

Y24KPC

PHASE CONTROL THYRISTOR

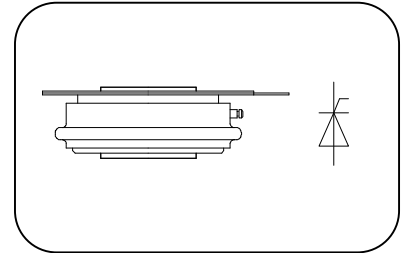
Features:

- 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

$I_{T(AV)}$ **416A**
 V_{DRM}/V_{RRM} **800~1200V**
 I_{TSM} **5.0 KA**
 I^2t **125 10³A²S**



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T _i (°C)	VALUE			UNIT
				Min	Type	Max	
I _{T(AV)}	Mean on-state current	180° half sine wave 50Hz Double side cooled T _{hs} =55°C	125			416	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	800		1200	V
I _{DRM} I _{RRM}	Repetitive peak current	V _{DM} = V _{DRM} V _{RM} = V _{RRM}	125			16	mA
I _{TSM}	Surge on-state current	10ms half sine wave V _R =0.6V _{RRM}	125			5	KA
I ² t	I ² T for fusing coordination					125	A ² s*10 ³
V _{TO}	Threshold voltage		125			0.75	V
r _T	On-state slop resistance					1.00	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =900A, F=5.0KN	125			1.65	V
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =0.67V _{DRM}	125			300	V/μs
di/dt	Critical rate of rise of on-state current	V _{DM} = 67%V _{DRM} to 800A, Gate pulse t _r ≤0.5 μ s I _{GM} =1.5A Repetitive	125			100	A/μs
I _{rm}	Reverse recovery current					100	A
t _{rr}	Reverse recovery time	I _{TM} =400A, tp=1000μs, di/dt=-20A/μs, V _R =50V	125			12	μs
Q _{rr}	Recovery charge					600	μC
I _{GT}	Gate trigger current			30		200	mA
V _{GT}	Gate trigger voltage	V _A =12V, I _A =1A	25	0.8		2.0	V
I _H	Holding current			20		150	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 5.0KN				0.095	°C /W
F _m	Mounting force			3.3		5.5	KN
T _{stg}	Stored temperature			-40		140	°C
W _t	Weight				55		g
Outline	KT19aT						

