

**Dual Thyristor Modules**
**TYPE: MTC1000A – 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
- Temperature control
- Professional light dimming

**Maximum Ratings**

Symbol	Condition	Ratings	Unit
$I_{T(AV)}$	Single phase, half wave, sin 180° conduction ; $T_C=85^{\circ}C$	1000	A
$I_{TRMS}$	Single phase, half wave, sin 180° conduction ; $T_C=85^{\circ}C$	1484	A
$I_{TSM}$	$T_j=125^{\circ}C$	30	kA
$I^2t$	$T_j=125^{\circ}C$	4300	$kA^2S$
$V_{DRM}/V_{RRM}$	$T_j=125^{\circ}C$	1600/1600	V
di/dt	non-repetitive	100	A/us
$V_{iso}$	A.C.1minute	2500	V
$T_j$		-40 ~ + 125	$^{\circ}C$
$T_{stg}$		-40 ~ + 125	$^{\circ}C$
W	About	3.6	Kg

**Electrical Characteristics**

Symbol	Condition	Ratings	Unit
$I_{DRM} / I_{RRM}$	At $V_{DRM}$ , Single phase, half wave, $T_j=125^{\circ}C$	100	mA
$V_{TM}$	On-State Current 3000A, $T_j=125^{\circ}C$	1.55	V
$V_{T(TO)}$	$T_j=125^{\circ}C$	0.8	V
$r_T$	$T_j=125^{\circ}C$	0.09	m $\Omega$
$R_{K1G1}$		-	$\Omega$
$R_{K2G2}$		-	$\Omega$
$t_{gd}$	$T_j=25^{\circ}C; V_D=0.4V_{DRM}; I_{TM}=I_{TAV}$	-	us
$t_q$	$dv_D/dt=50V/us; T_j=125^{\circ}C; I_{TM}=I_{TAV}$	-	us
$I_{GT}/V_{GT}$	$T_j=25^{\circ}C, I_T=1A, V_D=6V$	200 / 3.0	mA/V
$V_{GD}$	$V_D=67\%V_{DRM}$	0.2	V
DV/DT	$V_D=67\%V_{DRM}$	800	V/us
$I_H$	$T_j=25^{\circ}C$	300	mA
$I_L$	$T_j=25^{\circ}C$	800	mA
$R_{th(j-c)}$	Thermal resistance Junction to case	0.31	$^{\circ}C/kW$
$R_{th(c-h)}$	Thermal resistance case to heatsink	0.20	$^{\circ}C/kW$

