



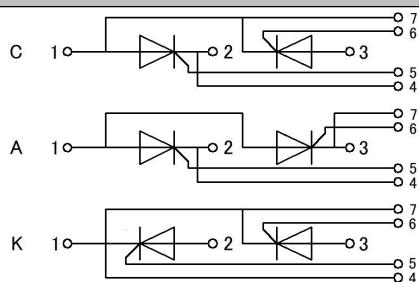
Thyristor Modules

V_{RRM} / V_{DRM} 1200 to 1600V
I_{TAV} 500A

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 _{DRM} /V _{RRM}	V _{DSM} /V _{RSM}
MT500C12DT6	MT500A12DT6	MT500K12DT6	1200V	1400V
MT500C14DT6	MT500A14DT6	MT500K14DT6	1400V	1600V
MT500C16DT6	MT500A16DT6	MT500K16DT6	1600V	1800V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{TAV}	Sine 180°; T _c =85°C	500	A
I _{TSM}	T _{VJ} =125°C t=10ms, sine	14500	A
i ² t	T _{VJ} =125°C t=10ms, sine	1051000	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
M _t	To terminals(M10)	12±15%	Nm
M _s	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	0.065	°C/W
R _{th(c-h)}	per module	0.024	°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}	$T_{VJ}=T_{VJM}$, $V_R=V_{RRM}$, $V_D=V_{DRM}$			35	mA
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

Performance Curves

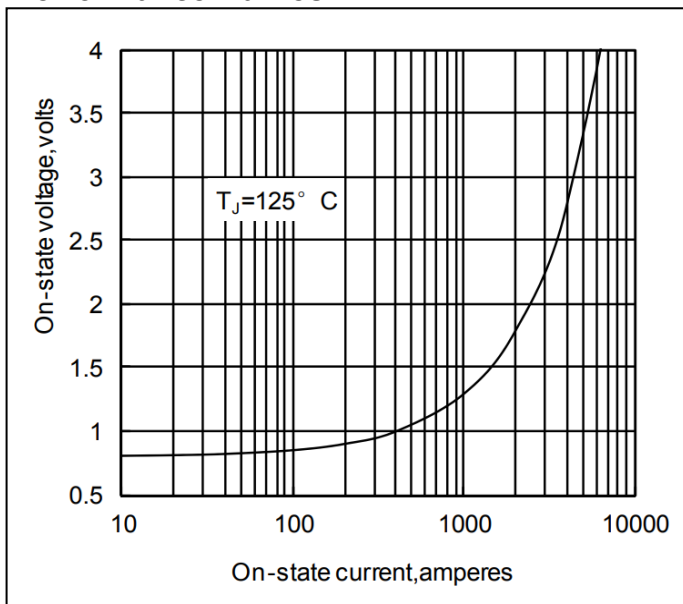


Fig1. Peak On-state Voltage Vs Peak On-state

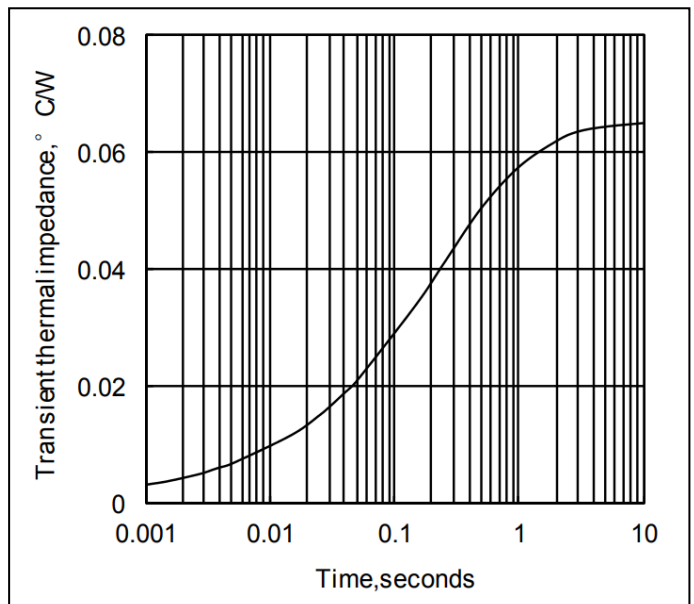


Fig2. Max. junction To case Thermal Impedance Vs Time

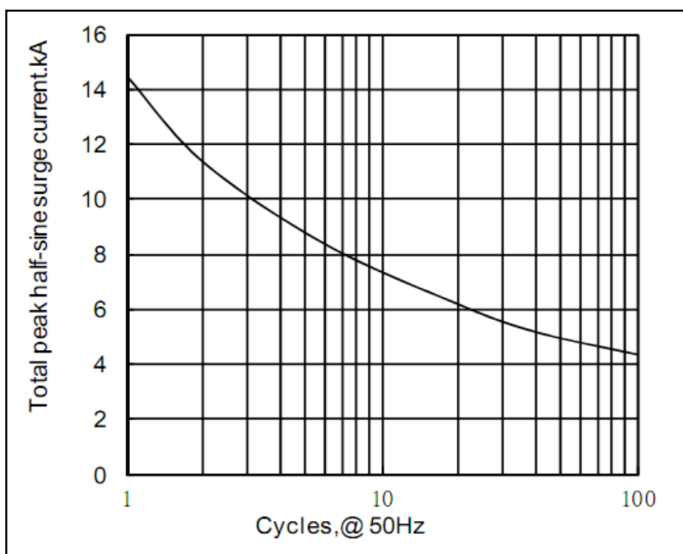


Fig3. Surge Current Vs Cycles

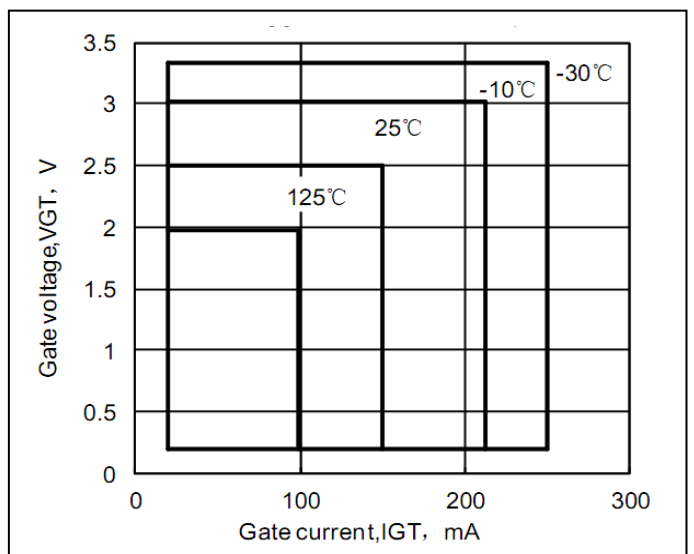


Fig4. Gate Trigger Zone at varies temperature

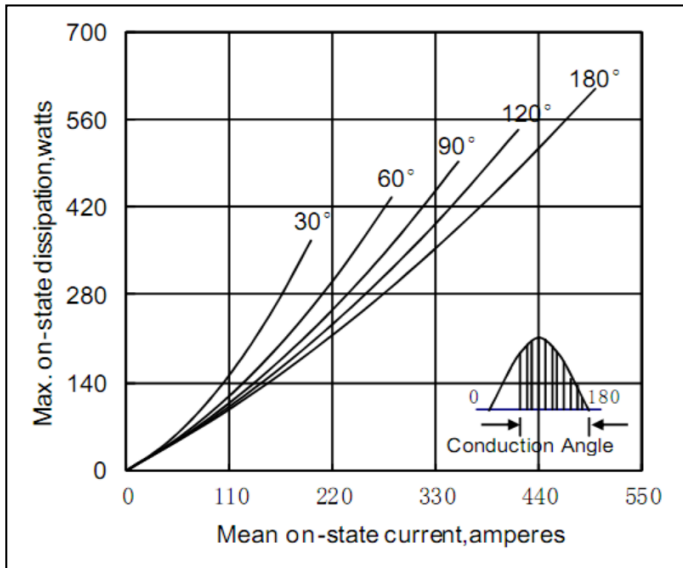


Fig5. Max. Power Dissipation Vs Mean On-state Current

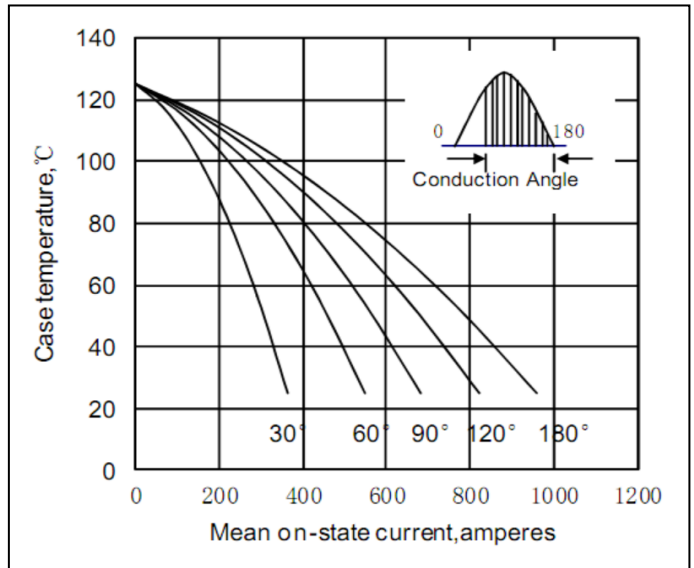
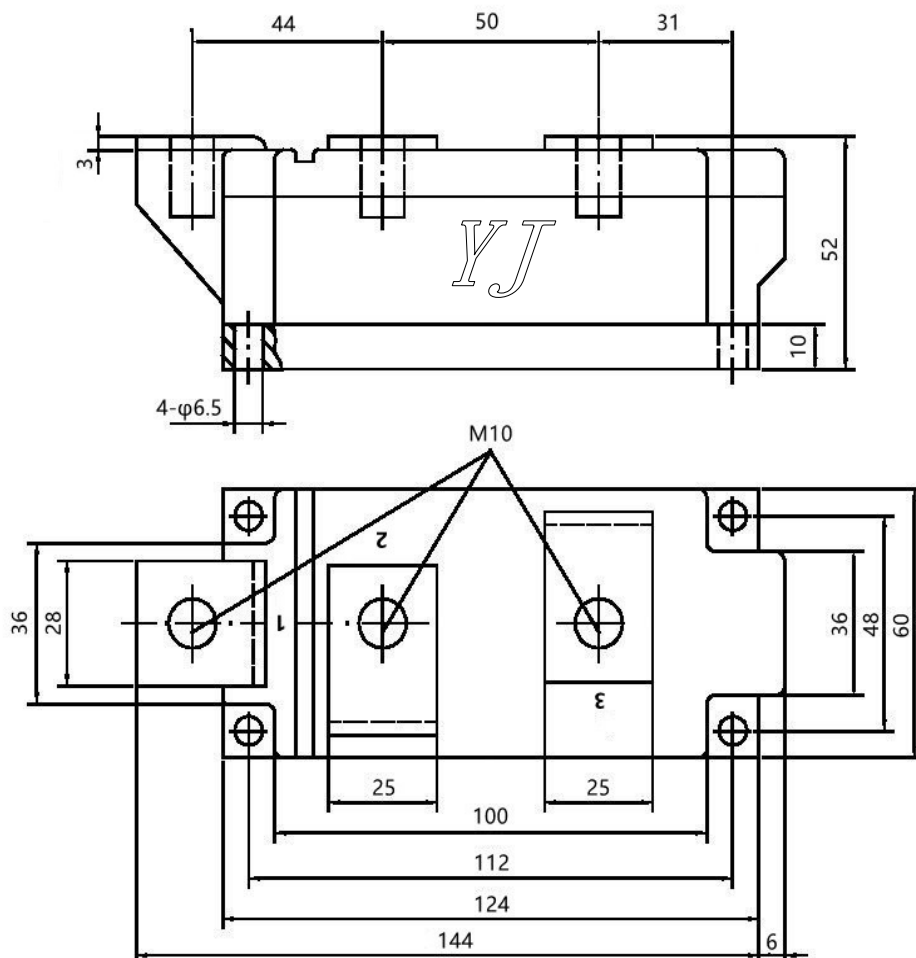


Fig6. Max case Temperature Vs Mean On-state Current

Package Outline Information

CASE: DT6



Dimensions in mm