

SCT5000C



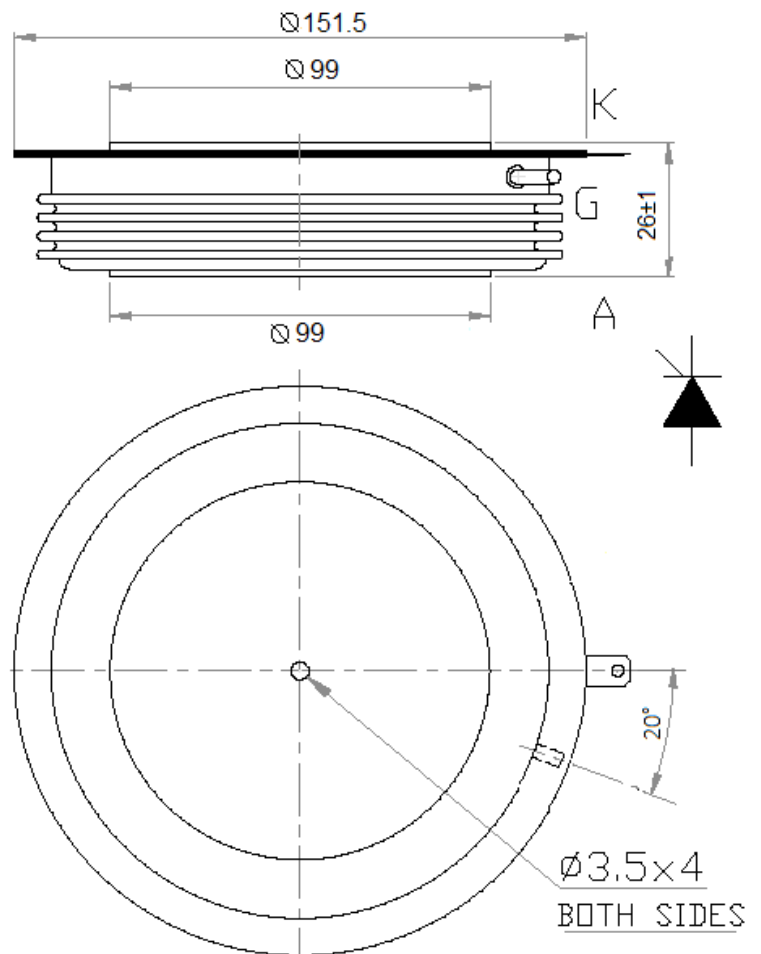
Power Rectifier Thyristor

Key Parameters

V_{RRM}	= 2000V
$I_{F(AV)}$	= 5000A
I_{FSM}	= 86000A
$V_{F(TO)}$	= 0.848V
r_T	= 0.0658mΩ

Features

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



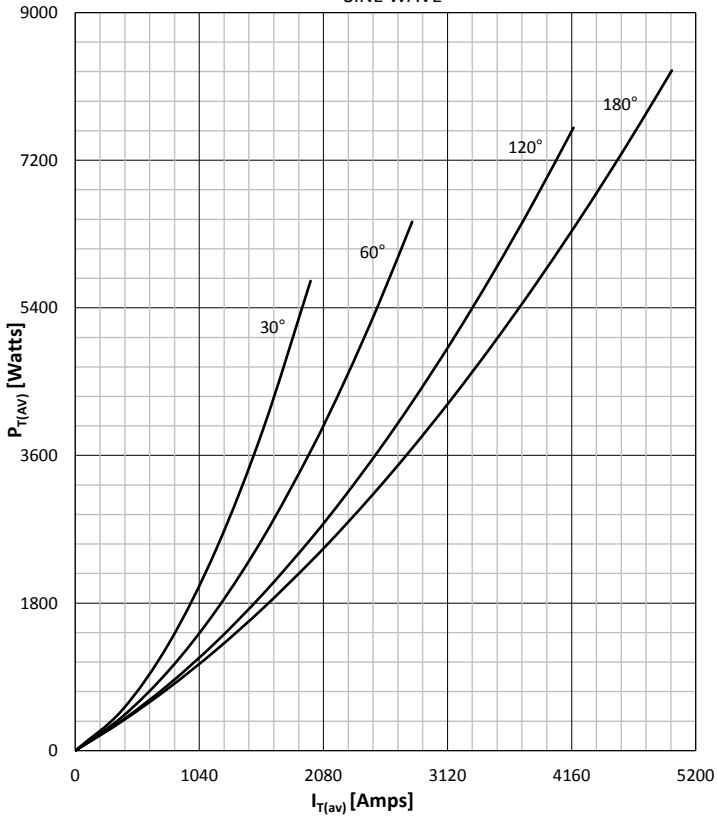
Applications

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

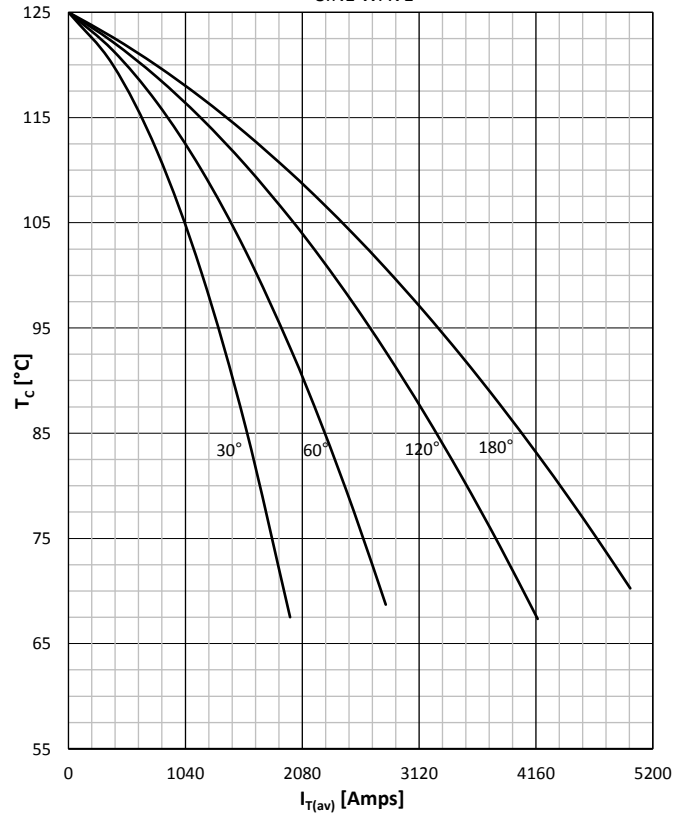
Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		125	1200 - 2000	V
V _{RSM}	Non-repetitive peak reverse voltage		125	1300 - 2100	V
V _{DRM}	Repetitive peak off-state voltage		125	1200 - 2000	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	125	200	mA
I _{DRM}	Repetitive peak off-state current	V = V _{DRM}	125	200	mA
CONDUCTING					
I _{T(AV)}	Mean on state current	180° sin ,50 Hz, T _c =70°C, Double side cooled		5000	A
I _{RMS}	RMS on-state current	T _c =70°C, Double side cooled		7850	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	86000	A
			125	85000	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	36980 x 10 ³	A ² s
			125	36125 x 10 ³	A ² s
V _T	On-state voltage	On-state current = 4000A	125	1.15	V
V _{T(TO)}	Threshold voltage		125	0.848	V
r _T	On-state slope resistance		125	0.0658	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current, Rep.		125	150	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	250	mA
V _{gt}	Gate trigger voltage	V _D =6V	25	3.0	V
I _H	Holding current	V _D =6V, gate open circuit	25	1000	mA
I _L	Latching current	V _D =6V	25	1200	mA
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, Double side cooled		0.0066	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case, Double side cooled		0.0076	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, Double side cooled		0.0014	°C/W
T _j	Max. junction temperature			125	°C
T _{stg}	Storage temperature			-40 125	°C
M	Clamping Force			71 - 89	kN
W	Weight (Approx.)			2900	gm

DISSIPATION CHARACTERISTICS

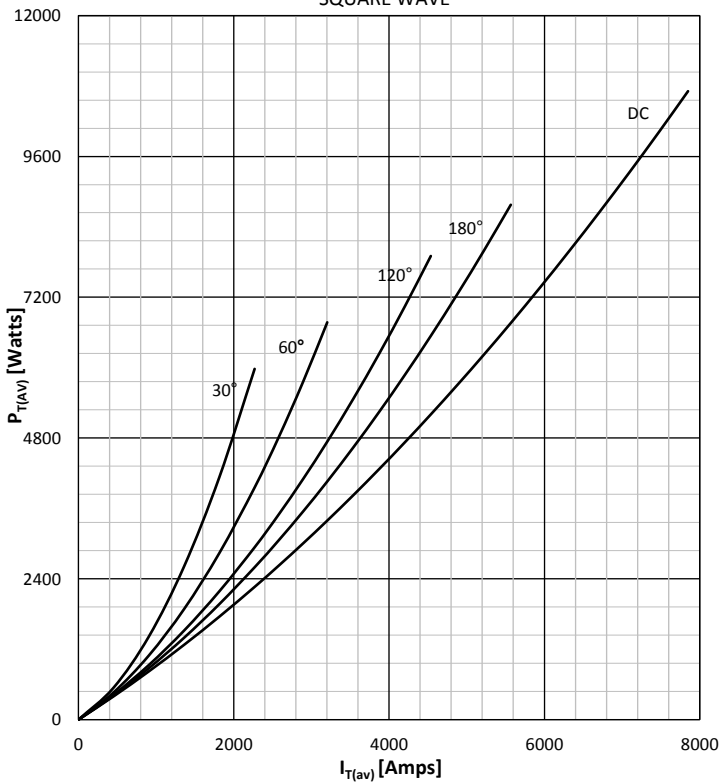
SINE WAVE


ON STATE CURRENT DERATING CURVE

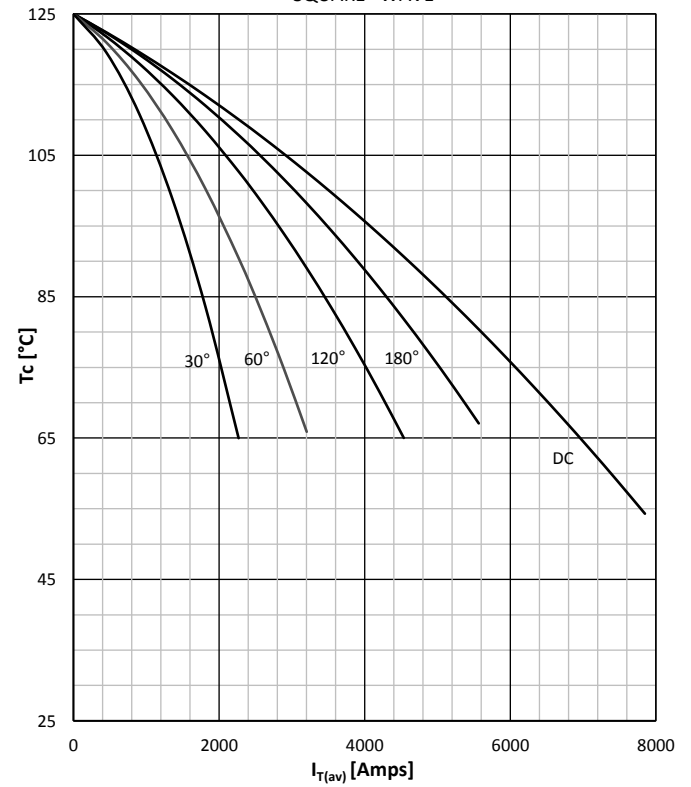
SINE WAVE

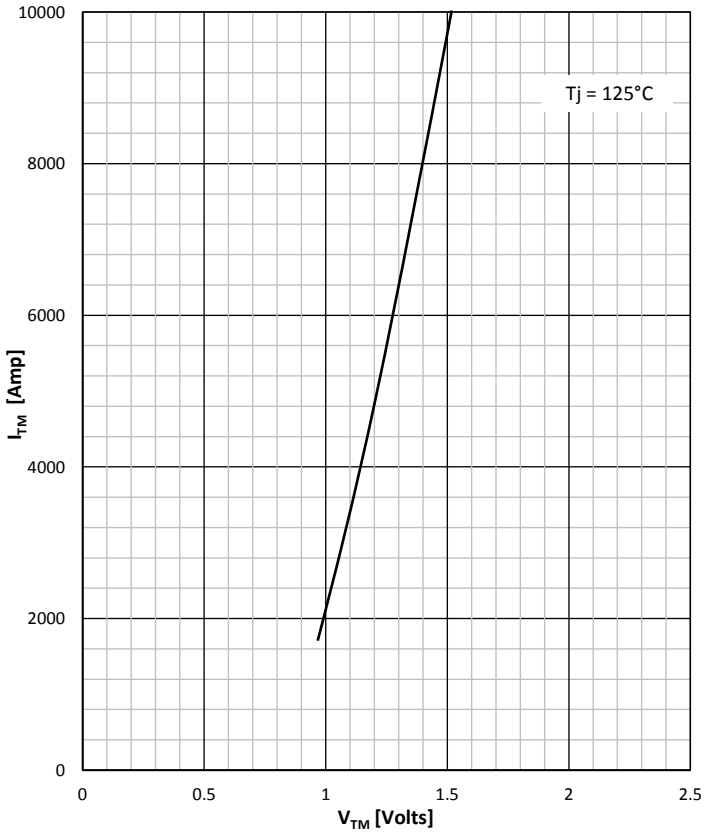
