www.scomes.com

SCT5450

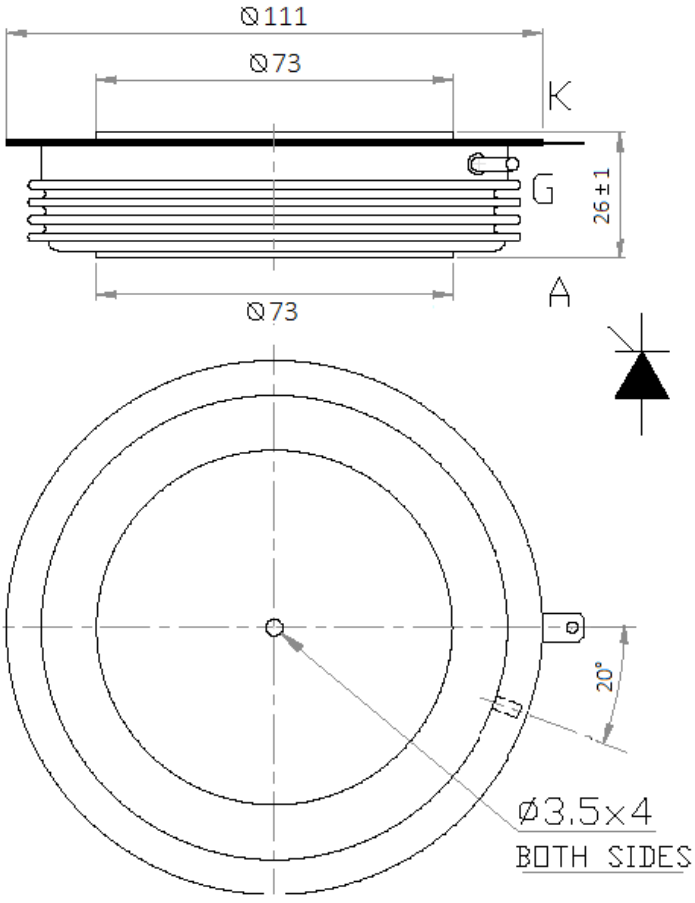
Power Rectifier Thyristor

Key Parameters

V_{DRM} / V_{RRM}	= 800V
$I_{T(AV)}$	= 5450A
I_{TSM}	= 74kA
$V_{T(TO)}$	= 0.84V
r_T	= 0.06mΩ

Features

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



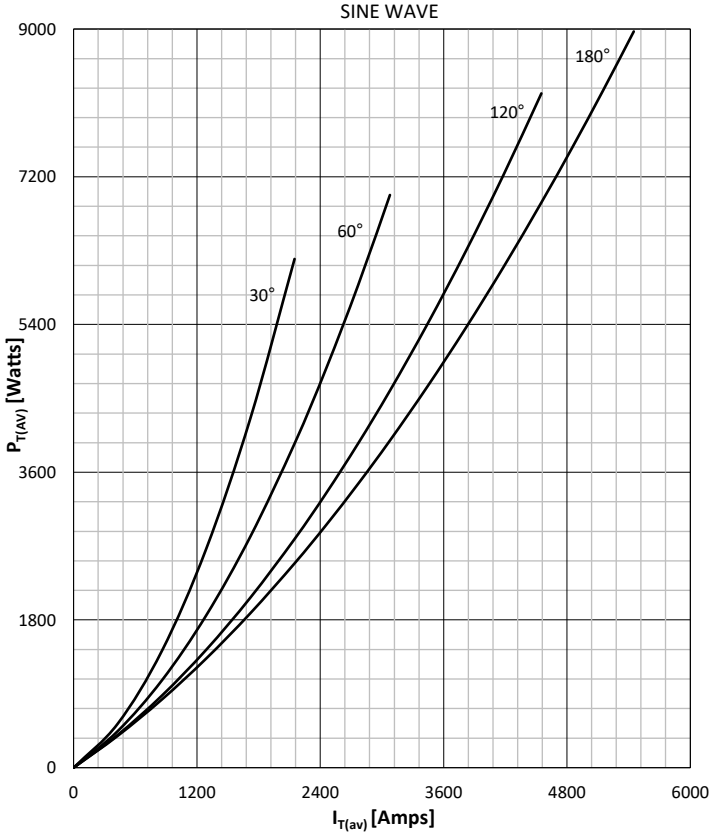
Applications

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

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		140	200 - 800	V
V_{RSM}	Non-repetitive peak reverse voltage		140	300 - 900	V
V_{DRM}	Repetitive peak off-state voltage		140	200 - 800	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	140	200	mA
I_{DRM}	Repetitive peak off-state current	V= V_{DRM}	140	200	mA
CONDUCTING					
$I_{T(AV)}$	Mean on state current	180° sin ,50 Hz, T_c=73°C, Double side cooled		5450	A
I_{RMS}	RMS on-state current			8556	A
I_{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	74000	A
			140	70000	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	27380 x 10^3	A^2s
			140	24500 x 10^3	A^2s
V_T	On-state voltage	On-state current = 2000A	140	0.96	V
$V_{T(TO)}$	Threshold voltage		140	0.84	V
r_T	On-state slope resistance		140	0.06	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current		140	320	A/µs
dv/dt	Critical rate of rise of off-state voltage	V_{DR} = 67%V_{DRM}	140	500	V/µs
GATE					
I_{gt}	Gate trigger current	V_D=6V	25	300	mA
V_{gt}	Gate trigger voltage	V_D=6V	25	3.0	V
I_H	Holding current	V_D=6V, gate open circuit	25	400	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		0.0075	°C/W
$R_{th(j-c)}$	Thermal impedance, rec120°	Junction to case, Double side cooled		0.0086	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, Double side cooled		0.002	°C/W
T_j	Max. junction temperature			140	°C
T_{stg}	Storage temperature			-40 140	°C
M	Clamping Force			40 - 50	kN
W	Weight (Approx.)			1200	gm

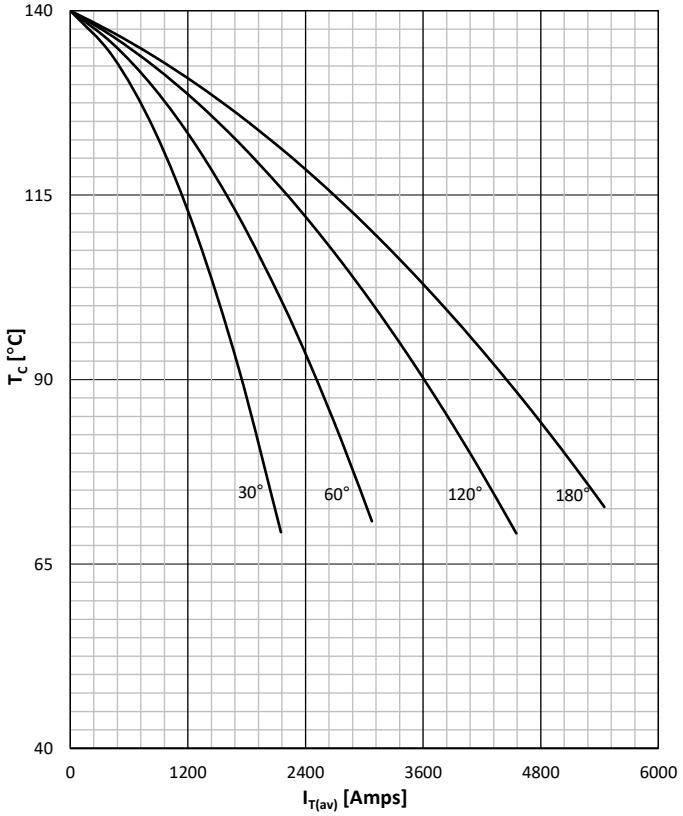
DISSIPATION CHARACTERISTICS

SINE WAVE



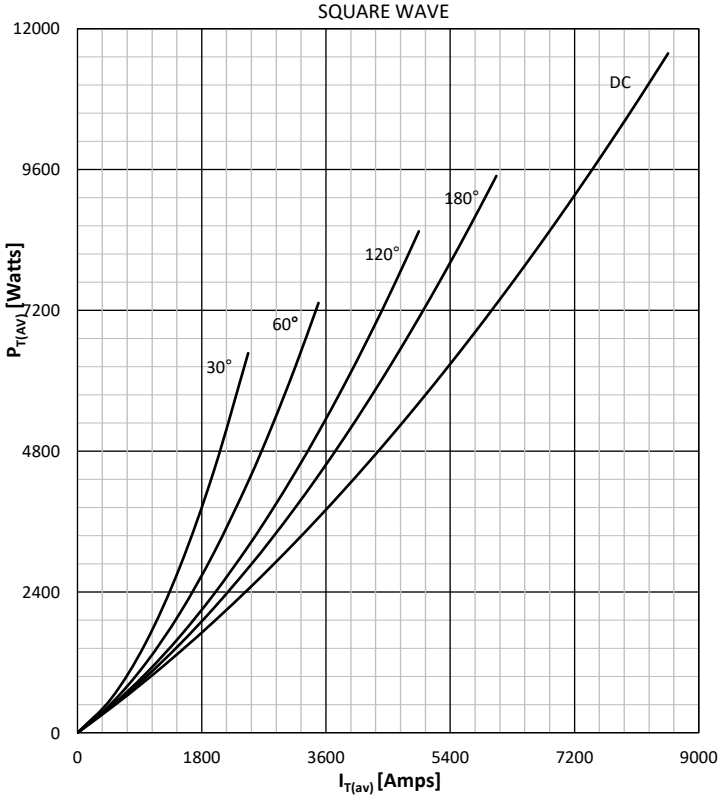
ON STATE CURRENT DERATING CURVE

SINE WAVE



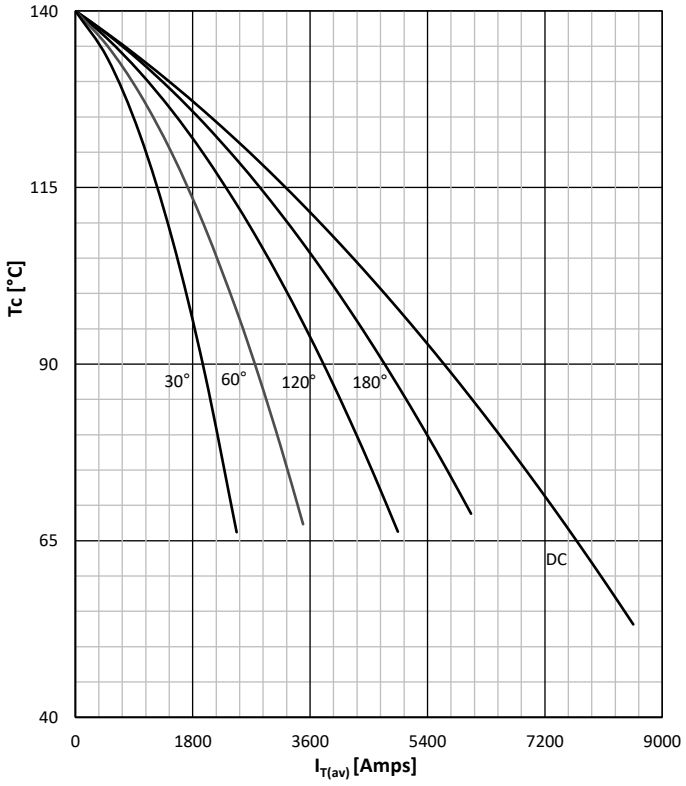
DISSIPATION CHARACTERISTICS

SQUARE WAVE

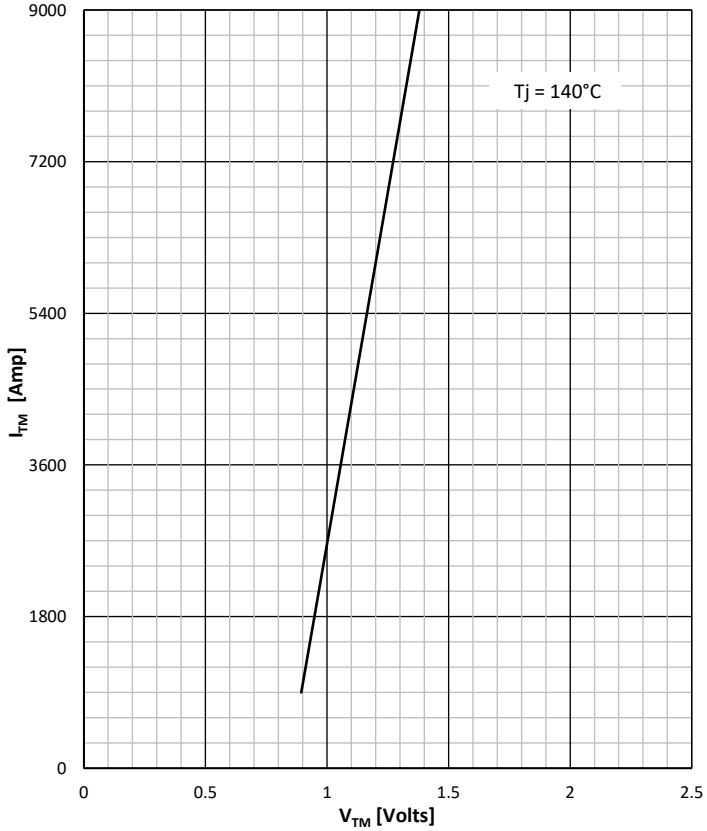


ON STATE CURRENT DERATING CURVE

