



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. Y38KPA-KT33aT		
I_{T(AV)}	1300A	
V_{DRM}, V_{RRM}	200V	400V
	600V	

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _j (°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				1300	
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			40	mA
I _{TSM}	Surge on-state current	10ms half sine wave		125			18	kA
I ² t	I ² t for fusing coordination	V _R =0.6V _{RRM}					1620	A ² s*10 ³
V _{TO}	Threshold voltage			125			0.76	V
r _T	On-state slope resistance						0.14	mΩ
V _{TM}	Peak on-state voltage	I _{TM} =2000A, F=15kN		25			1.34	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} to1300A, 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		1000		μC
I _{GT}	Gate trigger current	V _A =12V, I _A =1A		25	35		300	mA
V _{GT}	Gate trigger voltage				0.8		2.5	V
I _H	Holding current				20		250	mA
I _L	Latching current						500	mA
V _{GD}	Non-trigger gate voltage	V _{DM} =0.67V _{DRM}		125			0.3	V
R _{th(j-c)}	Thermal resistance Junction to case	At 180° sine double side cooled Clamping force15kN					0.035	°C /W
R _{th(c-h)}	Thermal resistance case to heatsink						0.008	
F _m	Mounting force				10		20	kN
T _{vj}	Junction temperature				-40		125	°C
T _{stg}	Stored temperature				-40		140	°C
W _t	Weight					150		g
Outline	KT33aT							

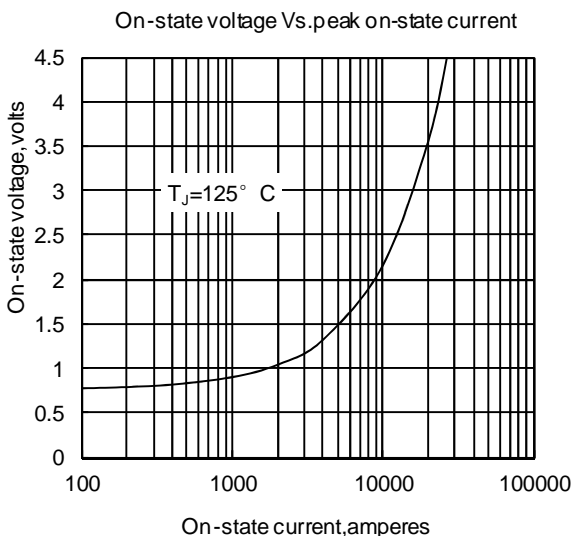


Fig 1

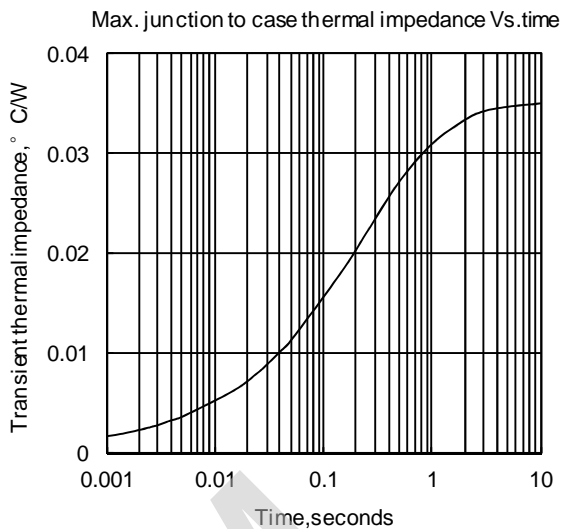


Fig 2

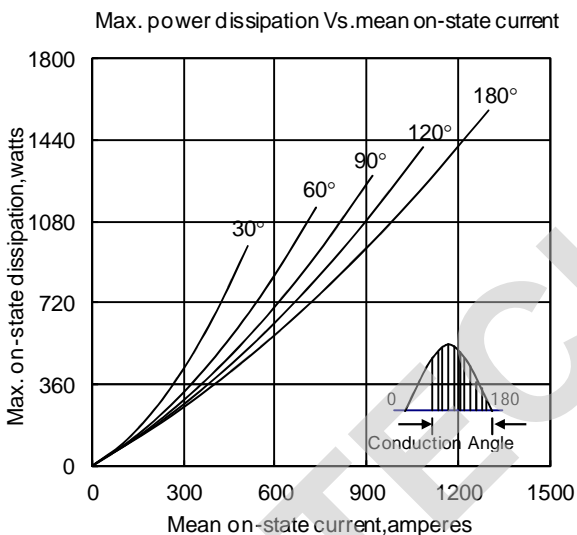


Fig 3

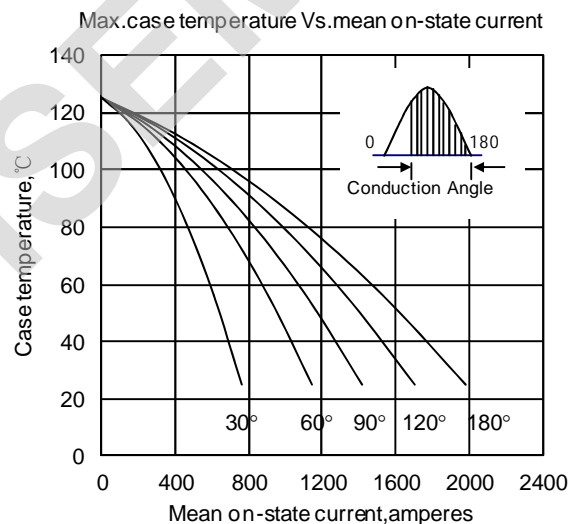


Fig 4

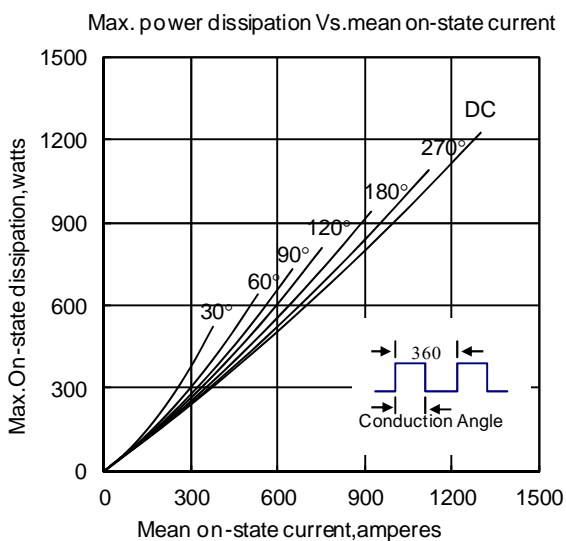


Fig 5

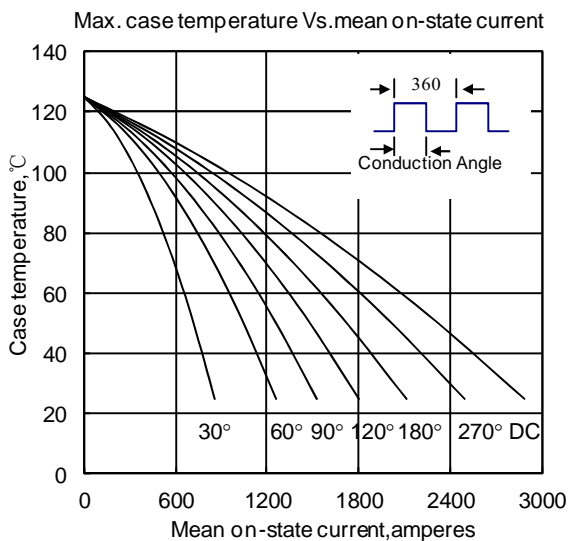


Fig 6

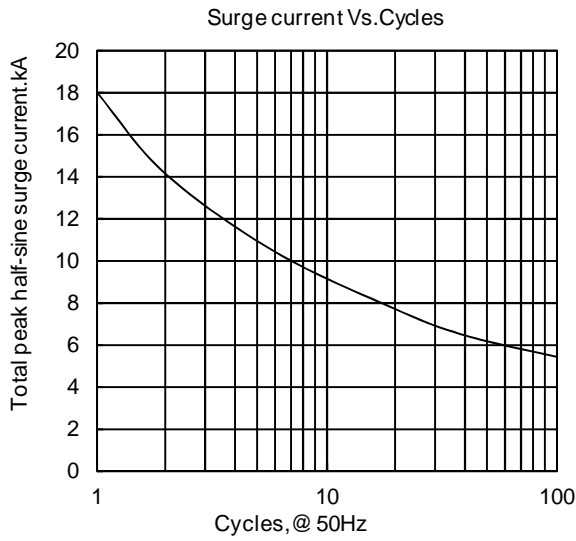


Fig 7

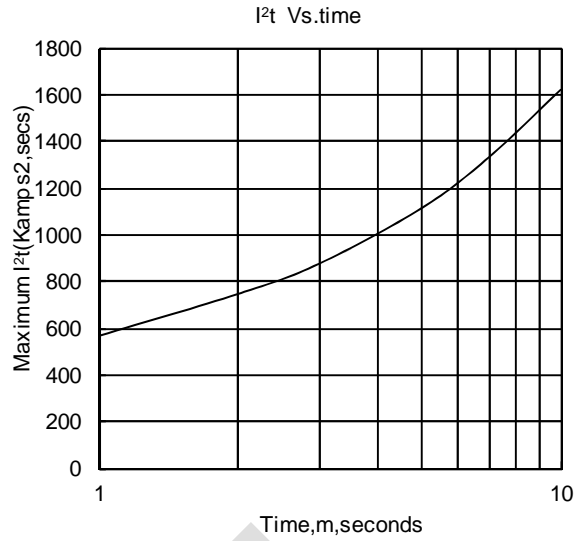


Fig 8

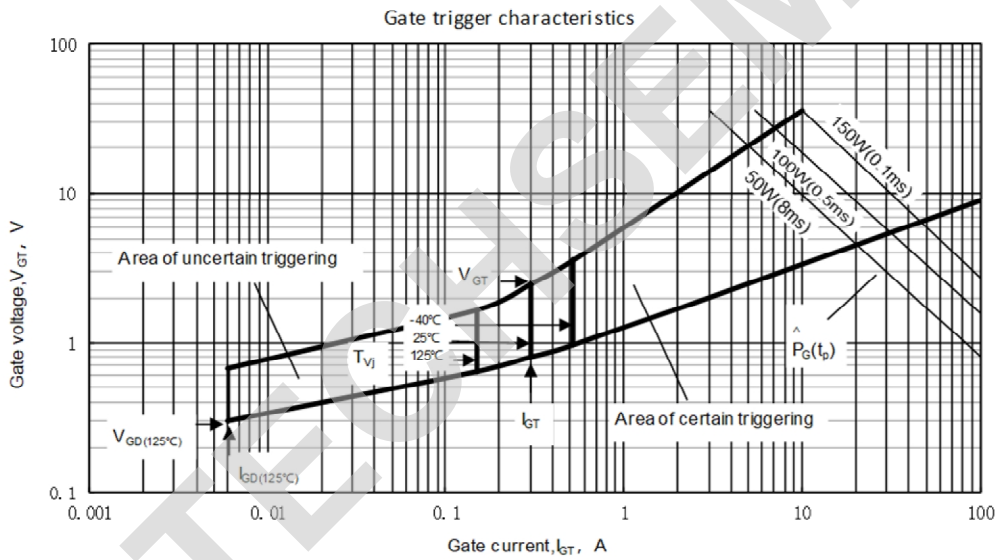
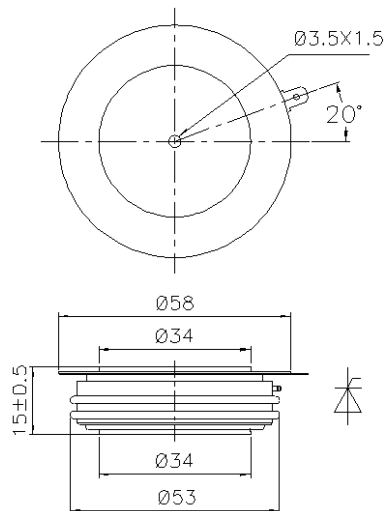


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.