



Features

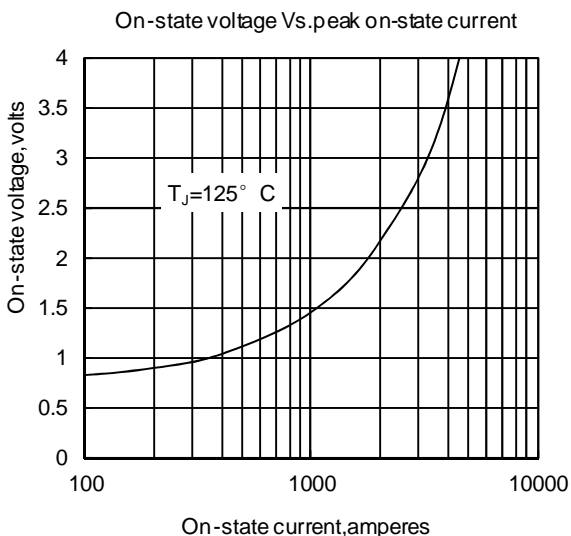
- n Center amplifying gate
- n Metal case with ceramic insulator
- n Low on-state and switching losses

Typical Applications

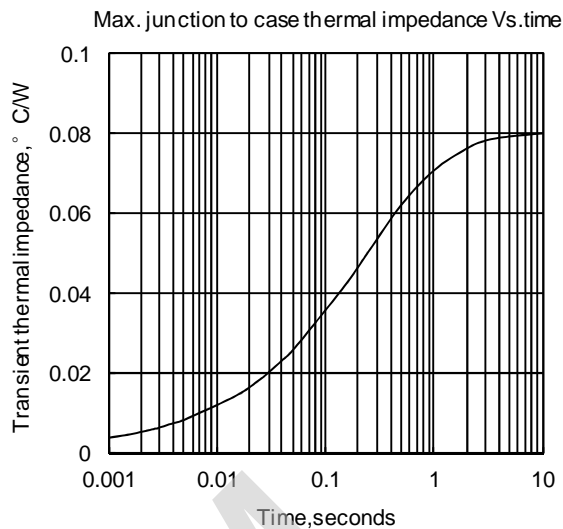
- n AC controllers
- n DC and AC motor control
- n Controlled rectifiers

Part No. Y24KPC-KT19aT			
I_{T(AV)}	450A		
V_{DRM}, V_{RRM}	400V	600V	
	800V	1000V	

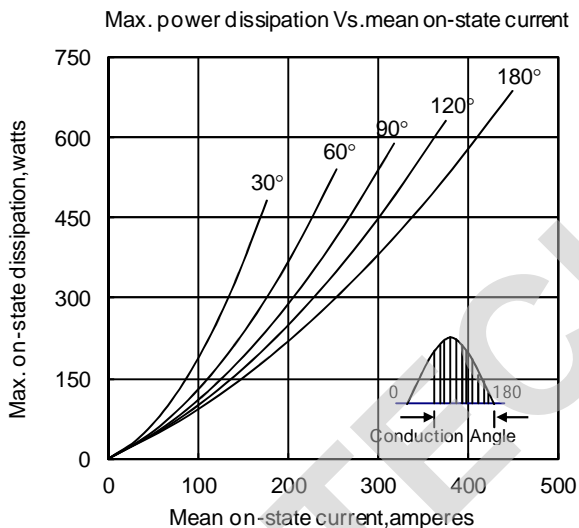
SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _j (°C)	VALUE			UNIT
					Min	Type	Max	
I _{T(AV)}	Mean on-state current	180° half sine wave 50Hz	T _C =70°C				450	
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	400		1000	V
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}		125			16	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125			5	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}					125	A ² s*10 ³
V _{TO}	Threshold voltage			125			0.75	V
r _T	On-state slope resistance						0.70	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =900A, F=5.0kN		25			2.20	V
dv/dt	Critical rate of rise of off-state voltage	V _{DM} =0.67V _{DRM}		125			1000	V/μs
di/dt	Critical rate of rise of on-state current	V _{DM} = 67%V _{DRM} to 800A, Gate pulse t _r ≤0.5μs I _{GM} =1.5A		125			100	A/μs
Q _{rr}	Recovery charge	I _{TM} =1000A, tp=4000μs, di/dt=-20A/μs, V _R =100V		125		800		μC
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25	30		200	mA
V _{GT}	Gate trigger voltage				0.8		2.0	V
I _H	Holding current				20		150	mA
I _L	Latching current						500	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 5.0kN					0.080	°C /W
R _{th(c-h)}	Thermal resistance case to heat sink					0.020		
F _m	Mounting force				3.3		5.5	kN
T _{vj}	Junction temperature				-40		125	°C
T _{stg}	Stored temperature				-40		140	°C
W _t	Weight					60		g
Outline	KT19aT							



