

**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. H38KPU-KT33dT

$I_{T(AV)}$ **300A**
 V_{DRM}, V_{RRM} **7500V 8000V**
 8500V

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	125			300	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10ms$	125	7300		8500	V
I_{DRM} I_{RRM}	Repetitive peak current	@ V_{DRM} @ V_{RRM}	125			200	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			4.0	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$				80	$A^2s \cdot 10^3$
V_{TO}	Threshold voltage		125			2.02	V
r_T	On-state slope resistance					2.19	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=500A, F=15kN$	25			3.00	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	$V_{DM}=67\%V_{DRM}$, 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		1500		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			20		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	C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink					0.008	C /W
F_m	Mounting force			10	15	20	kN
T_{vj}	Junction temperature			-40		125	C
T_{stg}	Stored temperature			-40		140	C
W_t	Weight				300		g
Outline	KT33dT						

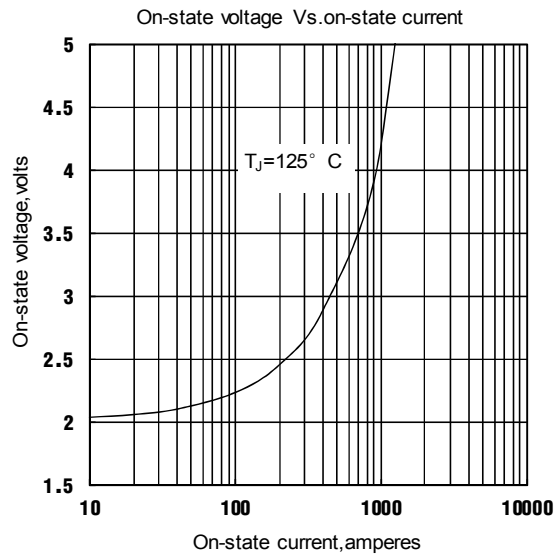


Fig.1

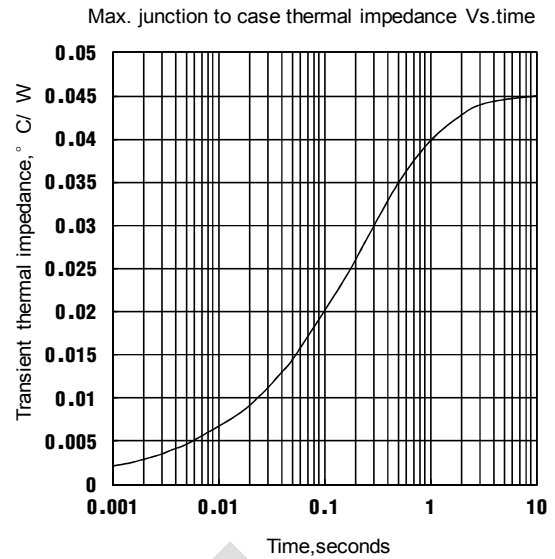


Fig.2

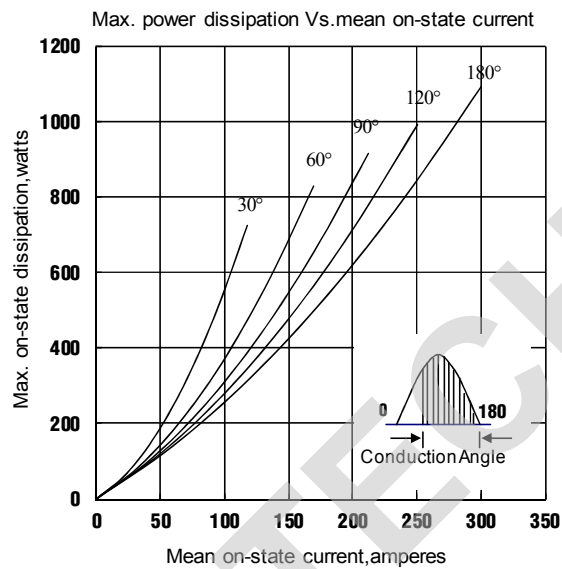


Fig.3

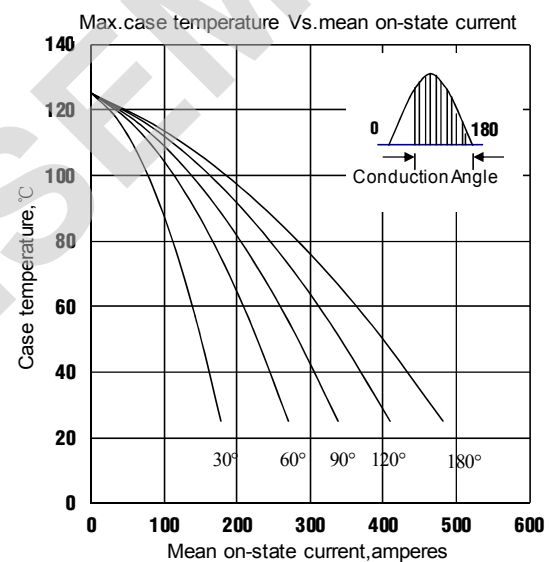


Fig.4

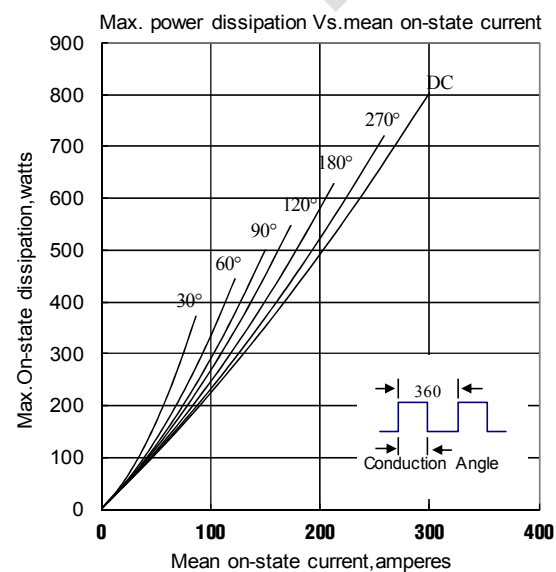


Fig.5

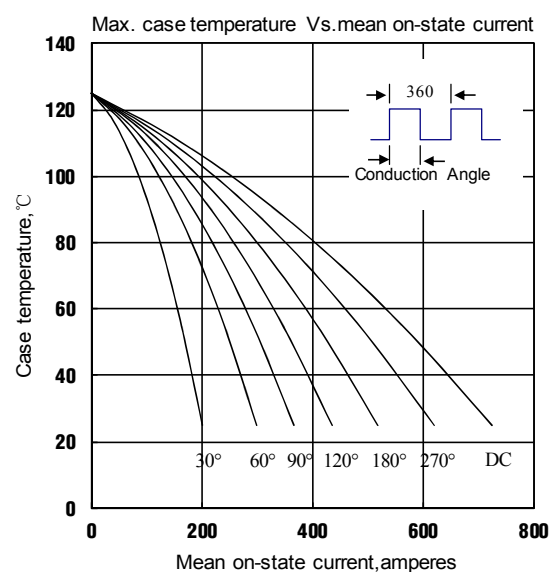


Fig.6

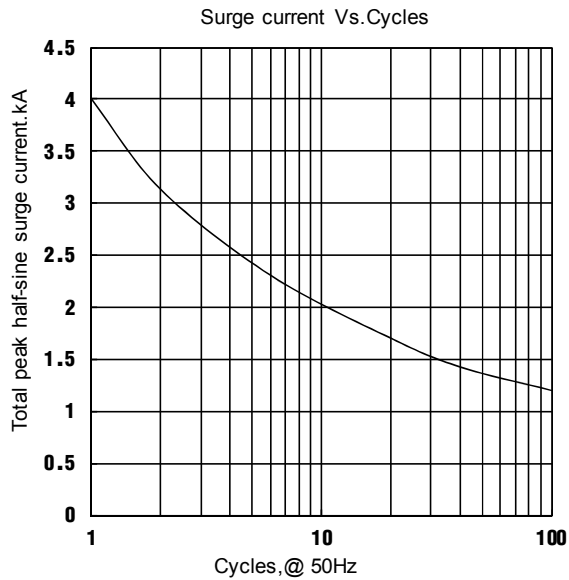


Fig.7

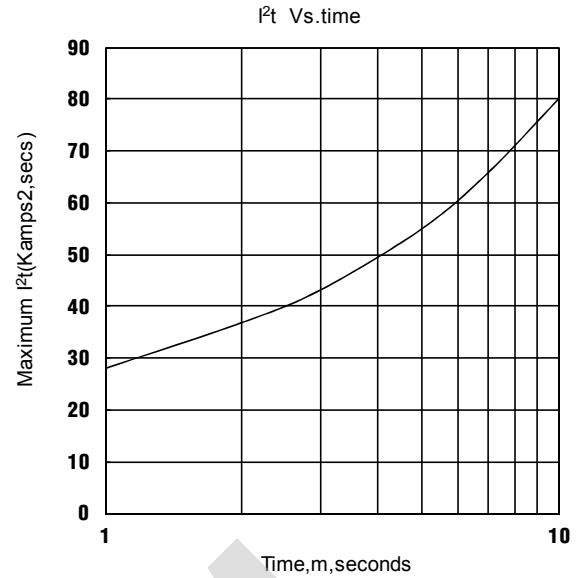


Fig.8

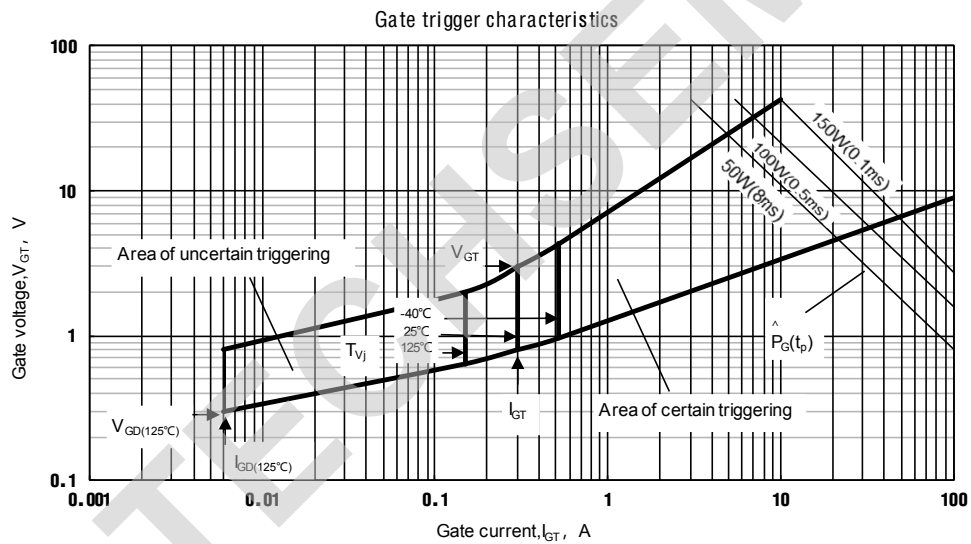
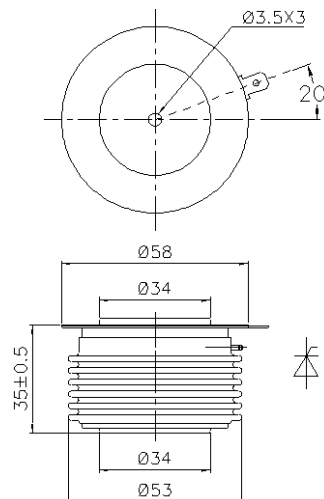


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.