



SCT4230

Power Rectifier Thyristor

Features

- Center amplifying gate
- Metal case with ceramic insulator
- Low on-state and switching losses

Typical Applications

- AC controllers
- DC and AC motor control
- Controlled rectifiers

$I_{T(AV)}$	3650 A
V_{DRM}/V_{RRM}	4300-5200V
I_{TSM}	45 kA
I^2t	10130 10³A²S

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		$T_j(^{\circ}C)$	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	$T_c=70^{\circ}C$	125			3500	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	4600		5500	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}		125			500	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125			45	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$					10130	A ² s*10 ³
V_{TO}	Threshold voltage			125			1.02	V
r_T	On-state slope resistance						0.21	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=3000A, F=90kN$		25			1.65	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125			2000	V/μs
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 3000A, Gate pulse tr ≤0.5μs IGM=1.5A		125			250	A/μs
Q_r	Recovery charge	$I_{TM}=2000A, tp=4000\mu s, di/dt=-5A/\mu s,$ $V_R=100V$		125		5000		μC
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$		25	40		300	mA
V_{GT}	Gate trigger voltage				0.8		3.0	V
I_H	Holding current			25		250	mA	
V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$		125			0.3	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force 90kN					0.0057	°C/W
$R_{th(c-hs)}$	Thermal resistance case to heatsink						0.0015	°C/W
F_m	Mounting force				81	90	108	kN
T_{vj}	Junction temperature				-40		125	°C
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					2500		g

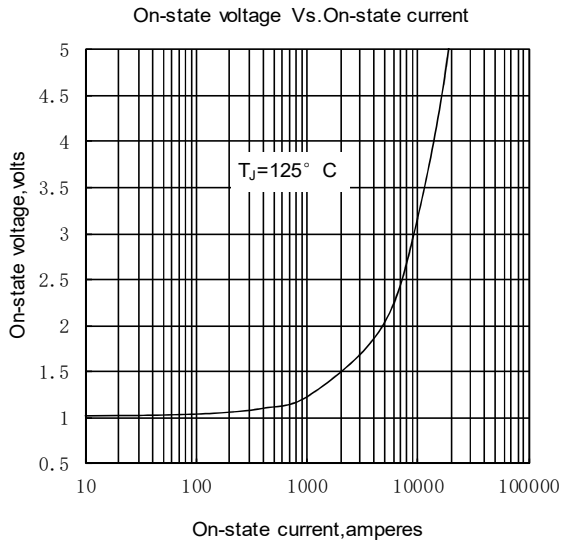


Fig.1

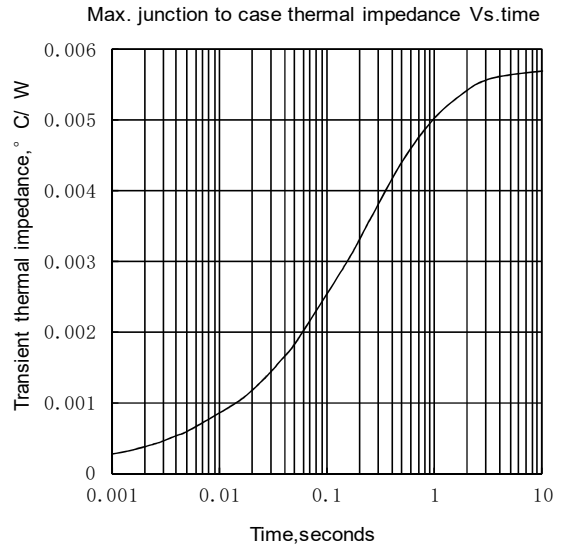


Fig.2

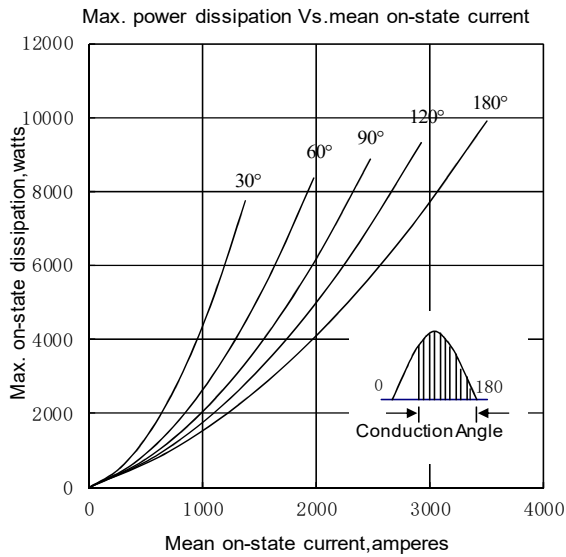


Fig.3

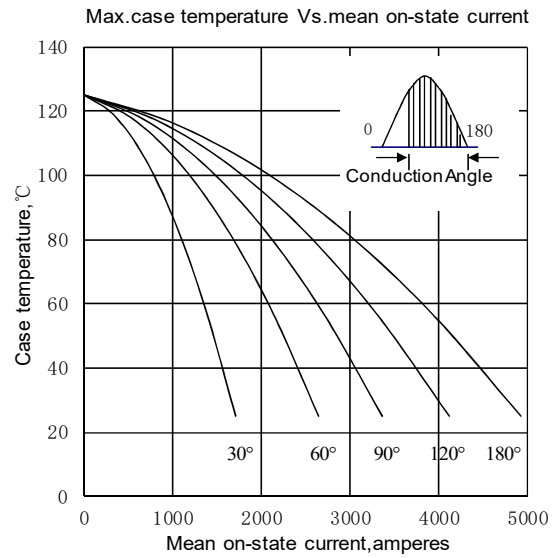