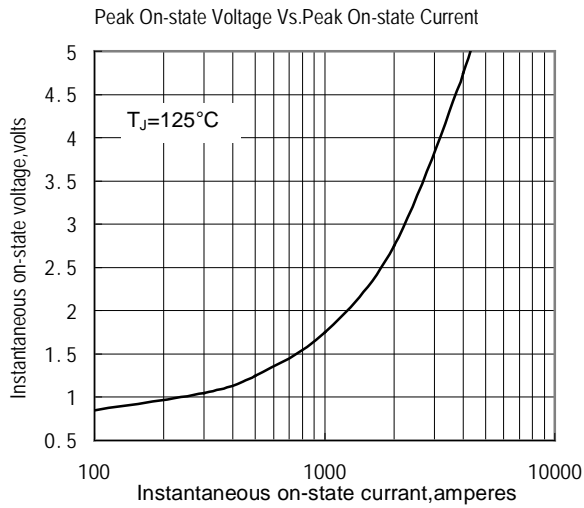


Fig.1

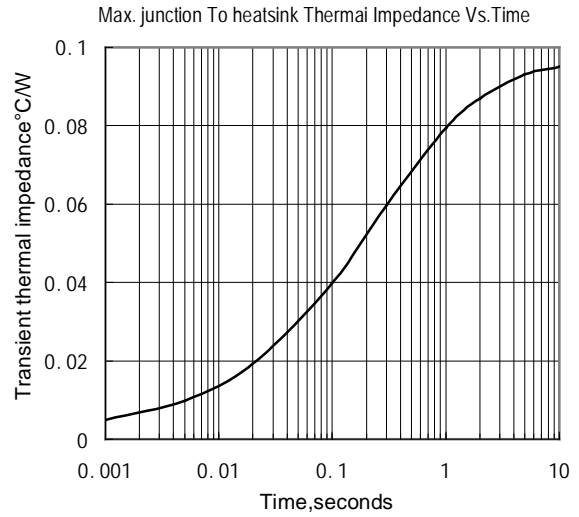


Fig.2

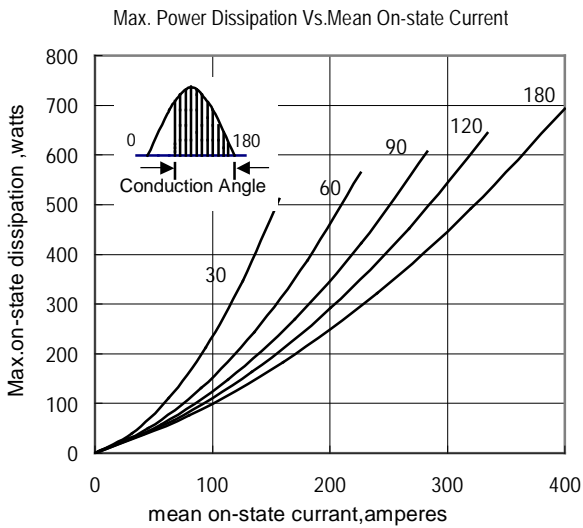


Fig.3

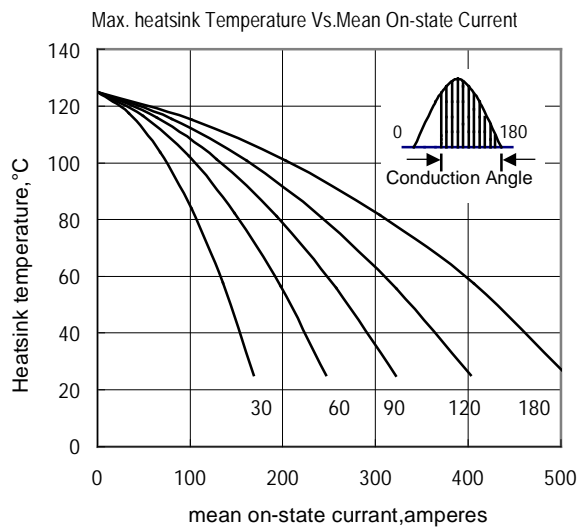


Fig.4

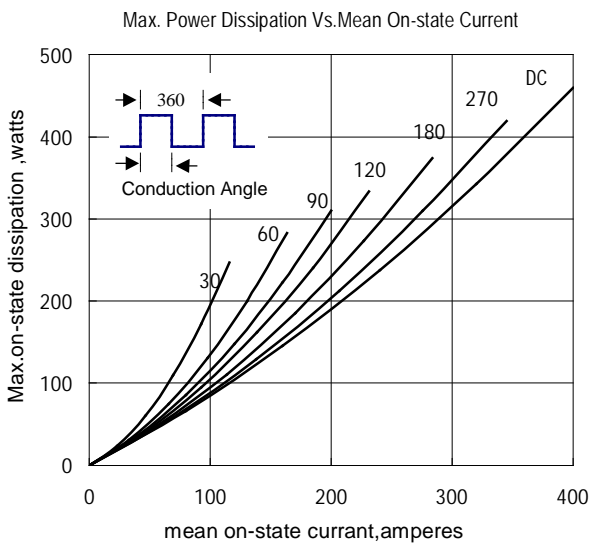


Fig.5

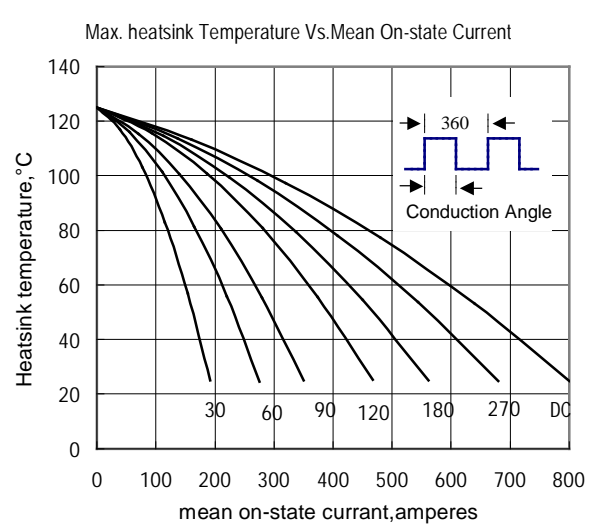


Fig.6

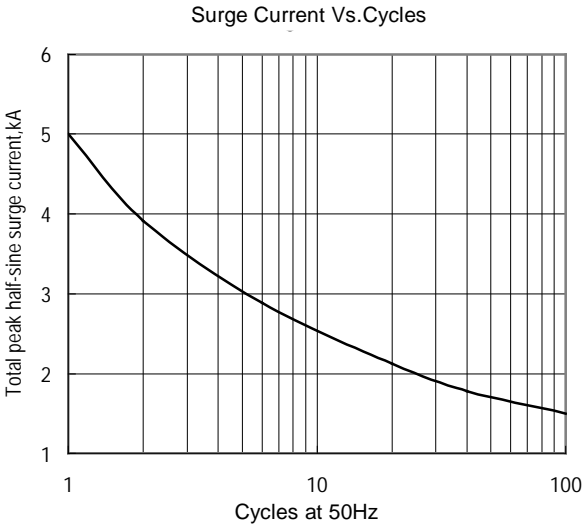


Fig.7

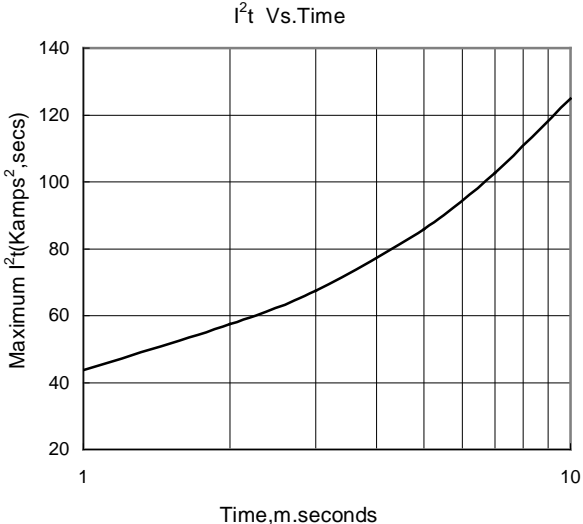


Fig.8

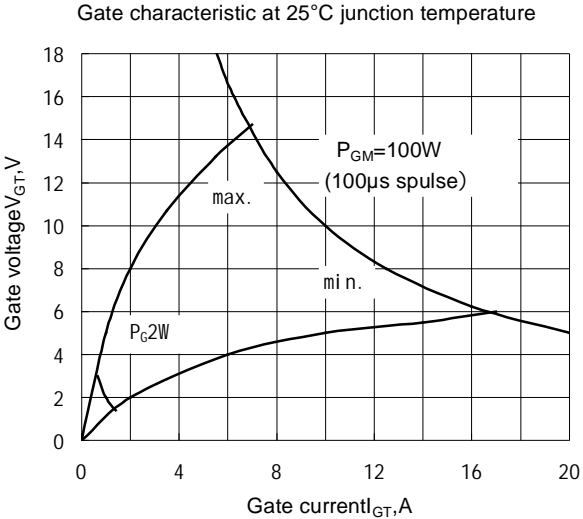


Fig.9

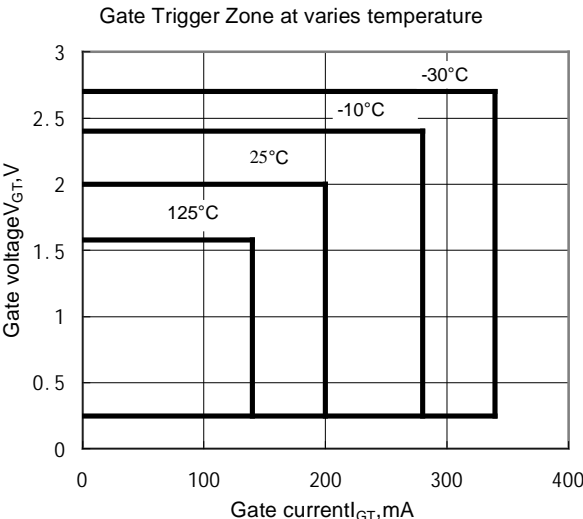


Fig.10

Outline:

