



SCOMES

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SCT56

Power Rectifier Thyristor



Key Parameters

$V_{DRM} / V_{RRM} = 1600V$

$I_{T(AV)} = 55A$

$I_{TSM} = 1100A$

$V_{T(TO)} = 0.95V$

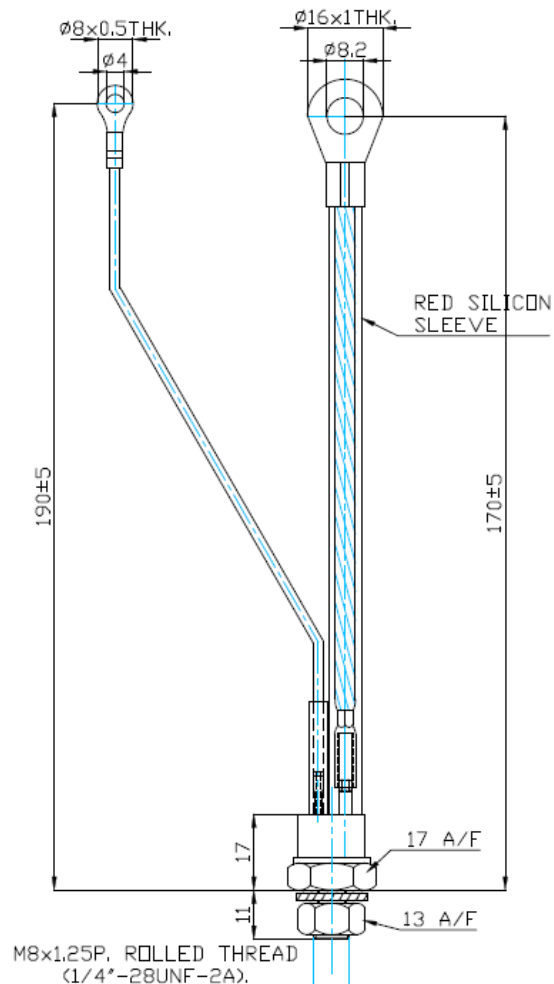
$r_T = 4.7m\Omega$

Features

- Full blocking capability over wide temperature range
- Hard soldered joints for high reliability

Applications

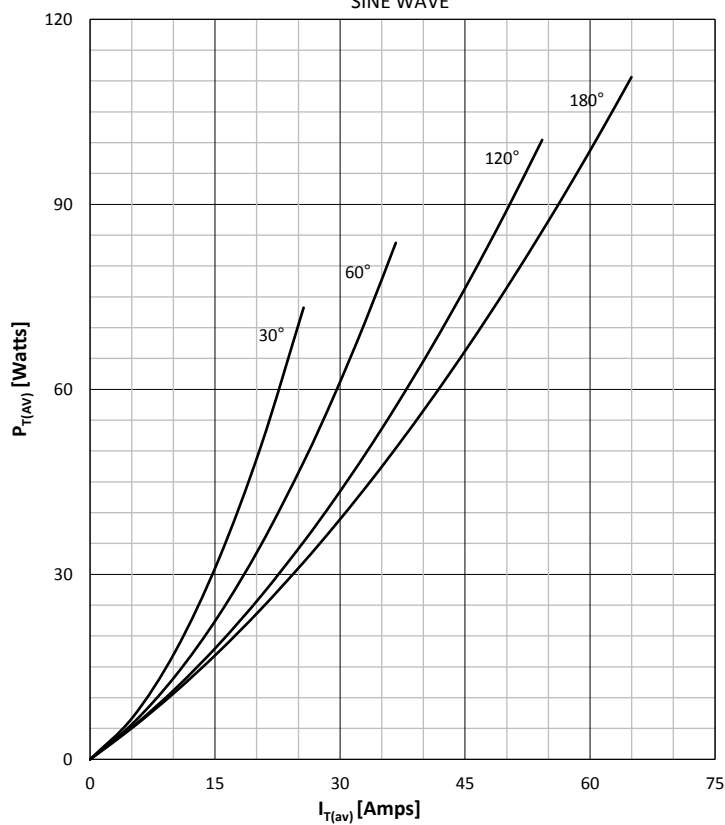
- Power Supplies
- DC motor control
- Controlled Rectifiers
- AC switch



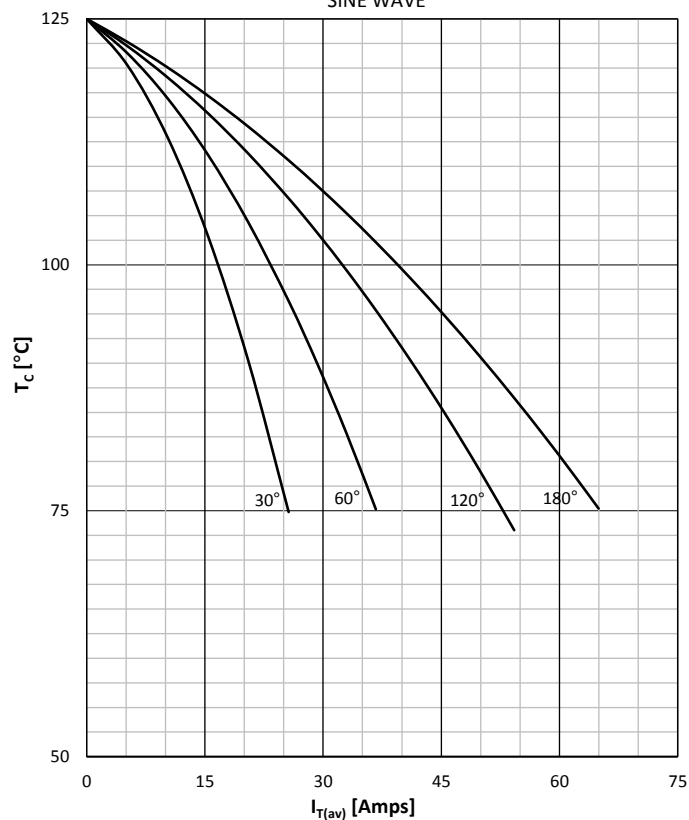
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		125	200 - 1600	V
V _{RSM}	Non-repetitive peak reverse voltage		125	300 - 1700	V
V _{DRM}	Repetitive peak off-state voltage		125	200 - 1600	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	125	10	mA
I _{DRM}	Repetitive peak off-state current	V = V _{DRM}	125	10	mA
CONDUCTING					
I _{T(AV)}	Mean on state current	180° sin ,50 Hz, T _c =85°C 180° sin ,50 Hz, T _c =75°C		55 65	A
I _{RMS}	RMS on-state current	T _c =75°C		102	A
I _{TSM}	Surge on-state current	Sine wave, 10 ms Without reverse voltage	25	1100	A
			125	1000	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	6050	A²s
			125	5000	A²s
V _T	On-state voltage	On-state current = 200A	125	1.95	V
V _{T(TO)}	Threshold voltage		125	0.95	V
r _T	On-state slope resistance		125	4.7	mΩ
SWITCHING					
di/dt	Critical rate of rise of on-state current		125	150	A/μs
dv/dt	Critical rate of rise of off-state voltage	V _{DR} = 67%V _{DRM}	125	1000	V/μs
GATE					
I _{gt}	Gate trigger current	V _D =6V	25	150	mA
V _{gt}	Gate trigger voltage	V _D =6V	25	3.0	V
I _H	Holding current	V _D =6V, gate open circuit	25	200	mA
I _L	Latching current	V _D =6V	25	400	mA
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case		0.45	°C/W
R _{th(j-c)}	Thermal impedance, rec120°	Junction to case		0.52	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink		0.20	°C/W
T _j	Max. junction temperature			125	°C
T _{stg}	Storage temperature			-40 125	°C
M	Mounting torque			4	NM
W	Weight (Approx.)			38	gm

DISSIPATION CHARACTERISTICS

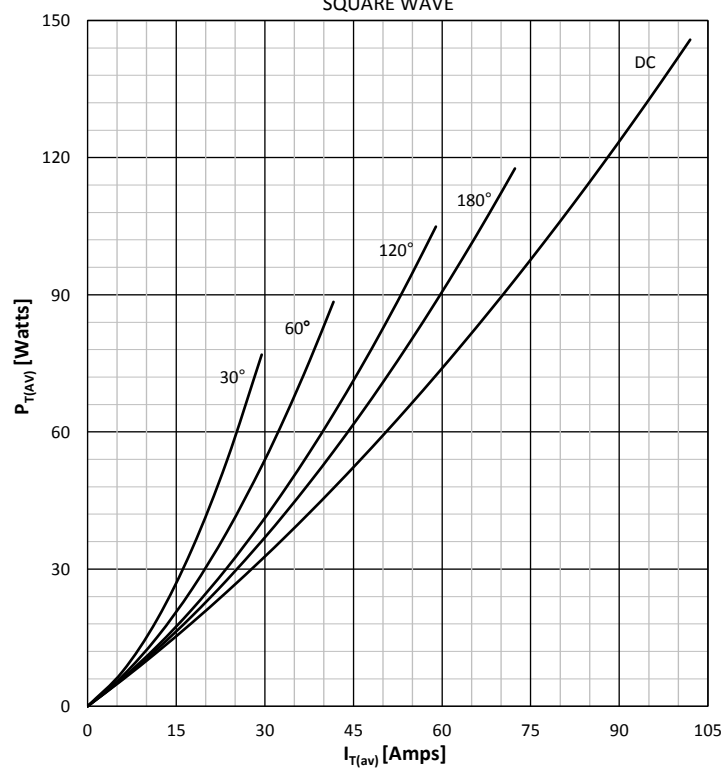
SINE WAVE


ON STATE CURRENT DERATING CURVE

SINE WAVE


DISSIPATION CHARACTERISTICS

SQUARE WAVE


ON STATE CURRENT DERATING CURVE

SQUARE WAVE