Fig.4

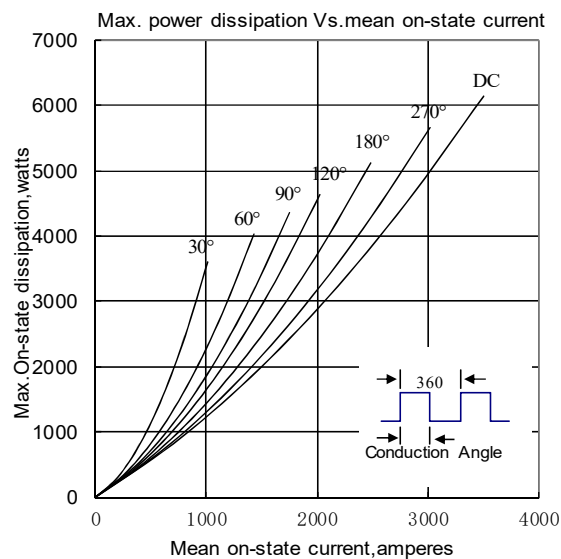


Fig.5

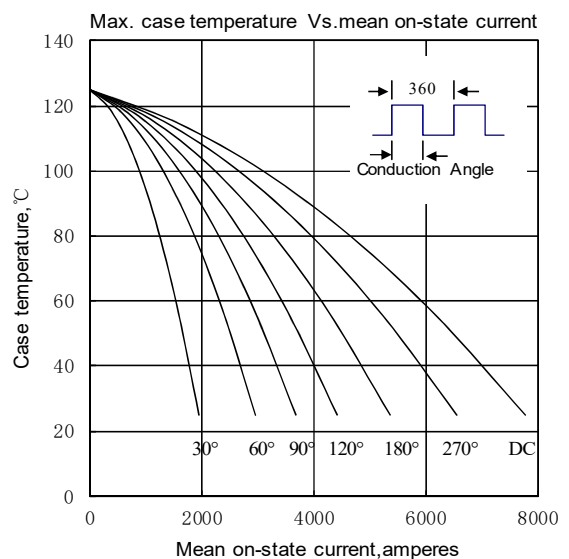


Fig.6

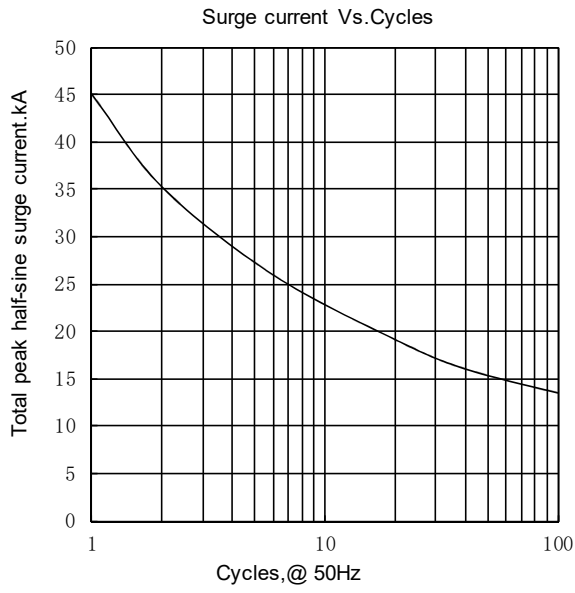


Fig.7

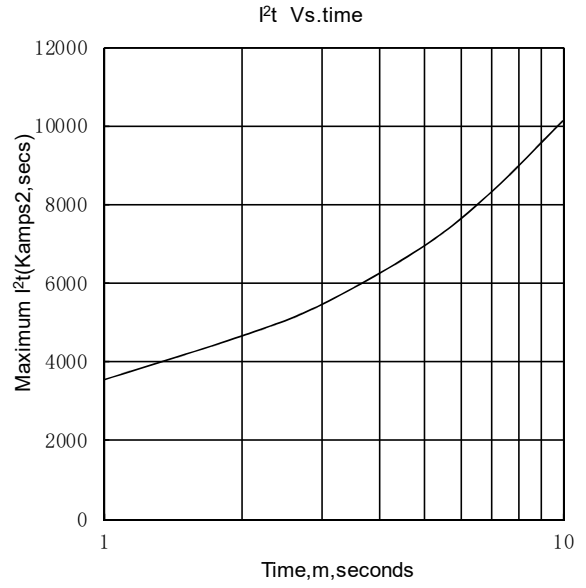


Fig.8

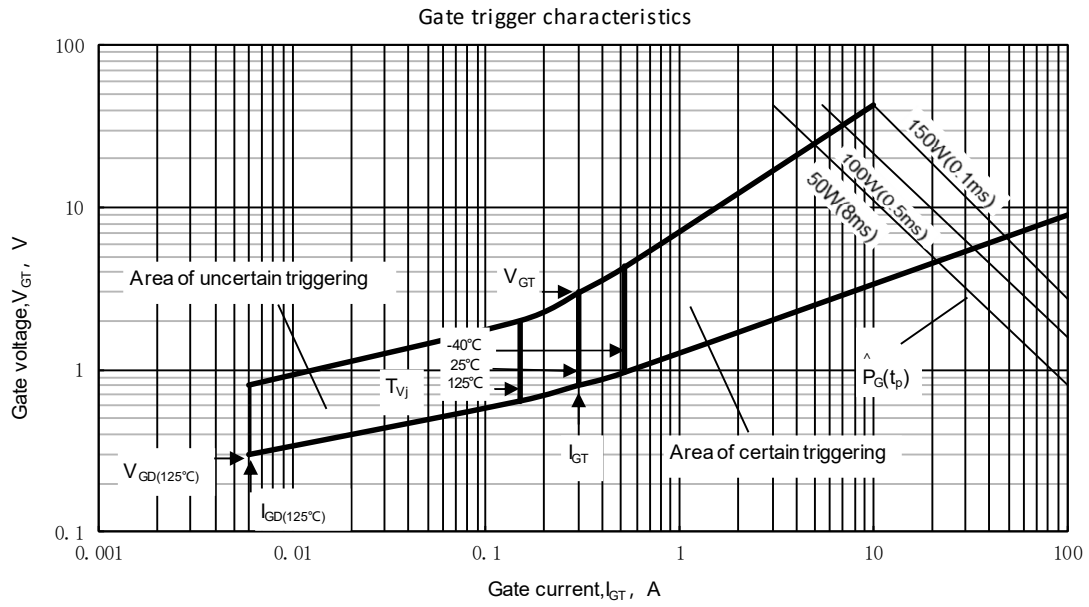


Fig.9

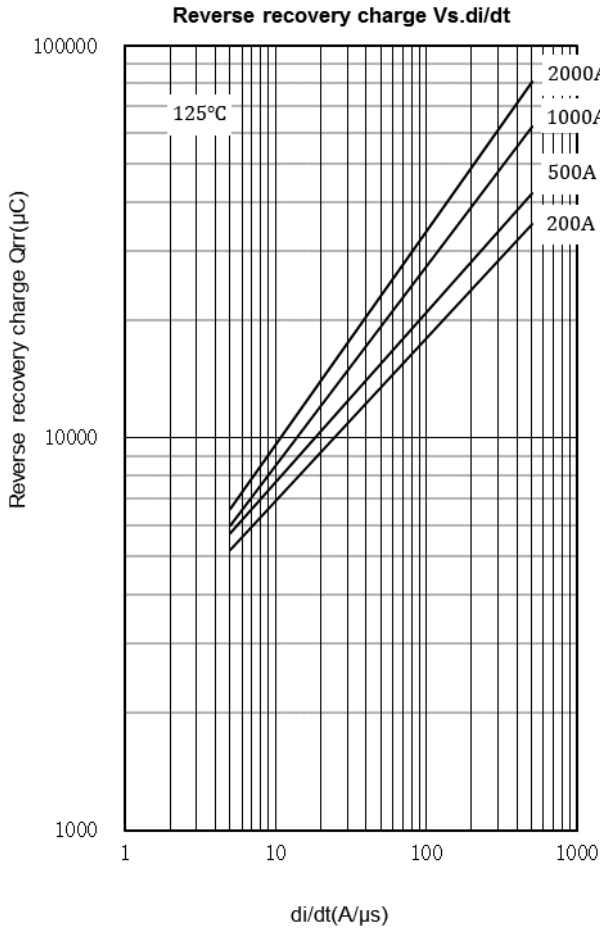


Fig.10

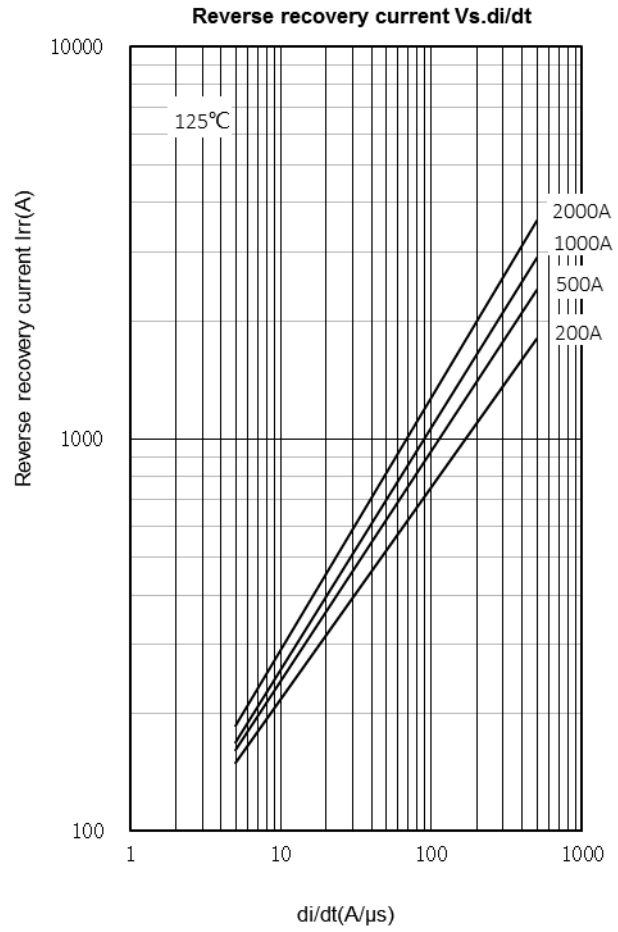


Fig.11

Outline:

