



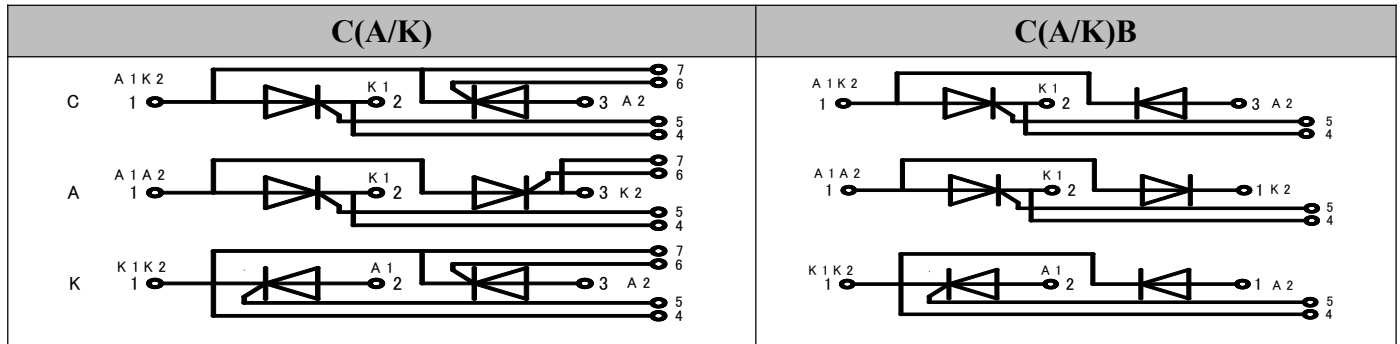
## Applications

- Power Converters
- Lighting Control
- DC Motor Control and Drives
- Heat and temperature control

## Features

- International standard package
- High Surge Capability
- Simple Mounting

## Internal Circuit



## Blocking - Off State

TYPE		V <sub>DRM</sub> /V <sub>RRM</sub>	V <sub>DSM</sub> /V <sub>RSM</sub>	Units
MT400C(A/K)20DT6	MT400C(A/K)B20DT6	2000	2200	V
MT400C(A/K)22DT6	MT400C(A/K)B22DT6	2200	2400	V
MT400C(A/K)25DT6	MT400C(A/K)B25DT6	2500	2700	V

## Maximum Ratings

Symbol	Conditions	Values	Units
I <sub>TAV</sub>	Sine 180°; T <sub>c</sub> =85°C	400	A
I <sub>TSM</sub>	T <sub>VJ</sub> =125°C t=10ms, sine	11000	A
I <sup>2</sup> t	T <sub>VJ</sub> =125°C t=10ms, sine	605000	A <sup>2</sup> s
Visol	a.c.50HZ;r.m.s.;1min,I <sub>iso</sub> :2mA(MAX)	3000	V
T <sub>vj</sub>		-40 to 125	°C
T <sub>stg</sub>		-40 to 125	°C
M <sub>t</sub>	To terminals(M8)	12±15%	Nm
M <sub>s</sub>	To heatsink(M6)	6±15%	Nm
di/dt	T <sub>VJ</sub> = T <sub>VJM</sub> ,V <sub>DM</sub> ≤2/3V <sub>DRM</sub> , I <sub>GM</sub> =1.5A t <sub>r</sub> ≤1.5μs	100	A/μs
dv/dt	T <sub>VJ</sub> = T <sub>VJM</sub> ,2/3V <sub>DRM</sub> , linear voltage rise	1000	V/μs
Weight	Module(Approximately)	1580	g

## Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	per chip	0.071	°C/W
R <sub>th(c-h)</sub>	per chip	0.024	°C/W



## Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$V_{TM}$	$T=25^{\circ}C$ $I_{TM}=1200A$			1.85	V
$I_{RRM}/I_{DRM}$	$T_{VJ}=T_{VJM}$ , $V=V_{RRM}$ , $V=V_{DRM}$			45	mA
$V_{TO}$	$T_{VJ}=T_{VJM}$			0.82	V
$r_T$	$T_{VJ}=T_{VJM}$			0.55	mΩ
$V_{GT}$	$T_{VJ}=25^{\circ}C$ , $V_D=12V$ , $R_L=3\Omega$	0.8		2.5	V
$I_{GT}$	$T_{VJ}=25^{\circ}C$ , $V_D=12V$ , $R_L=3\Omega$	30		150	mA
$I_L$	$T_{VJ}=25^{\circ}C$ , $V_D=12V$ , $R_L=3\Omega$			1000	mA
$I_H$	$T_{VJ}=25^{\circ}C$ , $V_D=12V$ , $R_L=3\Omega$	20		150	mA
$V_{GD}$	$T_{VJ}=T_{VJM}$ , $V_{DM}=67\%V_{DRM}$	0.2			V

## Performance Curves

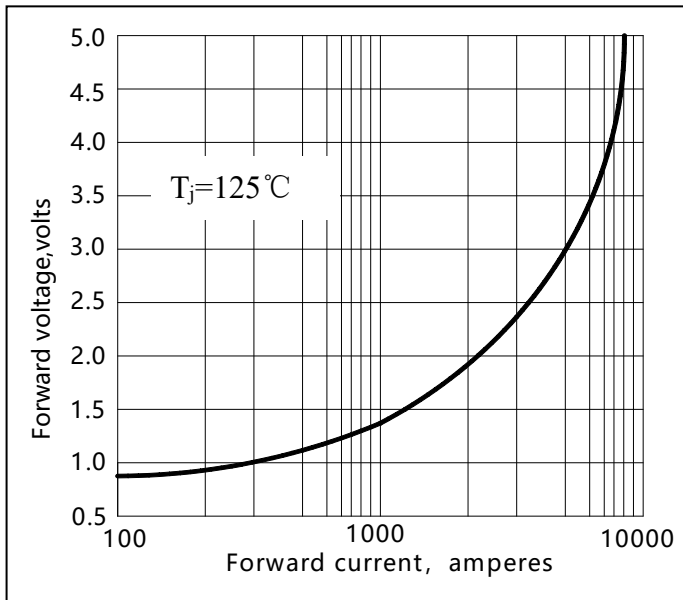


Fig1. Peak On-state Voltage Vs Peak On-state

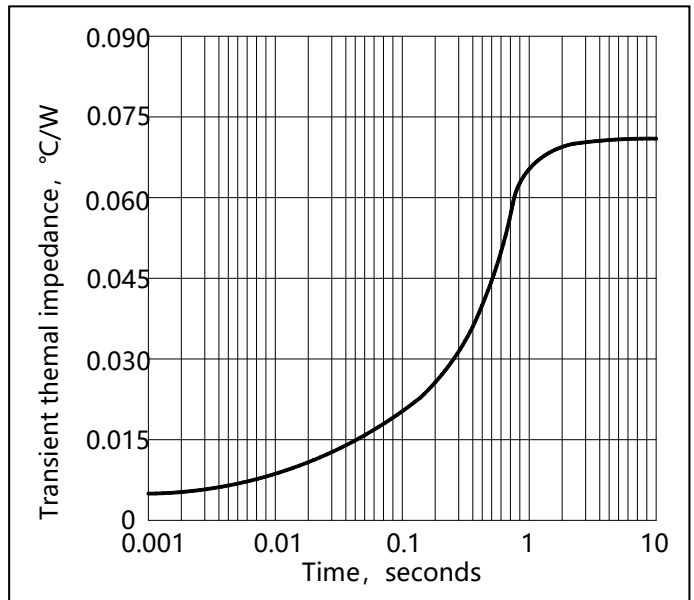


Fig2. Max. junction To case Thermal Impedance Vs Time

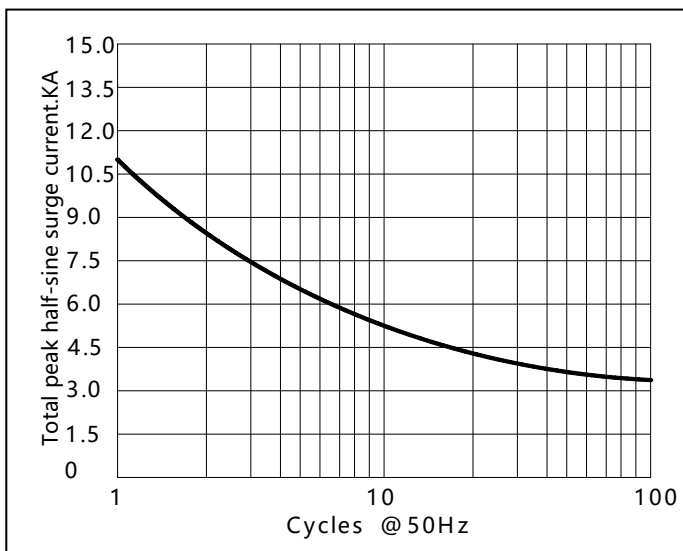


Fig3. Surge Current Vs Cycles

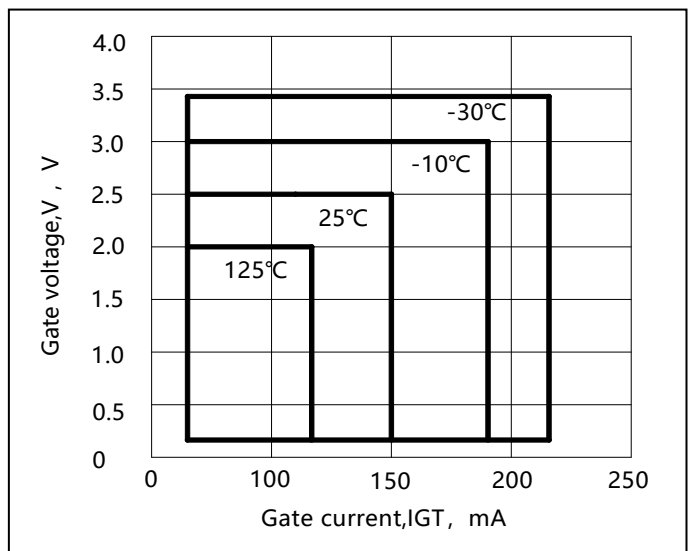
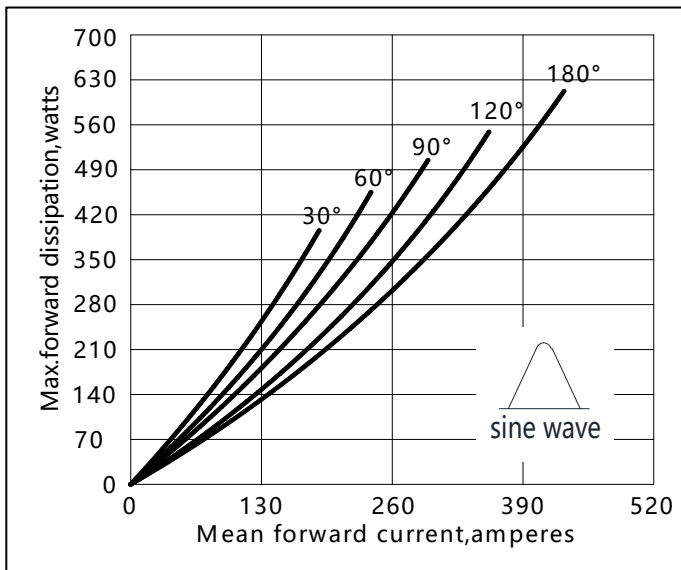
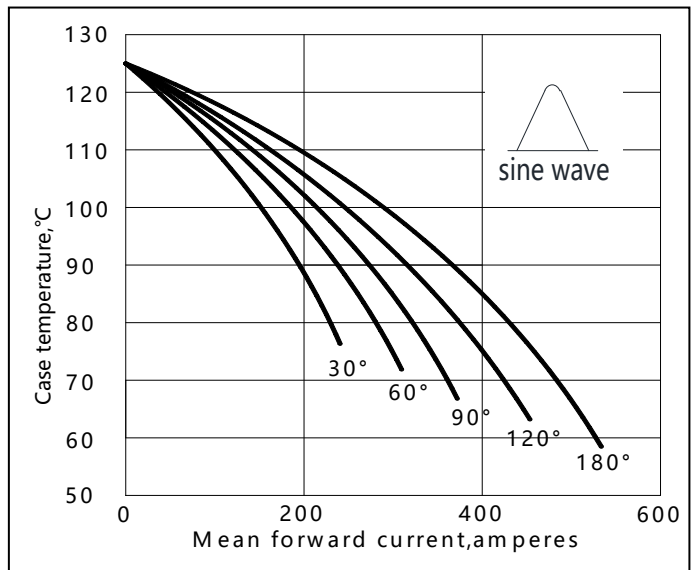


Fig4. Gate Trigger Zone Vs temperature



**Fig5. Max. Power Dissipation Vs Mean On-state Current**



**Fig6. Max case Temperature Vs Mean On-state Current**

## Package Outline Information

