

Dual Thyristor Modules

TYPE: YZPST-MCC312-16Io1

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 ; $T_C=85^{\circ}C$	320	A
I_{TRMS}	Single phase, half wave, sin 180° conduction	520-	A
I_{TSM}	$T_j = T_{j\ MAX}$	8.16	kA
I^2t	$T_j = T_{j\ MAX}$	332	kA^2S
V_{DRM}/V_{RRM}	$T_j = T_{j\ MAX}$	1600	V
di/dt	non-repetitive	100	A/us
V_{iso}	A.C.1minute/1S	3000/3600	V
T_j		-40 ~ + 140	$^{\circ}C$
T_{stg}		-40 ~ + 125	$^{\circ}C$
W	About	680	g

Electrical Characteristics

Symbol	Condition	Ratings	Unit
I_{DRM} / I_{RRM}	At V_{DRM} , Single phase, half wave, $T_j = T_{j\ MAX}$	40	mA
V_{TM}	On-State Current 600A, $T_j = 25^{\circ}C$	1.32	V
$V_{T(TO)}$	$T_j = T_{j\ MAX}$	0.80	V
r_T	$T_j = T_{j\ MAX}$	0.68	$m\Omega$
R_{K1G1}		7-8	Ω
R_{K2G2}		7-8	Ω
t_{gd}	$T_j = 25^{\circ}C; V_D = 0.4V_{DRM}; I_{TM} = I_{TAV}$	2	us
t_q	$dv_D/dt = 50V/us; T_j = 125^{\circ}C; I_{TM} = I_{TAV}$	200	us
I_{GT}/V_{GT}	$T_j = 25^{\circ}C, I_T = 1A, V_D = 6V$	150 / 2.0	mA/V
V_{GD}	$V_D = 67\%V_{DRM}$	0.25	V
DV/DT	$V_D = 67\%V_{DRM}$	1000	V/us
I_H	$T_j = 25^{\circ}C$	150	mA
I_L	$T_j = 25^{\circ}C$	200	mA
$R_{th(j-c)}$	Thermal resistance Junction to case; per module	0.12	K/kW
$R_{th(c-h)}$	Thermal resistance case to heatsink; per module	0.04	K/kW

Outline Drawing

