

SCT2835



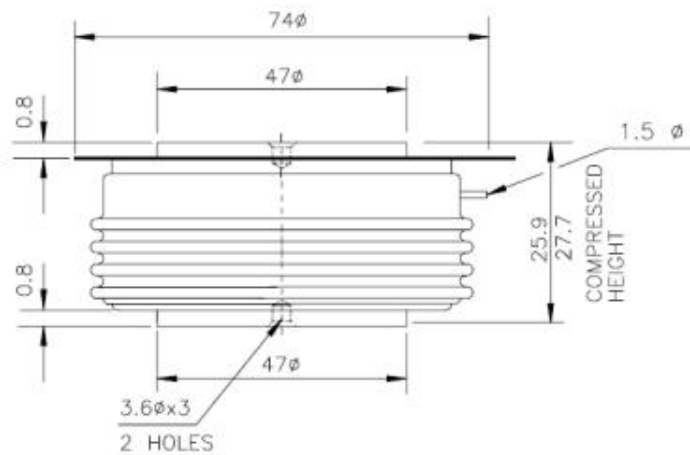
Power Rectifier Thyristor

Key Parameters

V_{RRM}	= 800V
$I_{F(AV)}$	= 2835A
I_{FSM}	= 37000A
$V_{F(TO)}$	= 0.80V
r_T	= 0.12mΩ

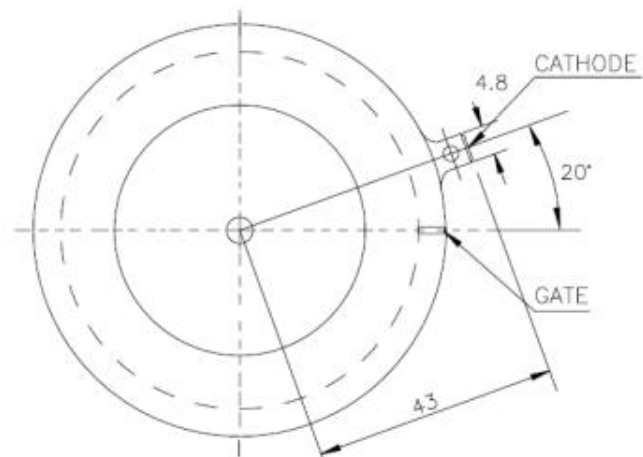
Features

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



Applications

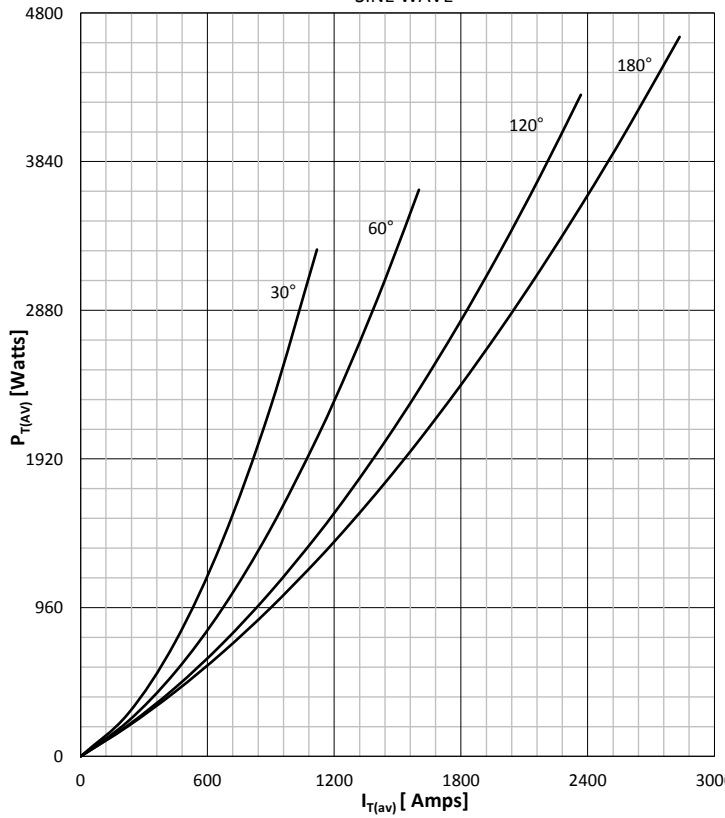
- Battery Chargers
- Medical Equipment
- UPS
- Power Supplies
- Motor control
- Controlled Rectifiers
- Transportation
- Induction Heating
- Welding



