

High Voltage Thyristor Module

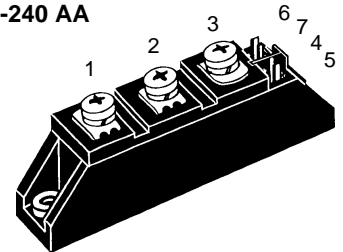
High Voltage Thyristor/Diode Modules

$$I_{TRMS} = 2 \times 180 \text{ A}$$

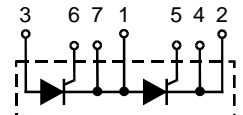
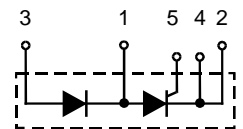
$$I_{TAVM} = 2 \times 104 \text{ A}$$

$$V_{RRM} = 2000\text{-}2200 \text{ V}$$

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type	
2100	2000	MCC 94-20io1 B	MCD 94-20io1 B
2300	2200	MCC 94-22io1 B	MCD 94-22io1 B

TO-240 AA


Symbol	Test Conditions	Maximum Ratings	
I_{TRMS}	$T_{VJ} = T_{VJM}$	180	A
I_{TAVM}	$T_C = 85^\circ\text{C}; 180^\circ \text{ sine}$	104	A
I_{TSM}	$T_{VJ} = 45^\circ\text{C};$ $V_R = 0$	$t = 10 \text{ ms (50 Hz)}$	1700 A
		$t = 8.3 \text{ ms (60 Hz)}$	1800 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms (50 Hz)}$	1540 A
		$t = 8.3 \text{ ms (60 Hz)}$	1640 A
$\int i^2 dt$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	$t = 10 \text{ ms (50 Hz)}$	14450 A ² s
		$t = 8.3 \text{ ms (60 Hz)}$	13500 A ² s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	$t = 10 \text{ ms (50 Hz)}$	11850 A ² s
		$t = 8.3 \text{ ms (60 Hz)}$	11300 A ² s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ repetitive, $I_T = 250 \text{ A}$ $f = 50 \text{ Hz}, t_p = 200 \mu\text{s}$ $V_D = 2/3 V_{DRM}$ $I_G = 0.45 \text{ A},$ non repetitive, $I_T = I_{TAVM}$ $di_G/dt = 0.45 \text{ A}/\mu\text{s}$	150	A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}; V_{DR} = 2/3 V_{DRM}$ $R_{GK} = \infty;$ method 1 (linear voltage rise)	1000	V/ μs
P_{GM}	$T_{VJ} = T_{VJM}$ $t_p = 30 \mu\text{s}$	10	W
	$I_T = I_{TAVM}$ $t_p = 300 \mu\text{s}$	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

MCC

MCD

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

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

