



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. Y30KPA-KT25aT

I_{T(AV)}	860A
V_{DRM}, V_{RRM}	200V 400V
	600V

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 _C =70°C				860		
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		125	200		600	V	
I _{DRM} I _{RRM}	Repetitive peak current	at V _{DRM} at V _{RRM}		125			30	mA	
I _{TSM}	Surge on-state current	10ms half sine wave V _R =0.6V _{RRM}		125			12	kA	
I ² t	I ² t for fusing coordination						720	A ² s*10 ³	
V _{TO}	Threshold voltage			125			0.73	V	
r _T	On-state slope resistance						0.33	mΩ	
V _{TM}	Peak on-state voltage	I _{TM} =1500A, F=7kN		25			1.53	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 1300A, 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			35	mA	
V _{GT}	Gate trigger voltage						0.8	2.5	V
I _H	Holding current						20	200	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 7kN					0.045	°C /W	
R _{th(c-h)}	Thermal resistance case to heat sink						0.010		
F _m	Mounting force				5.3		10	kN	
T _{vj}	Junction temperature				-40		125	°C	
T _{stg}	Stored temperature				-40		140	°C	
W _t	Weight					80		g	
Outline	KT25aT								

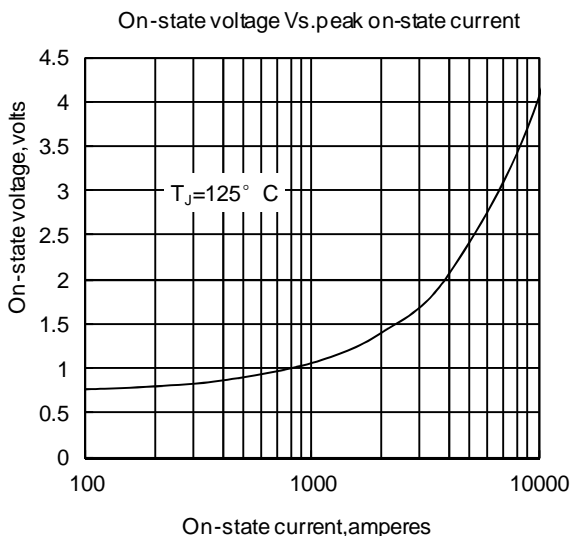


Fig 1

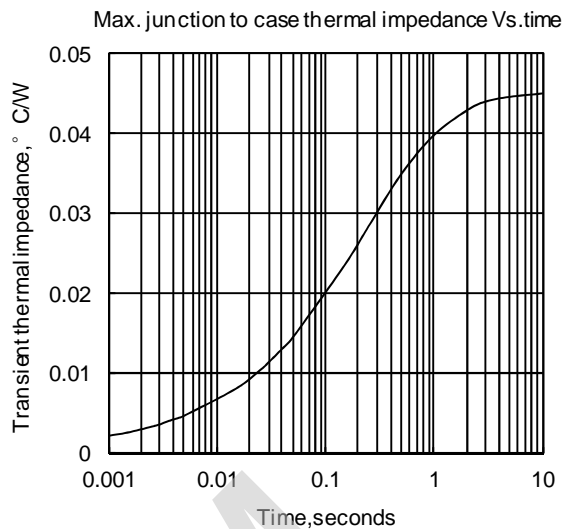


Fig 2

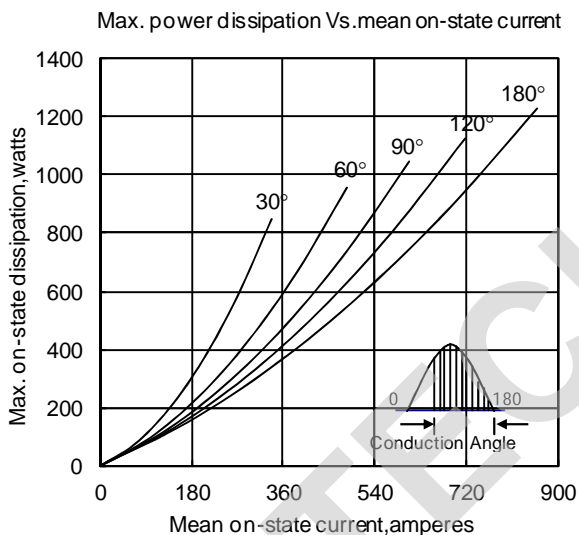


Fig 3

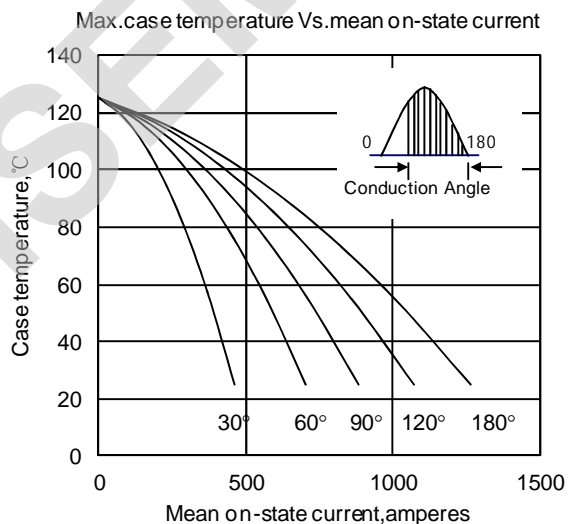


Fig 4

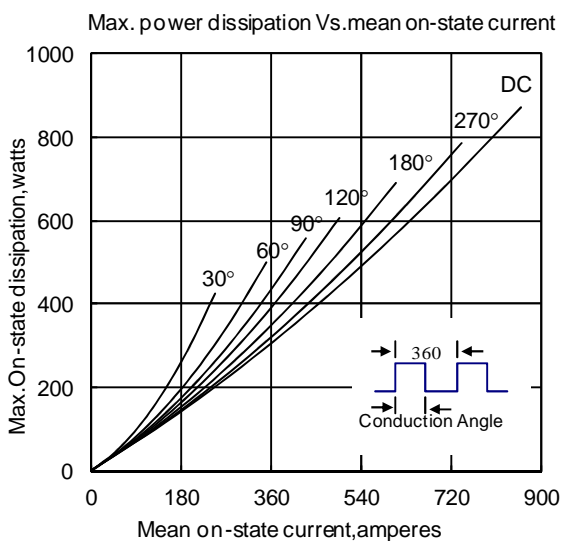


Fig 5

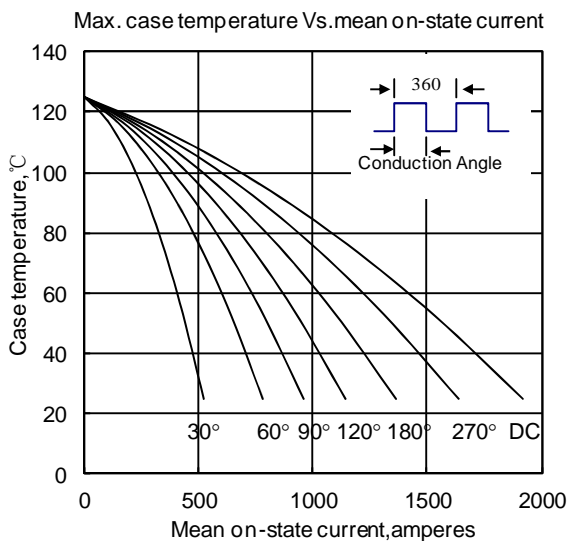


Fig 6

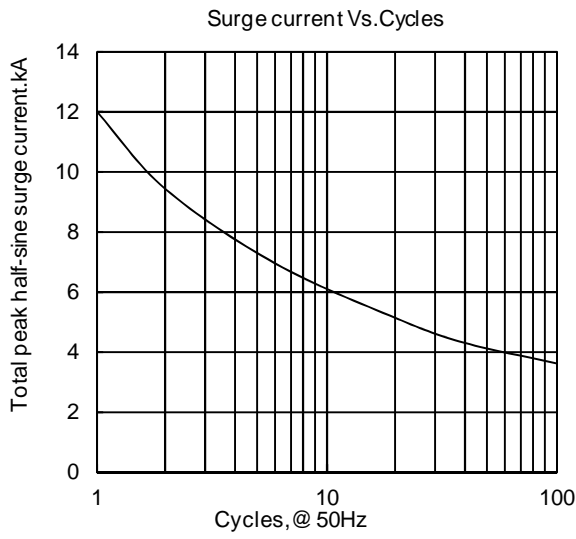


Fig 7

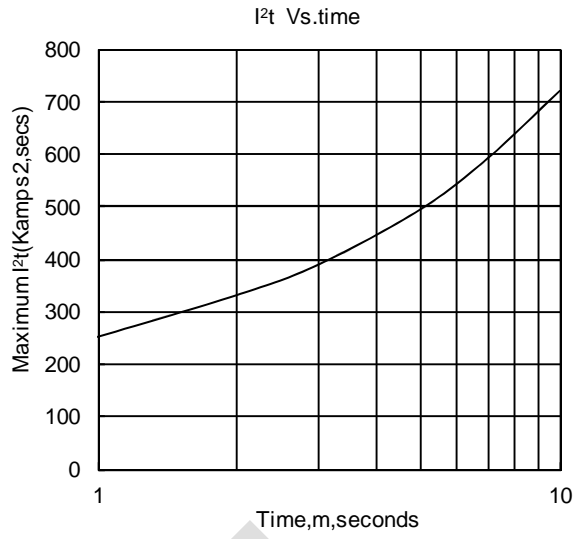


Fig 8

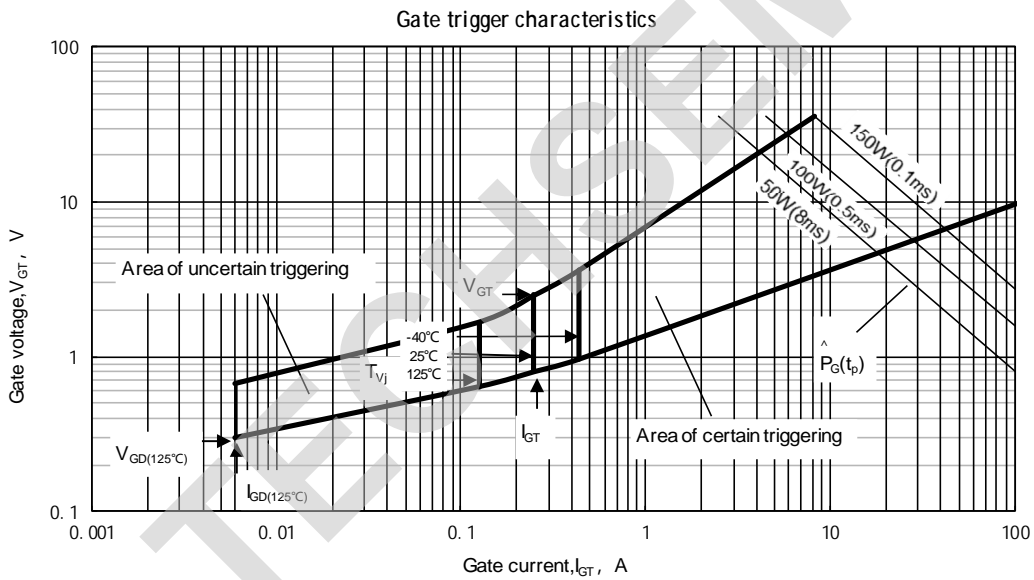
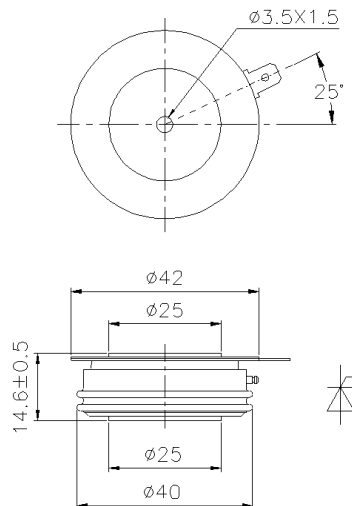


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.