

Dual Thyristor Modules

- Thyristor with amplifying gate

TYPE: MT3-500-36-D

Features

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

Typical Applications

- DC motor control
- Temperature control
- Professional light dimming

Maximum Ratings

Symbol	Condition	Ratings	Unit
$I_{T(AV)}$	Single phase, half wave, sin 180° conduction ; $T_C=85^\circ\text{C}$	500	A
I_{TRMS}	Single phase, half wave, sin 180° conduction ; $T_C=85^\circ\text{C}$	785	A
I_{TSM}	$T_J=125^\circ\text{C}$	18	kA
I^2t	$T_J=125^\circ\text{C}$	1620	kA^2S
V_{DRM}/V_{RRM}	$T_J=125^\circ\text{C}$	3600/3600	V
di/dt	non-repetitive	400	A/us
V_{iso}	A.C.1minute/1S	3000/3600	V
T_j		-40 ~ + 125	$^\circ\text{C}$
T_{stg}		-40 ~ + 125	$^\circ\text{C}$
W	About	-	Kg

Electrical Characteristics

Symbol	Condition	Ratings	Unit
I_{DRM} / I_{RRM}	At V_{DRM} , Single phase, half wave, $T_J=125^\circ\text{C}$	250	mA
V_{TM}	On-State Current 1570A, $T_J=25^\circ\text{C}$	1.85	V
$V_{T(TO)}$	$T_J=125^\circ\text{C}$	1.10	V
r_T	$T_J=125^\circ\text{C}$	0.40	m Ω
R_{K1G1}		-	Ω
R_{K2G2}		-	Ω
t_{gd}	$T_J=25^\circ\text{C}; V_D=0.4V_{DRM}; I_{TM}=I_{TAV}$	3	us
t_q	$dv_D/dt=50\text{V/us}; T_J=125^\circ\text{C}; I_{TM}=I_{TAV}$	400	us
I_{GT}/V_{GT}	$T_J=25^\circ\text{C}, I_T=1\text{A}, V_D=6\text{V}$	300 / 2.5	mA/V
V_{GD}	$V_D=67\%V_{DRM}$	0.35	V
DV/DT	$V_D=67\%V_{DRM}$	1000	V/us
I_H	$T_J=25^\circ\text{C}$	300	mA
I_L	$T_J=25^\circ\text{C}$	1500	mA
$R_{th(j-c)}$	Thermal resistance Junction to case	0.025	$^\circ\text{C/W}$
$R_{th(c-h)}$	Thermal resistance case to heatsink	0.008	$^\circ\text{C/W}$

