

# Y76KPR

## PHASE CONTROL THYRISTO

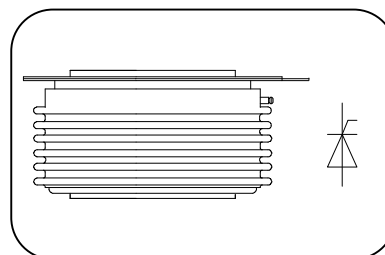
### Features:

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

### Typical Applications

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

$I_{T(AV)}$             **2434 A**  
 $V_{DRM}/V_{RRM}$     **5600-6500V**  
 $I_{TSM}$                 **29.2 KA**  
 $I^2t$                     **4263 10<sup>3</sup>A<sup>2</sup>S**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>J</sub> (°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, T <sub>HS</sub> =55°C	125			2434	A
$V_{DRM}$ $V_{RRM}$	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	5600		6500	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	$V_{DM}$ = $V_{DRM}$ $V_{RM}$ = $V_{RRM}$	125			250	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			29.2	KA
$I^2t$	I <sup>2</sup> T for fusing coordination	$V_R$ =0.6V <sub>RRM</sub>				4263	A2s*103
$V_{TO}$	Threshold voltage		125			1.20	V
$r_T$	On-state slop resistance					0.28	m□
$V_{TM}$	Peak on-state voltage	$I_{TM}$ =1600A, F=40KN	125			1.65	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{DM}$ =0.67V <sub>DRM</sub>	125			800	V/μs
$di/dt$	Critical rate of rise of on-state current	$V_{DM}$ = 67%V <sub>DRM</sub> to 4000A, Gate pulse tr ≤0.5μs IGM= 1.5A Repetitive	125			200	A/μs
$I_{rm}$	Reverse recovery current	$I_{TM}$ =2000A, tp=1000μs, di/dt=-20A/μs, Vr=50V	125			250	A
$t_{rr}$	Reverse recovery time					26	μs
$Q_{rr}$	Recovery charge					3250	μC
$I_{GT}$	Gate trigger current	VA=12V, IA=1A	25	40		300	mA
$V_{GT}$	Gate trigger voltage			0.8		3.0	V
$I_H$	Holding current			20		250	mA
$V_{GD}$	Non-trigger gate voltage	$V_{DM}$ =67%V <sub>DRM</sub>	125	0.3			V
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	At 180° sine double side cooled Clamping force 40.0KN				0.010	°C /W
$F_m$	Mounting force			35		47	KN
$T_{stg}$	Stored temperature			-40		140	°C
$W_t$	Weight				1100		g
Outline	KT73dT						

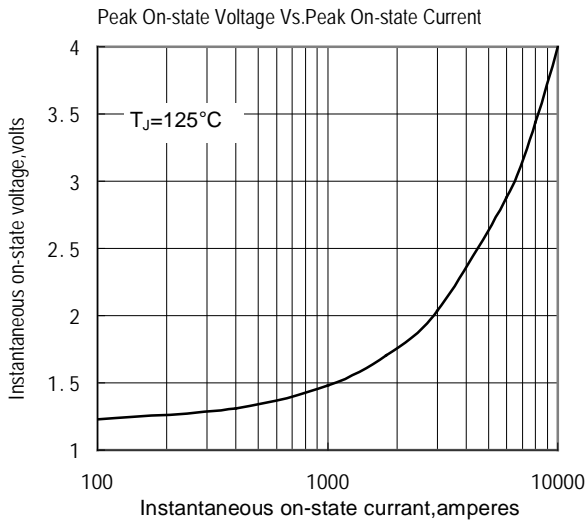


Fig.1

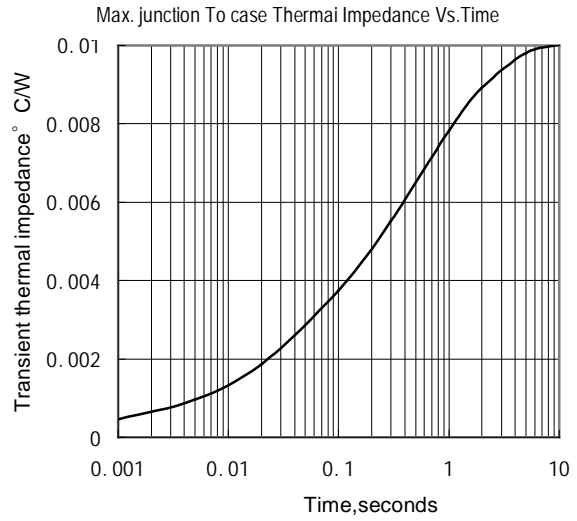


Fig.2

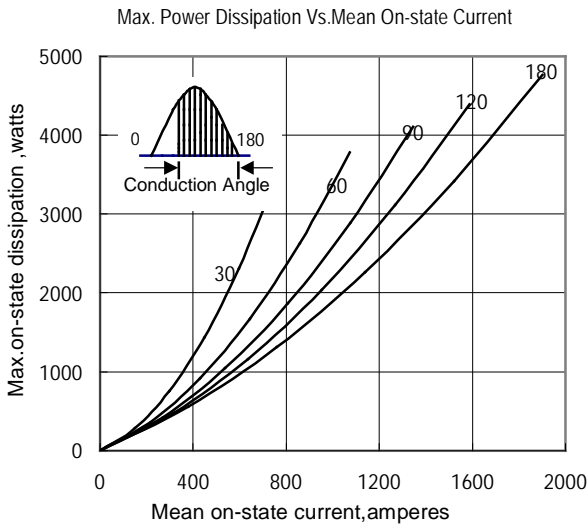


Fig.3

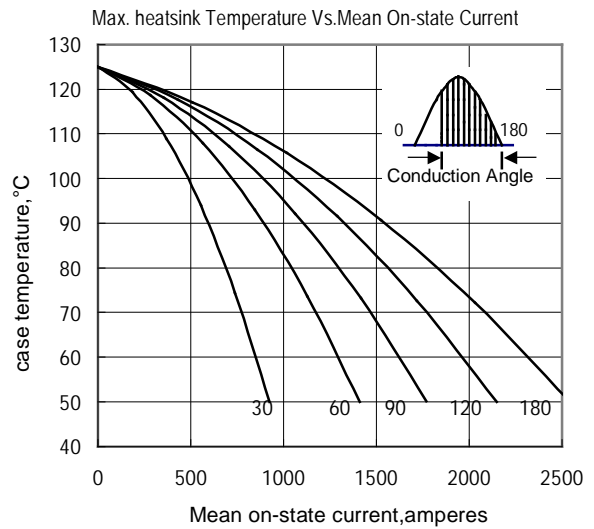


Fig.4

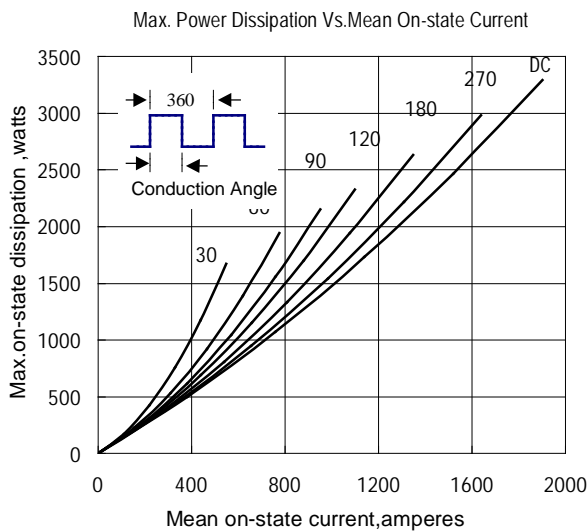


Fig.5

