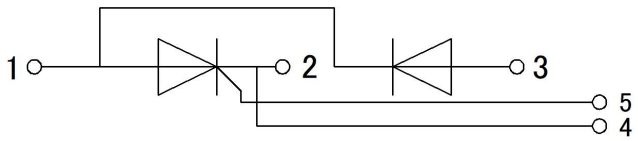
Thyristor/Diode Modules

VRRM / VDRM 2200 to 2500V
ITAV 460A

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	VDRM/VRRM	VDSM/VRSM
MT460CB22DT6 MT460CB24DT6 MT460CB25DT6	2200V 2400V 2500V	2400V 2600V 2700V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{TAV}	Sine 180°;Tc=85℃	460	A
I_{TSM}	T_{VJ}=125℃ t=10ms, sine	13000	A
i^2t	T_{VJ}=125℃ t=10ms, sine	845000	A^2s
Visol	a.c.50HZ;r.m.s.;1min,I_{iso}:2mA(MAX)	3000	V
Tvj		-40 to 125	℃
Tstg		-40 to 125	℃
Mt	To terminals(M10)	12±15%	Nm
Ms	To heatsink(M6)	6±15%	Nm
di/dt	T_{VJ}= T_{VJM} ,V_{DM} =2/3V_{DRM}	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
Rth(j-c)	per chip	0.065	℃/W
Rth(c-h)	per module	0.04	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{TM}	T=25℃ I_{TM} =1400A			1.65	V
I_{RRM}/I_{DRM}	T_{VJ} =T_{VJM} ,V=V_{RRM} ,V =V_{DRM}			45	mA
V_{TO}	T_{VJ} =T_{VJM}			0.85	V
r_T	T_{VJ} =T_{VJM}			0.35	mΩ
V_{GT}	T_{VJ} =25℃ , V_D =12V, R_G = 3 Ω	0.8		2.5	V
I_{GT}	T_{VJ} =25℃ , V_D =12V, R_G = 3 Ω	30		150	mA
I_L	T_{VJ} =25℃ , V_D =12V, R_G = 3 Ω			1000	mA
I_H	T_{VJ} =25℃ , V_D =12V, R_G = 3 Ω	20		150	mA

Performance Curves

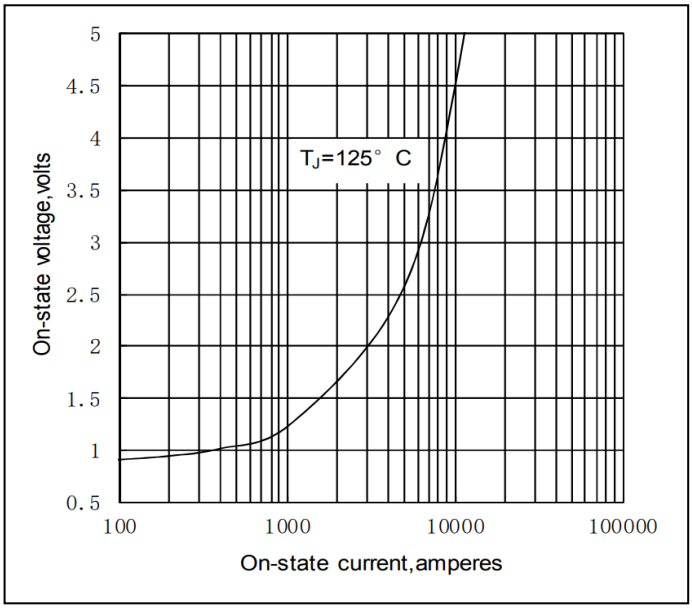


Fig1. Peak On-state Voltage Vs Peak On-state

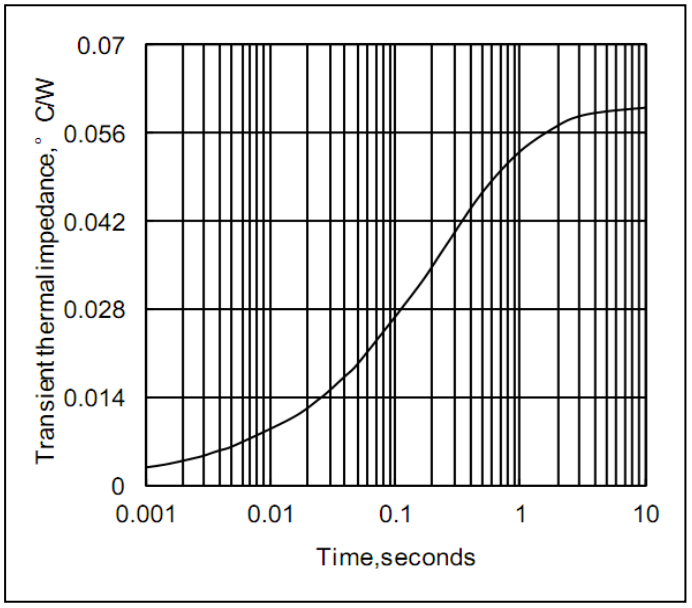


Fig2. Max. junction To case Thermai Impedance Vs Time

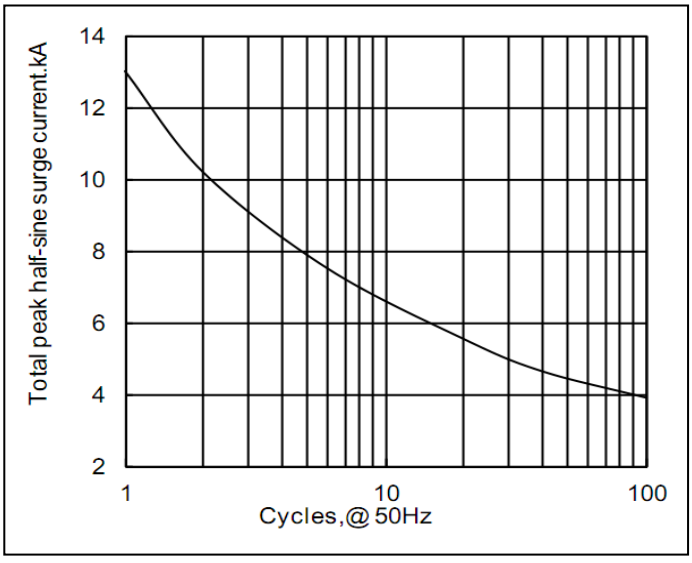


Fig3. Surge Current Vs Cycles

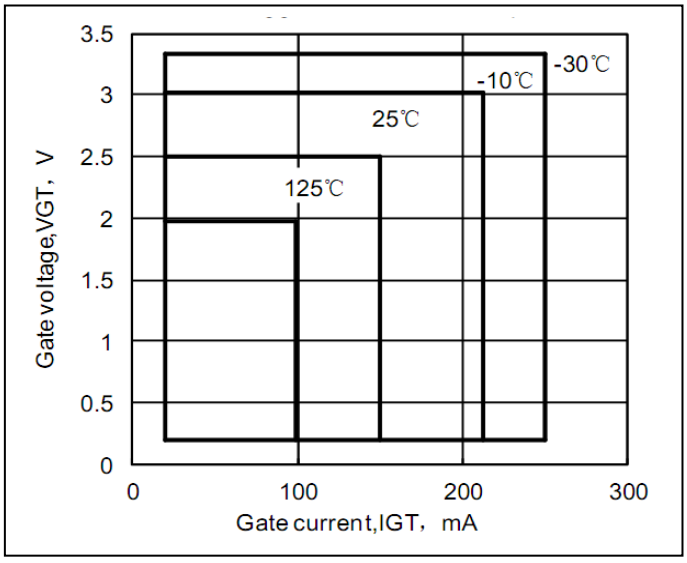


Fig4. Gate Trigger Zone at varies temperature

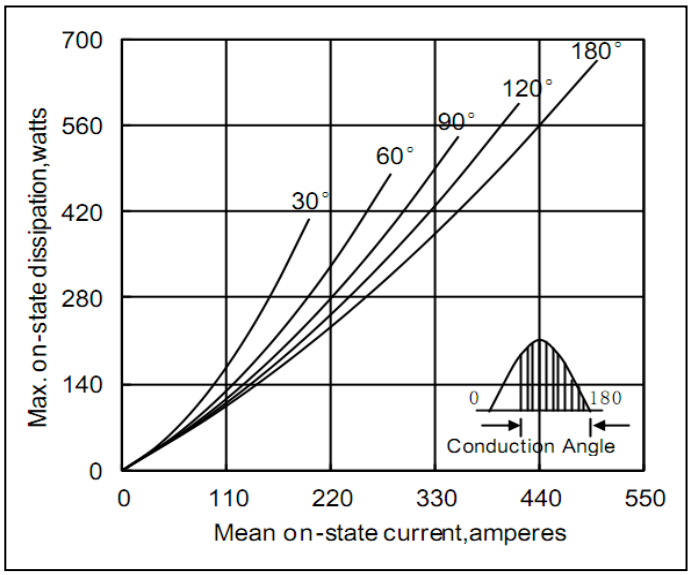


Fig5. Max. Power Dissipation Vs Mean On-state Current

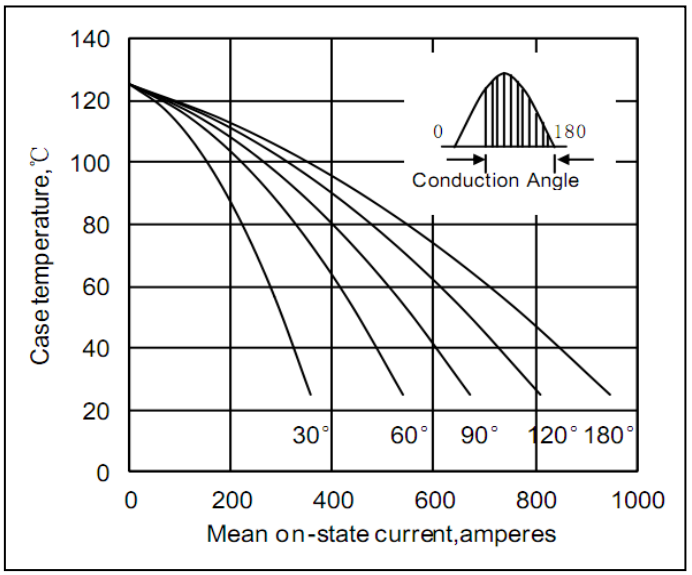
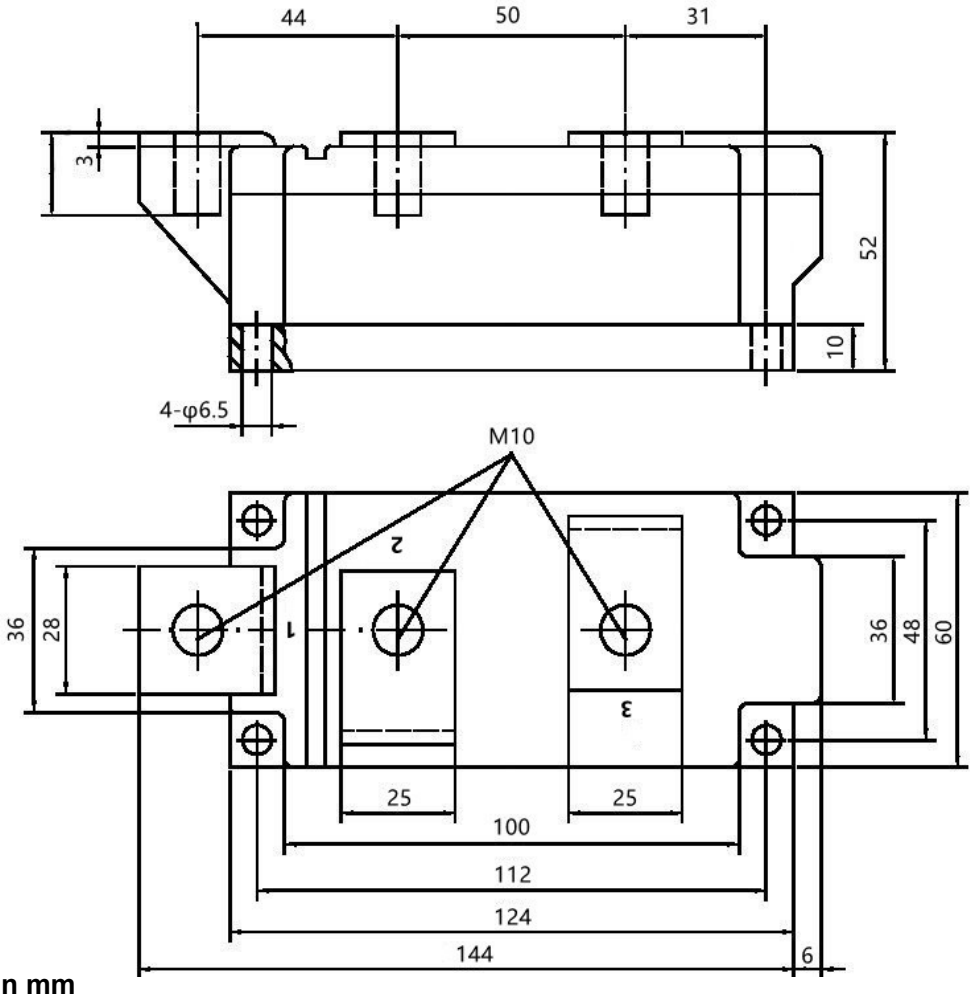


Fig6. Max case Temperature Vs Mean On-state Current

Package Outline Information

CASE: DT6



Dimensions in mm