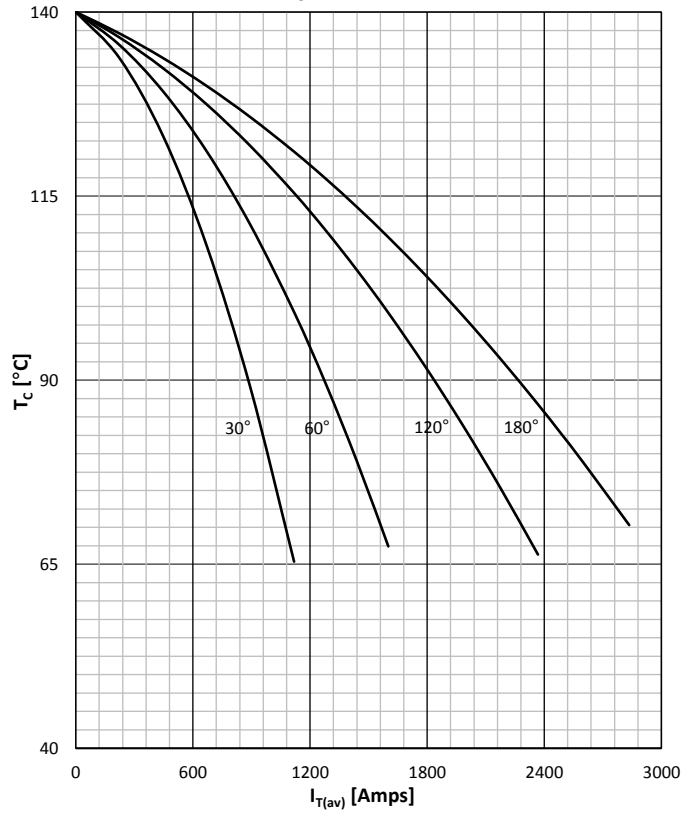
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		140	200 - 800	V
V _{RSM}	Non-repetitive peak reverse voltage		140	300 - 900	V
V _{DRM}	Repetitive peak off-state voltage		140	200 - 800	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	140	100	mA
I _{DRM}	Repetitive peak off-state current	V = V _{DRM}	140	100	mA
CONDUCTING					
I _{T(AV)}	Mean on state current	180° sin ,50 Hz, T _c =70°C, Double side cooled 180° sin ,50 Hz, T _c =79°C, Double side cooled		2835 2585	A
I _{RMS}	RMS on-state current			4451	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	37000	A
			140	36000	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	6845 x 10 ³	A ² s
			140	6480 x 10 ³	A ² s
V _T	On-state voltage	On-state current = 6000A	140	1.52	V
V _{T(TO)}	Threshold voltage		140	0.80	V
r _T	On-state slope resistance		140	0.12	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current		140	200	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	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	600	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		0.015	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case, Double side cooled		0.01725	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, Double side cooled		0.006	°C/W
T _j	Max. junction temperature			140	°C
T _{stg}	Storage temperature			-40 140	°C
M	Clamping Force			20 - 24	kN
W	Weight (Approx.)			500	gm