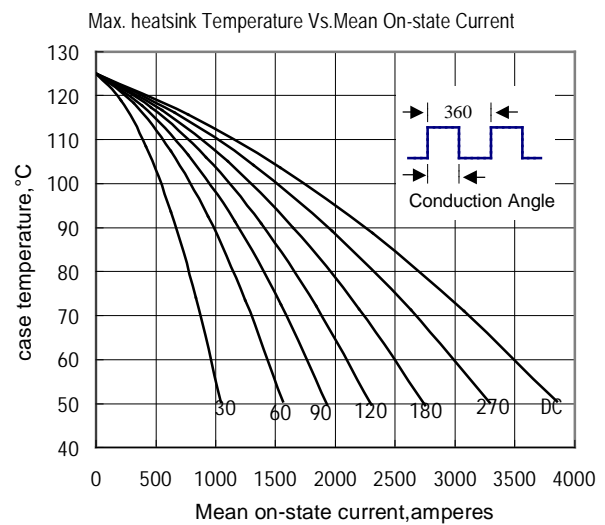


Fig.6

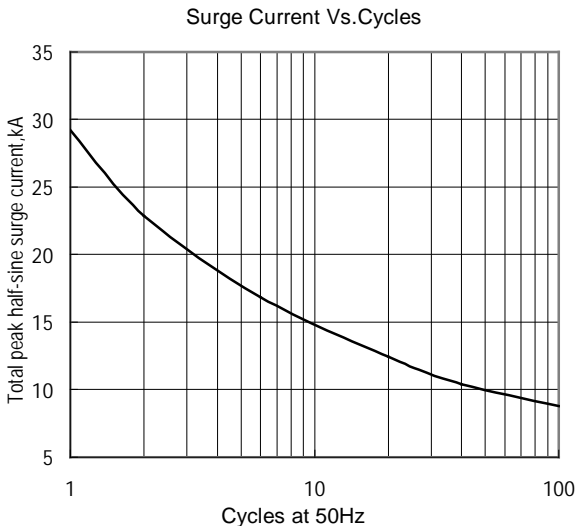


Fig.7

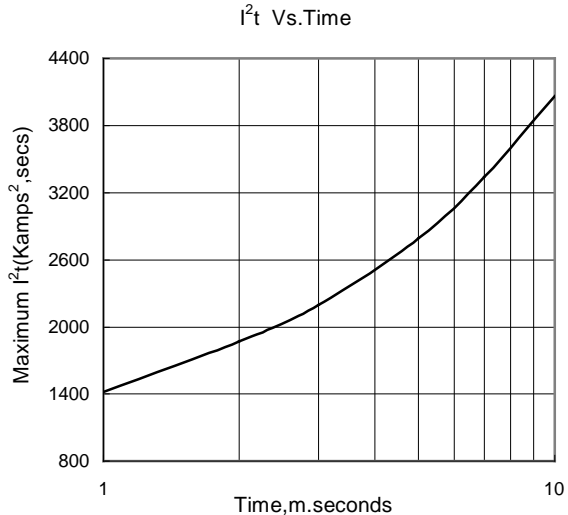


Fig.8

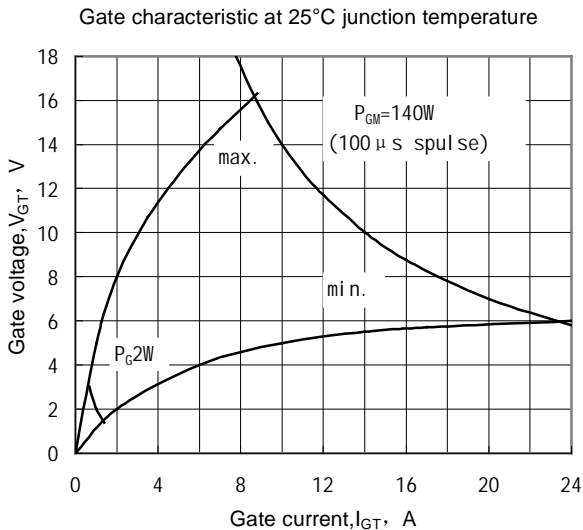


Fig.9

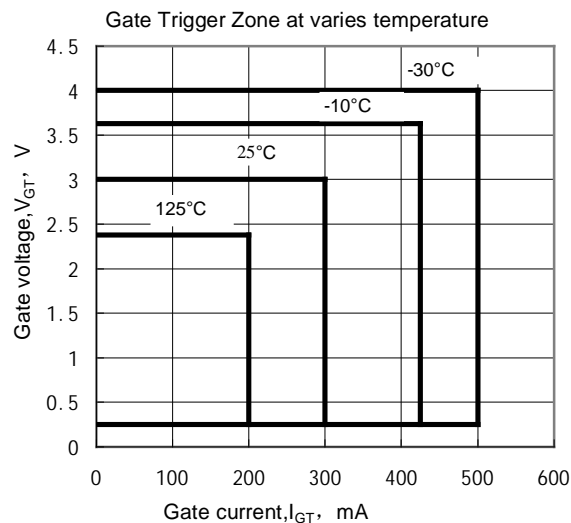


Fig.10

Outline:

