MS TT461

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 oxide 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	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, T_c=85°C		461	A
I_{RMS}	RMS on-state current			722	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	14000	A
			125	12000	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	980 x 10^3	A^2s
			125	720 x 10^3	A^2s
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	V_D = 75%V_{DRM} up to 1050A, gate 10V,5Ω	125	200	A/µs
dv/dt	Critical rate of rise of off-state voltage	V_{DR} = 67%V_{DRM}	125	500	V/µs
GATE					
I_{gt}	Gate trigger current	V_D=6V	25	200	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	2000	mA
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, per arm per module		0.05 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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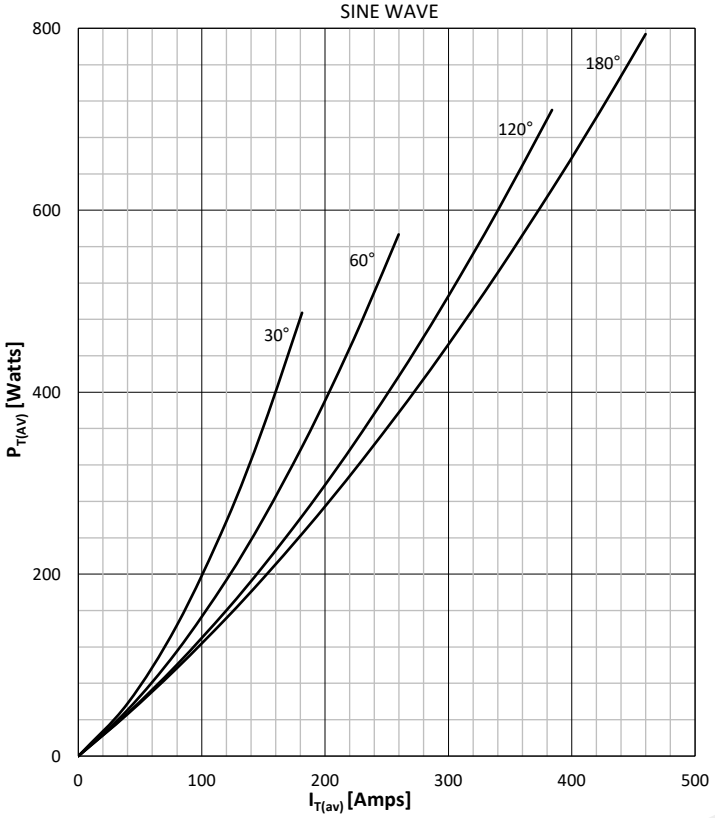
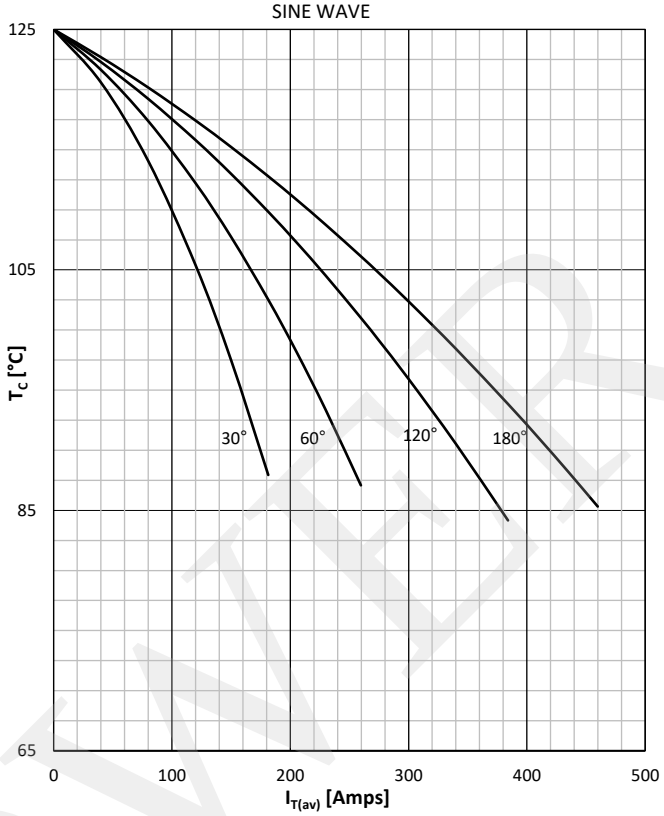
DISSIPATION CHARACTERISTICS

SINE WAVE



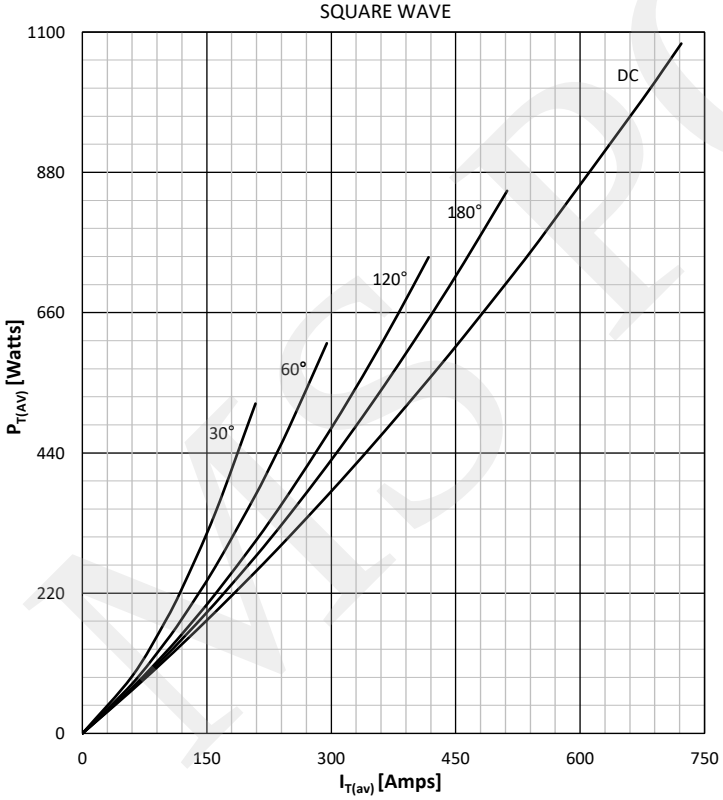
ON STATE CURRENT DERATING CURVE

SINE WAVE



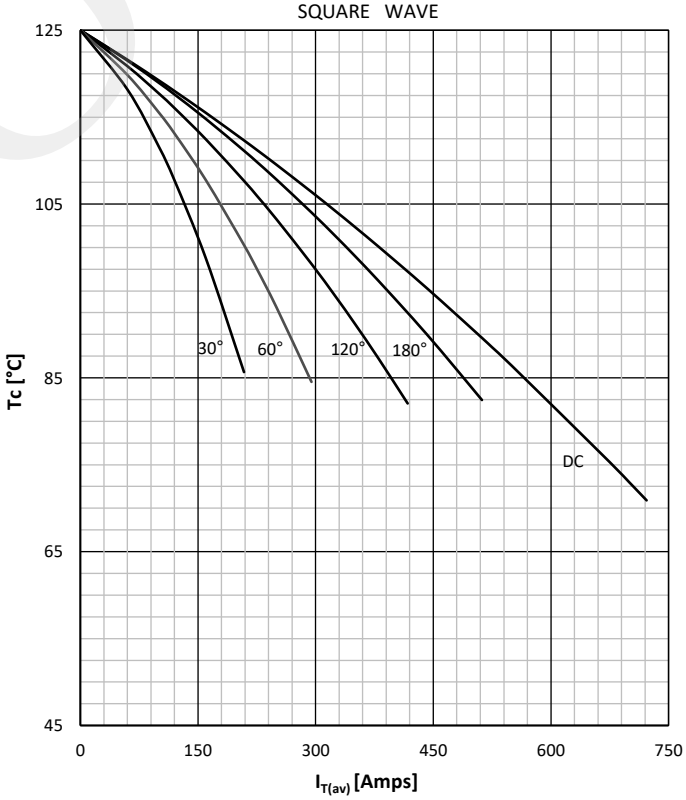
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



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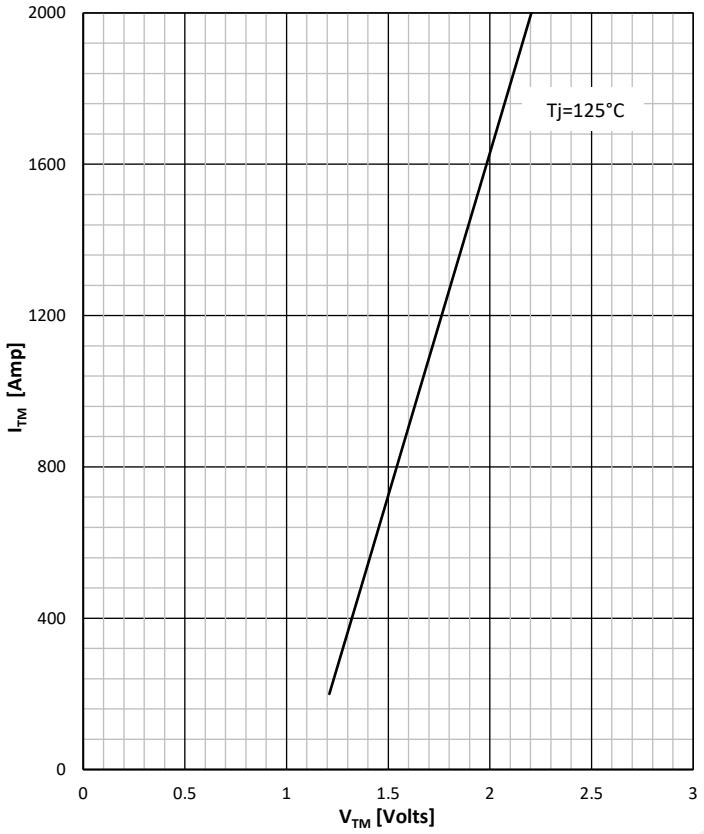
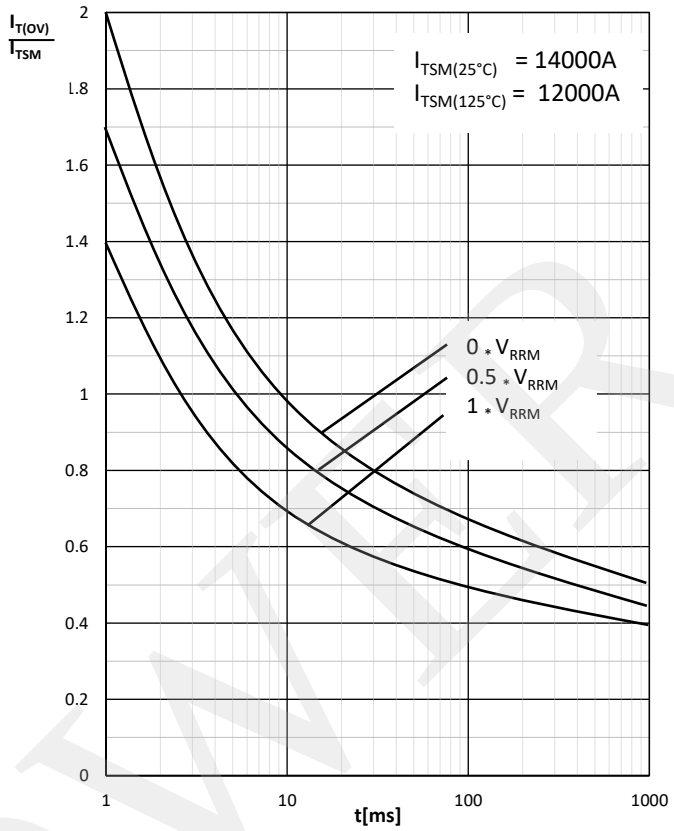
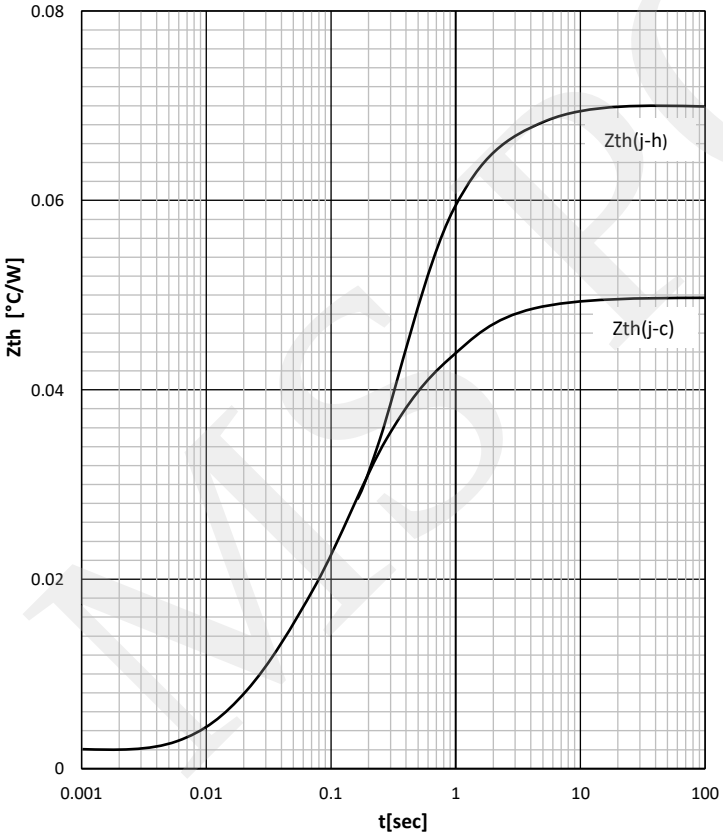
ON -STATE CHARACTERISTIC



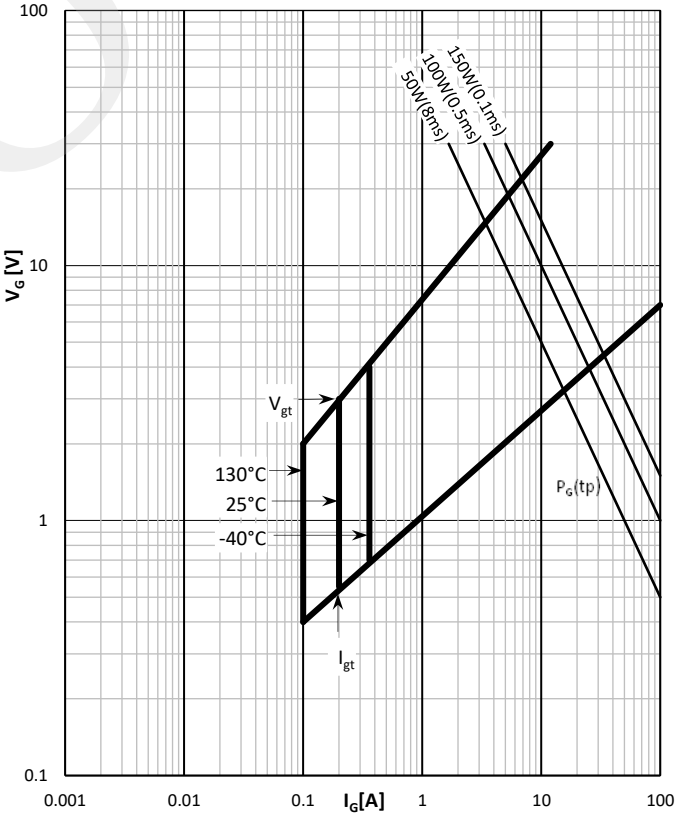
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



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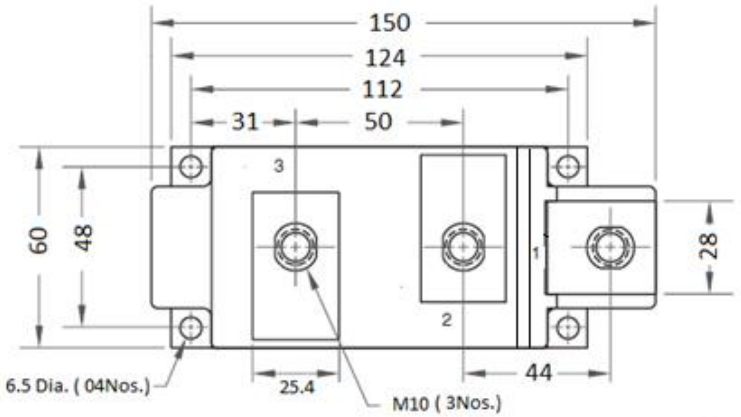
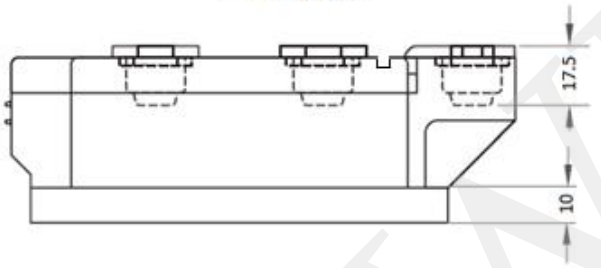
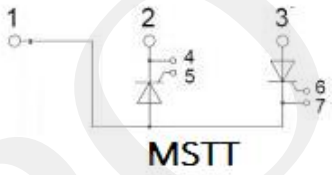
Outline





Note : All dimensions are in mm.
Tolerance : ± 0.5mm



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