

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	4290A
V_{DRM}/V_{RRM}	4100~5000V
t_q	80~180μs
I_{TSM}	44 kA
I^2t	9680 10 ³ A ² S



SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}\text{C})$	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled, $T_C=55^{\circ}\text{C}$	125			4290	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10\text{ms}$	125	4100		5000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at 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			1.58	V
r_T	On-state slope resistance					0.16	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=2500\text{A}$, $F=90\text{kN}$	25			3.40	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	$V_{DM}=67\%V_{DRM}$ to 4000A Gate pulse $t_r \leq 0.5\mu\text{s}$ $I_{GM}=1.5\text{A}$	125			1200	A/μs
Q_{rr}	Recovery charge	$I_{TM}=2000\text{A}$, $t_p=2000\mu\text{s}$, $di/dt=-60\text{A}/\mu\text{s}$, $V_R=50\text{V}$	125		2500		μC
t_q	Circuit commutated turn-off time	$I_{TM}=2000\text{A}$, $t_p=1000\mu\text{s}$, $V_R=50\text{V}$ $dv/dt=30\text{V}/\mu\text{s}$, $di/dt=-20\text{A}/\mu\text{s}$	125	80		180	μs
I_{GT}	Gate trigger current	$V_A=12\text{V}$, $I_A=1\text{A}$	25	40		300	mA
V_{GT}	Gate trigger voltage			0.9		3.5	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 90 kN				0.005	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.0015	
F_m	Mounting force			81		108	kN
T_{stg}	Stored temperature			-40		140	°C
W_t	Weight				2000		g
Outline	KT100cT						

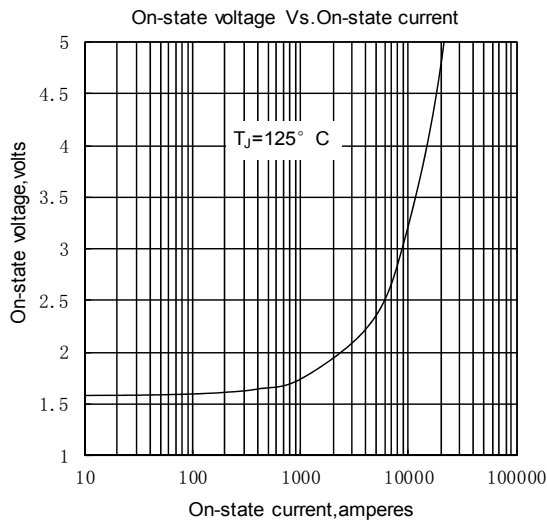


Fig. 1

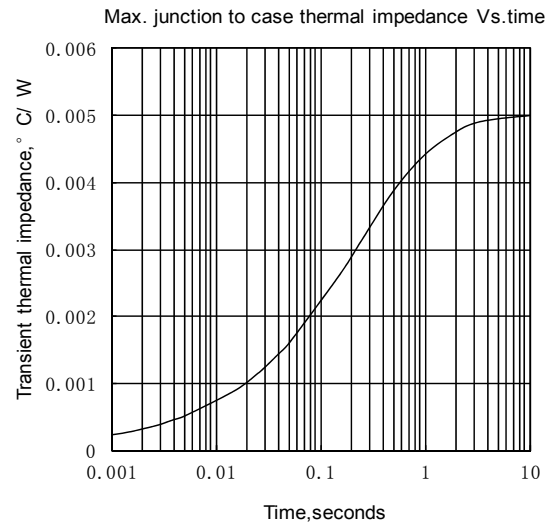


Fig. 2

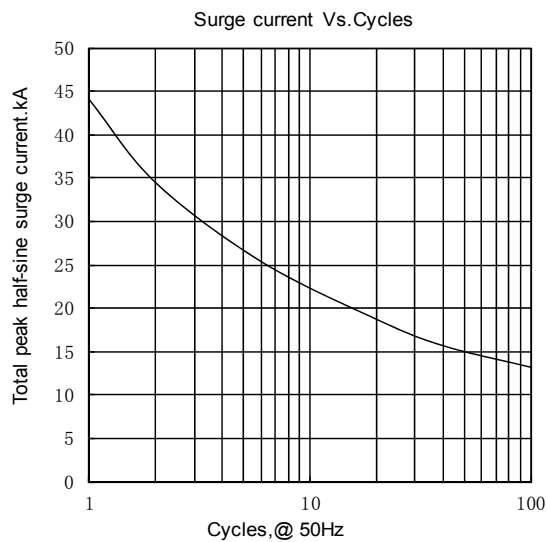


Fig. 3

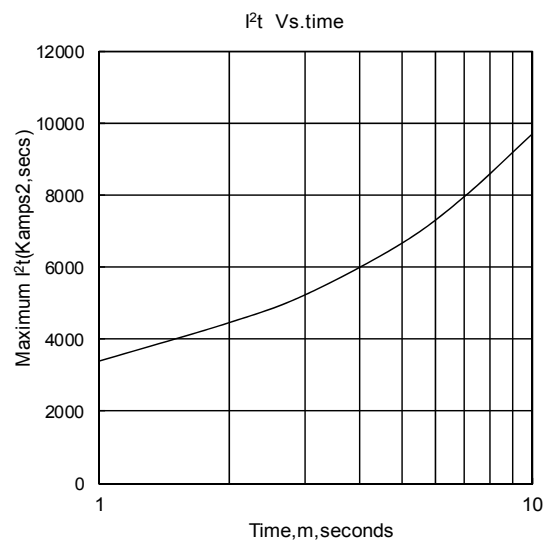


Fig. 4

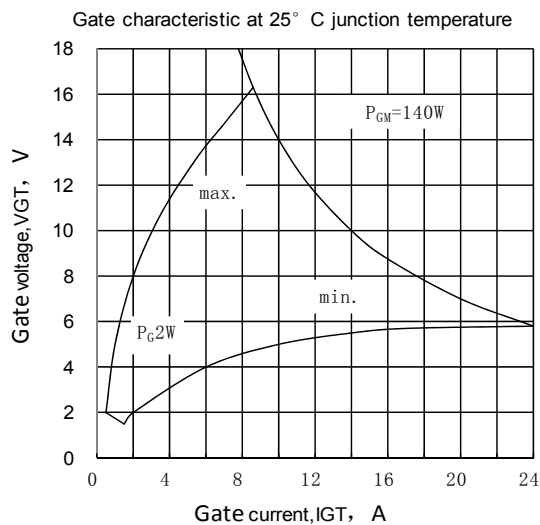


Fig. 5

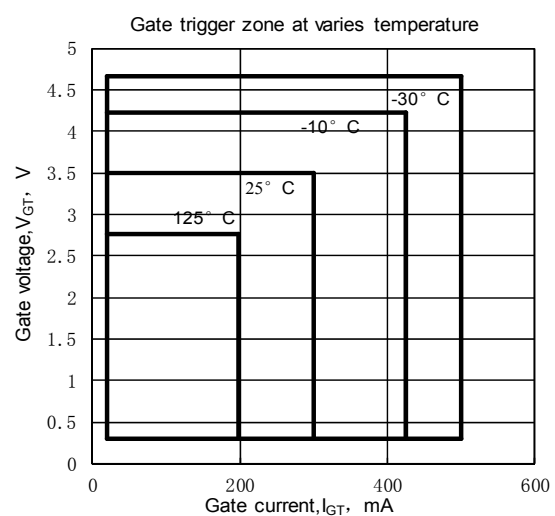


Fig. 6

Outline:

