



SCOMES

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SCT1450

Power Rectifier Thyristor



Key Parameters

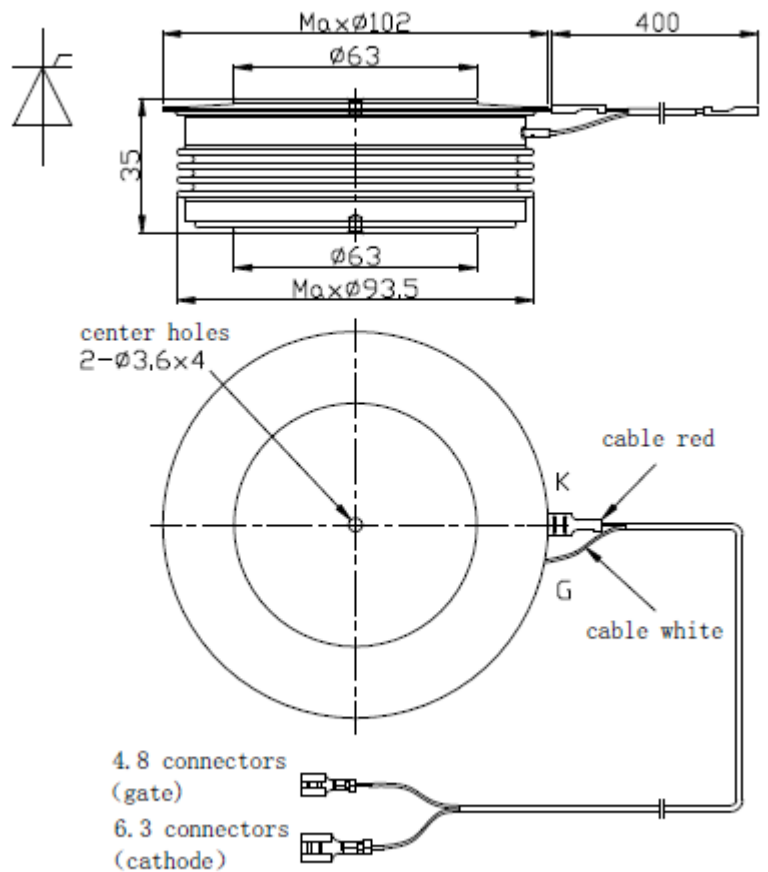
V_{DRM}	= 6500V
$I_{T(AV)}$	= 1450A
I_{TSM}	= 32.5kA
$V_{T(TO)}$	= 1.18V
r_T	= 0.547mΩ

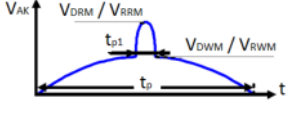
Features

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

Applications

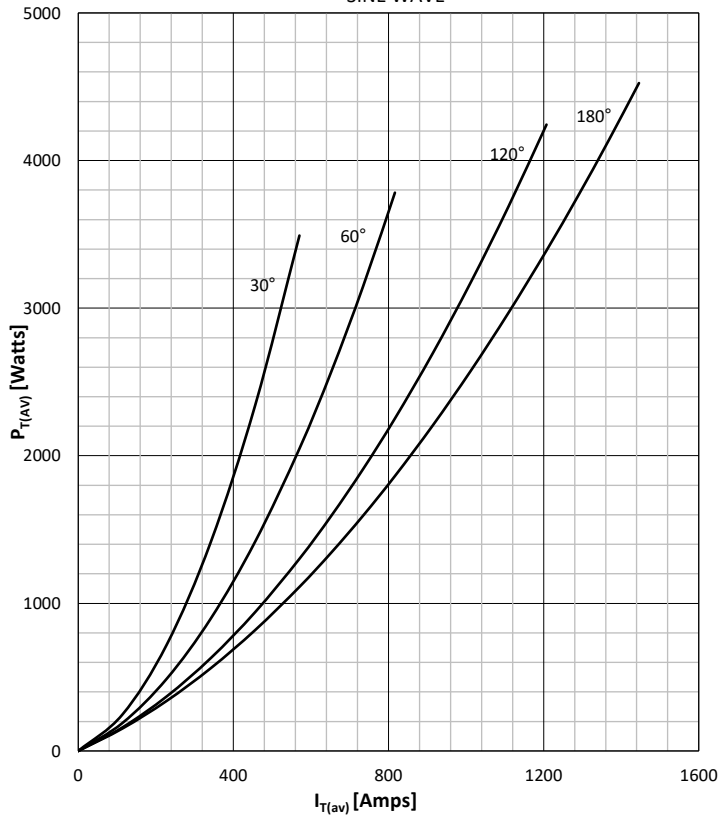
- Power Supplies
- Motor control
- Controlled Rectifiers
- Transportation
- Induction Heating



Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{DSM}	Maximum surge peak off-state voltage	f= 5Hz, t _p =10msec	125	6500	V
V _{RSM}	Maximum surge peak reverse voltage				
V _{DRM}	Maximum repetitive peak off-state voltage	f= 50Hz, t _p =10msec, t _{p1} = 250μs 	125	6500	V
V _{RRM}	Maximum repetitive peak reverse voltage				
V _{DWM}	Maximum crest working forward voltage				
V _{RWM}	Maximum crest working reverse voltage				
I _{RRM}	Repetitive peak reverse current	V= V _{RRM}	125	300	mA
I _{DRM}	Repetitive peak off-state current	V= V _{DRM}	125	300	mA
CONDUCTING					
I _{T(AV)}	Mean on state current	180° sin ,50 Hz, T _c =70°C, Double side cooled		1450	A
I _{RMS}	RMS on-state current			2270	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	32500	A
			125	31500	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	5281 x 10 ³	A ² s
			125	4961 x 10 ³	A ² s
V _T	On-state voltage	On-state current = 1500A	125	2.00	V
V _{T(TO)}	Threshold voltage		125	1.18	V
r _T	On-state slope resistance		125	0.547	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current		125	250	A/μs
dv/dt	Critical rate of rise of off-state voltage	V _{DR} = 67%V _{DRM}	125	2000	V/μs
GATE					
I _{gt}	Gate trigger current	V _D =6V	25	400	mA
V _{gt}	Gate trigger voltage	V _D =6V	25	2.6	V
I _H	Holding current	V _D =6V, gate open circuit	25	100	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		0.0110	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case, Double side cooled		0.0125	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, Double side cooled		0.0025	°C/W
T _j	Max. junction temperature			125	°C
T _{stg}	Storage temperature			-40 150	°C
M	Clamping Force			45 - 60	kN
W	Weight (Approx.)			1400	gm

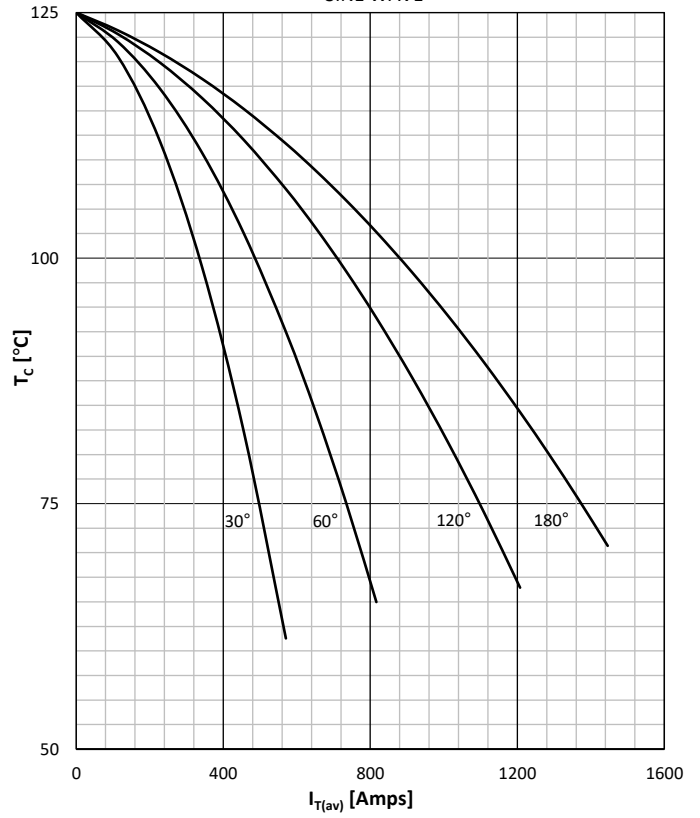
DISSIPATION CHARACTERISTICS

SINE WAVE



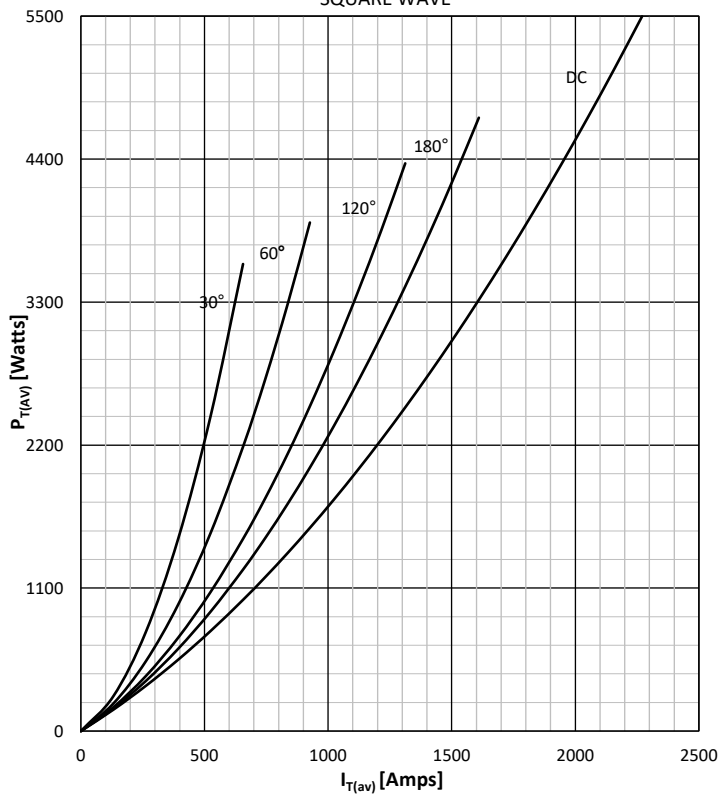
ON STATE CURRENT DERATING CURVE

SINE WAVE



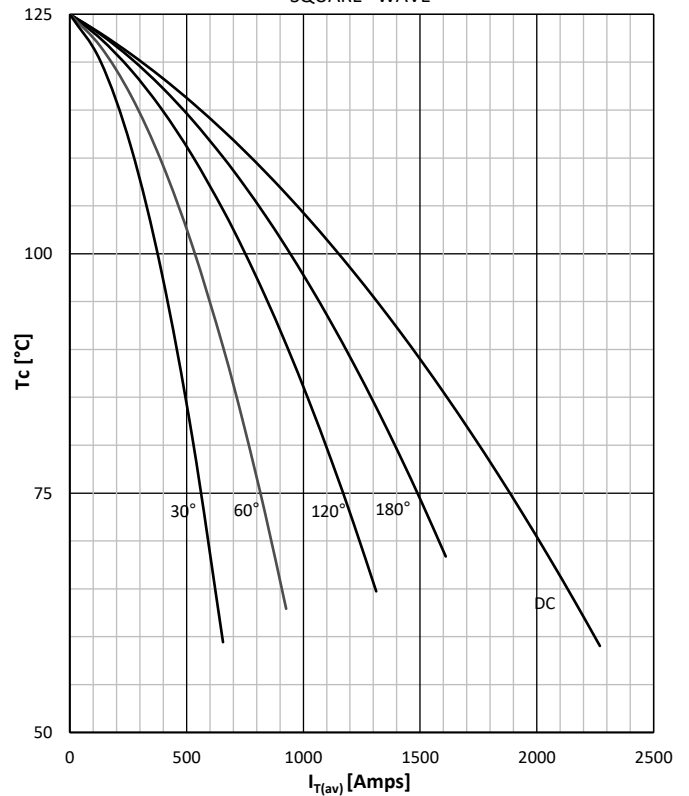
DISSIPATION CHARACTERISTICS

SQUARE WAVE

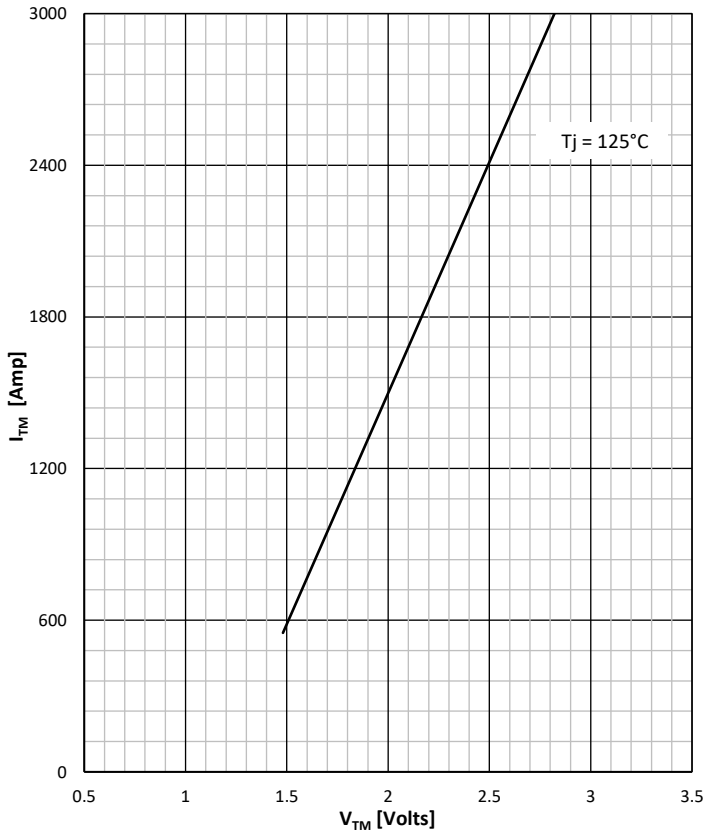


ON STATE CURRENT DERATING CURVE

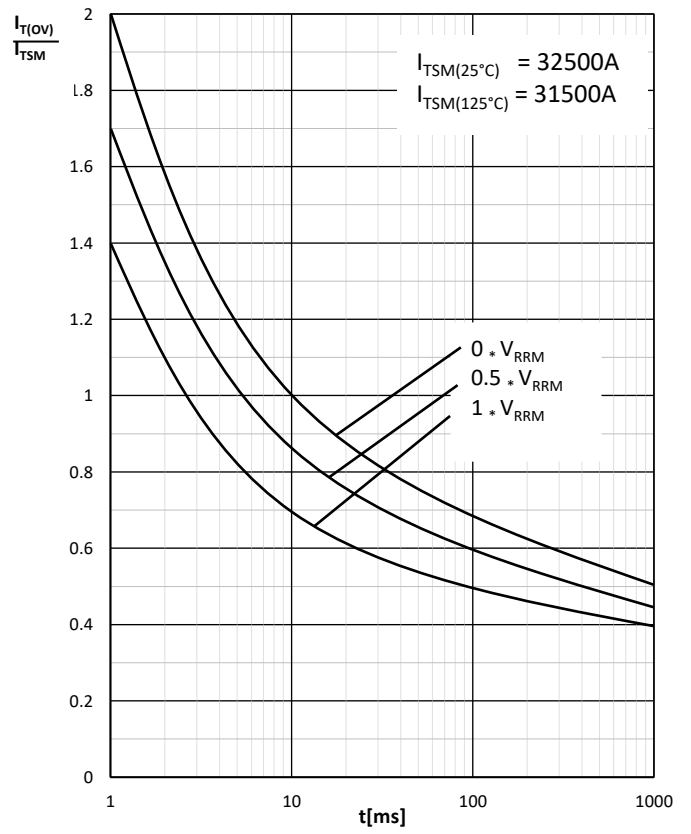
SQUARE WAVE



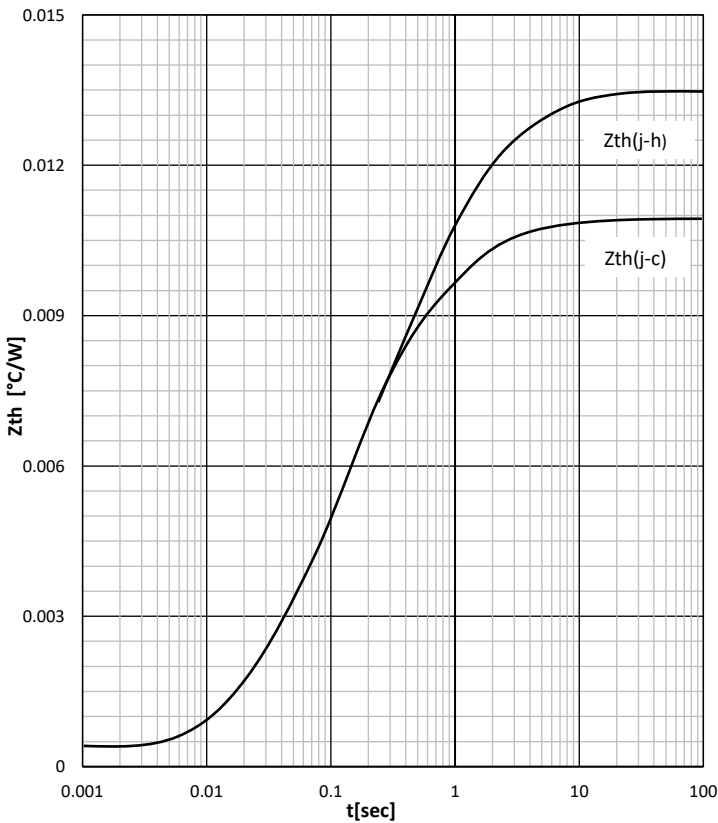
ON STATE CHARACTERISTIC



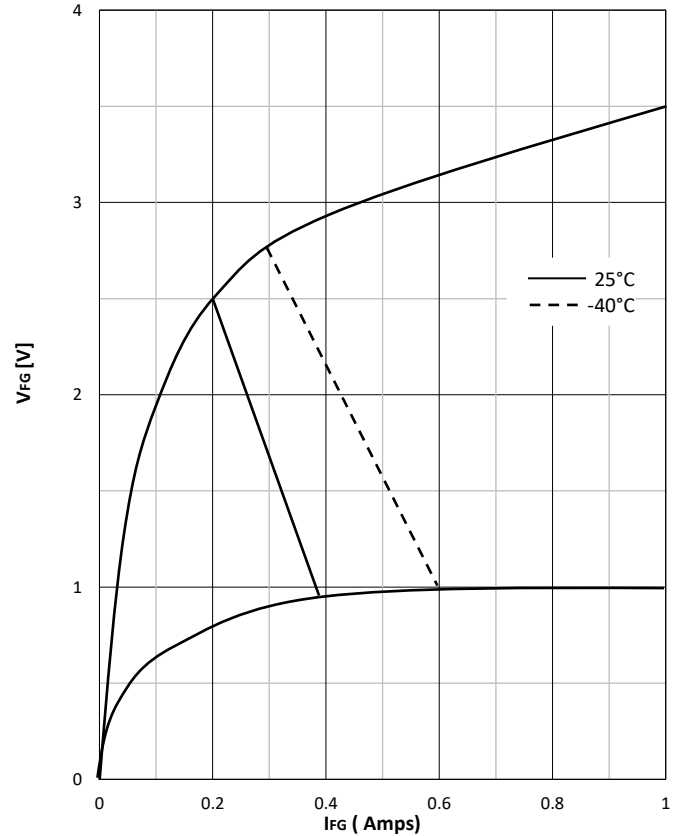
SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



GATE TRIGGER CHARACTERISTICS



Scomes srl reserves the right to change any specification without notice

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