



Key Parameters

V_{DRM} / V_{RRM}	= 4800V
$I_{T(AV)}$	= 475A
I_{TSM}	= 9.0kA
$V_{T(TO)}$	= 1.40V
r_T	= 1.70mΩ

Features

- Full blocking capability over wide temperature range
- High Surge current capability
- Hermetic metal case with ceramic insulator

Applications

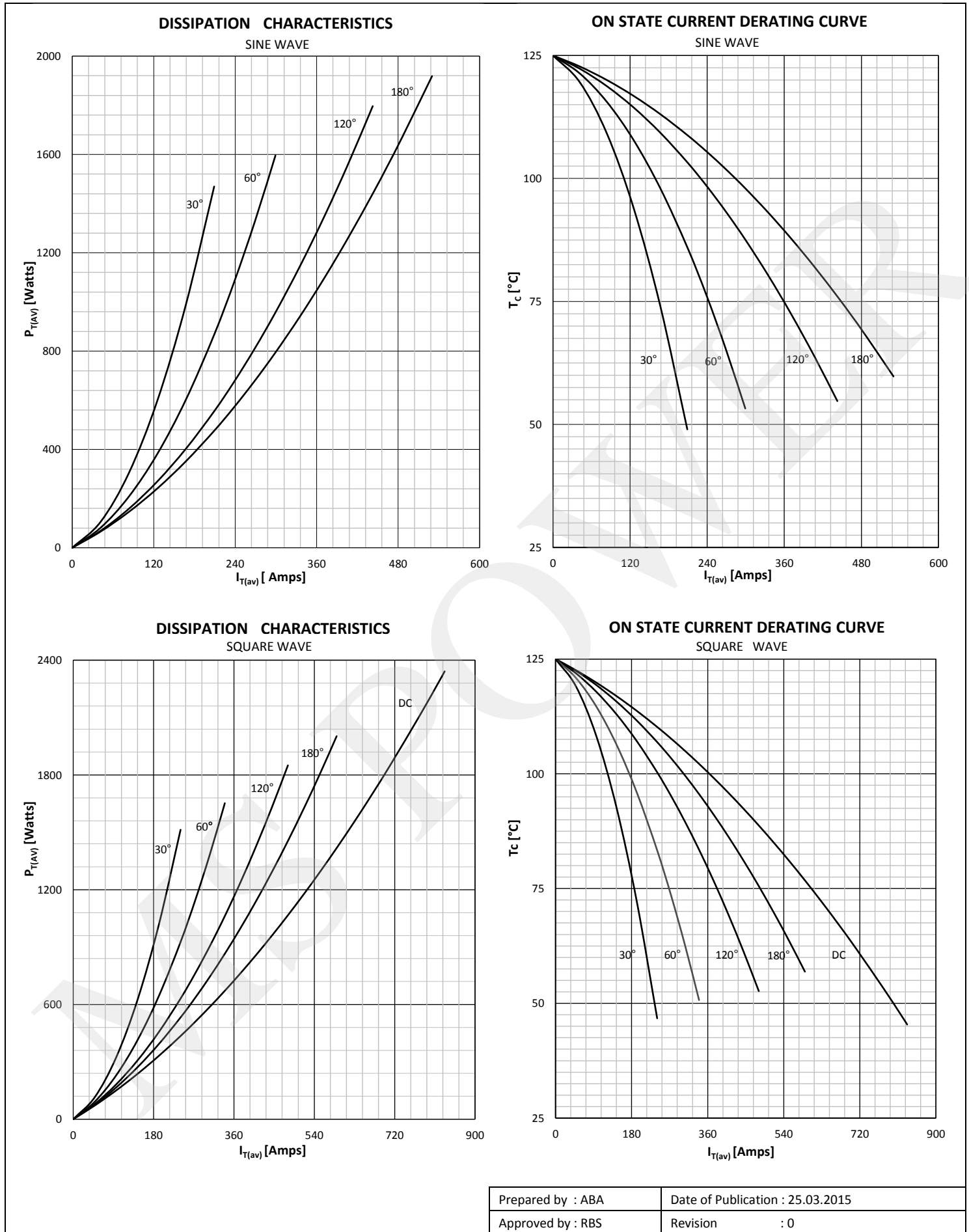
- Battery Chargers
- Medical Equipment
- UPS
- Power Supplies
- Motor control
- Controlled Rectifiers
- Transportation
- Induction Heating
- Welding

Ordering Information

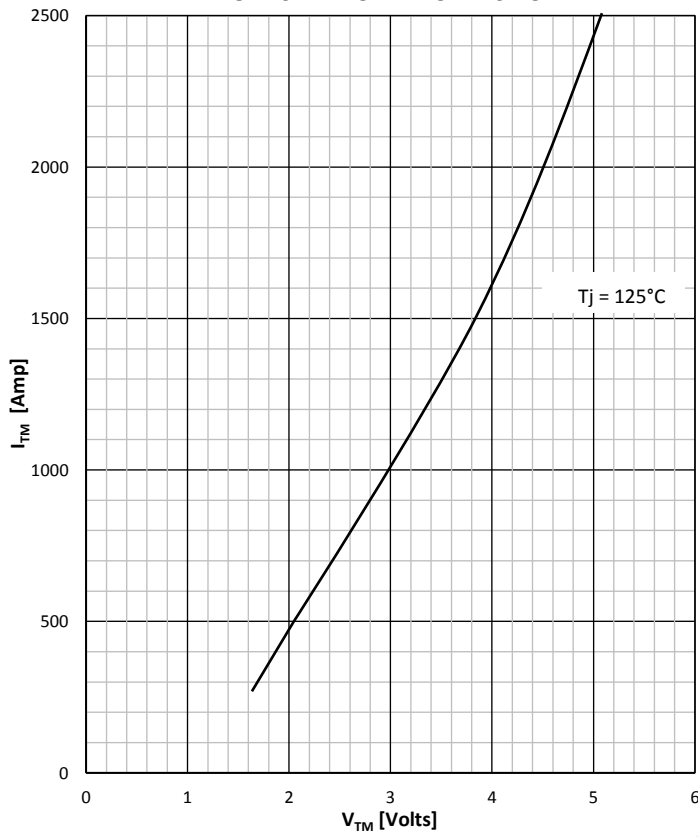
MS T	475	C	XX
Phase Control Thyristor	Current Code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS T475C48 : 4800V V_{DRM}, V_{RRM} , 26mm clamp height capsule thyristor			

Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 0

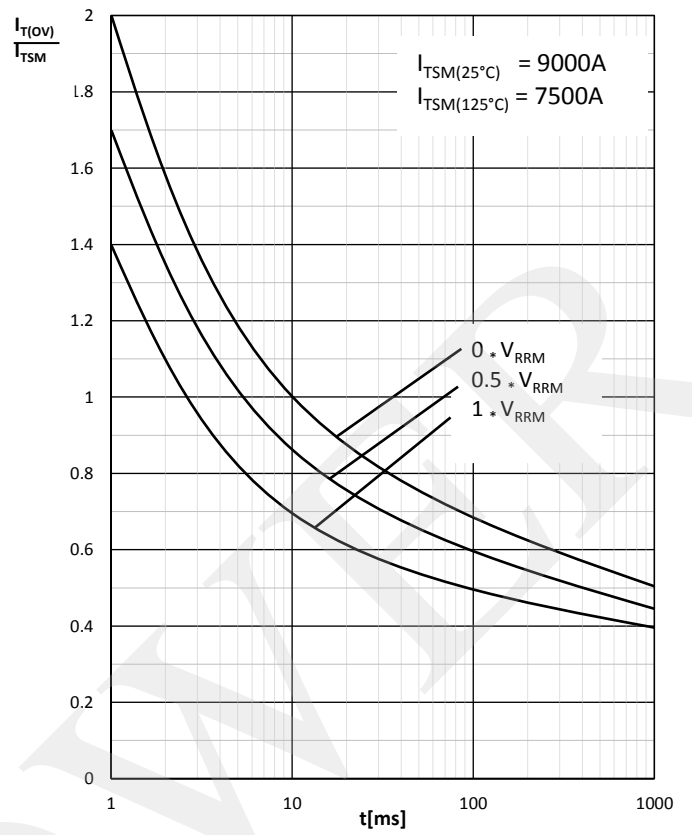
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		125	3600 - 4800	V
V _{RSM}	Non-repetitive peak reverse voltage		125	3700 - 4900	V
V _{DRM}	Repetitive peak off-state voltage		125	3600 - 4800	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	125	50	mA
I _{DRM}	Repetitive peak off-state current	V = V _{DRM}	125	50	mA
CONDUCTING					
I _{T(AV)}	Mean on state current	180° sin ,50 Hz, T _c =70°C, Double side cooled 180° sin ,50 Hz, T _c =60°C, Double side cooled		475 530	A
I _{RMS}	RMS on-state current	T _c =60°C, Double side cooled		832	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	9000	A
			125	7500	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	405 x 10 ³	A ² s
			125	281 x 10 ³	A ² s
V _T	On-state voltage	On-state current = 1500A	125	3.85	V
V _{T(TO)}	Threshold voltage		125	1.40	V
r _T	On-state slope resistance		125	1.70	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current	Repetitive	125	75	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	500	mA
I _L	Latching current	V _D =6V	25	1000	mA
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, Double side cooled		0.034	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case, Double side cooled		0.039	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, Double side cooled		0.008	°C/W
T _j	Max. junction temperature			125	°C
T _{stg}	Storage temperature			-40 ... 125	°C
M	Clamping Force			12 - 15	kN
W	Weight (Approx.)			255	gm
			Prepared by : ABA	Date of Publication : 25.03.2015	
			Approved by : RBS	Revision : 0	



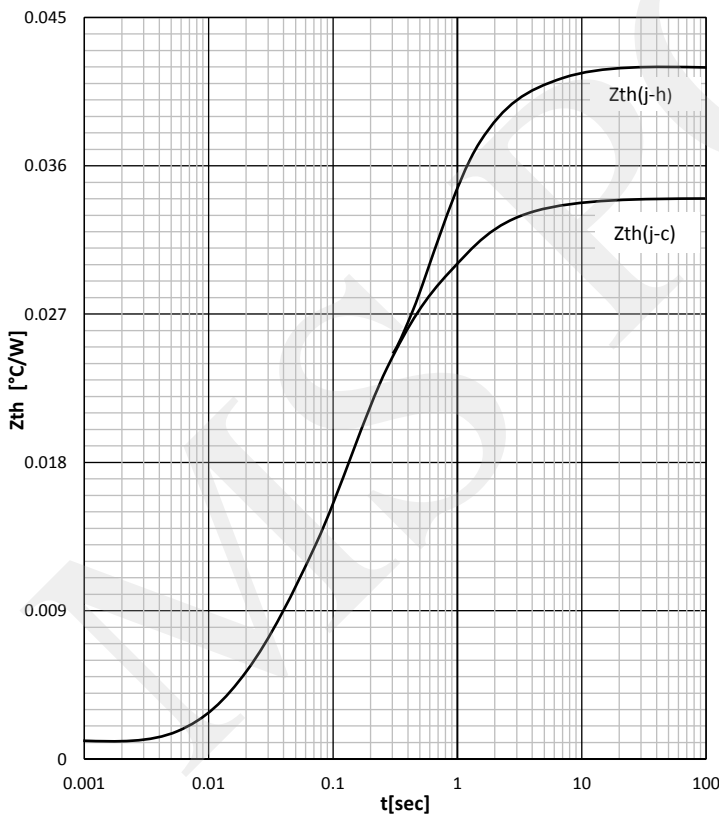
ON -STATE CHARACTERISTIC



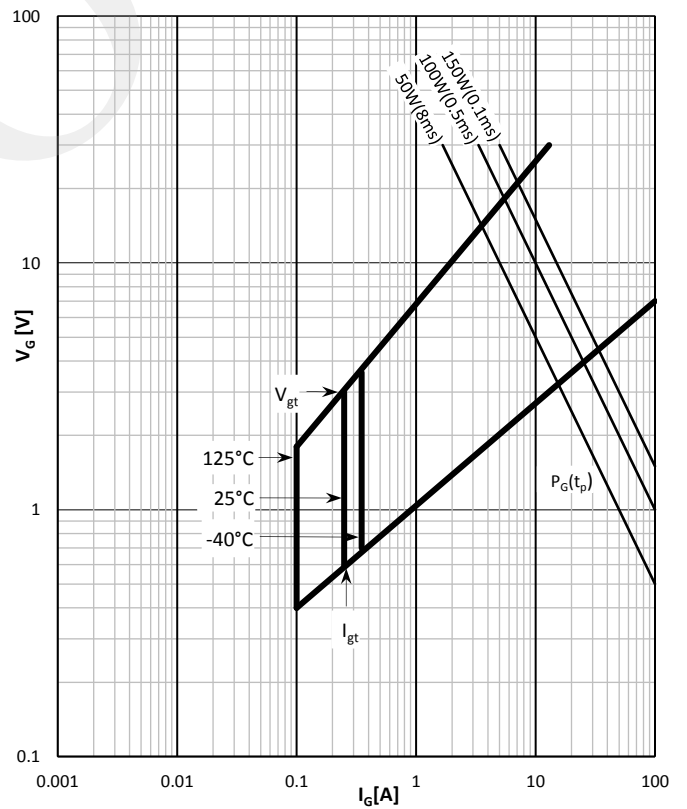
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



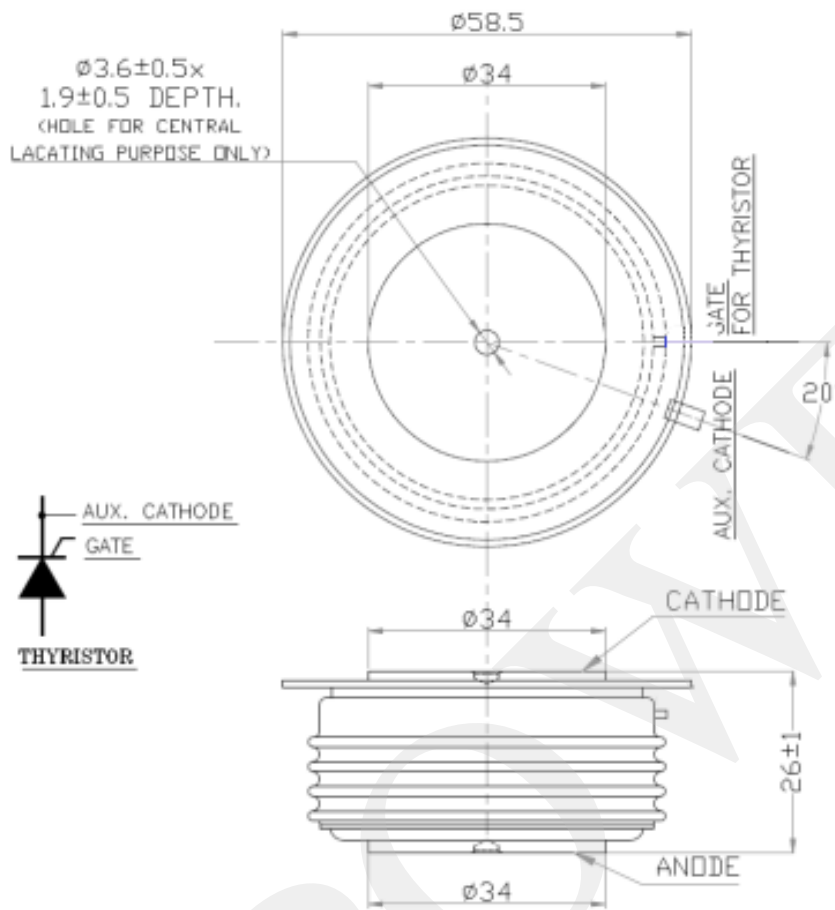
Prepared by : ABA

Date of Publication : 25.03.2015

Approved by : RBS

Revision : 0

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



Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 0

Terms & Conditions of usage :

The data contained in this product datasheet is exclusively Intended for technically trained staff. You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. This product datasheet is describing the characteristics of this product for which a warranty is granted. Any such warranty is granted exclusively pursuant the terms and conditions of the supply agreement. There will be no guarantee of any kind for the product and its characteristics. The information in the valid application-and assembly notes of the device must be considered.

Should you require product information in excess of the data given in this product datasheet or which concerns the specific application of our product, please contact the sales office, which is responsible for you (see www.mspowergroup.com). For those that are specifically interested we may provide application notes.

Due to technical requirements our product may contain dangerous substances. For information on the types in question please contact the sales office, which is responsible for you.

Should you intend to use the Product in aviation applications, in health or live endangering or life support applications, please notify. Please note, that for any such applications we urgently recommend

- to perform joint Risk and Quality Assessments;
- the conclusion of Quality Agreements;
- to establish joint measures of an ongoing product survey, and that we may make delivery depended on the realization of any such measures.

If and to the extent necessary, please forward equivalent notices to your customers.

Changes of this product datasheet are reserved.

Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 0