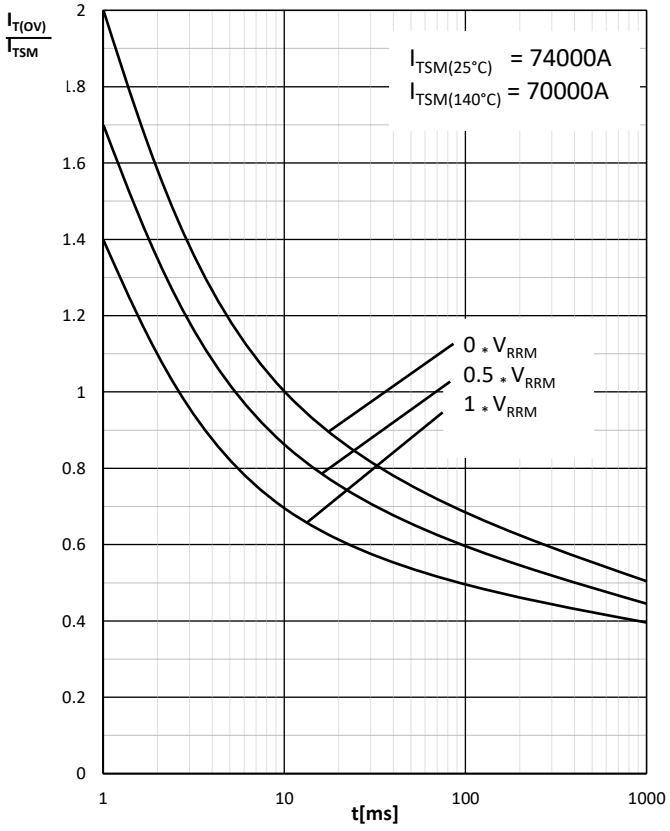
SQUARE WAVE



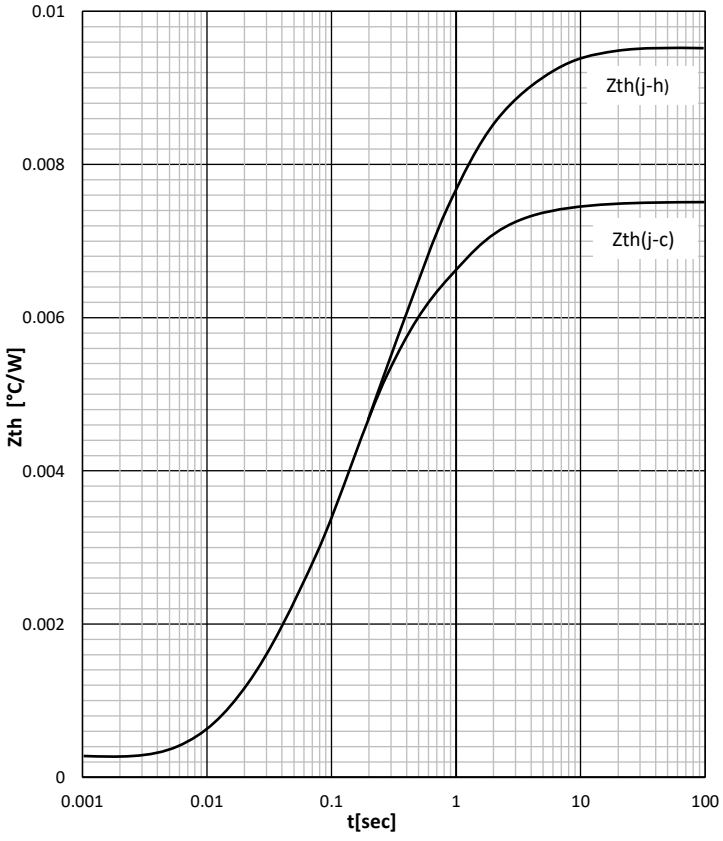
ON STATE CHARACTERISTIC



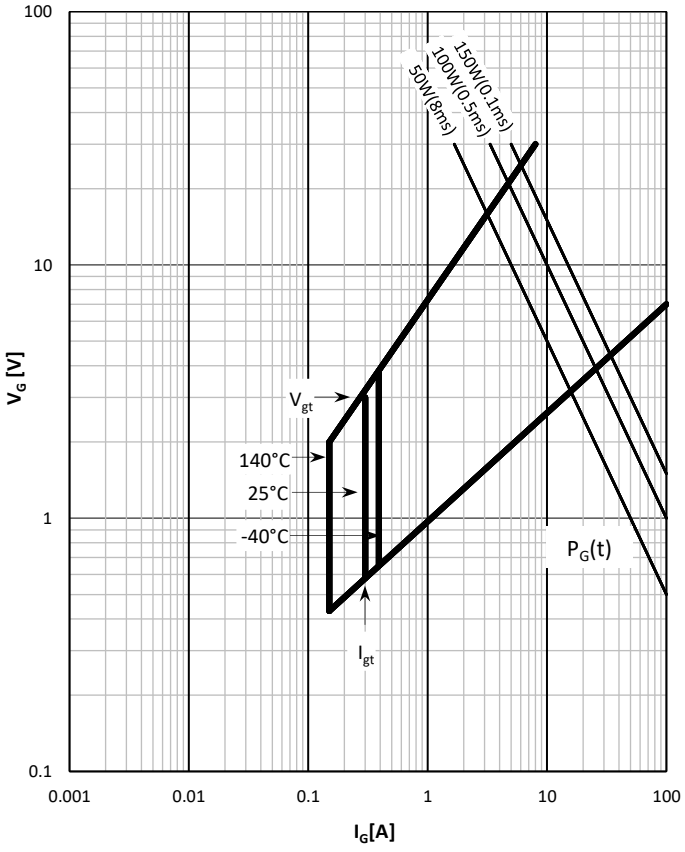
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



GATE TRIGGER CHARACTERISTICS



S.CO.M.E.S. srl Via Enrico Mattei,6/8 26823 Castiglione d'Adda(LO)-IT
Phone:+39 0377 901243 Fax:+39 0377 900206