

Features

- n Interdigitated amplifying gates
- n Fast turn-on and high di/dt
- n Low switching losses
- n Short turn-off time
- n Hermetic metal cases with ceramic insulators

Typical Applications

- n Inductive heating
- n Electronic welders
- n Self-commutated inverters
- n AC motor speed control

Part No. Y76KAD(D)-KT73cT

$I_{T(AV)}$	2600A
V_{DRM}, V_{RRM}	1200V
	1400V
tq	10~25μs

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		2600	A
			$T_C=70^{\circ}C$	125		2200	A
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} $t_p=10ms$ at V_{RRM} $t_p=10ms$	125			300	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			35	kA
I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$				6125	10^3A^2s
V_{TO}	Threshold voltage		125			1.38	V
r_T	On-state slope resistance					0.20	mΩ
V_{TM}	Peak on-state voltage	$I_{TM}=4000A, F=40kN$	25			2.50	V
dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DR}$	125			1000	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			1500	A/μs
Q_{rr}	Recovery charge	$I_{TM}=2000A, t_p=4000\mu s$, $di/dt=-20A/\mu s, V_R=50V$	125		60		μC
tq	Circuit commutated turn-off time	$I_{TM}=2000A, t_p=4000\mu s, V_R=50V$ $dv/dt=30V/\mu s, di/dt=-20A/\mu s$	125	10		25	μs
I_{GT}	Gate trigger current		25	40		300	mA
V_{GT}	Gate trigger voltage	$V_A=12V, I_A=1A$		0.8		3.0	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	Double side cooled Clamping force 40kN				0.010	$^{\circ}C/W$
$R_{th(c-h)}$	Thermal resistance case to heatsink					0.003	
F_m	Mounting force			35		47	kN
T_{vj}	Junction temperature			-40		125	$^{\circ}C$
T_{stg}	Stored temperature			-40		140	$^{\circ}C$
W_t	Weight				1100		g
Outline	KT73cT						

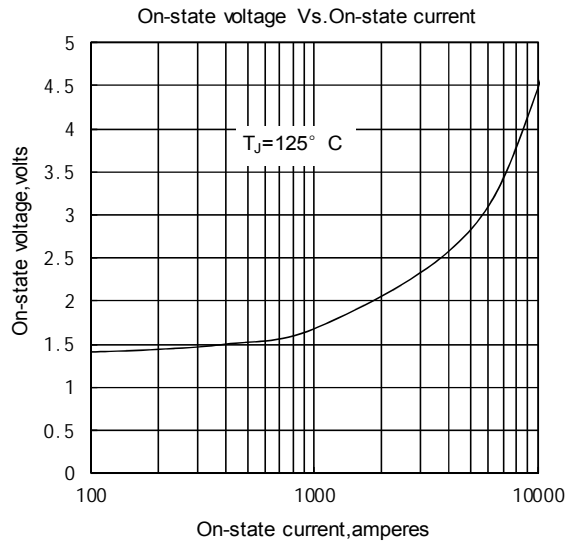


Fig.1

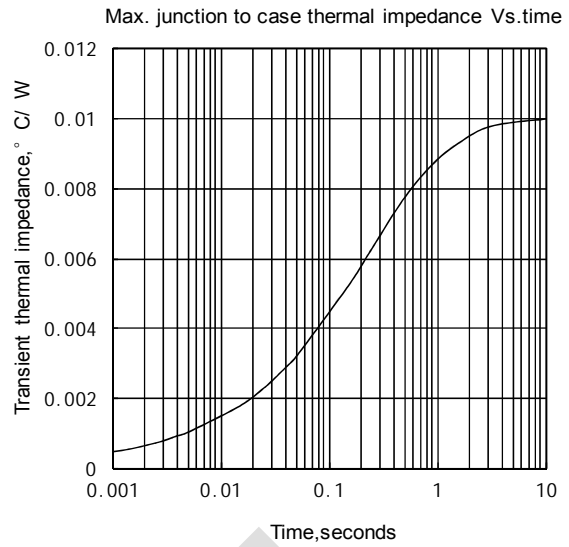


Fig.2

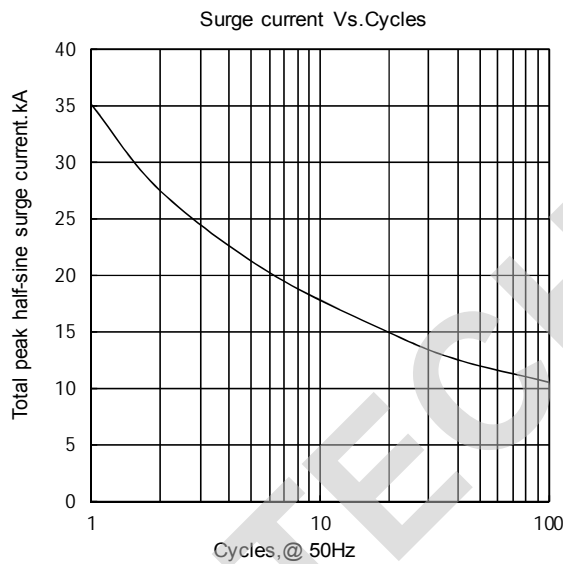


Fig.3

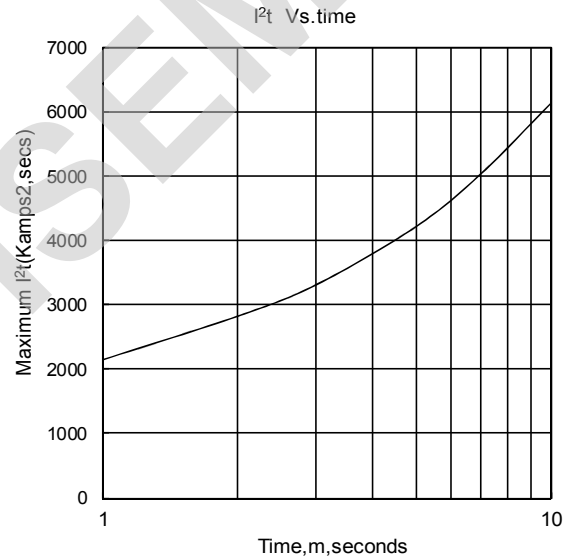


Fig.4

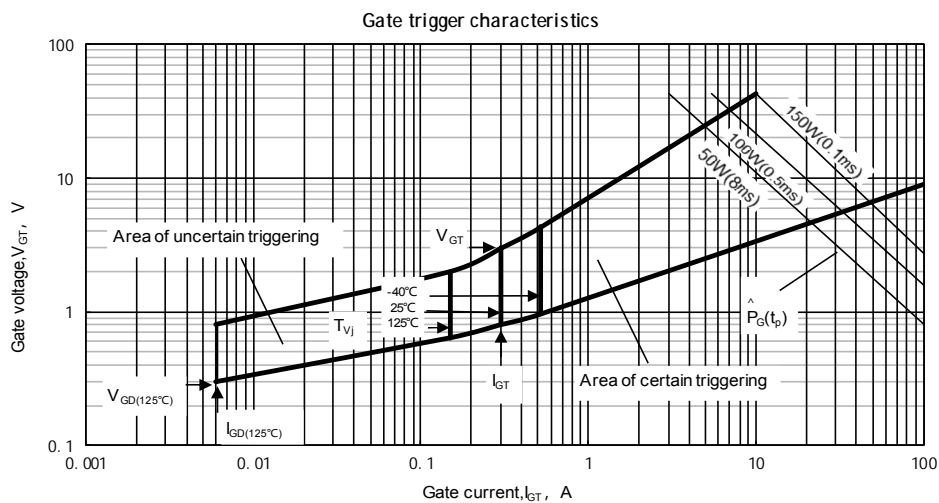
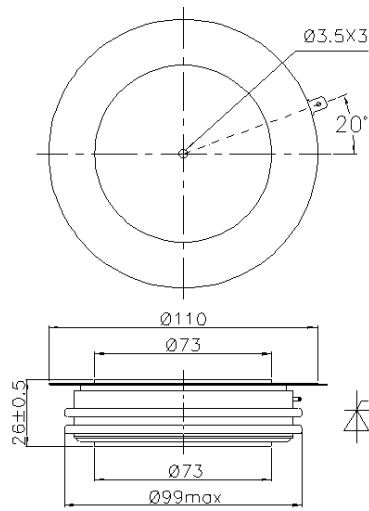


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.

TECHSEM