

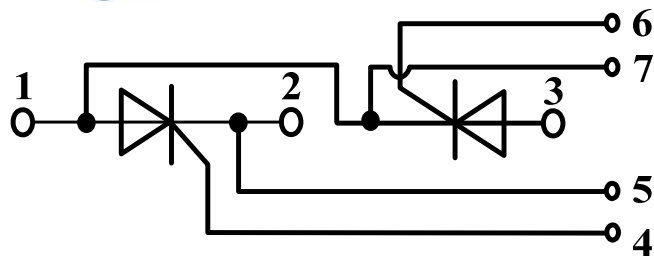
Features

- Lead Free Finish/RoHS Compliant (NOTE 1)("P" Suffix designates RoHS Compliant. See ordering information)
- International standard package
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- Simple Mounting

Applications

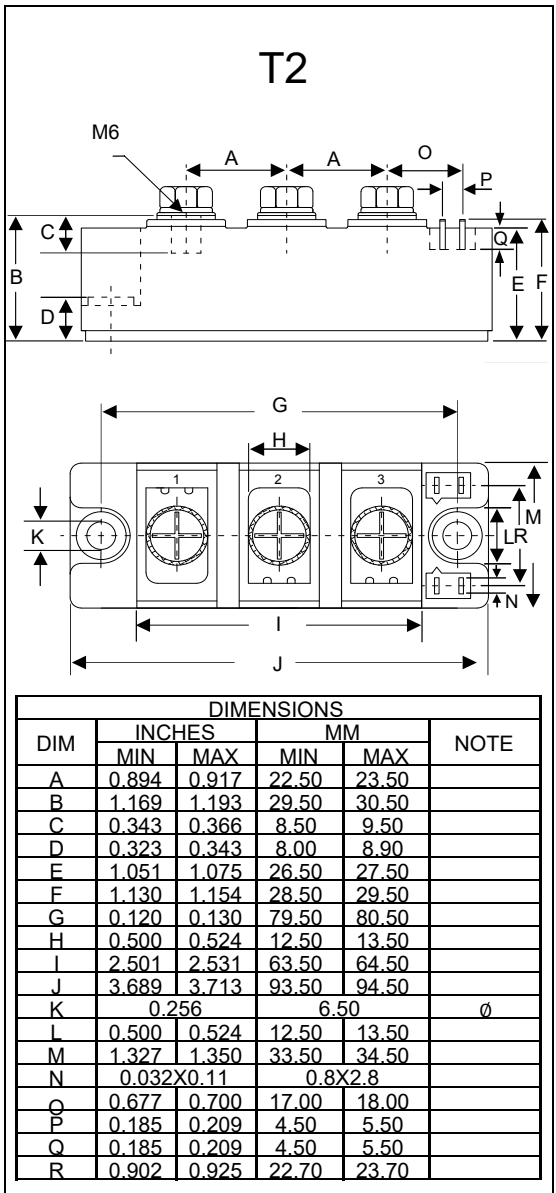
- Power Converters
- Lighting Control
- DC Motor Control and Drives
- Heat and temperature control

MCC Part Number	V _{RRM}	V _{RSM}
MT160C08T2	800V	900V
MT160C12T2	1200V	1300V
MT160C16T2	1600V	1700V
MT160C18T2	1800V	1900V



Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

**160 Amp
THYRISTOR
MODULE
800~1800 Volts**



Maximum Ratings

Symbol	Conditions	Values	Units
I_{TAV}	Sine 180°; $T_c=85^\circ\text{C}$	160	A
I_{TSM}	$T_{VJ}=45^\circ\text{C}$ t=10ms, sine $T_{VJ}=125^\circ\text{C}$ t=10ms, sine	5400 5000	A
i^2t	$T_{VJ}=45^\circ\text{C}$ t=10ms, sine $T_{VJ}=125^\circ\text{C}$ t=10ms, sine	145000 125000	A ² s
Visol	a.c.50HZ; r.m.s.; 1min	3000	V
T_{vj}		-40 to 130	°C
T_{stg}		-40 to 125	°C
M_t	To terminals(M6)	$3 \pm 15\%$	Nm
M_s	To heatsink(M6)	$5 \pm 15\%$	Nm
di/dt	$T_{VJ}=T_{VJM}$, $2/3V_{DRM}$, $I_G=500\text{mA}$ $T_r < 0.5\mu\text{s}$, $t_p > 6\mu\text{s}$	200	A/ μs
dv/dt	$T_J=T_{VJM}$, $2/3V_{DRM}$, linear voltage rise	1000	V/ μs
a	Maximum allowable acceleration	50	m/s ²
Weight	Module(Approximately)	165	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Cont.; per thyristor / per module	0.17/0.085	°C/W
$R_{th(c-s)}$	per thyristor / per module	0.1/0.05	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
V_{TM}	$T=25^\circ\text{C}$ $I_{TM}=500\text{A}$			1.7	V
I_{RRM}/I_{DRM}	$T_{VJ}=T_{VJM}$, $V_R=V_{RRM}$, $V_D=V_{DRM}$			40	mA
V_{TO}	For power-loss calculations only ($T_{VJ}=125^\circ\text{C}$)			0.85	V
r_T	$T_{VJ}=T_{VJM}$			1.5	m Ω
V_{GT}	$T_{VJ}=25^\circ\text{C}$, $V_D=6\text{V}$			3	V
I_{GT}	$T_{VJ}=25^\circ\text{C}$, $V_D=6\text{V}$			150	mA
V_{GD}	$T_{VJ}=125^\circ\text{C}$, $V_D=2/3V_{DRM}$			0.25	V
I_{GD}	$T_{VJ}=125^\circ\text{C}$, $V_D=2/3V_{DRM}$			10	mA
I_L	$T_{VJ}=25^\circ\text{C}$, $R_G=33\ \Omega$	300	1000		mA
I_H	$T_{VJ}=25^\circ\text{C}$, $V_D=6\text{V}$	150	400		mA
tg δ	$T_{VJ}=25^\circ\text{C}$, $I_G=1\text{A}$, $di_G/dt=1\text{A}/\mu\text{s}$	1			μs
tq	$V_J=T_{VJM}$	100			μs

Performance Curves

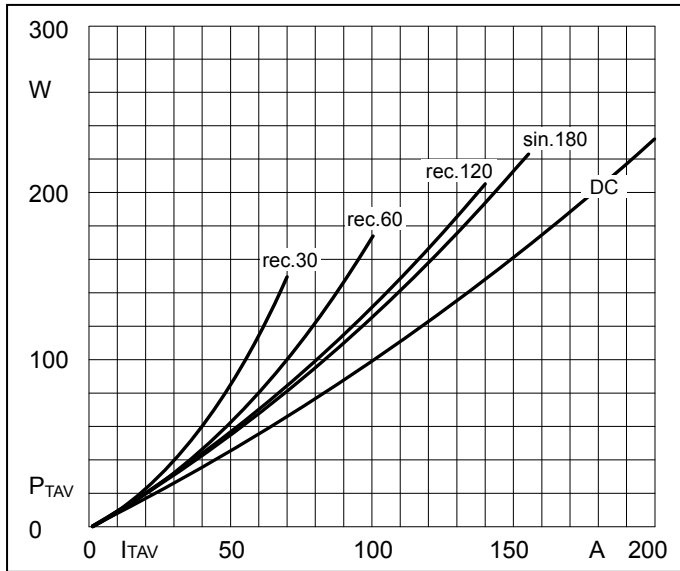


Fig1. Power dissipation

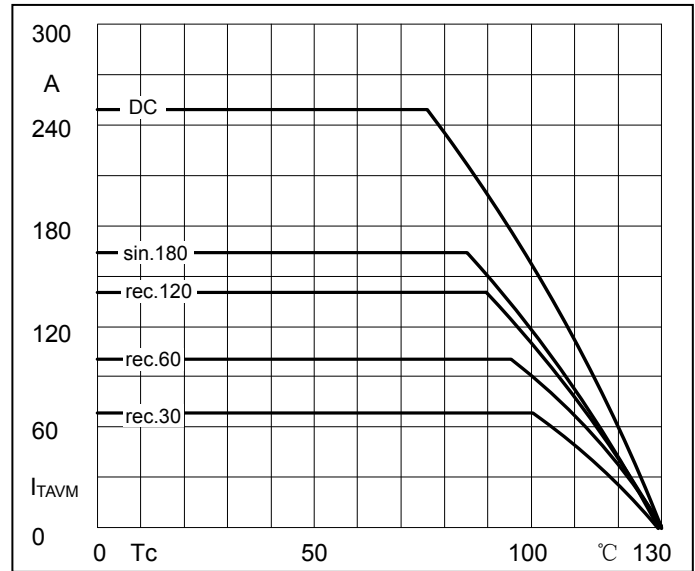


Fig2. Forward Current Derating Curve

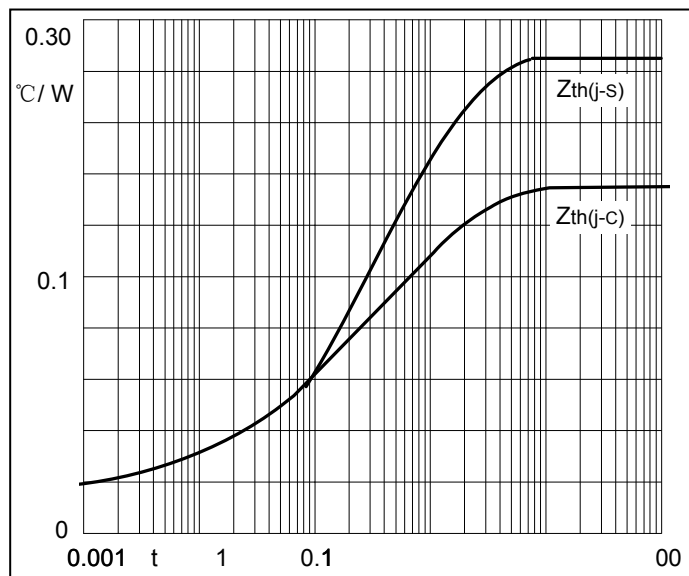


Fig3. Transient thermal impedance

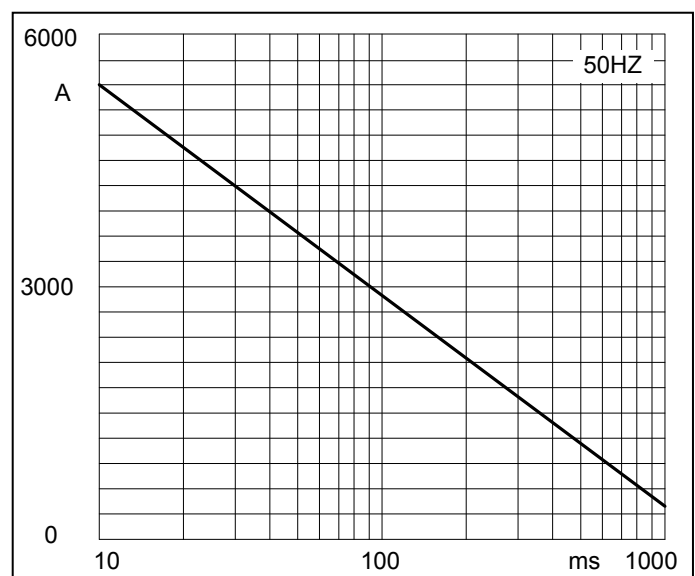


Fig4. Max Non-Repetitive Forward Surge Current

Performance Curves

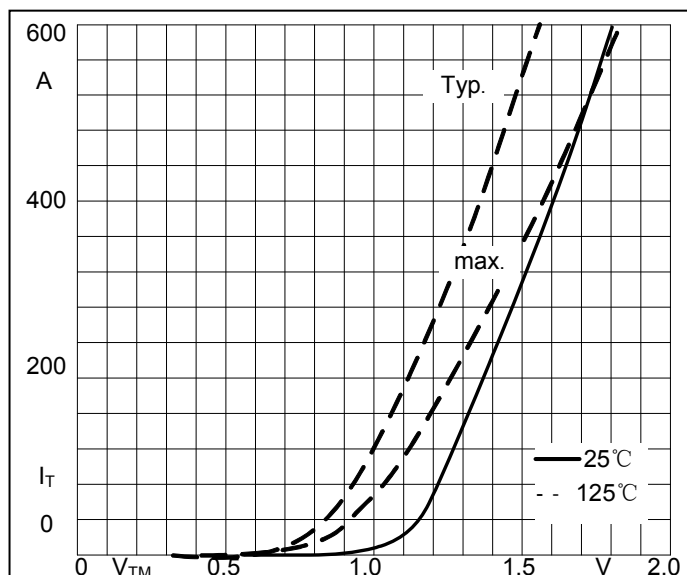


Fig5. Forward Characteristics

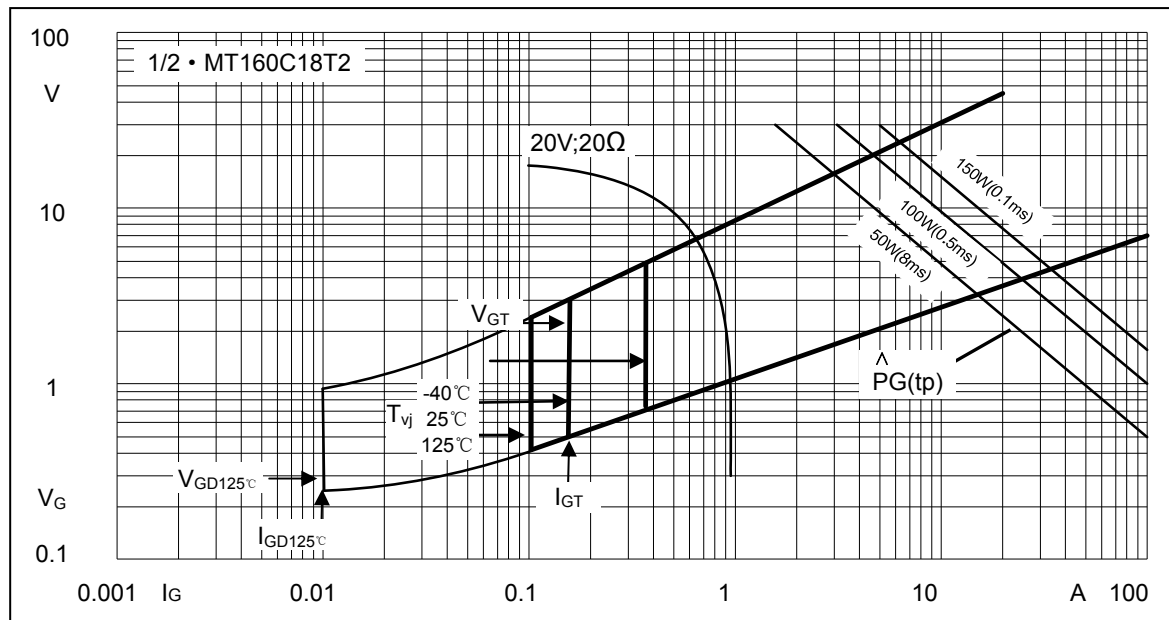


Fig6. Gate trigger Characteristics

Ordering Information

Device	Packing
Part Number-BP	Bulk: 8PCS/BOX ;80PCS/CTN

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