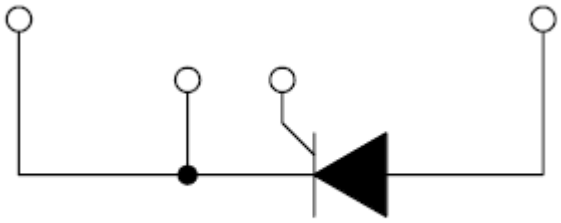
MS TZ740



TZ

Key Parameters

V_{DRM} / V_{RRM}	= 2200V
$I_{T(AV)}$	= 819A
I_{TSM}	= 30000A
$V_{T(TO)}$	= 0.82V
r_T	= 0.17mΩ

Features

- Full blocking capability over wide temperature range
- Heat transfer through aluminium oxide ceramic isolated metal baseplate
- Pressure contacts technology for high reliability

Ordering Information

MS	TZ	740	K	X X
Fixed code	TZ - Thyristor Module	Current Code	Technology K = Pressure Contact Technology	Voltage Code Code X 100 = V_{DRM}/V_{RRM}
Order Code MS TZ740K22 : 2200V V_{DRM},V_{RRM}, Thyristor Module				

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Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		125	2000 - 2200	V
V_{RSM}	Non-repetitive peak reverse voltage		125	2100 - 2300	V
V_{DRM}	Repetitive peak off-state voltage		125	2000 - 2200	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	125	170	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	125	170	mA
CONDUCTING					
$I_{T(AV)}$	Mean on state current	180° sin ,50 Hz, T_c=85°C		819	A
I_{RMS}	RMS on-state current			1286	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	30000	A
			125	26500	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	4500×10^3	A^2s
			125	3511×10^3	A^2s
V_T	On-state voltage	On-state current = 3000A	125	1.51	V
$V_{T(TO)}$	Threshold voltage		125	0.82	V
r_T	On-state slope resistance		125	0.17	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current	i_{GM}=1A, d_{iG}/dt=1A/µs, f=50Hz	125	200	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	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 module		0.042	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case, per module		0.043	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per module		0.015	°C/W
T_j	Max. junction temperature			125	°C
T_{stg}	Storage temperature			-40 125	°C
V_{ISOL}	Insulation test voltage,RMS	F=50Hz, 1min		3.0	KV
M1	Mounting torque			6 ± 15%	Nm
M2	Terminal connection torque			18 ± 15%	Nm
W	Weight (Approx.)			2100	gm

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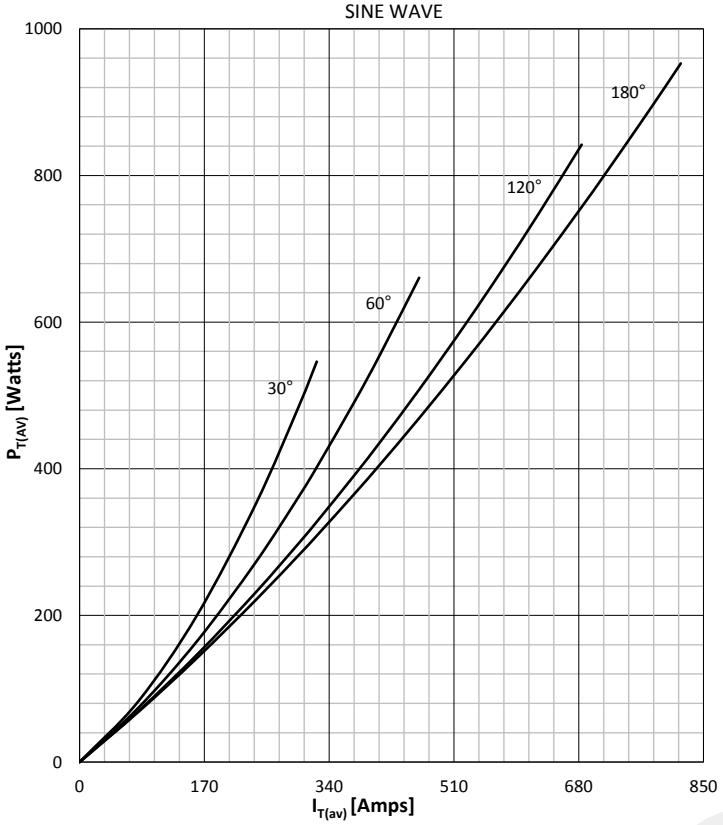
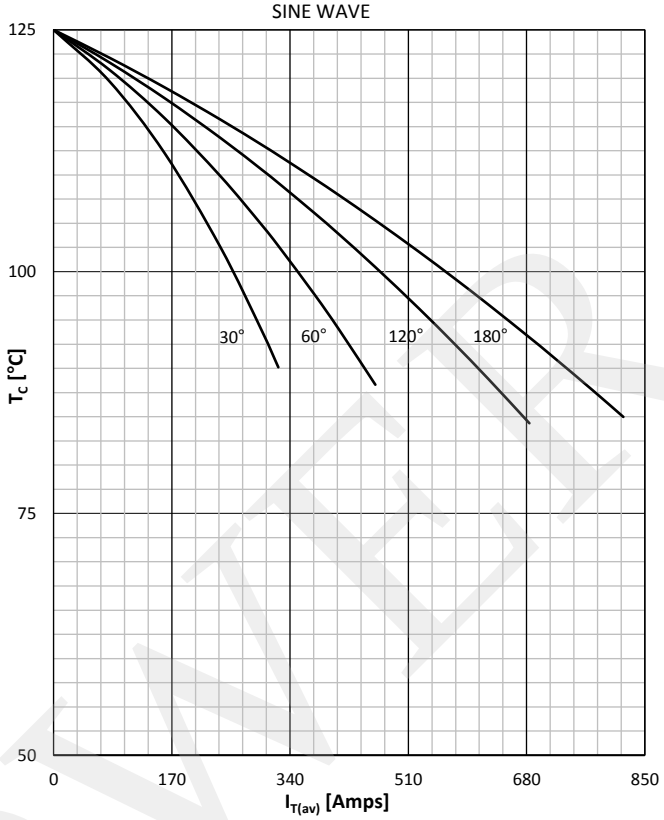
DISSIPATION CHARACTERISTICS

SINE WAVE



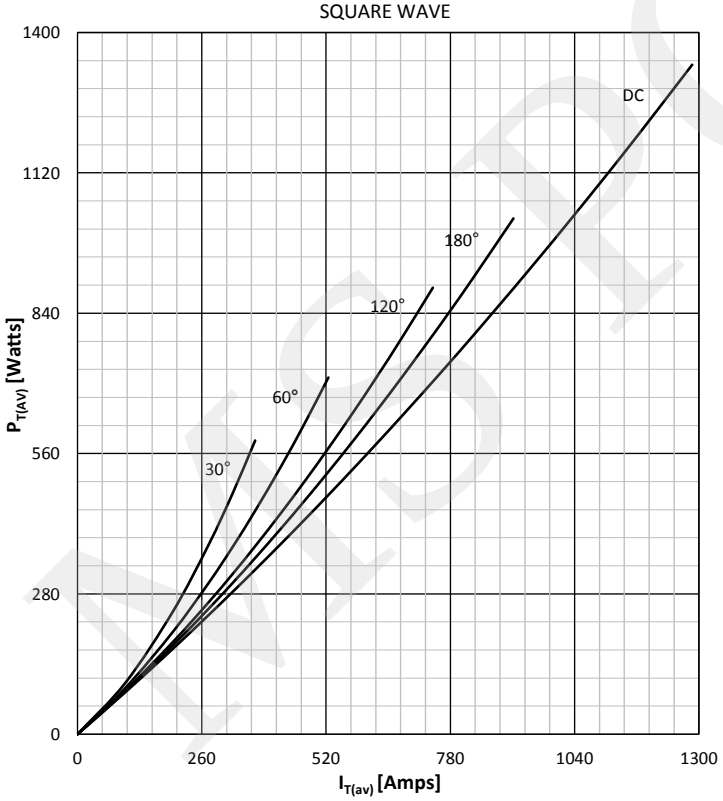
ON STATE CURRENT DERATING CURVE

SINE WAVE



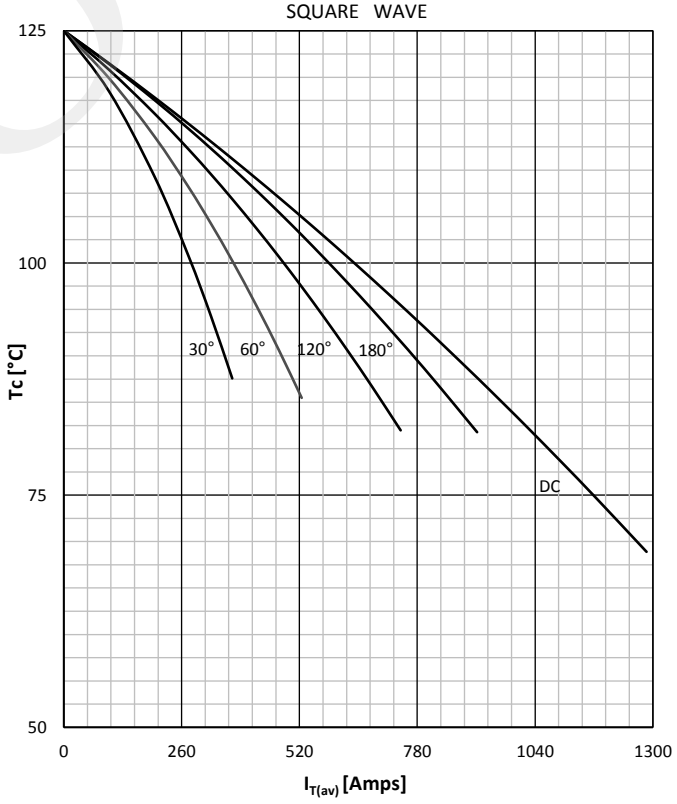
DISSIPATION CHARACTERISTICS

SQUARE WAVE



ON STATE CURRENT DERATING CURVE

SQUARE WAVE



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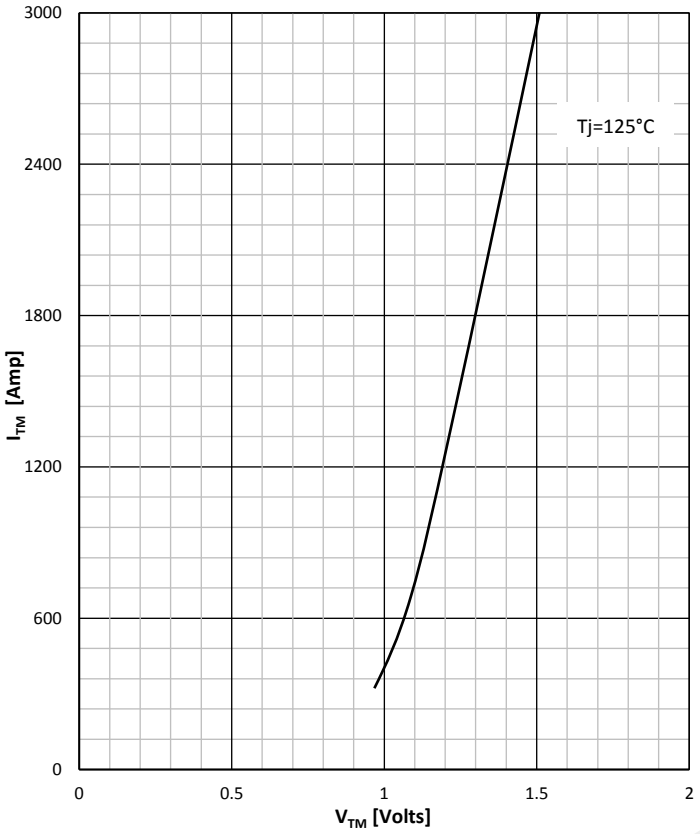
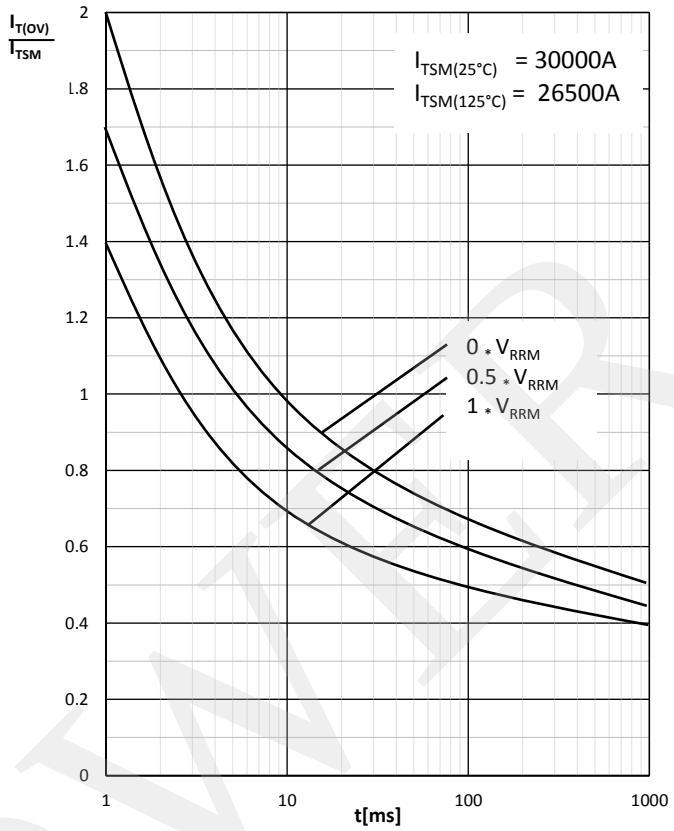
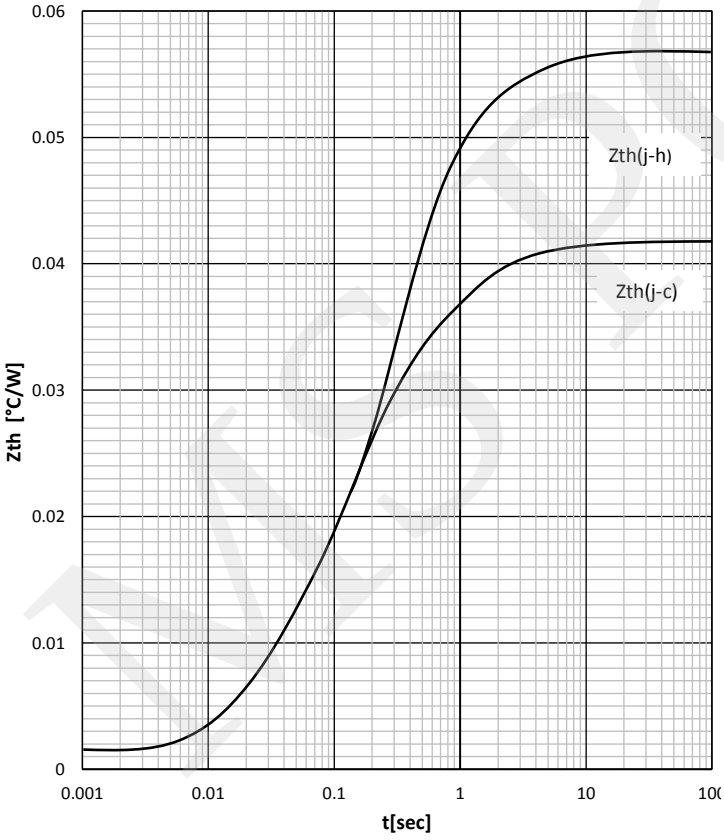
ON -STATE CHARACTERISTIC



