



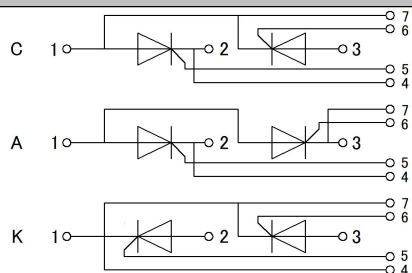
Thyristor Modules

V_{RRM} / V_{DRM} 1200 to 1600V
I_{TAV} 600A

Applications

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

Circuit



Features

- International standard package
- High Surge Capability
- Simple Mounting

Module Type

TYPE			V _{RRM}	V _{RSM}
MT600C12DT6	MT600A12DT6	MT600K12DT6	1200V	1400V
MT600C14DT6	MT600A14DT6	MT600K14DT6	1400V	1600V
MT600C16DT6	MT600A16DT6	MT600K16DT6	1600V	1800V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{TAV}	Sine 180°; T _c =70°C	600	A
I _{TSM}	T _{VJ} =125°C t=10ms, sine	16000	A
i ² t	T _{VJ} =125°C t=10ms, sine	1280000	A ² s
Visol	a.c.50HZ;r.m.s.;1min,I _{iso} :2mA(MAX)	2500	V
T _{vj}		-40 to 125	°C
T _{stg}		-40 to 125	°C
Mt	To terminals(M10)	12±15%	Nm
Ms	To heatsink(M6)	6±15%	Nm
di/dt	T _J = T _{VJM} ,I _{GM} =1.5A t _r =1.5s	100	A/us
dv/dt	T _J = T _{VJM} ,2/3V _{DRM} , linear voltage rise	1000	V/us
Weight	Module(Approximately)	1650	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	per chip/per module	0.071/0.035	°C/W
R _{th(j-c)}	sin180° per chip /per module	0.075/0.037	°C/W
R _{th(c-s)}	Per chip/per module	0.024/0.012	°C/W



Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{TM}	$T=25^{\circ}\text{C}$ $I_{TM}=1500\text{A}$			1.5	V
I_{RRM}/I_{DRM}	$T_{VJ}=T_{VJM}$, $V_R=V_{RRM}$, $V_D=V_{DRM}$			45	mA
V_{TO}	$T_{VJ}=T_{VJM}$			0.81	V
r_T	$T_{VJ}=T_{VJM}$			0.32	m Ω
V_{GT}	$T_{VJ}=25^{\circ}\text{C}$, $V_D=12\text{V}$, $R_G=3\ \Omega$	0.8		2.5	V
I_{GT}	$T_{VJ}=25^{\circ}\text{C}$, $V_D=12\text{V}$, $R_G=3\ \Omega$	30		150	mA
I_L	$T_{VJ}=25^{\circ}\text{C}$, $V_D=12\text{V}$, $R_G=3\ \Omega$			1000	mA
I_H	$T_{VJ}=25^{\circ}\text{C}$, $V_D=12\text{V}$, $R_G=3\ \Omega$	20		150	mA
tgd	$T_{VJ}=25^{\circ}\text{C}$, $I_G=1\text{A}$, $di_G/dt=1\text{A/us}$	1			us
tgr	$V_D=0.67 \cdot V_{DRM}$	2			us

Performance Curves

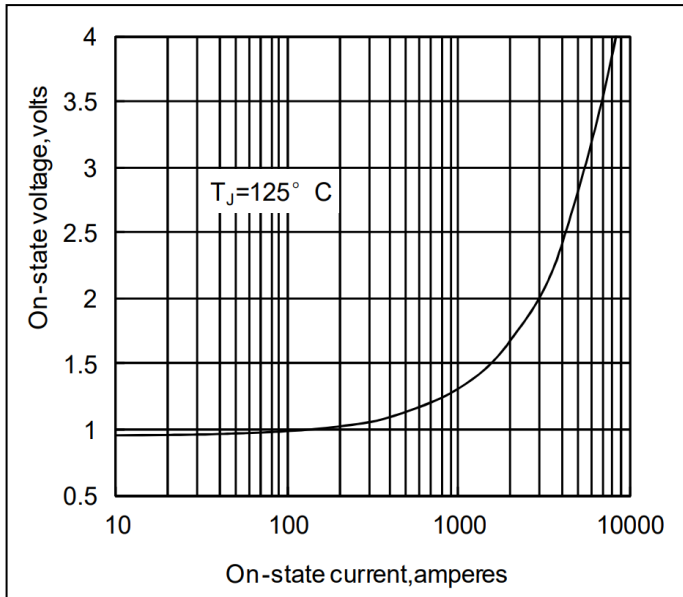


Fig1. Peak On-state Voltage Vs Peak On-state

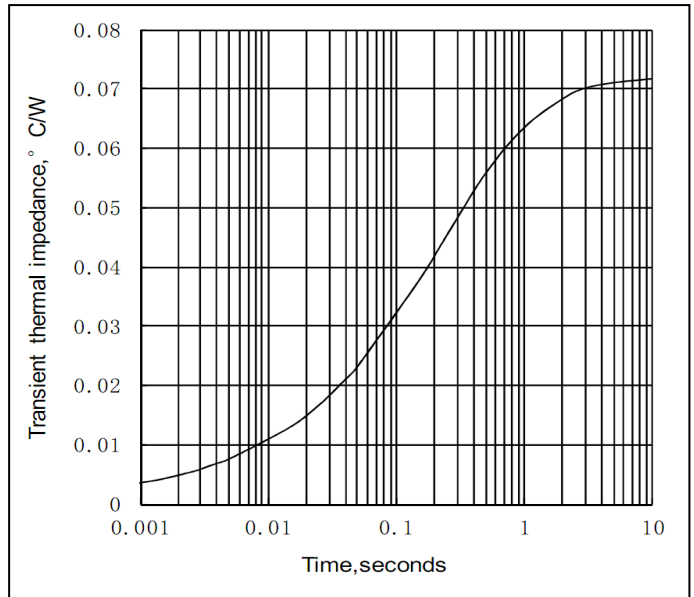


Fig2. Max. junction To case Thermal Impedance Vs Time

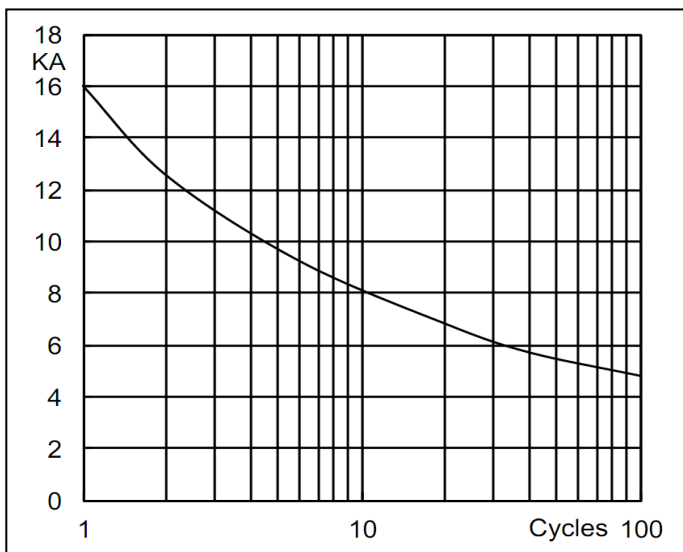


Fig3. Surge Current Vs Cycles

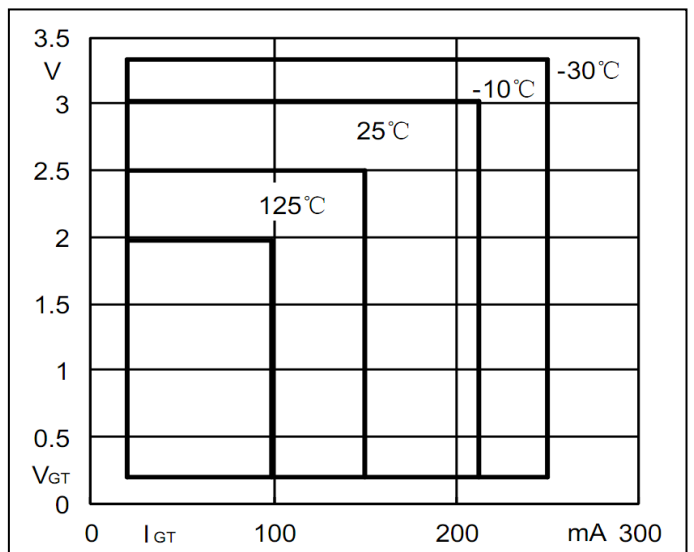


Fig4. Gate Trigger Zone at varies temperature

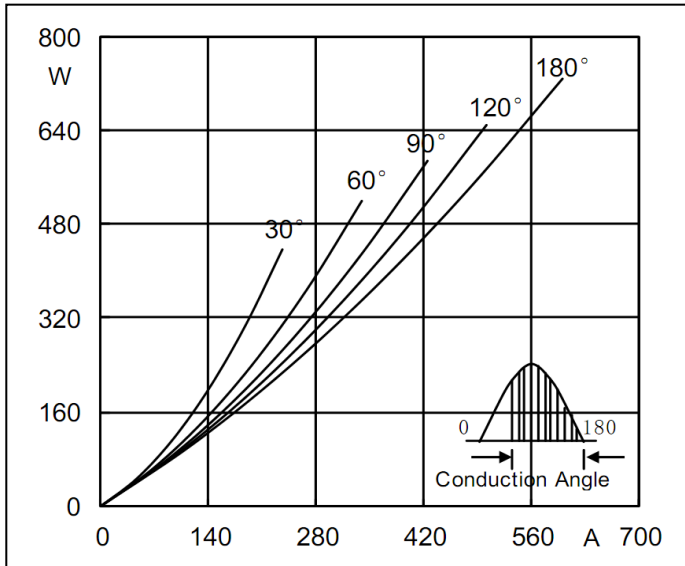


Fig5. Max. Power Dissipation Vs Mean On-state Current

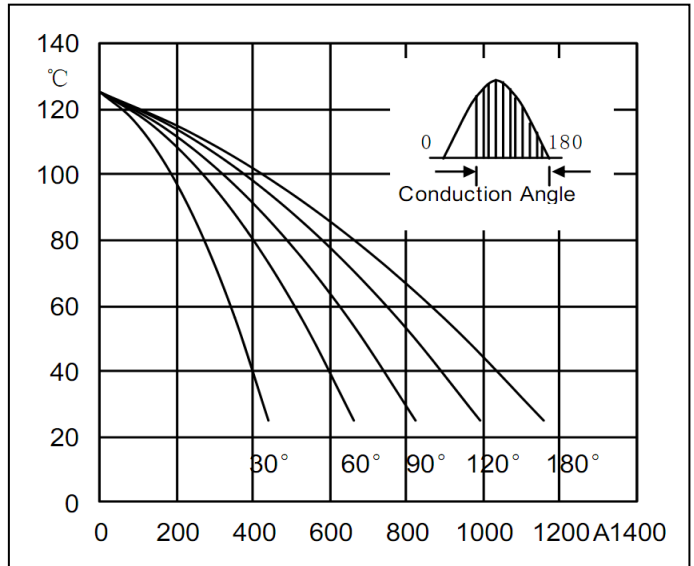
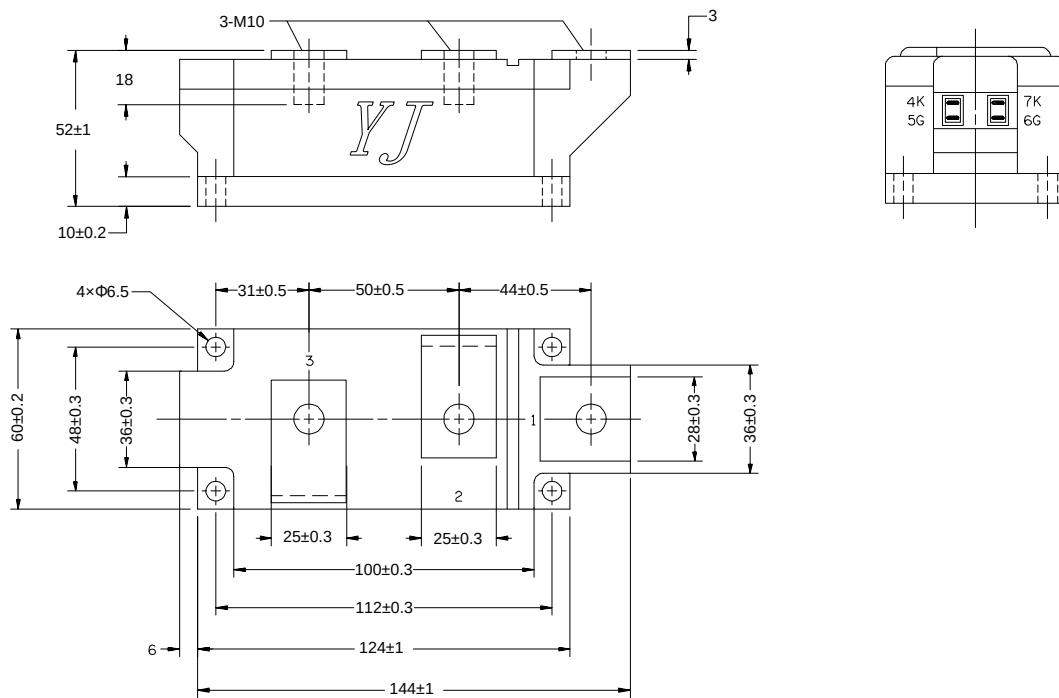


Fig6. Max case Temperature Vs Mean On-state Current

Package Outline Information

CASE: DT6



Dimensions in mm