



Features

- n Interdigitated amplifying gates
- n Fast turn-on and high di/dt
- n Low switching losses

Typical Applications

- n Inductive heating
- n Electronic welders
- n Self-commutated inverters

Part No. H89KKJ-KT78cT

$I_{T(AV)}$	2200A
V_{DRM}, V_{RRM}	3500V 4000V
	4500V 4800V
t_q	50~100μs

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	$T_C=55^{\circ}C$	125		2200	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} $t_p=10ms$ at V_{RRM} $t_p=10ms$		125		250	mA
I_{TSM}	Surge on-state current	10ms half sine wave		125		35	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$		125		6125	10 ³ A ² s
V_{TO}	Threshold voltage			125		1.48	V
r_T	On-state slope resistance			125		0.35	m Ω
V_{TM}	Peak on-state voltage	$I_{TM}=2500A, F=70kN$		25		2.80	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$		125		1000	V/ μ s
di/dt	Critical rate of rise of on-state current (Non-repetitive)	$V_{DM}=67\%V_{DRM}$, Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$		125		600	A/ μ s
Q_{rr}	Recovery charge	$I_{TM}=2000A, t_p=4000\mu s, di/dt=-20A/\mu s,$ $V_R=50V$		125	1500		μC
t_q	Circuit commutated turn-off time	$I_{TM}=2000A, t_p=4000\mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-20A/\mu s$		100	50	100	μs
I_{GT}	Gate trigger current			25	40	250	mA
V_{GT}	Gate trigger voltage			25	0.9	2.5	V
I_H	Holding current	$V_A=12V, I_A=1A$		25	20	1000	mA
I_L	Latching current			25		1500	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	Double side cooled				0.009	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heatsink	Clamping force 70kN				0.002	
F_m	Mounting force				63	84	kN
T_{vj}	Junction temperature				-40	125	$^{\circ}C$
T_{stg}	Stored temperature				-40	130	$^{\circ}C$
W_t	Weight					1390	g
Outline	KT78cT						

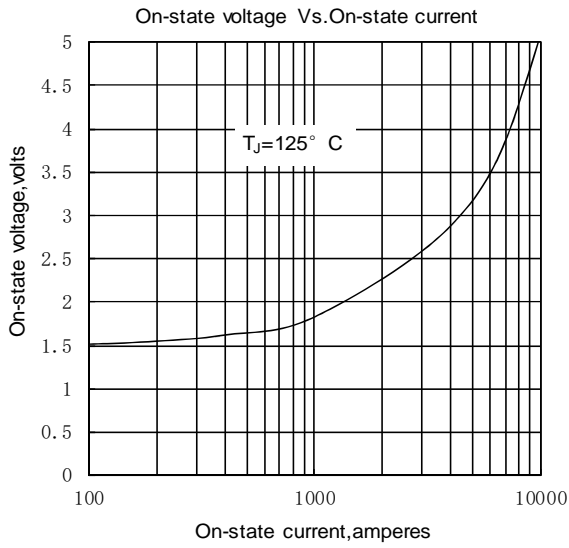


Fig.1

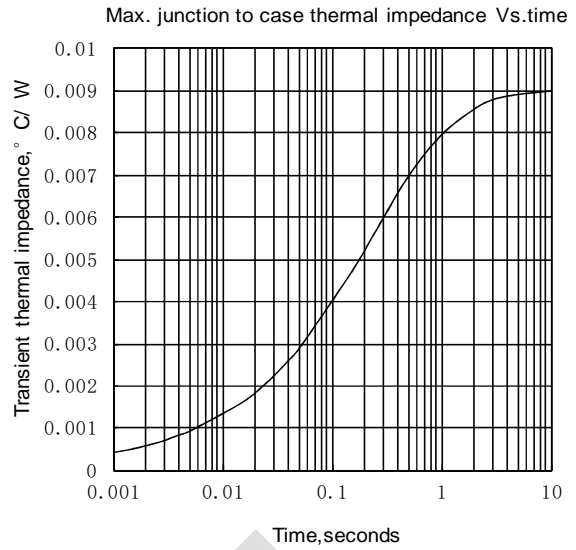


Fig.2

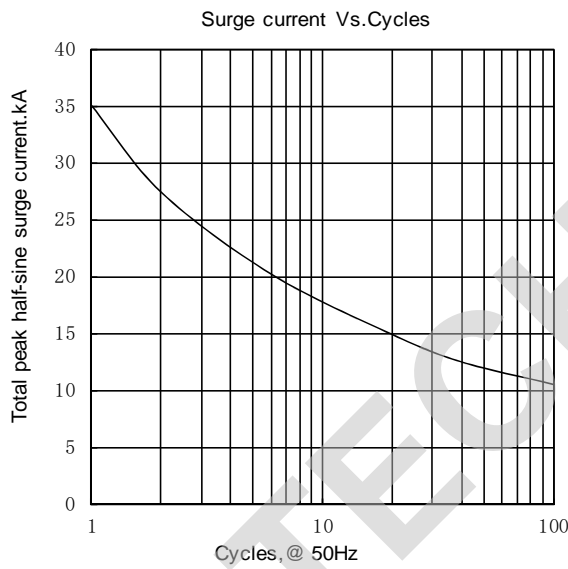


Fig.3

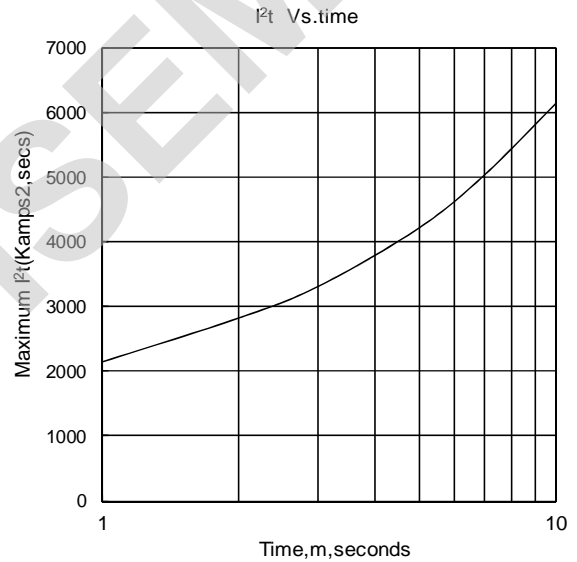


Fig.4

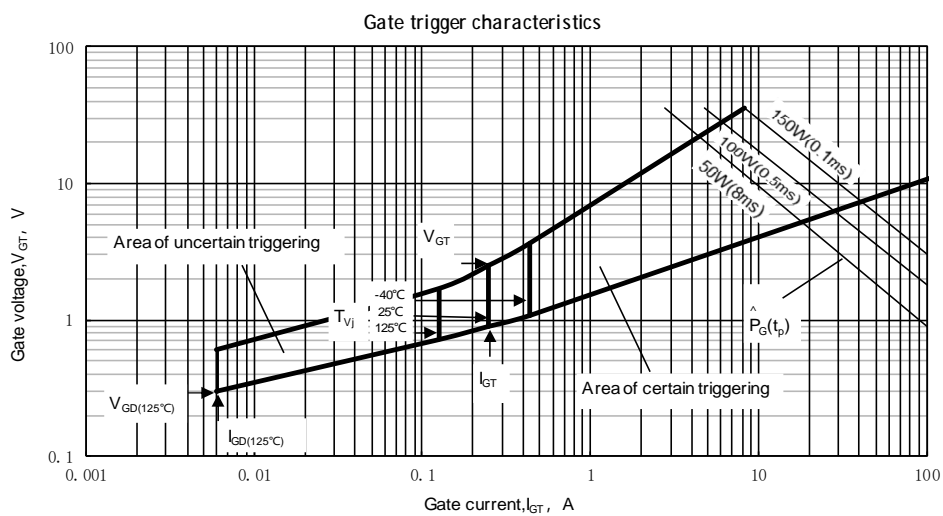
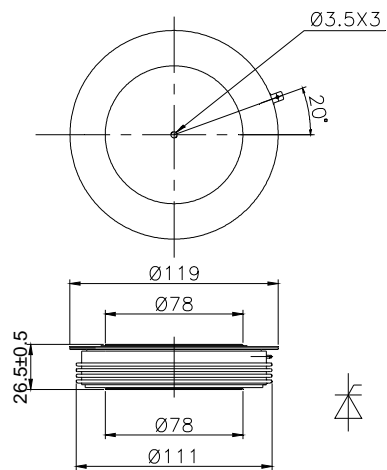


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

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