



Key Parameters

V_{DRM} / V_{RRM}	= 2800V
$I_{T(AV)}$	= 461A
I_{TSM}	= 14000A
$V_{T(TO)}$	= 1.1V
r_T	= 0.552mΩ

Features

- Full blocking capability over wide temperature range
- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Pressure contacts technology for high reliability
- UL Recognized, file no. E505556

Applications

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

Ordering Information

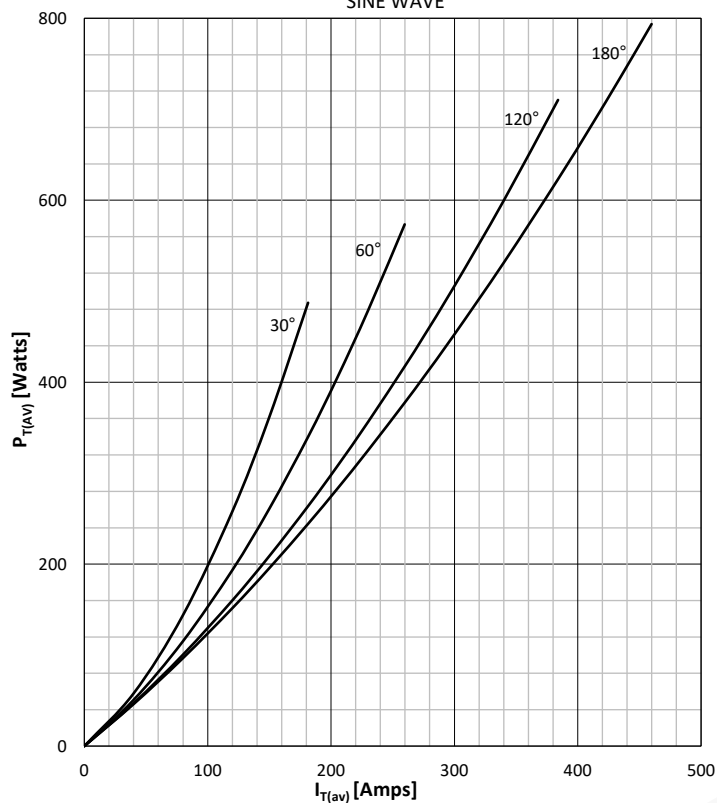
MS	TT	461	K	28
Fixed code	TT- Thyristor- Thyristor Module TD- Thyristor- Diode Module	Current Code	Technology K = Pressure Contact Technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS TT461K28 : 2800V V_{DRM}, V_{RRM} , Thyristor-Thyristor Module				

