

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	3800A
V_{DRM}/V_{RRM}	1900~2500V
t_q	40~110μs
I_{TSM}	44 kA
I^2t	9680 10 ³ A ² S



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,	125			3800	A
						2580	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$V_{DRM} \& V_{RRM}$, $t_p=10ms$ $V_{DSM} \& V_{RSM} = V_{DRM} \& V_{RRM} + 100V$	125	1900		2500	V
I_{DRM} I_{RRM}	Repetitive peak current	$V_D = V_{DRM}$ $V_R = V_{RRM}$	125			250	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			44	kA
I^2t	I^2t for fusing coordination	$V_R = 0.6V_{RRM}$				9680	A ² s*10 ³
V_{TO}	Threshold voltage		125			1.32	V
r_T	On-state slop resistance					0.14	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=5000A$, $F=70kN$	125			2.02	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=0.67V_{DRM}$	125			500	V/μs
di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$, $t_{to4000A}$ Gate pulse $t_r \leq 0.5\mu s$, $I_{GM}=1.5A$	125			1200	A/μs
Q_{rr}	Recovery charge	$I_{TM}=2000A$, $t_p=2000\mu s$, $di/dt=-60A/\mu s$, $V_R=50V$	125		2100		μC
t_q	Circuit commutated turn-off time	$I_{TM}=2000A$, $t_p=1000\mu s$, $V_R=50V$ $dv/dt=30V/\mu s$, $di/dt=-20A/\mu s$	125	40		110	μs
I_{GT}	Gate trigger current	$V_A=12V$, $I_A=1A$	25	40		450	mA
V_{GT}	Gate trigger voltage			0.9		4.5	V
I_H	Holding current			20		1000	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 70 kN				0.007	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.002	
F_m	Mounting force			63		84	kN
T_{stg}	Stored temperature			-40		140	°C
W_t	Weight				1390		g
Outline	KT84cT						

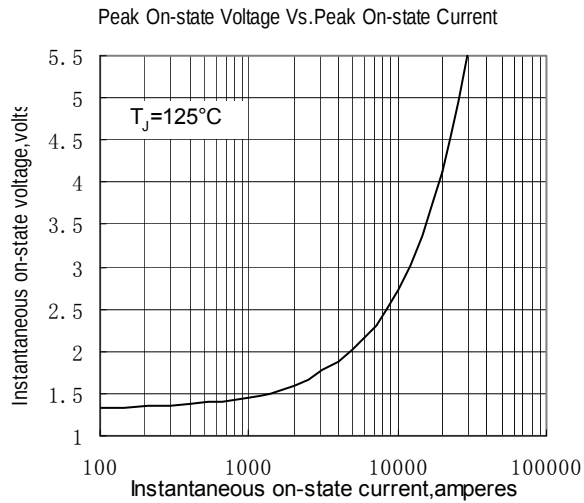


Fig.1

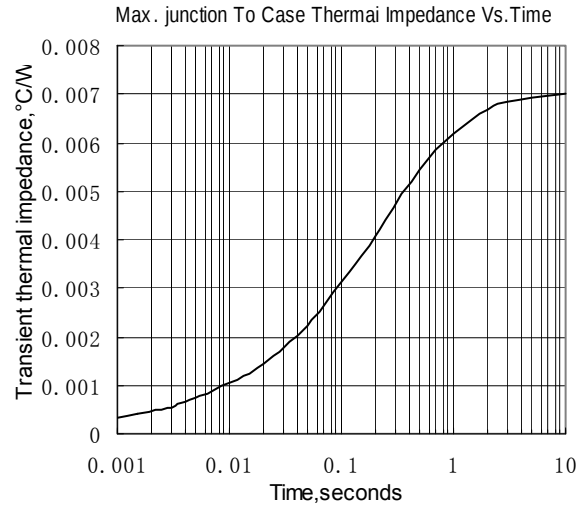


Fig.2

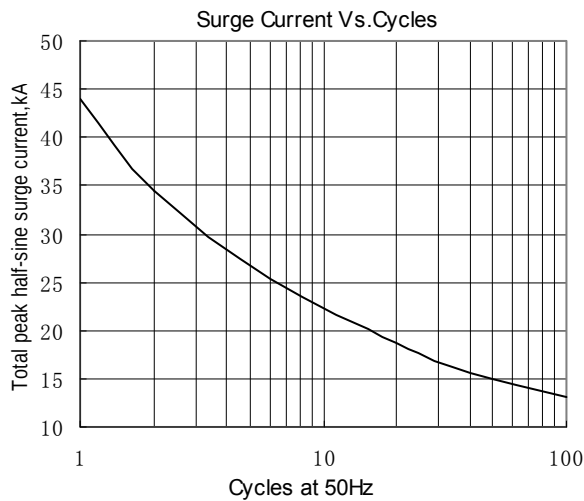


Fig.3

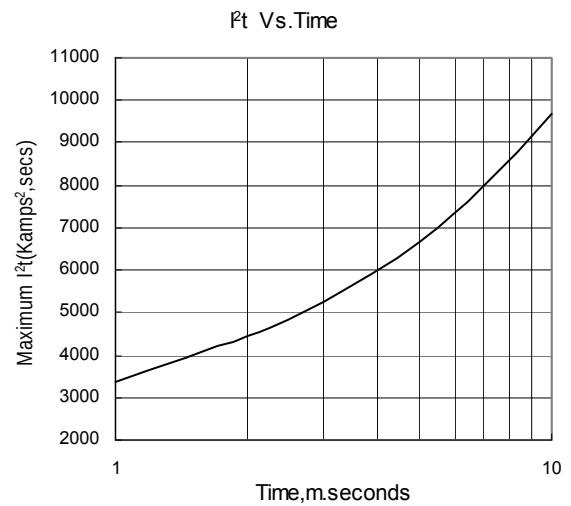


Fig.4

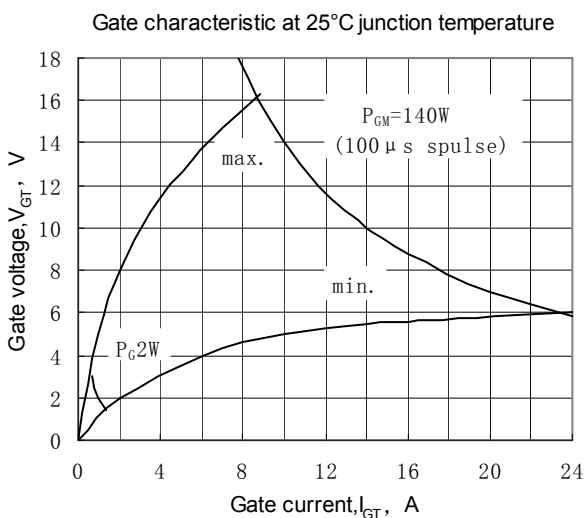


Fig.5

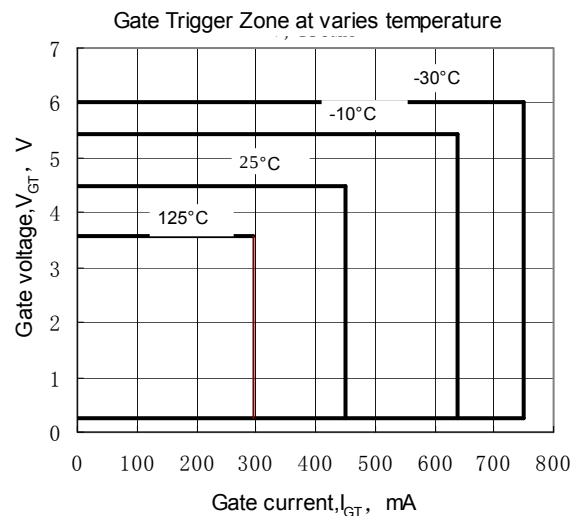


Fig.6

Outline:

