

Dual Thyristor Modules

TYPE:MTC500A-1600V

Features

- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Precious metal pressure contacts for high reliability
- Thyristor with amplifying gate

Typical Applications

- DC motor control
- AC motor soft starters
- Temperature control
- Professional light dimming

Maximum Ratings

Symbol	Condition	Ratings	Unit
$I_{T(AV)}$	Single phase, half wave, 85° conduction	500	A
I_{TRMS}	Single phase, half wave, 35° conduction	720	A
I_{TSM}	$T_j=125^{\circ}C$	15	kA
I^2t	$T_j=125^{\circ}C$	1100	kA^2S
V_{DRM}/V_{RRM}		1600/1600	V
di/dt	non-repetitive	250	A/us
V_{ISO}	A.C.1minute	3000	V
T_j		-40 ~ + 125	$^{\circ}C$
T_{stg}		-40 ~ + 125	$^{\circ}C$
W		-	g

Electrical Characteristics

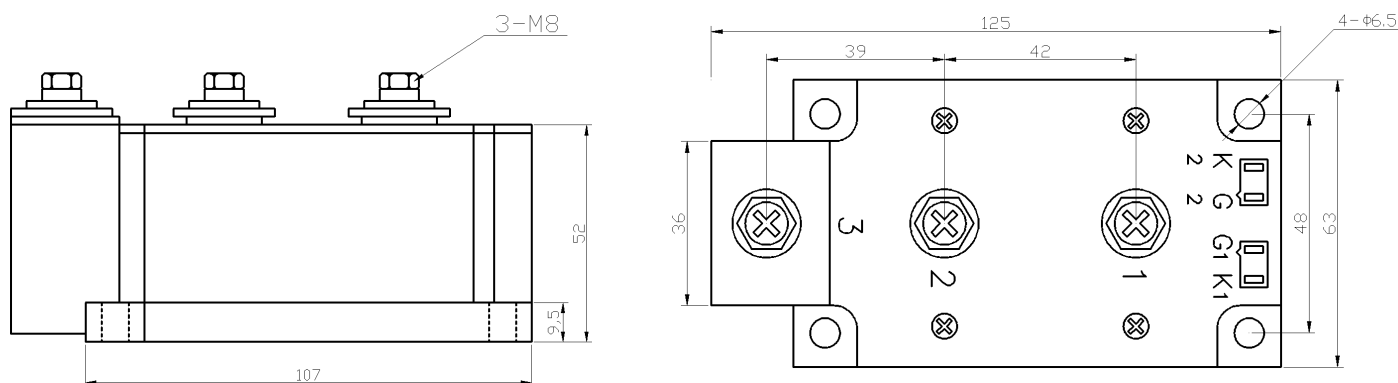
Symbol	Condition	Ratings	Unit
I_{DRM}/I_{RRM}	At V_{DRM} , Single phase, half wave, $T_j=125^{\circ}C$	205	mA
V_{TM}	On-State Current 1700A, $T_j=25^{\circ}C$	1.44	V
$V_{T(TO)}$	$T_j=125^{\circ}C$	0.78	V
t_{gd}	$T_j=25^{\circ}C$	1	us
t_q	$T_j=125^{\circ}C$	200	us
I_{GT}/V_{GT}	$T_j=25^{\circ}C$	200 / 3	mA/V
V_{GD}	$V_D=67\%V_{DRM}$, $T_j=125^{\circ}C$	0.25	V
DV/DT	$V_D=67\%V_{DRM}$	1000	V/us
I_H	$T_j=25^{\circ}C$	150	mA
I_L	$T_j=25^{\circ}C$	300	mA
$R_{th(j-c)}$	Per Module	0.034	K/W

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Outline Drawing



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