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Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V RRM	Repetitive peak reverse voltage		125	2000 - 2800	V
V RSM	Non-repetitive peak reverse voltage		125	2100 - 2900	V
V DRM	Repetitive peak off-state voltage		125	2000 - 2800	V
I RRM	Repetitive peak reverse current	V= V RRM	125	70	mA
I DRM	Repetitive peak off-state current	V= V DRM	125	70	mA
CONDUCTING					
I T (AV)	Mean on state current	180° sin ,50 Hz, Tc=85°C		461	A
I RMS	RMS on-state current	Tc=85°C		722	A
I TSM	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	14000	A
			125	12000	A
I² t	I² t	Sine wave, 10 ms Without reverse voltage	25	980 x 10³	A²s
			125	720 x 10³	A²s
V T	On-state voltage	On-state current = 1600A	25	2.0	V
V T(TO)	Threshold voltage		125	1.1	V
r T	On-state slope resistance		125	0.552	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current	VD = 75%VDRM up to 1050A, gate 10V,5Ω	125	200	A/μs
dv/dt	Critical rate of rise of off-state voltage	VDR = 67%VDRM	125	500	V/μs
GATE					
I gt	Gate trigger current	VD=6V	25	200	mA
V gt	Gate trigger voltage	VD=6V	25	3.0	V
I H	Holding current	VD=6V, gate open circuit	25	500	mA
I L	Latching current	VD=6V	25	2000	mA
MOUNTING					
R th(j-c)	Thermal impedance, sin 180°	Junction to case, per arm per module		0.050 0.025	°C/W
R th(j-c)	Thermal impedance, rec120°	Junction to case, per arm per module		0.057 0.0285	°C/W
R th(c-h)	Thermal impedance	Case to heatsink, per arm per module		0.02 0.01	°C/W
T j	Max. junction temperature			125	°C
T stg	Storage temperature			-40 150	°C
V ISOL	Insulation test voltage,RMS	F=50Hz, 1min		3.0	KV
M1	Mounting torque			5 ± 15%	Nm
M2	Terminal connection torque			12 ± 15%	Nm
W	Weight (Approx.)			1400	gm
	File No.			E505556	
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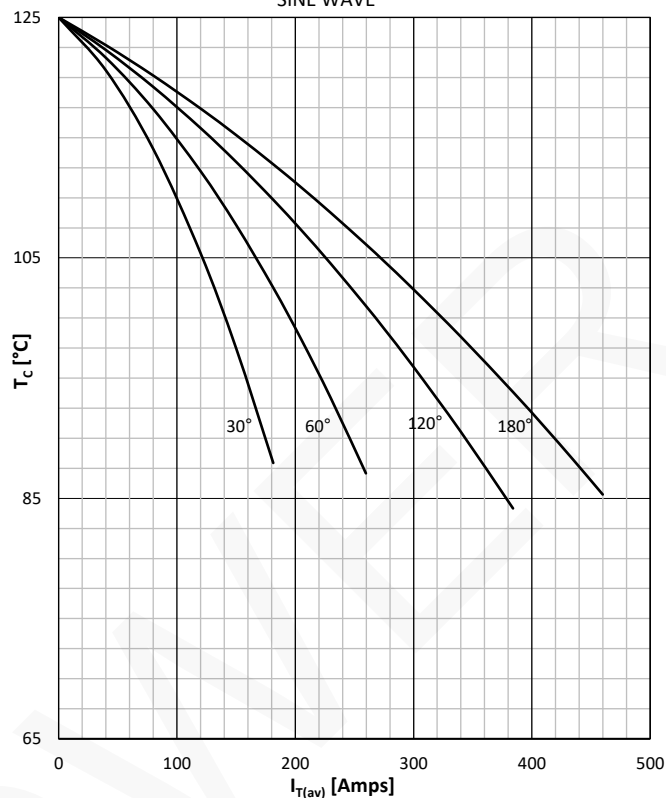
DISSIPATION CHARACTERISTICS

SINE WAVE



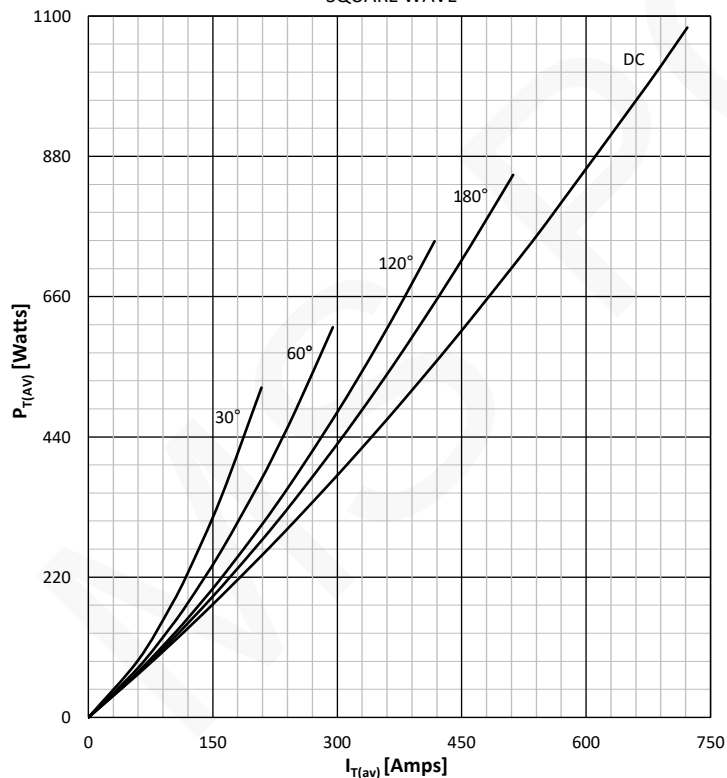
ON STATE CURRENT DERATING CURVE

SINE WAVE



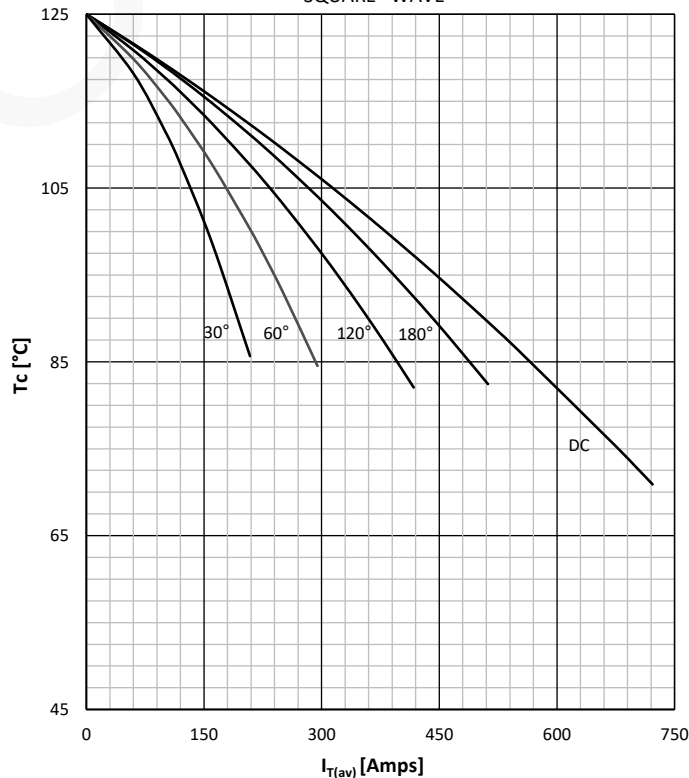
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



