

Features

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

Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$ **2940A**
 V_{DRM}/V_{RRM} **800~1800V**
 t_q **30~60μs**
 I_{TSM} **35.6 kA**
 I^2t **6337 10³A²S**



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			2940	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	$t_p=10\text{ms}$	125	800		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			200	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			35.6	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$				6337	$\text{A}^2\text{s}\cdot 10^3$
V_{TO}	Threshold voltage		125			1.30	V
r_T	On-state slope resistance					0.15	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=5000\text{A}$, $F=40\text{kN}$	25			3.15	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 3000A 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		1000		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	30		60	μs
I_{GT}	Gate trigger current	$V_A=12\text{V}$, $I_A=1\text{A}$	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 40kN				0.010	$^{\circ}\text{C}/\text{W}$
$R_{th(c-h)}$	Thermal resistance case to heat sink					0.003	
F_m	Mounting force			35		47	kN
T_{stg}	Stored temperature			-40		140	$^{\circ}\text{C}$
W_t	Weight				1100		g
Outline	KT73cT						

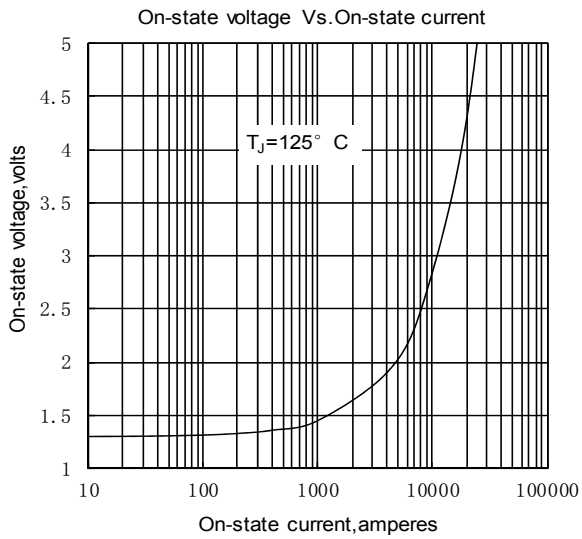


Fig. 1

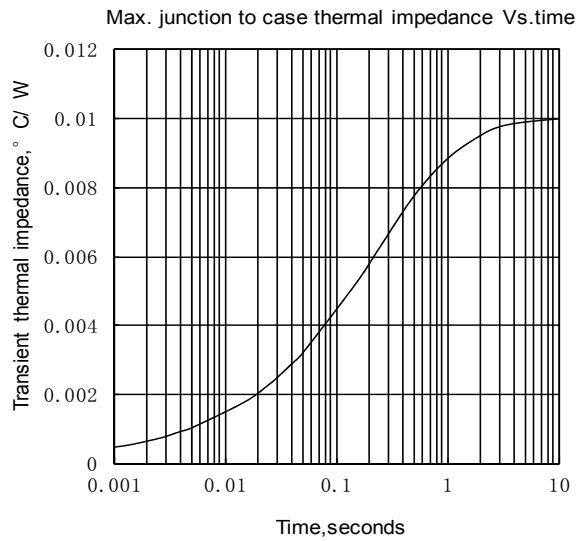


Fig. 2

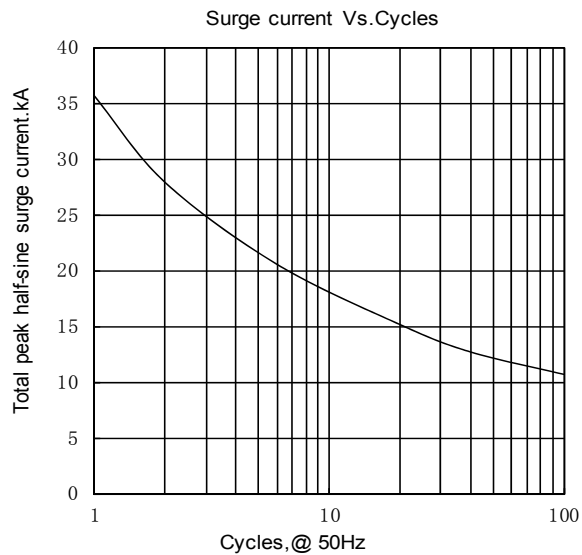


Fig. 3

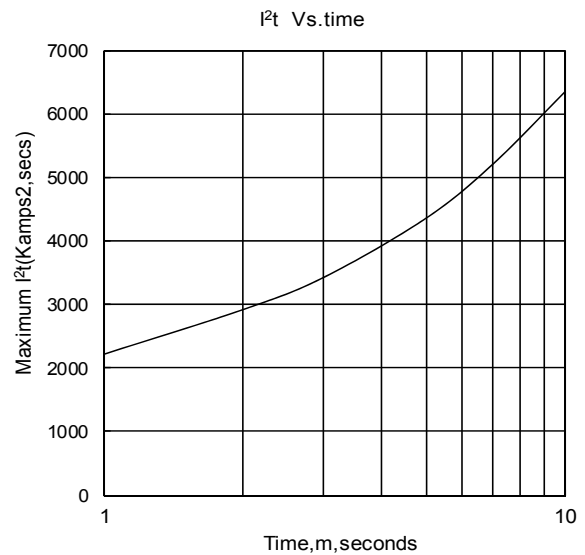


Fig. 4

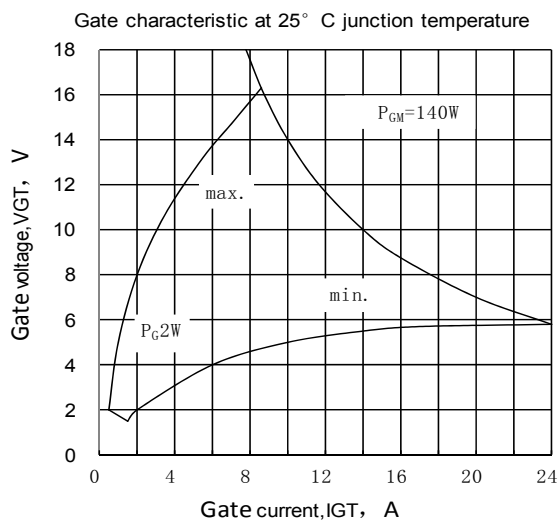


Fig. 5

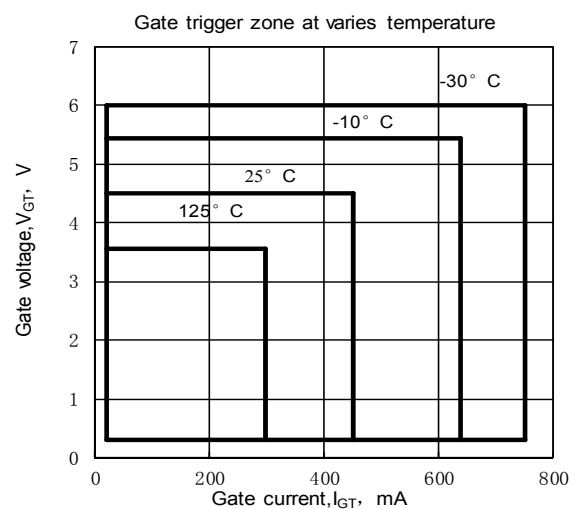


Fig. 6

Outline:

