



Key Parameters

V_{DRM} / V_{RRM}	= 1600V
$I_{T(AV)}$	= 3160A
I_{TSM}	= 63kA
$V_{T(TO)}$	= 0.83V
r_T	= 0.082mΩ

Features

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

Applications

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

Ordering Information

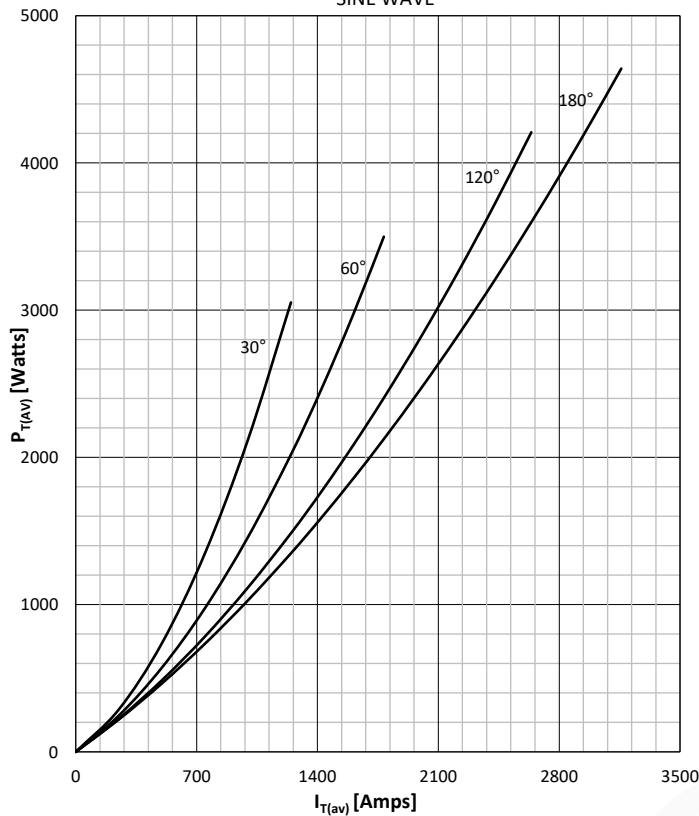
MS T	3161	C	X X
Phase Control Thyristor	Current Code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS T3161C16: 1600V V_{DRM}, V_{RRM} , 26mm clamp height capsule thyristor			

Prepared by : ABA	Date of Publication : 08.2025
Approved by : RBS	Revision : 1

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V RRM	Repetitive peak reverse voltage		125	1200 - 1600	V
V RSM	Non-repetitive peak reverse voltage		125	1300 - 1700	V
V DRM	Repetitive peak off-state voltage		125	1200 - 1600	V
I RRM	Repetitive peak reverse current	V= V RRM	125	250	mA
I DRM	Repetitive peak off-state current	V= V DRM	125	250	mA
CONDUCTING					
I T (AV)	Mean on state current	180° sin ,50 Hz, Tc=85°C, Double side cooled 180° sin ,50 Hz, Tc=70°C, Double side cooled		3160 3934	A
I RMS	RMS on-state current	Tc=85°C, Double side cooled		4961	A
I TSM	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	63000	A
			125	57000	A
I² t	I² t	Sine wave, 10 ms Without reverse voltage	25	19845 x 10³	A²s
			125	16245 x 10³	A²s
V T	On-state voltage	On-state current = 6000A	125	1.35	V
V T(TO)	Threshold voltage		125	0.83	V
r T	On-state slope resistance		125	0.082	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current Non-repetitive (f=1Hz)	From 75%VDRM , Gate 10V 5Ω, diG/dt≥1A/ μs	125	200	A/μs
dv/dt	Critical rate of rise of off-state voltage	VDR = 67%VDRM	125	1000	V/μs
GATE					
I gt	Gate trigger current	VD=6V	25	300	mA
V gt	Gate trigger voltage	VD=6V	25	3.0	V
I H	Holding current	VD=6V, gate open circuit	25	300	mA
I L	Latching current	VD=6V	25	1500	mA
MOUNTING					
R th(j-c)	Thermal impedance, Sin180°	Junction to case, Double side cooled		0.0085	°C/W
R th(j-c)	Thermal impedance, rec120°	Junction to case, Double side cooled		0.0097	°C/W
R th(c-h)	Thermal impedance	Case to heatsink, Double side cooled		0.0025	°C/W
T j	Max. junction temperature			125	°C
T stg	Storage temperature			-40 125	°C
M	Clamping Force			40 - 50	kN
W	Weight (Approx.)			1150	gm
Prepared by : ABA			Date of Publication : 08.2025		
Approved by : RBS			Revision : 1		

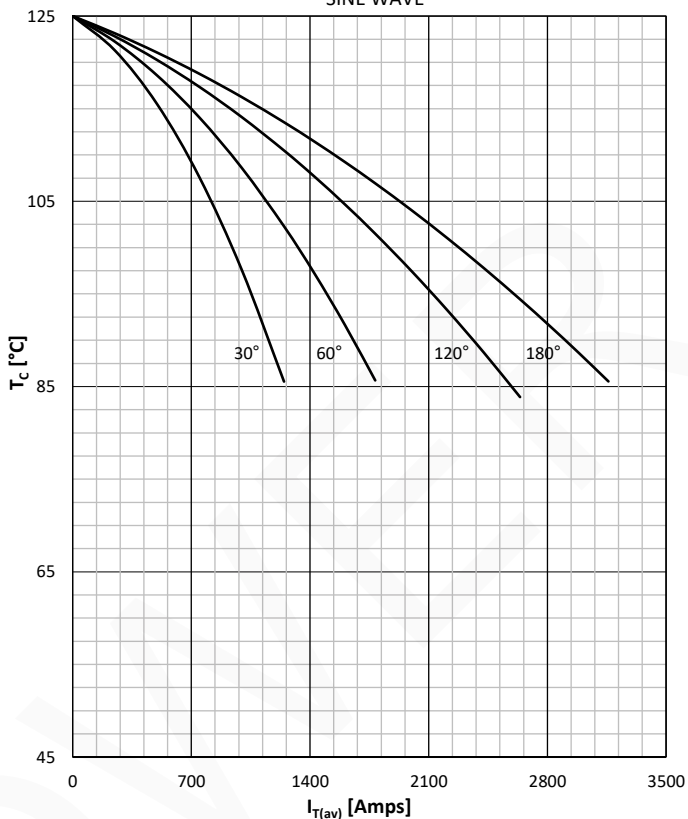
DISSIPATION CHARACTERISTICS

SINE WAVE



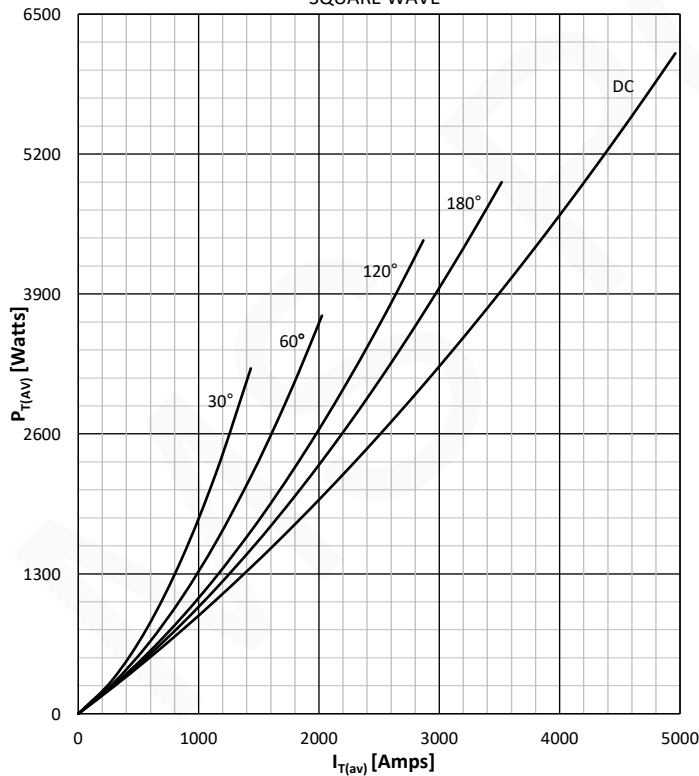
ON STATE CURRENT DERATING CURVE

SINE WAVE



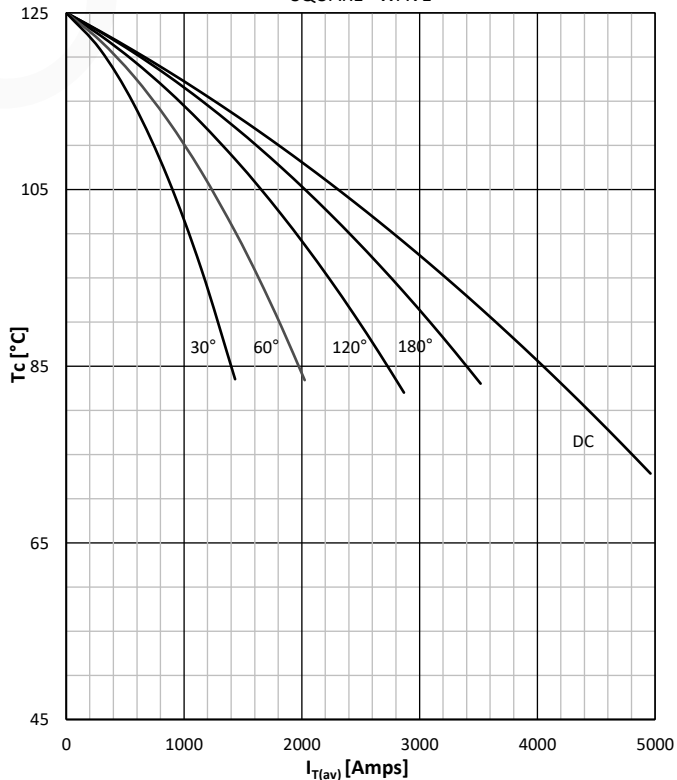
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE

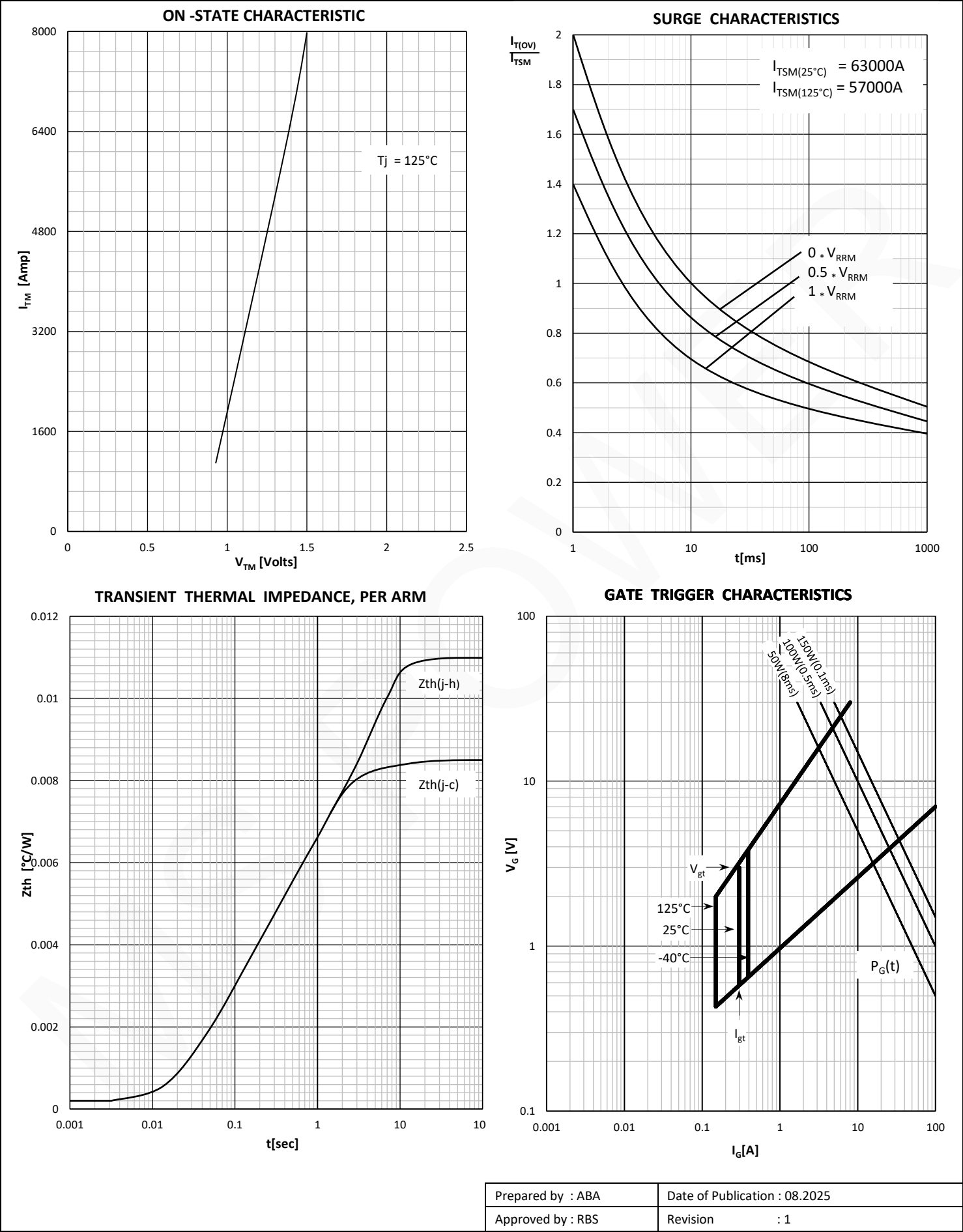


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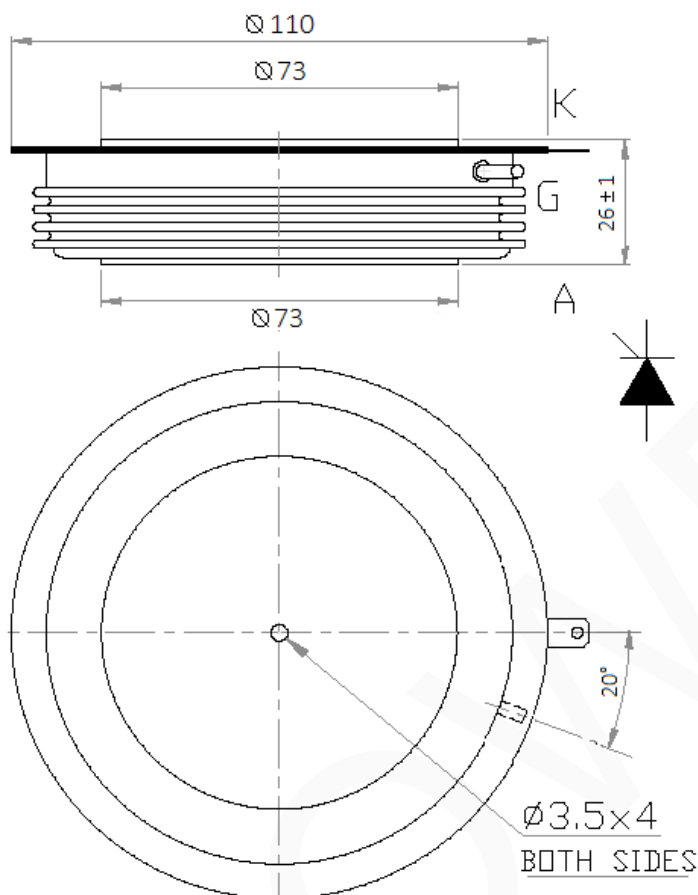
Date of Publication : 08.2025

Approved by : RBS

Revision : 1



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 : 08.2025

Approved by : RBS

Revision : 1

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Prepared by : ABA	Date of Publication : 08.2025
Approved by : RBS	Revision : 1