DISSIPATION CHARACTERISTICS

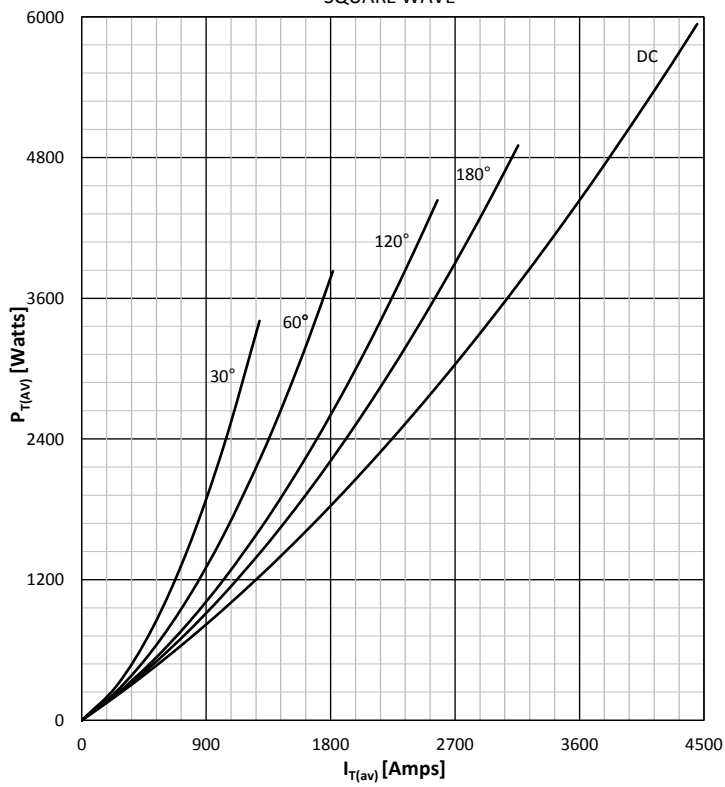
SINE WAVE


ON STATE CURRENT DERATING CURVE

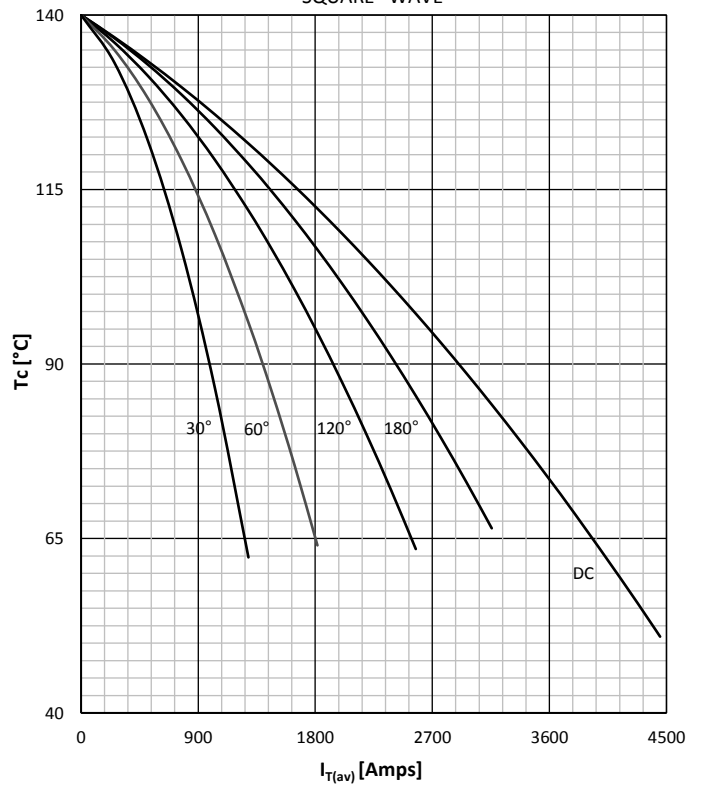
SINE WAVE


DISSIPATION CHARACTERISTICS

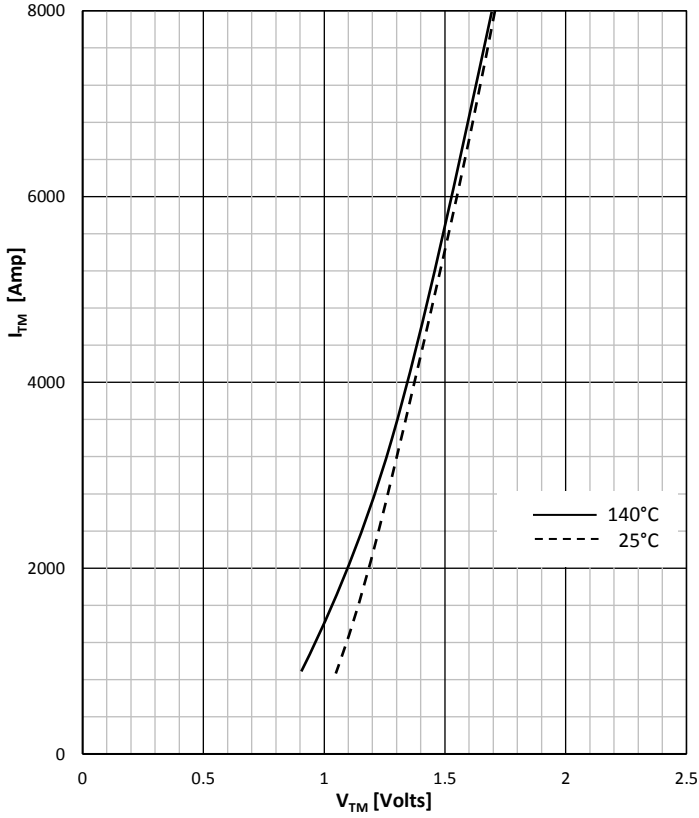
SQUARE WAVE


ON STATE CURRENT DERATING CURVE

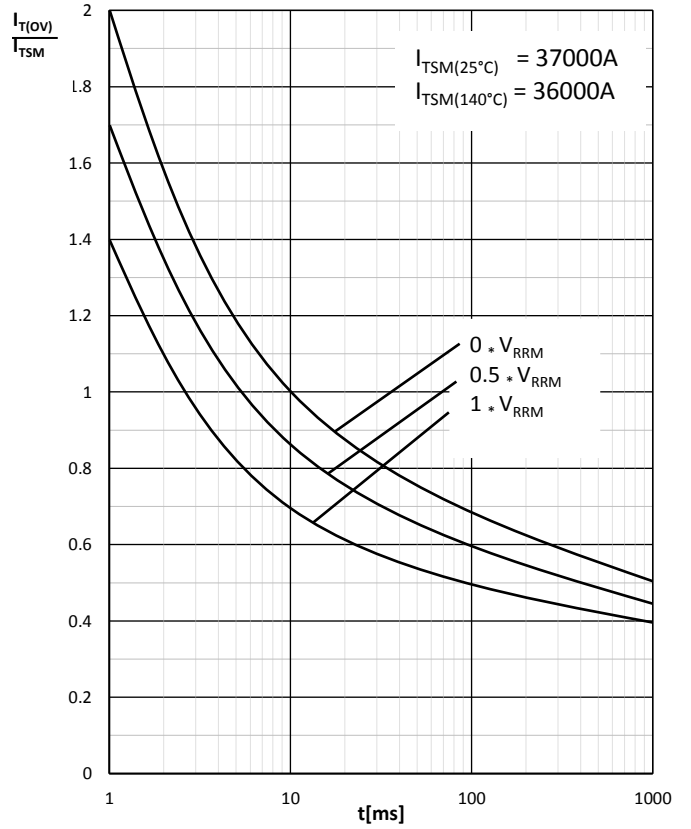
SQUARE WAVE



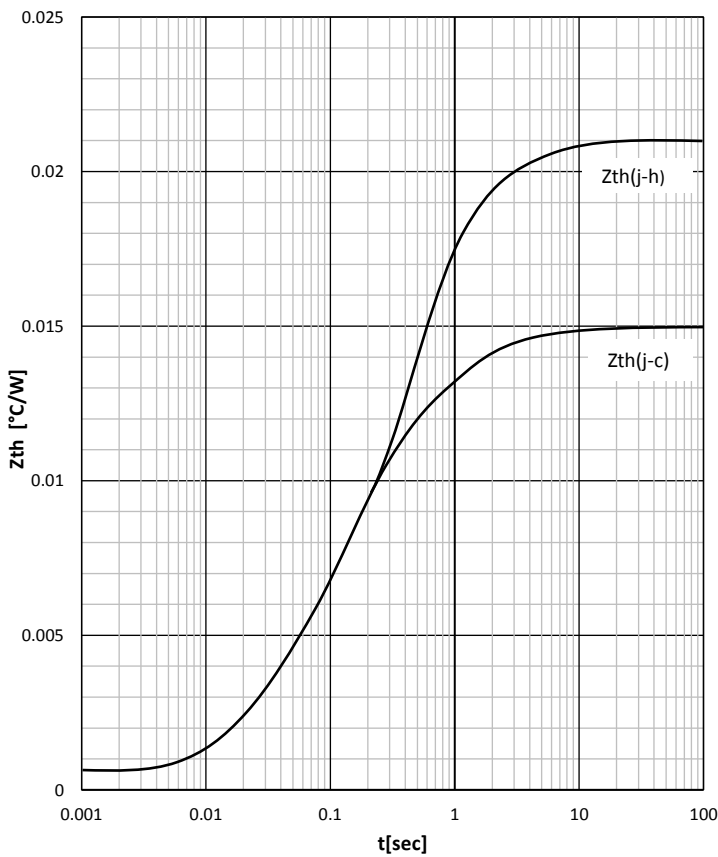
ON -STATE CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



GATE TRIGGER CHARACTERISTICS

