

# Y30KPE

## PHASE CONTROL THYRISTOR

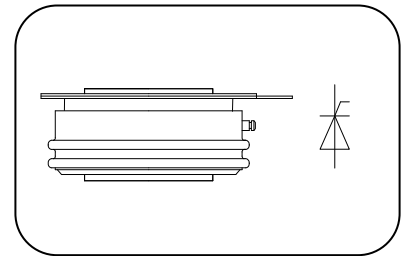
### Features

- 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

$I_{T(AV)}$       **600A**  
 $V_{DRM}/V_{RRM}$     **1100~1800V**  
 $I_{TSM}$             **7.5 kA**  
 $I^2t$                 **281 10<sup>3</sup>A<sup>2</sup>S**



				VALUE		
$I_{T(AV)}$	Mean on-state current	180 half sine wave 50Hz Double side cooled,				A
			old model			
$V_{DRM}$ $V_{RRM}$	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM}&V_{RRM}$ tp=10ms $V_{DSM}&V_{RSM}=V_{DRM}&V_{RRM}+100V$	125	1100	1800	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	$V_R=V_{DRM}$ $V_R=V_{RRM}$	125		30	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave $V_R=0.6V_{RRM}$	125		7.5	kA
$I^2t$	$I^2t$ for fusing coordination		125		281	$A^2s \cdot 10^3$
$V_{TO}$	Threshold voltage		125		0.88	V
$r_T$	On-state slop resistance		125		0.8	m
$V_{TM}$	Peak on-state voltage	$I_{TM}=1550A, F=7.0kN$	125		2.11	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125		1000	V/ s
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 800A, Gate pulse $t_r$ 0.5 s $I_{GM}=1.5A$ Repetitive	125		100	A/ s
$Q_{rr}$	Recovery charge	$I_{TM}=800A, tp=2000\mu s, di/dt=-20A/\mu s,$ $V_R=50V$	125		1030	$\mu C$
$I_{GT}$	Gate trigger current	$V_A=12V, I_A=1A$		35	250	mA
$V_{GT}$	Gate trigger voltage		25	0.8	2.5	V
$I_H$	Holding current		20	200	mA	
$V_{GD}$	Non-trigger gate voltage	$V_{DM}=0.67V_{DRM}$	125	0.3		V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine' double side cooled Clamping force 7.0kN			0.045	C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink		0.010			
$m$	Mounting force		5.3	10	kN	
$T_{stg}$	Stored temperature		-40	140	C	
$W_t$	Weight			80	g	
Outline	KT25aT					

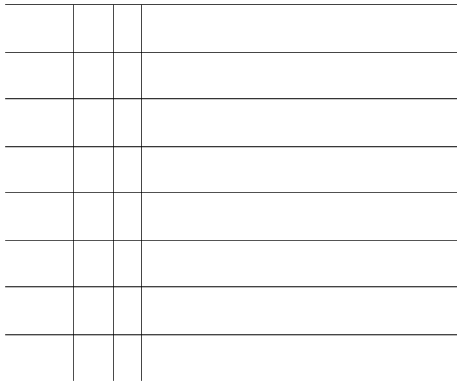


Fig.1

Fig.2

Fig.3

Fig.4

Fig.5

Fig.6

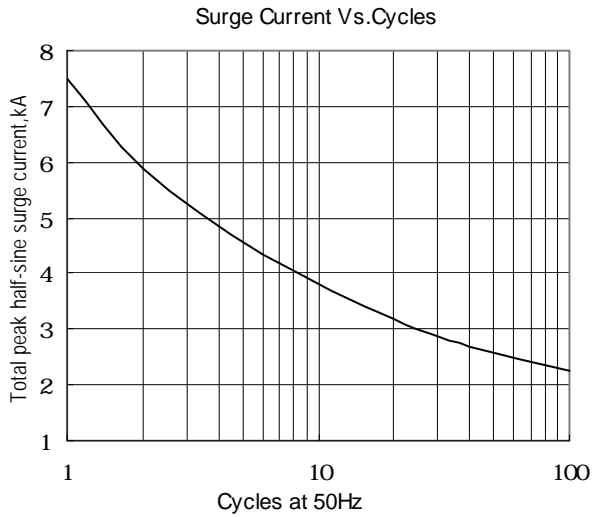


Fig.7

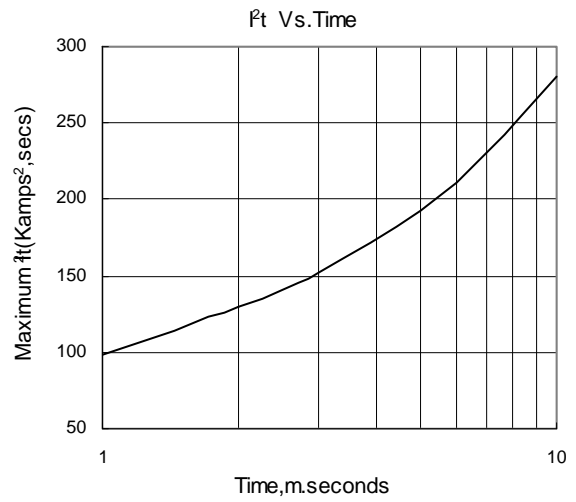


Fig.8

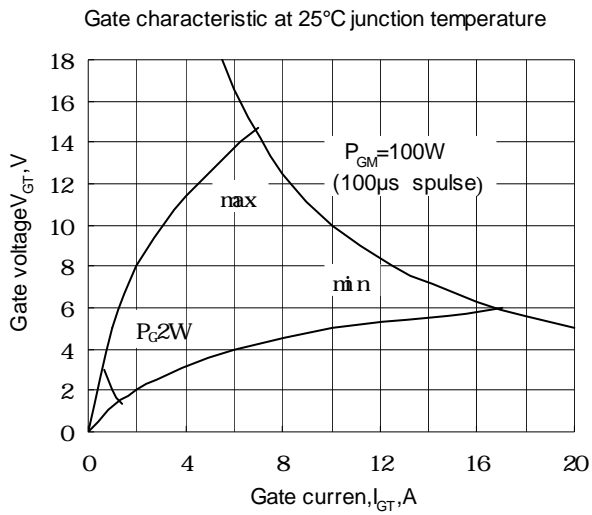


Fig.9

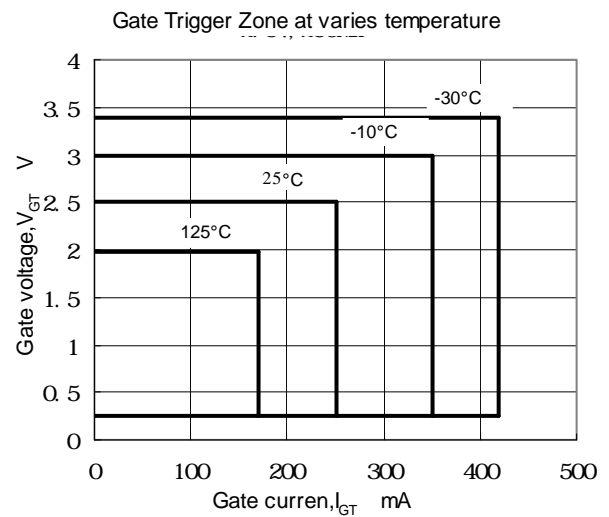


Fig.10

Outline:

