

Thyristor Modules

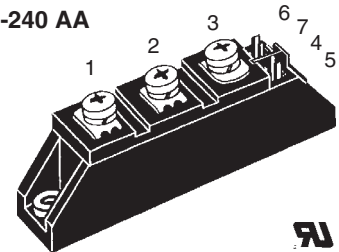
Thyristor/Diode Modules

$$I_{TRMS} = 2 \times 100 \text{ A}$$

$$I_{TAVM} = 2 \times 64 \text{ A}$$

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

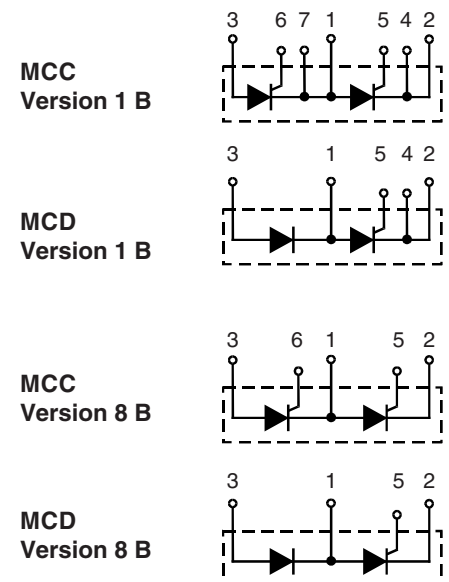
TO-240 AA



V_{RSM}	V_{RRM}	Type						
V_{DSM}	V_{DRM}							
V	V	Version	1 B	8 B	Version	1 B	8 B	
900	800	MCC 56-08	io1 B / io8 B		MCD 56-08	io1 B / io8 B		
1300	1200	MCC 56-12	io1 B / io8 B		MCD 56-12	io1 B / io8 B		
1500	1400	MCC 56-14	io1 B / io8 B		MCD 56-14	io1 B / io8 B		
1700	1600	MCC 56-16	io1 B / io8 B		MCD 56-16	io1 B / io8 B		
1900	1800	MCC 56-18	io1 B / io8 B		MCD 56-18	io1 B / io8 B		

Symbol	Conditions	Maximum Ratings	
I_{TRMS}, I_{FRMS}	$T_{VJ} = T_{VJM}$	100	A
I_{TAVM}, I_{FAVM}	$T_C = 83^\circ\text{C}; 180^\circ \text{ sine}$	64	A
	$T_C = 85^\circ\text{C}; 180^\circ \text{ sine}$	60	A
I_{TSM}, I_{FSM}	$T_{VJ} = 45^\circ\text{C};$ $V_R = 0$	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	1500 1600 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	1350 1450 A
$\int i^2 dt$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	11 200 10 750 A^2s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms (50 Hz), sine}$ $t = 8.3 \text{ ms (60 Hz), sine}$	9100 8830 A^2s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ $f = 50 \text{ Hz}, t_p = 200 \mu\text{s}$ $V_D = \frac{2}{3} V_{DRM}$	repetitive, $I_T = 150 \text{ A}$	150 $\text{A}/\mu\text{s}$
	$I_G = 0.45 \text{ A}$ $di_G/dt = 0.45 \text{ A}/\mu\text{s}$	non repetitive, $I_T = I_{TAVM}$	500 $\text{A}/\mu\text{s}$
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM};$ $R_{GK} = \infty$; method 1 (linear voltage rise)	$V_{DR} = \frac{2}{3} V_{DRM}$	1000 $\text{V}/\mu\text{s}$
P_{GM}	$T_{VJ} = T_{VJM};$ $I_T = I_{TAVM};$	$t_p = 30 \mu\text{s}$ $t_p = 300 \mu\text{s}$	10 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; $I_{ISOL} \leq 1 \text{ mA};$	$t = 1 \text{ min}$ $t = 1 \text{ s}$	3000 3600 V~
M_d	Mounting torque (M5) Terminal connection torque (M5)		2.5-4.0/22-35 Nm/lb.in.
Weight	Typical including screws		90 g

Data according to IEC 60747 and refer to a single thyristor/diode unless otherwise stated.
IXYS reserves the right to change limits, test conditions and dimensions



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