

Thyristor Modules

Thyristor/Diode Modules

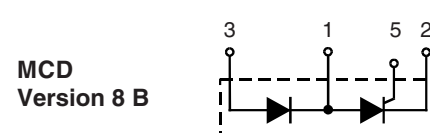
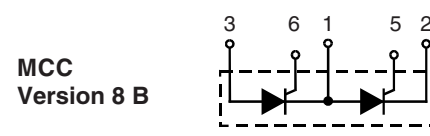
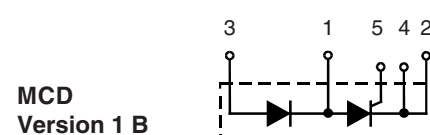
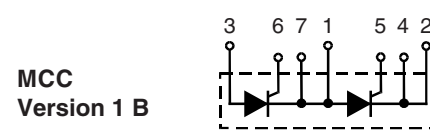
$$I_{TRMS} = 2 \times 80 \text{ A}$$

$$I_{TAVM} = 2 \times 51 \text{ A}$$

$$V_{RRM} = 800-1800 \text{ V}$$

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type						
		Version	1 B	8 B	Version	1 B	8 B	
900	800	MCC 44-08	io1 B / io8 B		MCD 44-08	io1 B / io8 B		
1300	1200	MCC 44-12	io1 B / io8 B		MCD 44-12	io1 B / io8 B		
1500	1400	MCC 44-14	io1 B / io8 B		MCD 44-14	io1 B / io8 B		
1700	1600	MCC 44-16	io1 B / io8 B		MCD 44-16	io1 B / io8 B		
1900	1800	MCC 44-18	io1 B / io8 B		MCD 44-18	io1 B / io8 B		

Symbol	Conditions		Maximum Ratings	
I_{TRMS}, I_{FRMS} I_{TAVM}, I_{FAVM}	$T_{VJ} = T_{VJM}$		80	A
	$T_C = 83^{\circ}\text{C}; 180^{\circ}$ sine		51	A
	$T_C = 85^{\circ}\text{C}; 180^{\circ}$ sine		49	A
I_{TSM}, I_{FSM}	$T_{VJ} = 45^{\circ}\text{C};$	$t = 10\text{ ms}$ (50 Hz), sine	1150	A
	$V_R = 0;$	$t = 8.3\text{ ms}$ (60 Hz), sine	1230	A
	$T_{VJ} = T_{VJM};$	(50 Hz), sine	1000	A
	$t = 10\text{ ms};$	$t = 8.3\text{ ms}$ (60 Hz), sine	1070	A
$V_R = 0;$				
I^2dt	$T_{VJ} = 45^{\circ}\text{C};$	$t = 10\text{ ms}$ (50 Hz), sine	6600	A ² s
	$V_R = 0,$	$t = 8.3\text{ ms}$ (60 Hz), sine	6280	A ² s
	$T_{VJ} = T_{VJM};$	$t = 10\text{ ms}$ (50 Hz), sine	5000	A ² s
	$V_R = 0;$	$t = 8.3\text{ ms}$ (60 Hz), sine	4750	A ² s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM};$	repetitive, $I_T = 150\text{ A}$	150	A/ μs
	$f = 50\text{Hz}; t_p = 200\mu\text{s};$			
$V_D = \frac{2}{3} V_{DRM};$				
$I_G = 0.45\text{ A};$	non repetitive, $I_T = I_{TAVM}$		500	A/ μs
	$di_G/dt = 0.45\text{ A}/\mu\text{s}$			
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM};$	$V_{DR} = \frac{2}{3} V_{DRM}$	1000	V/ μs
	$R_{GK} = \infty;$ method 1 (linear voltage rise)			
P_{GM}	$T_{VJ} = T_{VJM};$	$t_p = 30\text{ }\mu\text{s}$	10	W
	$I_T = I_{TAVM};$	$t_p = 300\text{ }\mu\text{s}$	5	W
P_{GAV}			0.5	W
V_{RGM}			10	V
T_{VJ}			-40...+125	$^{\circ}\text{C}$
T_{VJM}			125	$^{\circ}\text{C}$
T_{stg}			-40...+125	$^{\circ}\text{C}$
V_{ISOL}	50/60 Hz, RMS;	$t = 1\text{ min}$	3000	V~
	$I_{ISOL} \leq 1\text{ mA};$	$t = 1\text{ s}$	3600	V~
M_d	Mounting torque (M5)		2.5-4.0/22-35	Nm/lb.in.
	Terminal connection torque (M5)		2.5-4.0/22-35	Nm/lb.in.
Weight	typical including screws		90	g



Features

- International standard package, JEDEC TO-240 AA
- Direct copper bonded Al_2O_3 -ceramic base plate
- Planar passivated chips
- Isolation voltage 3600 V~
- UL registered, E 72873
- Gate-cathode twin pins for version 1B

Applications

- DC motor control
- Softstart AC motor controller
- Light, heat and temperature control

Advantages

- Space and weight savings
- Simple mounting with two screws
- Improved temperature and power cycling
- Reduced protection circuits