

**Features**

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

Typical Applications

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

Part No. H38KPN-KT33dT

$I_{T(AV)}$	400A
V_{DRM}, V_{RRM}	4600V 5000V
	5200V 5500V

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_J(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled $T_C=70^{\circ}C$	125			400	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10ms$	125	4600		5500	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			150	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			4.5	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$	125			101	$A^2s \cdot 10^3$
V_{TO}	Threshold voltage		125			1.08	V
r_T	On-state slope resistance		125			1.92	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=1000A, F=15kN$	25			2.80	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			2000	V/μs
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 1300A, Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$	125			100	A/μs
Q_{rr}	Recovery charge	$I_{TM}=2000A, t_p=4000\mu s, di/dt=-5A/\mu s,$ $V_R=100V$	125		2000		μC
I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	40		300	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			25		200	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 force 15kN				0.045	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heatsink					0.008	$^{\circ}C/W$
F_m	Mounting force			10	15	20	kN
T_{vj}	Junction temperature			-40		125	$^{\circ}C$
T_{stg}	Stored temperature			-40		140	$^{\circ}C$
W_i	Weight				300		g
Outline	KT33dT						

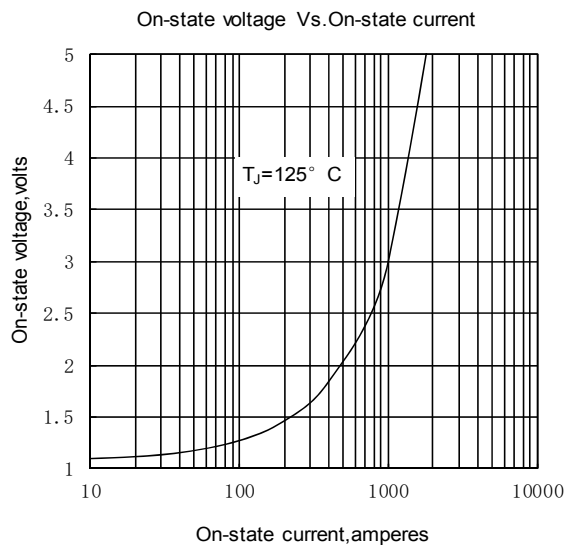


Fig.1

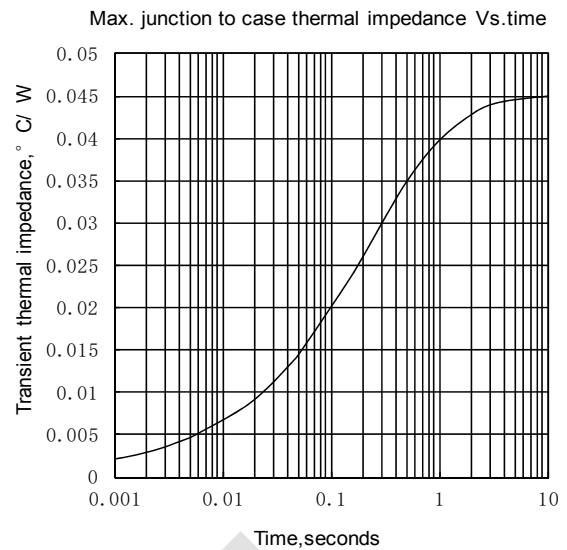


Fig.2

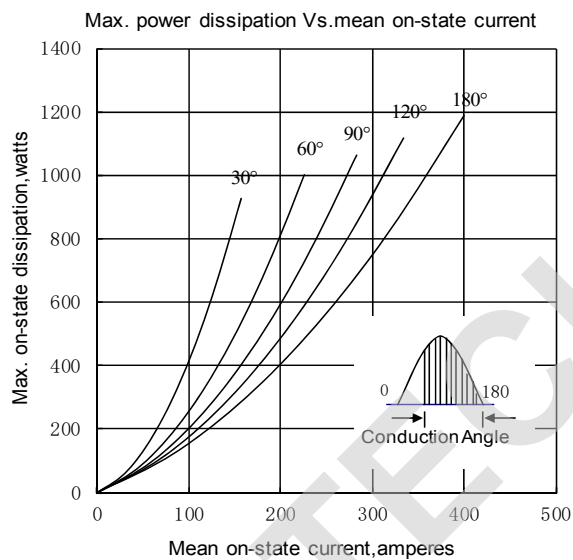


Fig.3

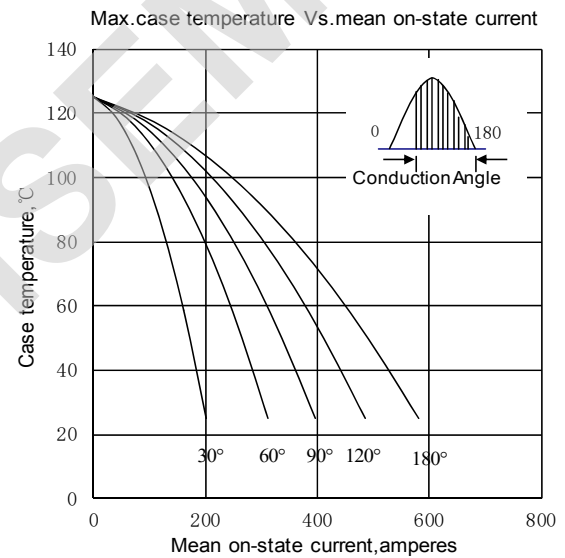


Fig.4

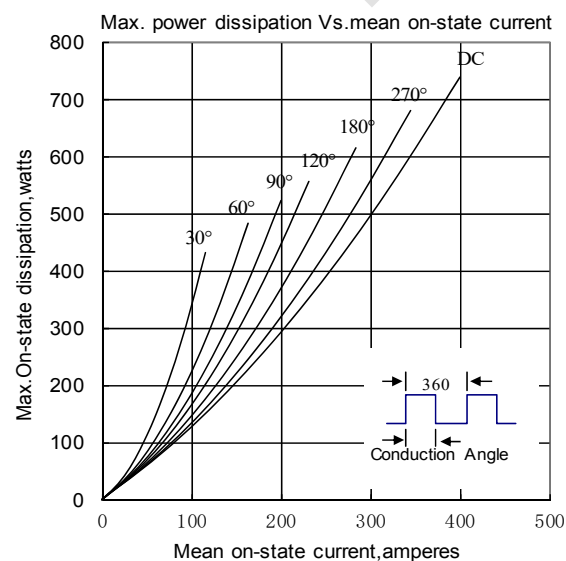


Fig.5

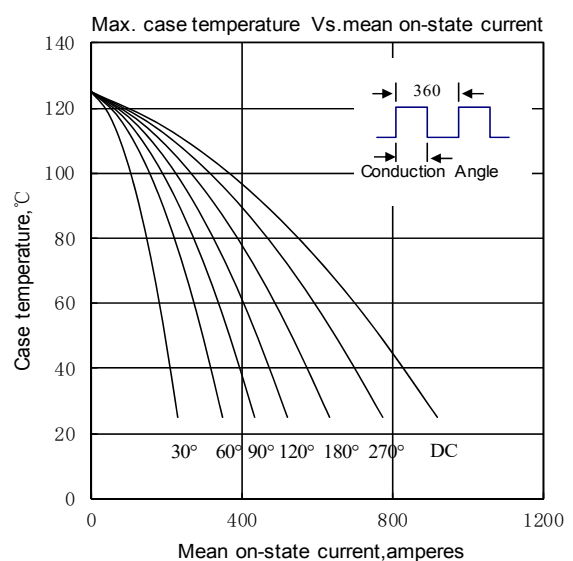


Fig.6

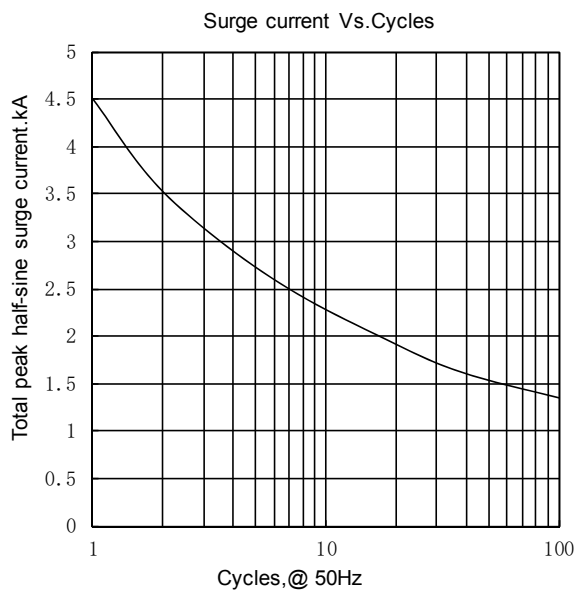


Fig.7

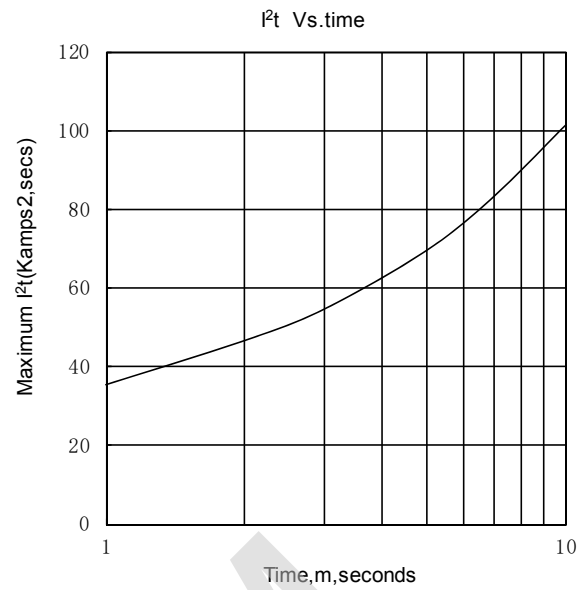


Fig.8

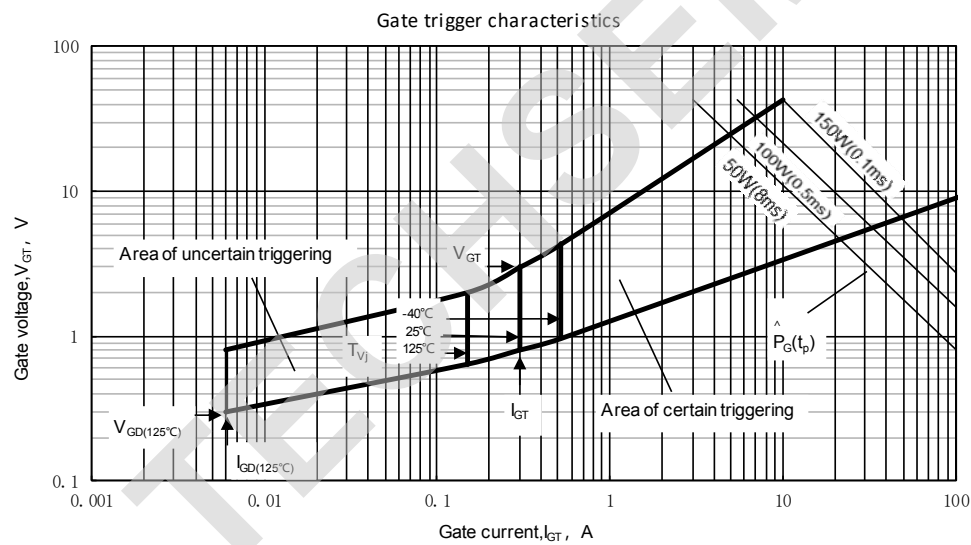
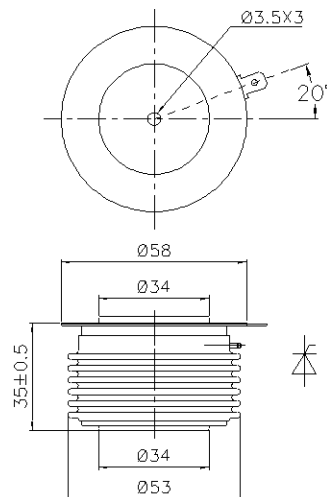


Fig.9

Outline:

TECHSEM reserves the right to change specifications without notice.