



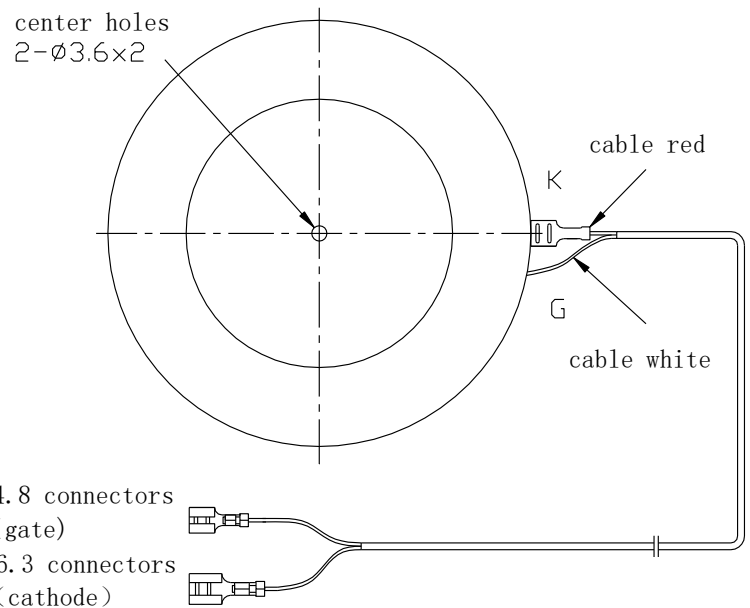
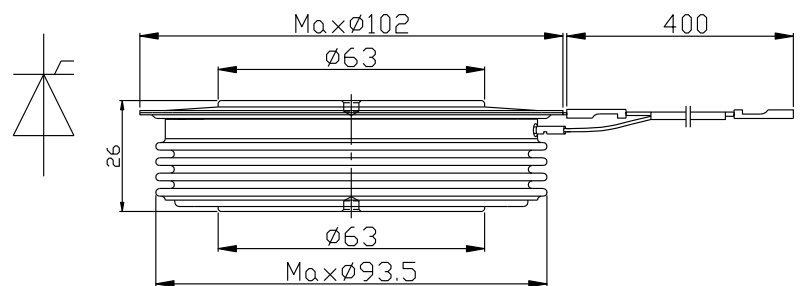
Power Rectifier Thyristor

Key Parameters

V_{DRM}	= 6500V
$I_{T(AV)}$	= 1540A
I_{TSM}	= 32.5kA
$V_{T(TO)}$	= 1.18V
r_T	= 0.547mΩ

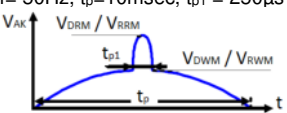
Features

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



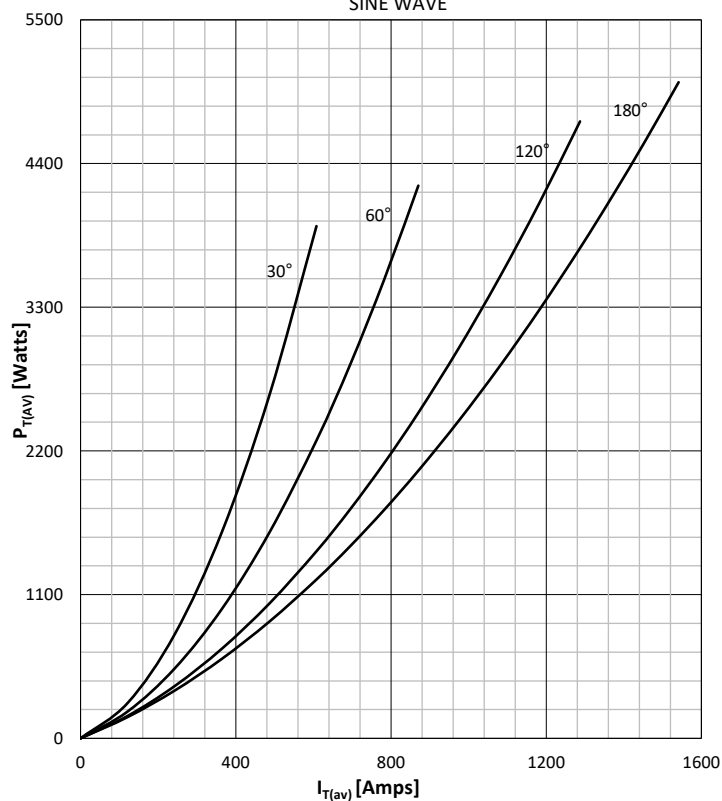
Applications

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

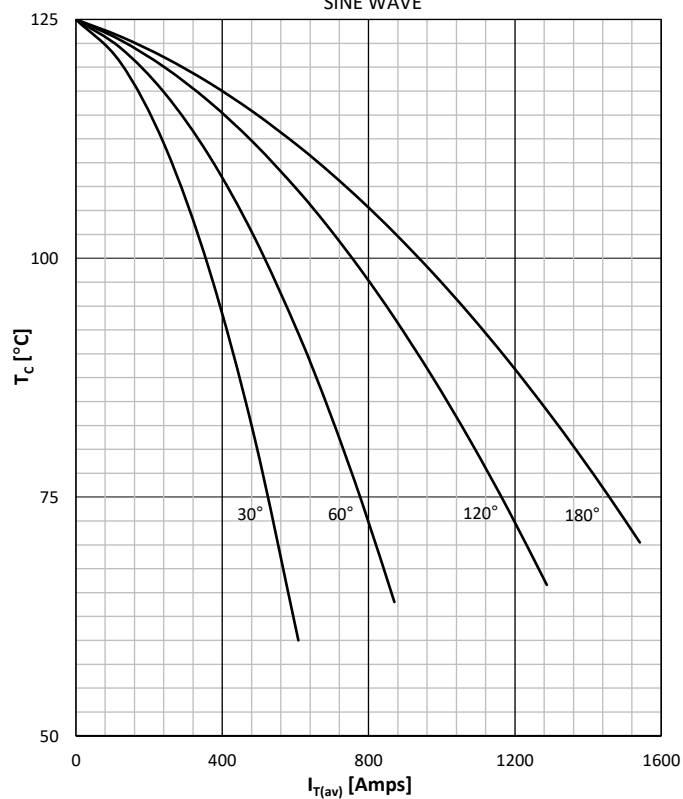
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{DSM}	Maximum surge peak off-state voltage	f= 5Hz, t _p =10msec	125	6500	V
V _{RSM}	Maximum surge peak reverse voltage				
V _{DRM}	Maximum repetitive peak off-state voltage	f= 50Hz, t _p =10msec, t _{p1} = 250μs 	125	6500	V
V _{RRM}	Maximum repetitive peak reverse voltage				
V _{DWM}	Maximum crest working forward voltage		125	4340	V
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		1540	A
I _{RMS}	RMS on-state current			2420	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		0.010	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case, Double side cooled		0.011	°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.)			1000	gm

DISSIPATION CHARACTERISTICS

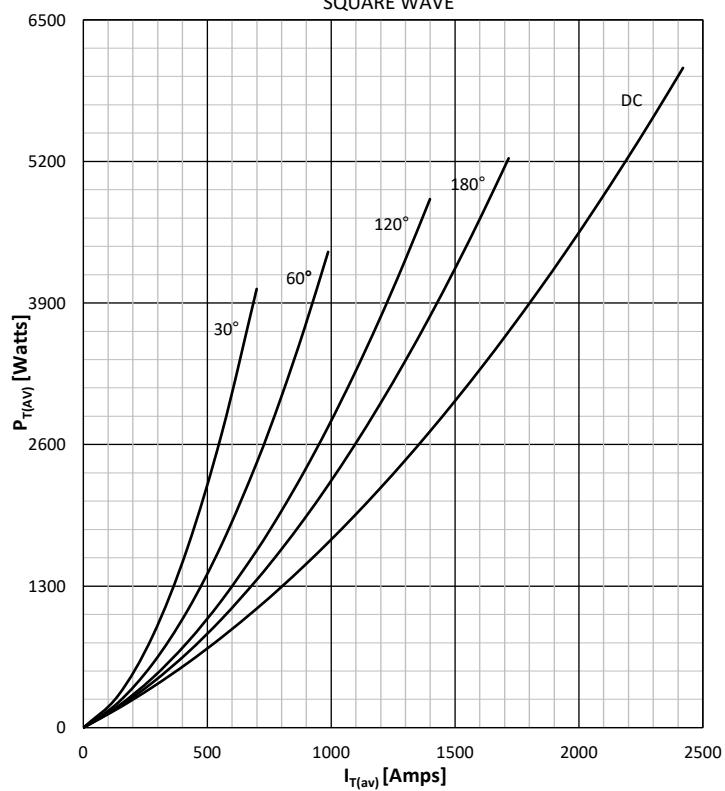
SINE WAVE


ON STATE CURRENT DERATING CURVE

SINE WAVE


DISSIPATION CHARACTERISTICS

SQUARE WAVE


ON STATE CURRENT DERATING CURVE

SQUARE WAVE