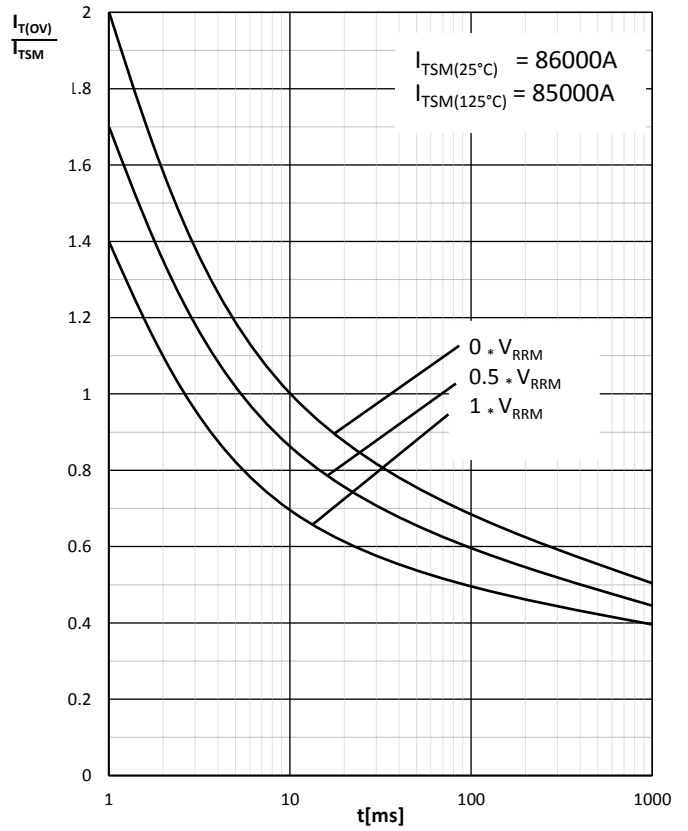
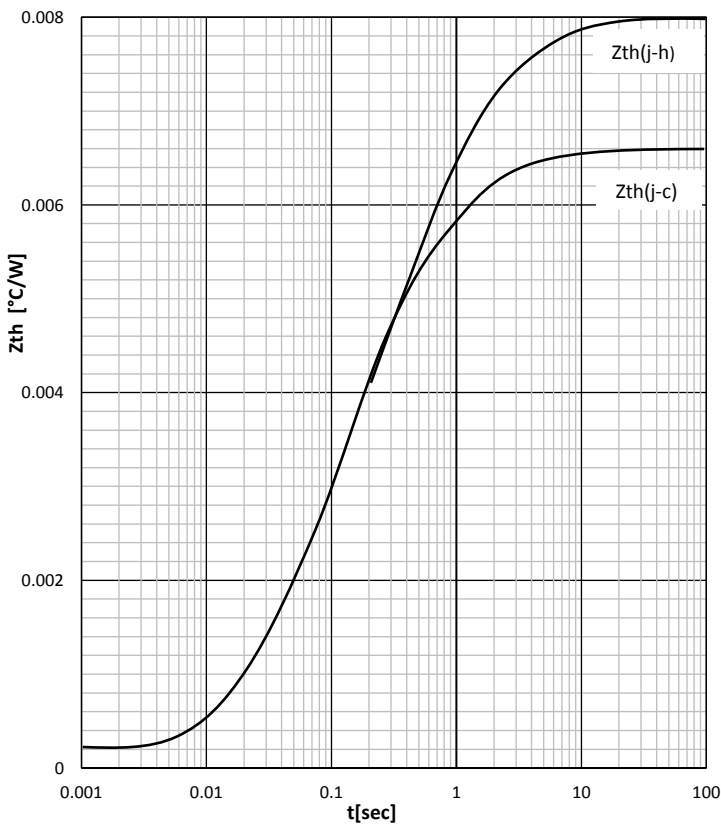
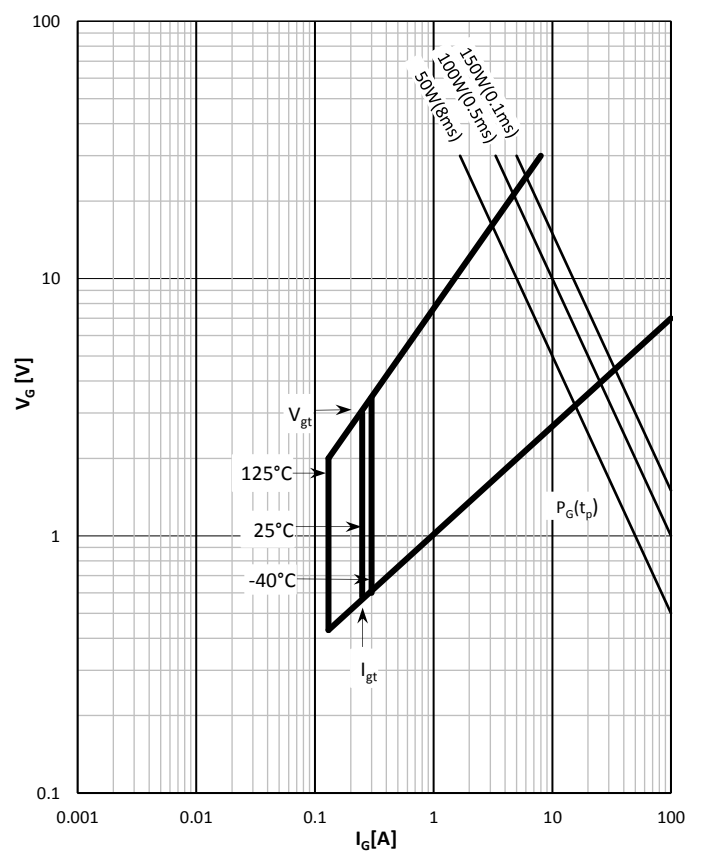

DISSIPATION CHARACTERISTICS

SQUARE WAVE


ON STATE CURRENT DERATING CURVE

SQUARE WAVE



ON STATE CHARACTERISTIC

SURGE CHARACTERISTICS

TRANSIENT THERMAL IMPEDANCE

GATE TRIGGER CHARACTERISTICS


Scomes srl reserves the right to change any specification without notice

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