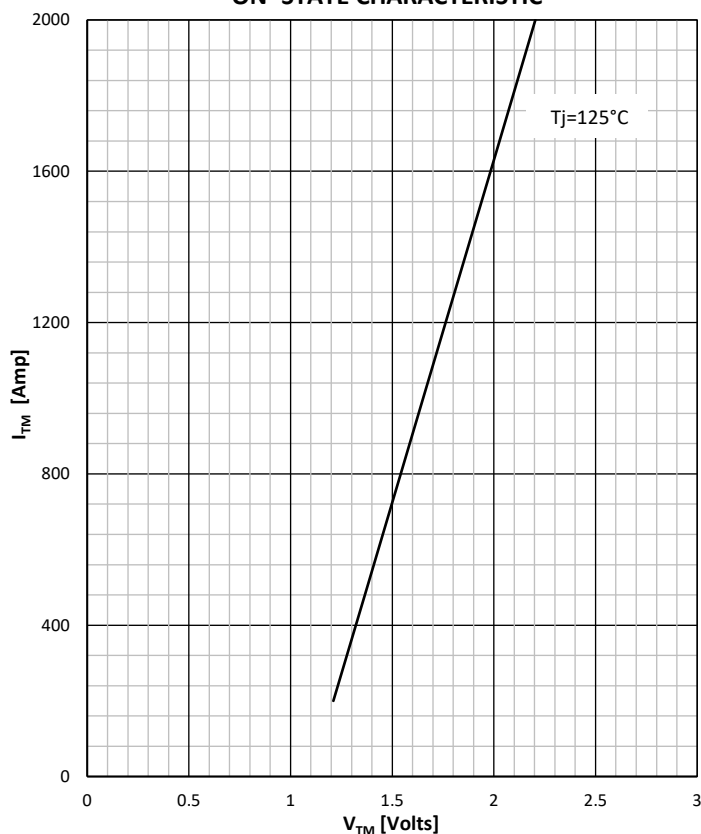
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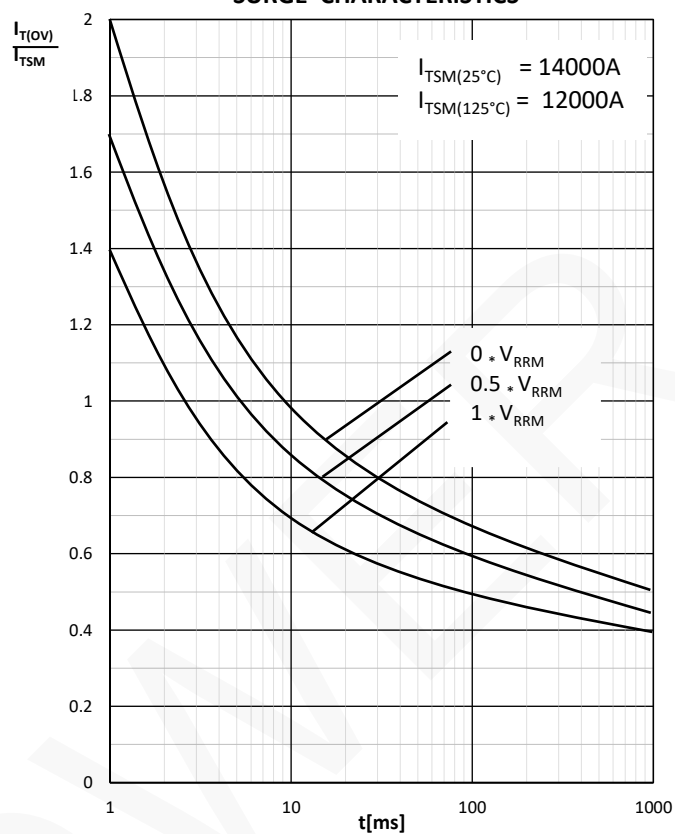
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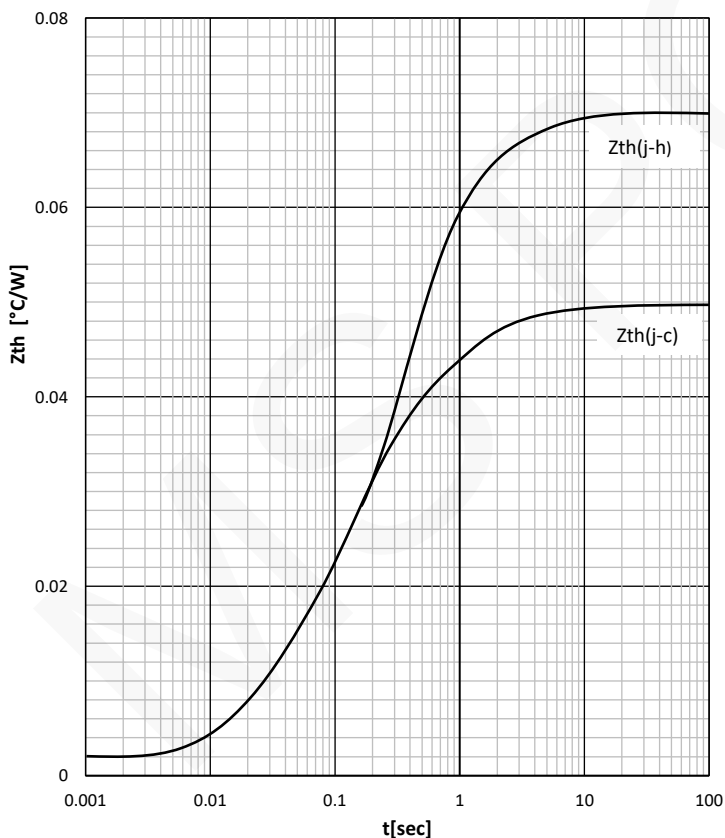
ON -STATE CHARACTERISTIC



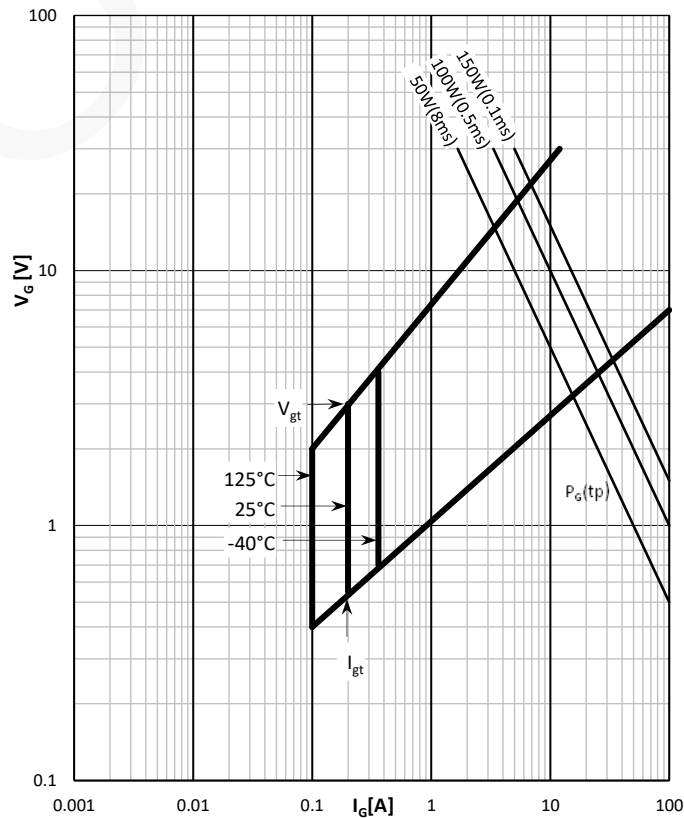
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



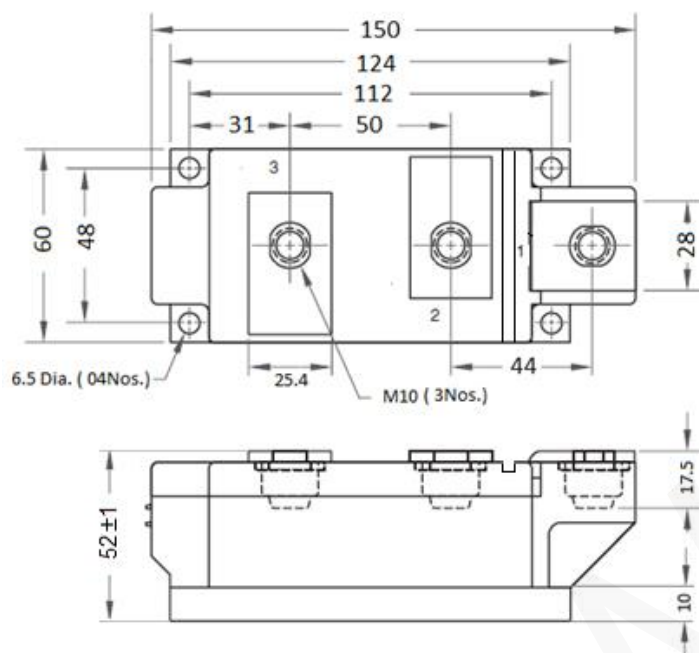
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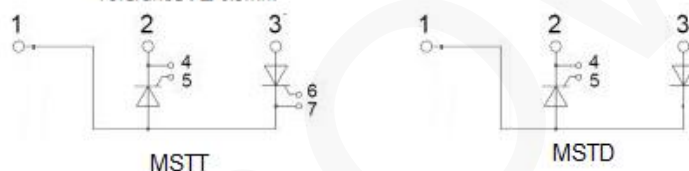
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Outline



Note : All dimensions are in mm.
Tolerance : $\pm 0.5\text{mm}$



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