

# STANDARD DIODE MODULE | 整流二极管模块

## Ordering Information Table

Device Code **M D C 200 -12 \***

① ② ③ ④ ⑤ ⑥

- 1 -Power Module
- 2 -T=thy-thy D=dio-dio F=dio-thy  
K=fast thy Z=fast dio H=fast thy-fast dio
- 3 -Circuit form:A=common positive pole  
C=series connection K=common negative pole  
X=reverse parallel connection
- 4 -Current Code= $I_{F(AV)}$
- 5 -Voltage code=Code  $\times 100 = V_{RRM}$
- 6 -None: Air-cool \* Means water-cool

## Features

- Base & chip insulation AC voltage 2500V
- International standard packing
- Excellent temperature feature
- $\geq 300A$  could chose water-cool
- Easy to install

## Explanation

- $I^2t = I_{TSM}^2 \times t_w / 2$ ;  $t_w$  = Half sine wave current, when at 50Hz,  $I^2t = 0.005 I_{TSM}^2 (A^2S)$
- When at 60Hz,  $I_{TSM}(8.3ms) = I_{TSM}(10ms) \times 1.066$   
 $T_j = T_{jm}$   $I^2t(8.3ms) = I^2t(10ms) \times 0.943, T_j = T_{jm}$

## Applications

- AC DC motor control
- Motor soft start
- Industry heat-up control
- Rectificate power supply
- Welder
- Frequency transformer
- UPS power supply
- Battery charge & discharge

## Part number type & circuit

MDC MDA MDK  
SKKD SKND SKMD  
IRKD/VSKD IRKJ/VSKJ IRKC/VSKC  
MDD

## ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Conditions	MDX130	MDX160	MDX200	Unit
$I_{F(AV)}$	Peak collector Current(eac diode)	THS=140°C	130	160	200	A
$I_{F(RMS)}$	RMS on-state current	THS=55°C	210	250	310	A
$I_{FMS}$	Surge on-state current	THS=55°C	3.9	6	7.8	$A \times 10^3$
$V_{RRM}$	Repetitive peak reverse voltage	THS=140°C	400-2600			V
$I_{RRM}$	On-state voltage	THS=140°C	$\leq 15.0$	$\leq 15.0$	$\leq 15.0$	mA
$V_{FM}$	On-state Current	THS=140°C	1.38	1.45	1.38	V
$I_{FM}$	Gate Trigger Current	THS=140°C	400	480	600	A
R j-c	Peak gate forward voltage		$\leq 0.31$	$\leq 0.23$	$\leq 0.21$	°C/W
$T_j$	Junction temperature		-40~+150			°C
$T_{stg}$	Storage temperature		-40~+125			°C
MT	Mounting torque		$\leq 3.0$			N·m
Wt	Weight	Typical value	220	240	330	g

## Outline table

(Dimension in mm)

M3 IXYS MDD

M6 x 16 2.8 / 0.8 2.2 30 0.25 65 29 7 5 6 7 11 10 8 9 1 2 3 4 5 17 40 63 34 23.2 15 12.4 94 80 7.5 38 94 13 30 25 25 22