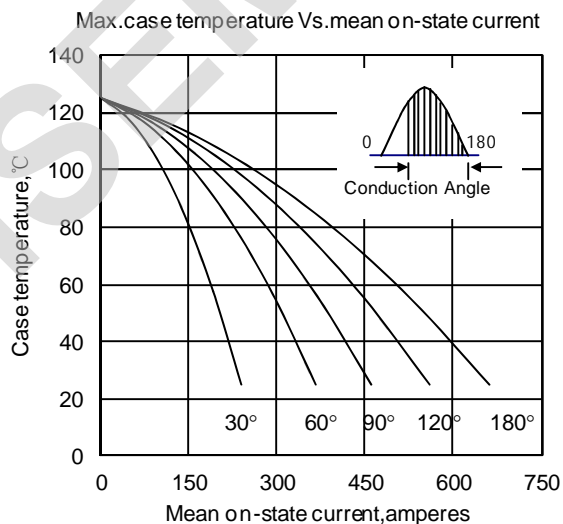
Fi q1



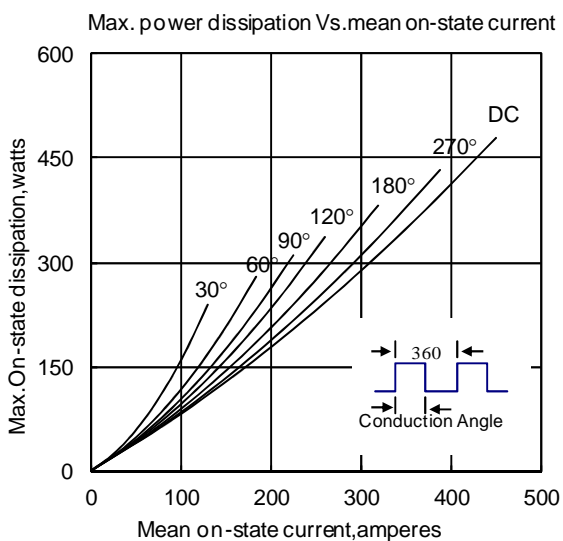
Fi q2



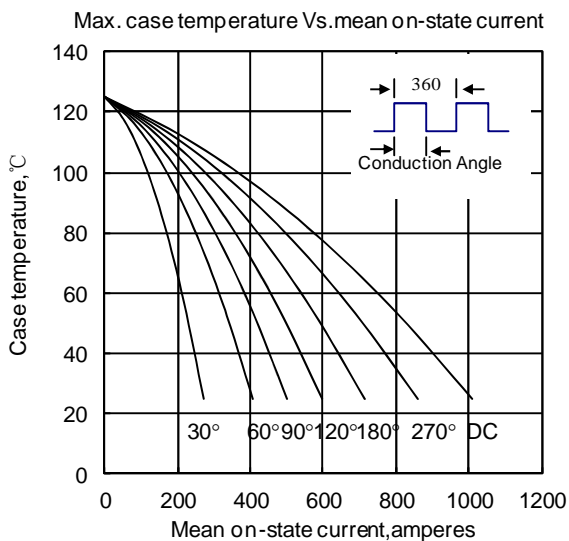
Fi q3



Fi q4



Fi q5



Fi q6

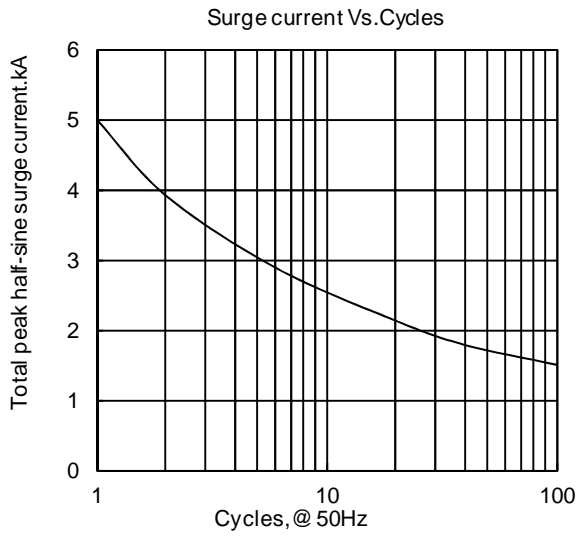


Fig7

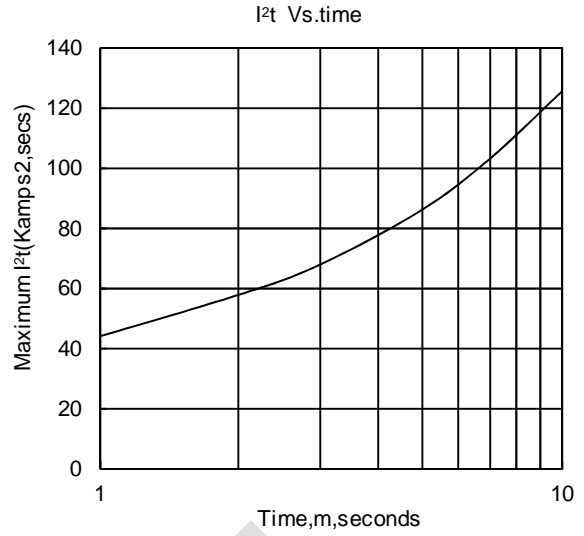


Fig8

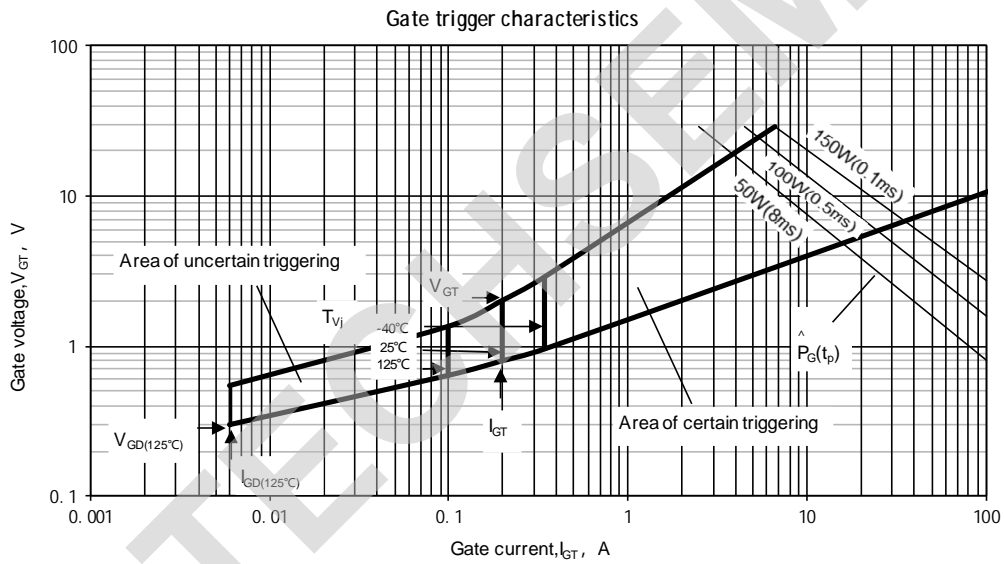
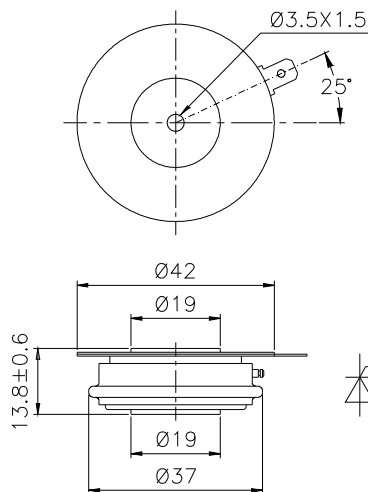


Fig.9

Outline:



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