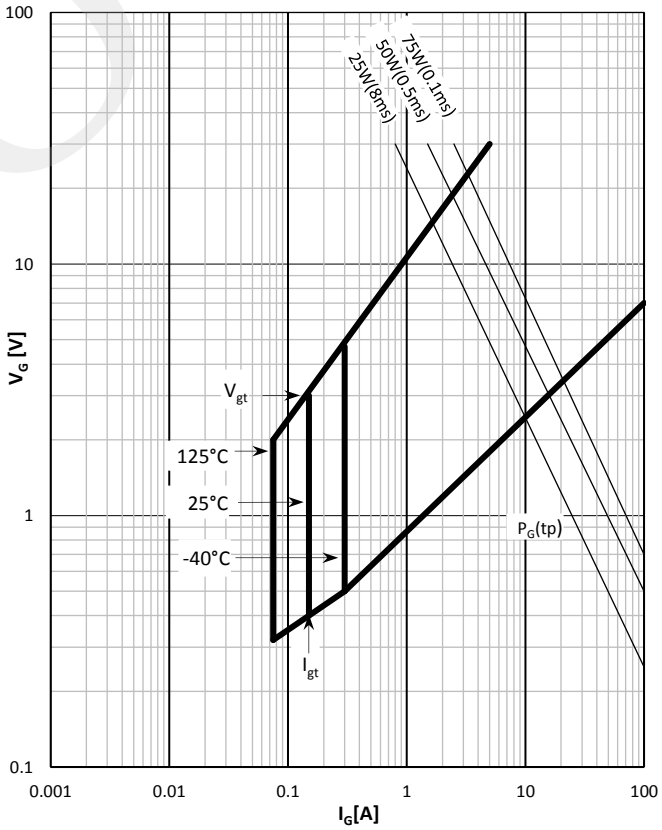
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



GATE TRIGGER CHARACTERISTICS



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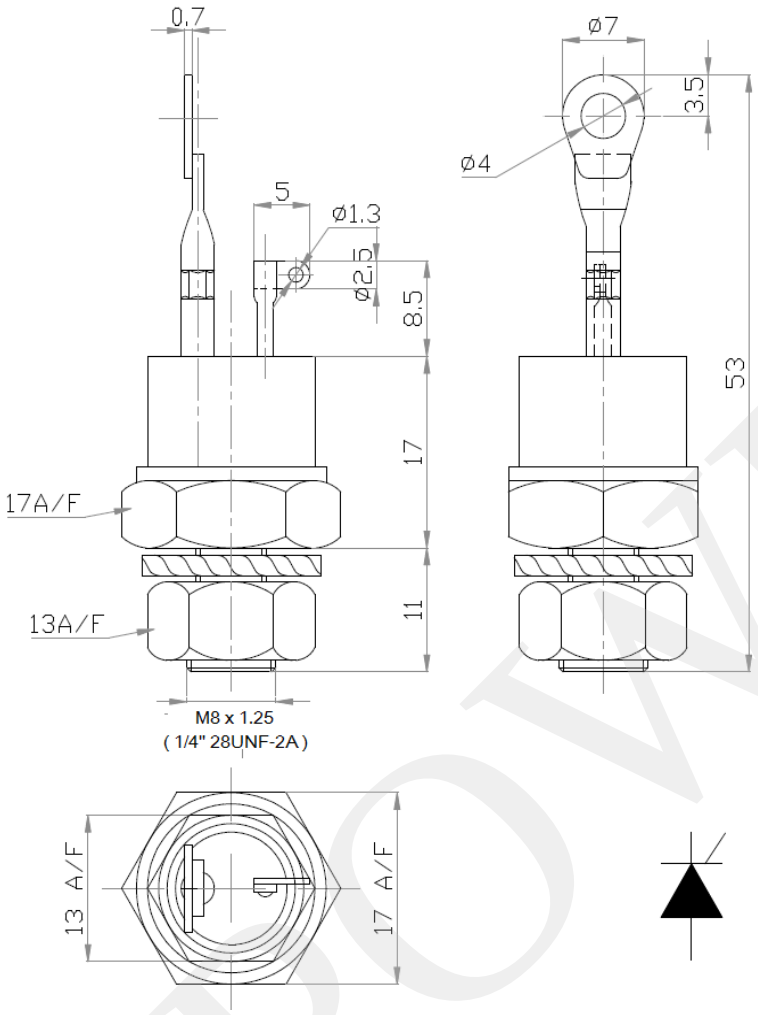
Outline



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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