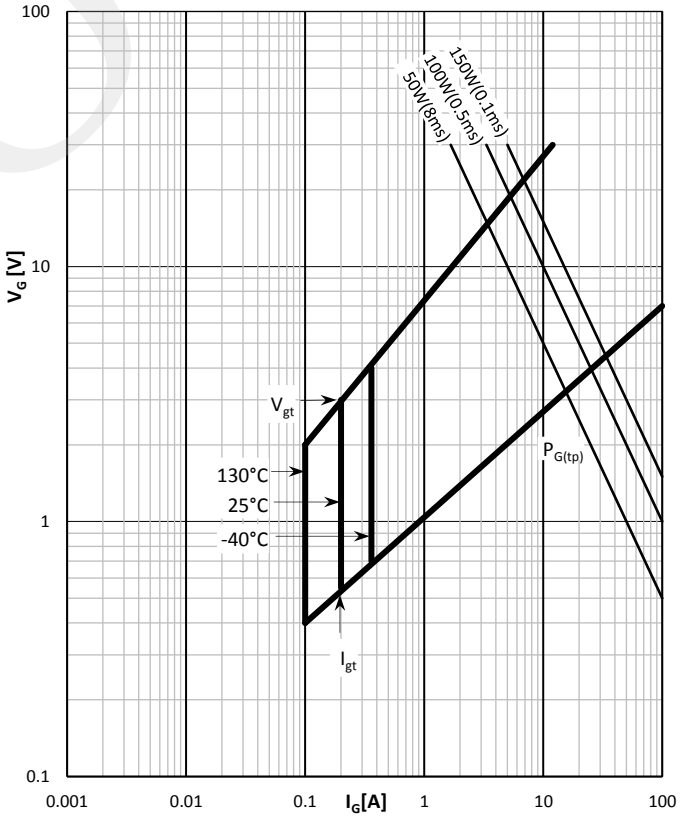
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS



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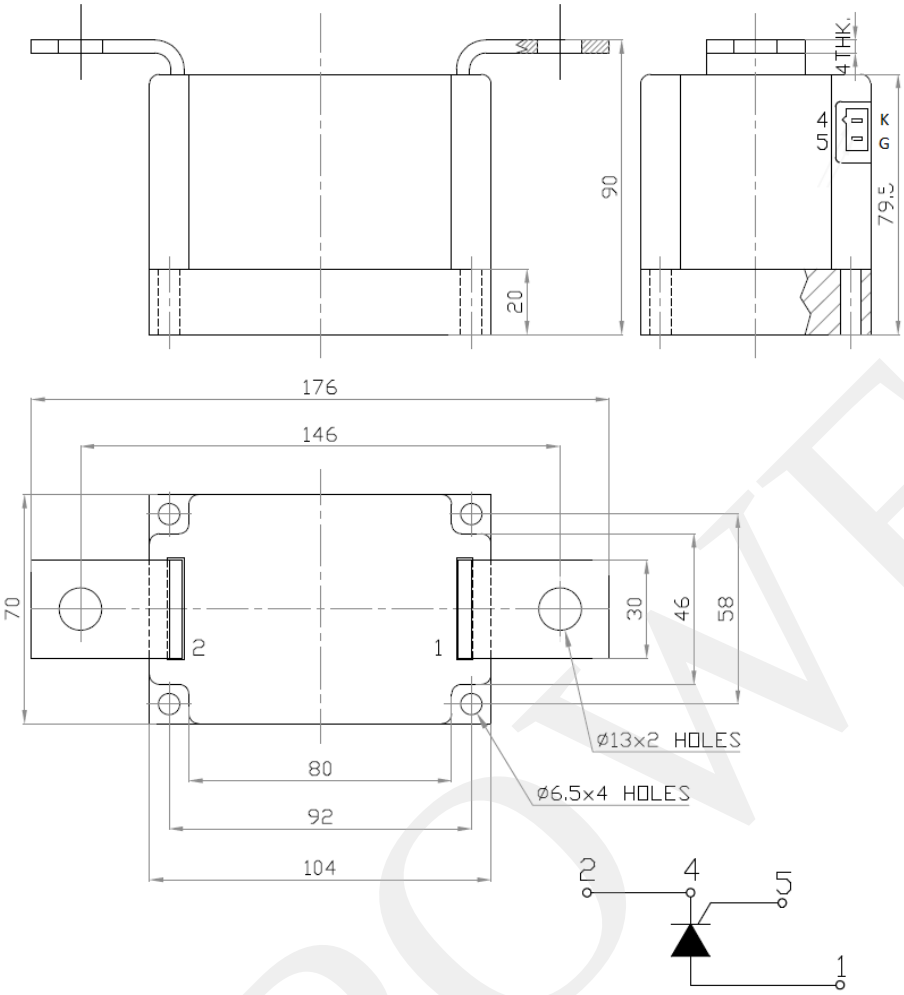
Outline



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