

# Y76KPJ

## PHASE CONTROL THYRISTOR

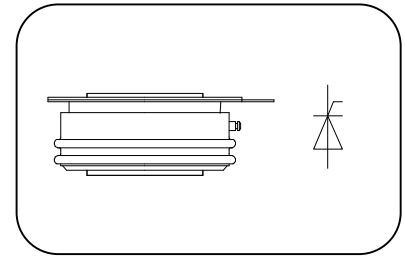
### Features:

- 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

$I_{T(AV)}$             **2205 A**  
 $V_{DRM}/V_{RRM}$     **3100-4200V**  
 $I_{TSM}$                 **26.5 KA**  
 $I^2t$                     **3511 10<sup>3</sup>A<sup>2</sup>S**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>f</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			2205	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	3100		4200	V
$I_{DRM}$ $I_{RRM}$	Repetitive peak current	$V_{DM}= V_{DRM}$ $V_{RM}= V_{RRM}$	125			200	mA
$I_{TSM}$	Surge on-state current	10ms half sine wave	125			26.5	KA
$I^2t$	I <sup>2</sup> T for fusing coordination	$V_R=0.6V_{RRM}$				3511	A <sup>2</sup> s*10 <sup>3</sup>
$V_{TO}$	Threshold voltage		125			1.15	V
$r_T$	On-state slop resistance					0.32	mW
$V_{TM}$	Peak on-state voltage	$I_{TM}=3000A$ , F=40KN	125			2.11	V
$dv/dt$	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			800	V/μs
$di/dt$	Critical rate of rise of on-state current	$V_{DM}= 67\%V_{DRM}$ to 2000A, Gate pulse t <sub>r</sub> ≤ 0.5 μ s I <sub>GM</sub> =1.5A Repetitive	125			250	A/μs
$I_{rm}$	Reverse recovery current	$I_{TM}=2000A$ , tp=1000μs, di/dt=-20A/μs, $V_R=50V$	125			250	A
$t_{rr}$	Reverse recovery time					24	μs
$Q_{rr}$	Recovery charge					3000	μC
$I_{GT}$	Gate trigger current	$V_A=12V$ , I <sub>A</sub> =1A	25	40		300	mA
$V_{GT}$	Gate trigger voltage			0.8		3.0	V
$I_H$	Holding current			20		300	mA
$V_{GD}$	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$	125	0.3			V
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	At 180° sine double side cooled Clamping force 40.0KN				0.011	°C /W
$F_m$	Mounting force			35		47	KN
$T_{stg}$	Stored temperature			-40		140	°C
$W_t$	Weight				1100		g
Outline	KT73cT						

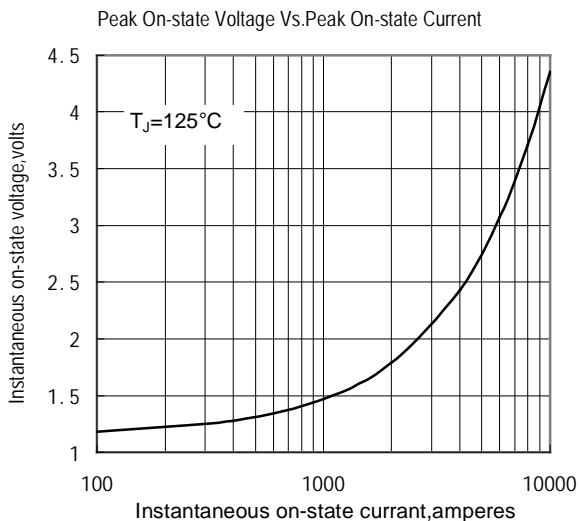


Fig.1

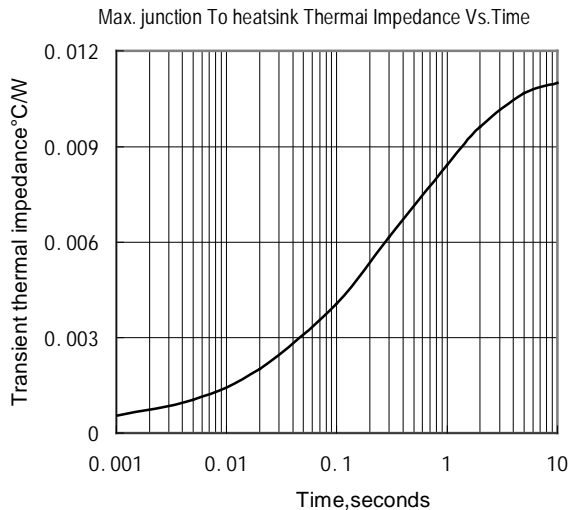


Fig.2

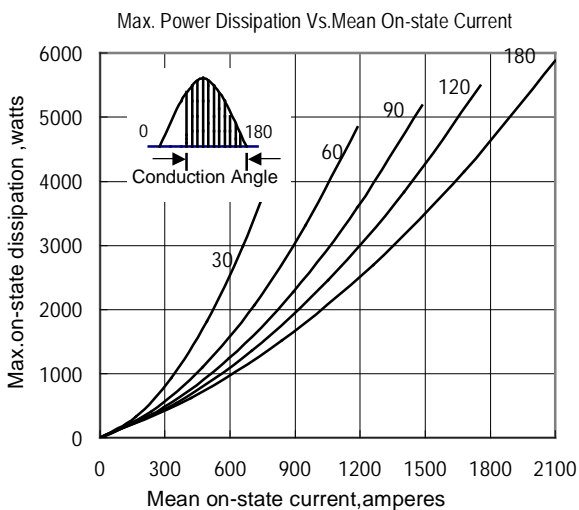


Fig.3

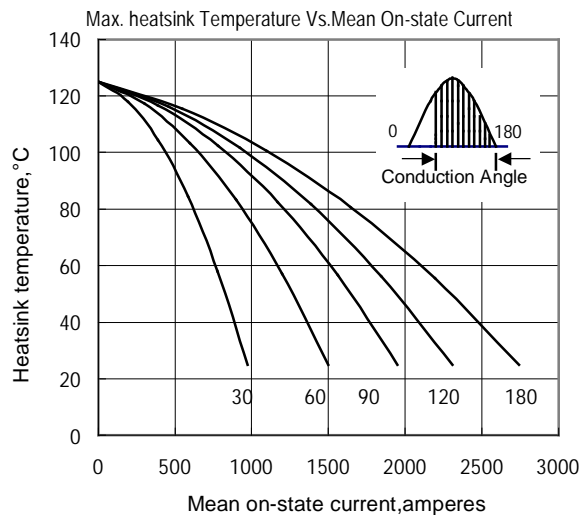


Fig.4

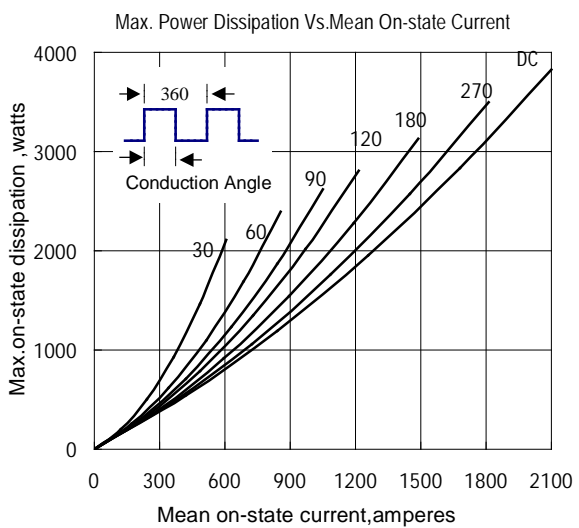


Fig.5

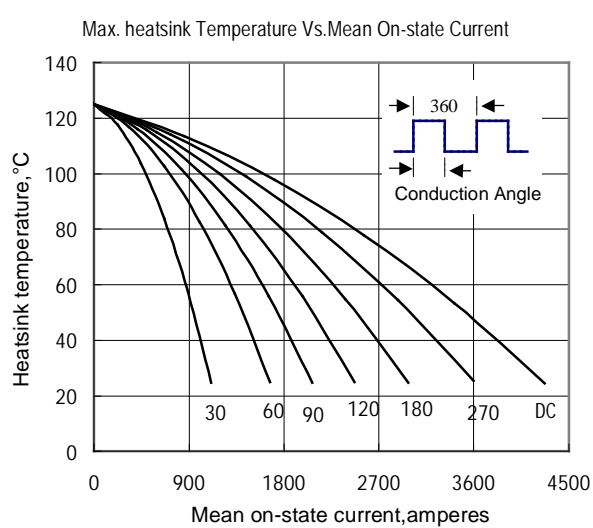


Fig.6

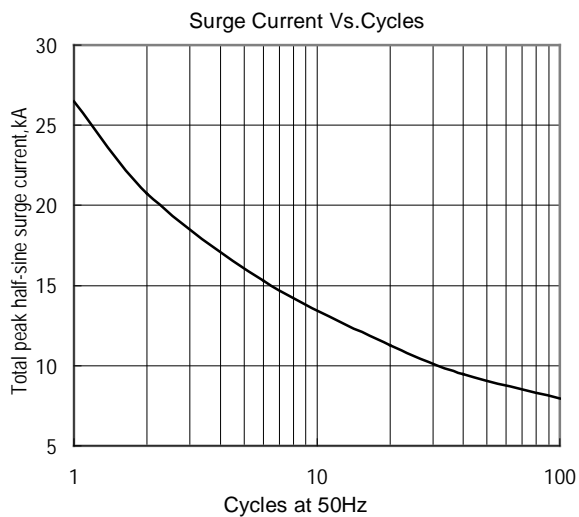


Fig.7

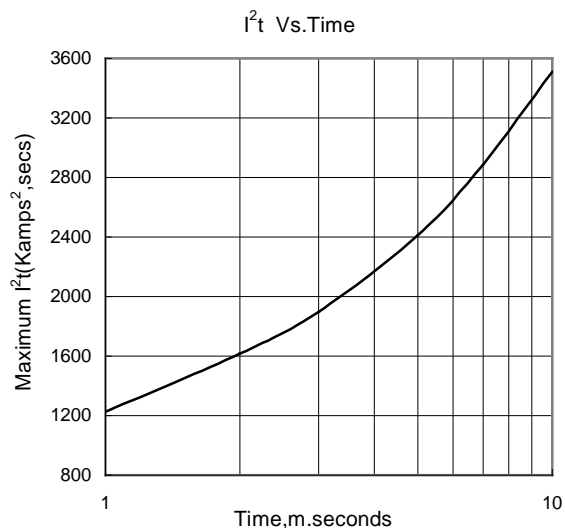


Fig.8

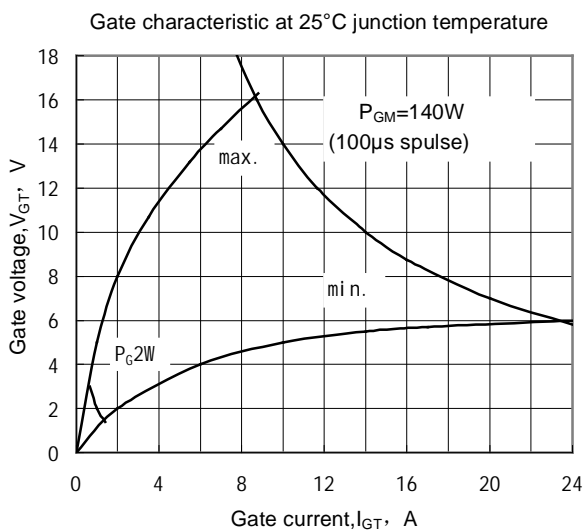


Fig.9

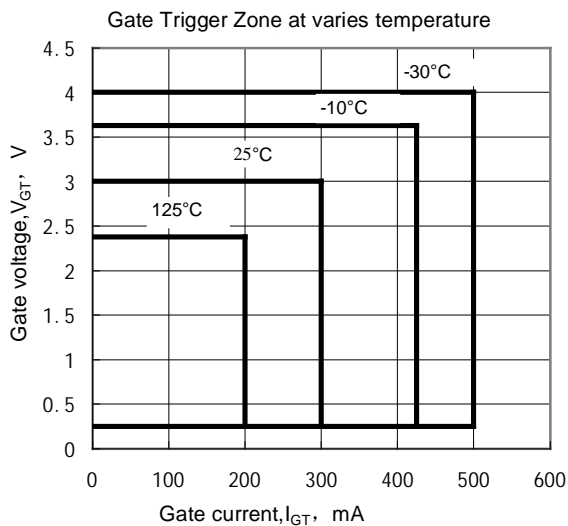


Fig.10

**Outline:**

