

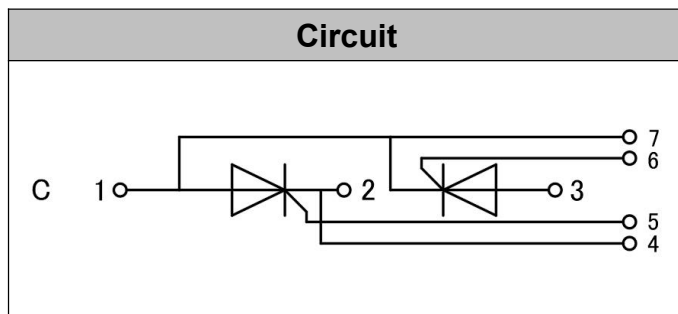


## Thyristor Modules

**VRRM / VDRM** 1200 to 1600V  
**ITAV** 330A

### Applications

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



### Features

- International standard package
- High Surge Capability
- Simple Mounting

### Module Type

TYPE	VDRM/VRRM	VDSM/VRSM
MT330C12T3	1200V	1400V
MT330C14T3	1400V	1600V
MT330C16T3	1600V	1800V

### Maximum Ratings

Symbol	Conditions	Values	Units
ITAV	Sine 180°;Tc=85°C	330	A
ITSM	Tvj=125°C t=10ms, sine	9100	A
i²t	Tvj=125°C t=10ms, sine	414000	A²s
Visol	a.c.50HZ;r.m.s.;1min,Iiso :2mA(MAX)	2500	V
Tvj		-40 to 125	°C
Tstg		-40 to 125	°C
Mt	To terminals(M8)	12±15%	Nm
Ms	To heatsink(M6)	6±15%	Nm
di/dt	Tvj= TvJM ,VDM =2/3VDRM	100	A/us
dv/dt	Tj= TvJM ,2/3VDRM, linear voltage rise	1000	V/us
Weight	Module(Approximately)	690	g

### Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	per chip	0.097	°C/W
Rth(c-h)	per module	0.04	°C/W



## Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
$V_{TM}$	$T=25^{\circ}C$ $I_{TM} = 1000A$			1.6	V
$I_{RRM}/I_{DRM}$	$T_{VJ} = T_{VJM}$ , $V = V_{RRM}$ , $V = V_{DRM}$			30	mA
$V_{TO}$	$T_{VJ} = T_{VJM}$			0.83	V
$r_T$	$T_{VJ} = T_{VJM}$			0.5	m $\Omega$
$V_{GT}$	$T_{VJ} = 25^{\circ}C$ , $V_D = 12V$ , $R_G = 3 \Omega$	0.8		2.5	V
$I_{GT}$	$T_{VJ} = 25^{\circ}C$ , $V_D = 12V$ , $R_G = 3 \Omega$	30		150	mA
$I_L$	$T_{VJ} = 25^{\circ}C$ , $V_D = 12V$ , $R_G = 3 \Omega$			1000	mA
$I_H$	$T_{VJ} = 25^{\circ}C$ , $V_D = 12V$ , $R_G = 3 \Omega$	20		150	mA

## Performance Curves

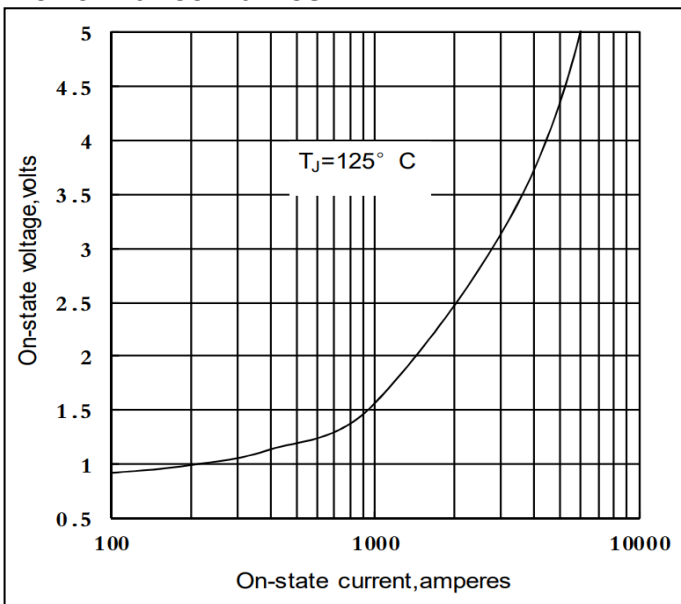


Fig1. Peak On-state Voltage Vs Peak On-state

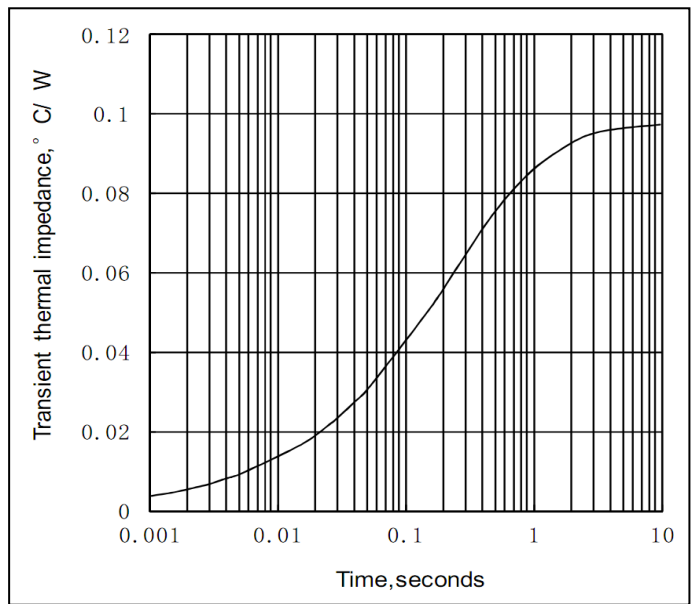


Fig2. Max. junction To case Thermal Impedance Vs Time

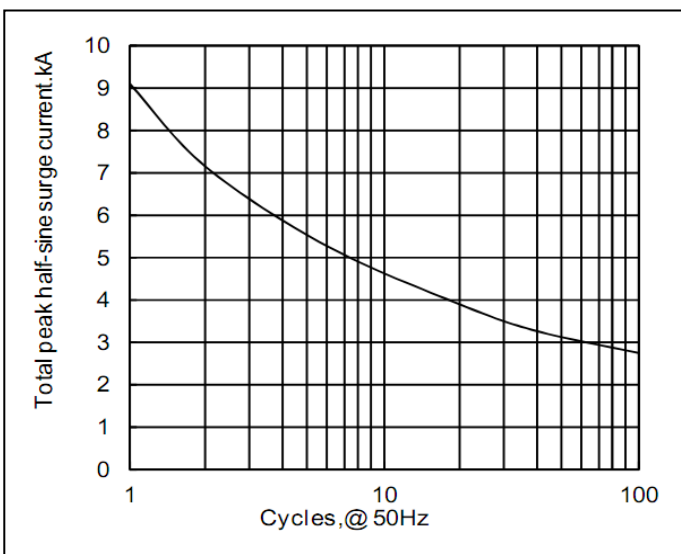


Fig3. Surge Current Vs Cycles

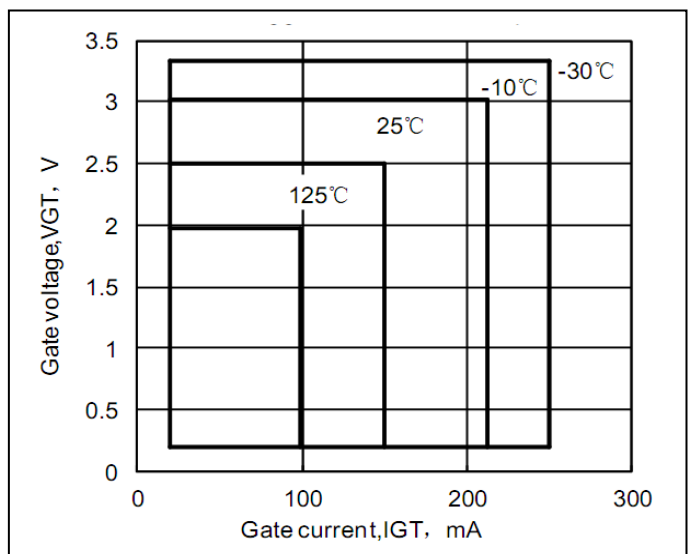
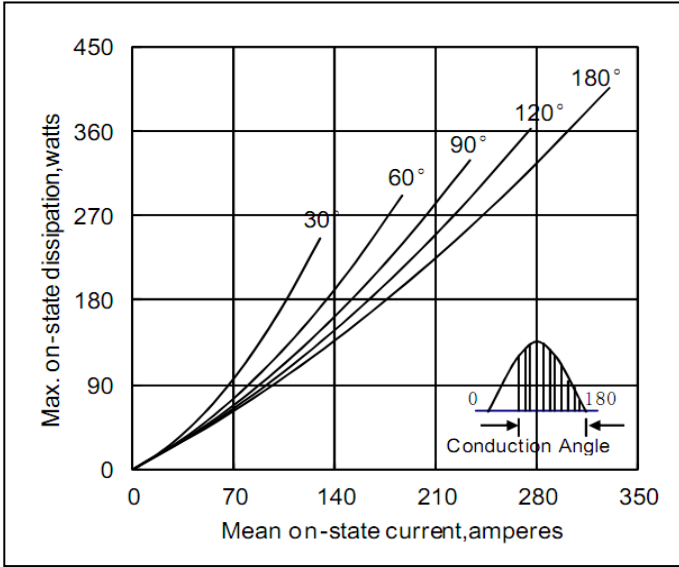
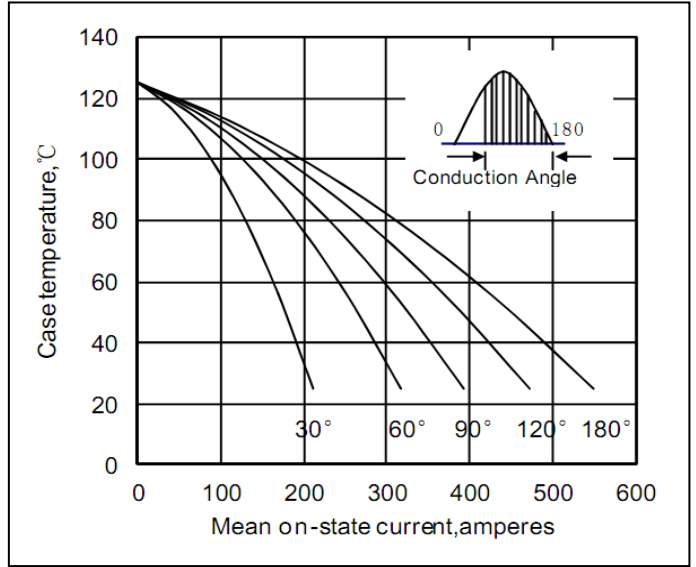


Fig4. Gate Trigger Zone at varies temperature



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



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

## Package Outline Information

