

## Non-isolated Diode Module, 50 Amps

### Features

- Low voltage three-phase
- Easy construction
- High surge current capability
- Non-isolated

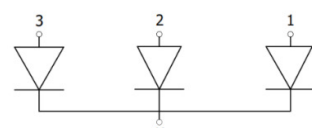
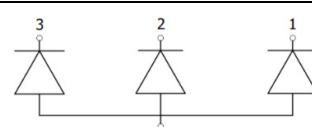


Voltage Ratings ( $T_C = 25^\circ\text{C}$ unless otherwise specified)				
Parameter	Symbol	N3D50A30(R)	N3D50A40(R)	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	300	400	V
Maximum Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	360	480	V
DC Reverse Voltage	$V_{R(DC)}$	240	320	V

Electrical Characteristics ( $T_C = 25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Values	Units
Maximum average forward current	$I_{F(AV)}$	50	A
Maximum average RMS forward current	$I_{FRMS}$	79	A
Maximum non-repetitive surge current	$I_{FSM}$	1000	A
Maximum $I^2t$ for fusing	$I^2t$	5000	$\text{A}^2\text{s}$
Forward voltage drop	$V_{FM}$	1.2	V
Maximum Repetitive Peak Reverse Current	$I_R$	10	mA

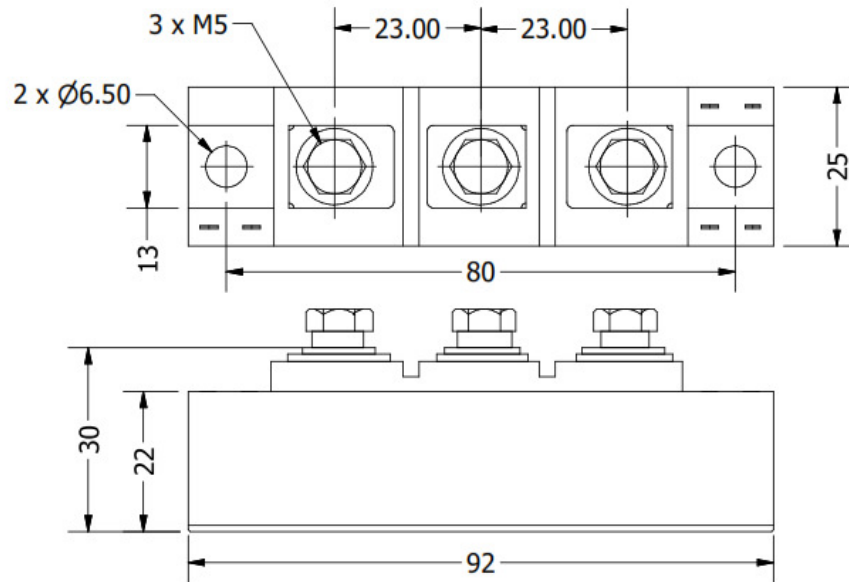
Thermal & Mechanical Specifications ( $T_C = 25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Values	Units
Operating junction temperature range	$T_J$	-30 to +150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-30 to +125	$^\circ\text{C}$
Thermal resistance, junction to case	$R_{th(j-c)}$	0.60	$^\circ\text{C}/\text{W}$
Mounting torque	to heatsink	2.5	Nm
	to terminals	2.5	
Weight	$W$	240	g

### Circuit Configuration

Circuit Description	Configuration Code	Circuit Drawing
Common cathode (base plate cathode)	N3D	
Common anode (base plate anode)	N3DR	

## Package Outline

(All dimensions in mm)



## Ordering Table

N3D	50	A	40	R
1	2		3	4

- 1 – Half-bridge Diode Module
- 2 – Current Rating =  $I_{F(AV)}$
- 3 – Voltage Code (see Voltage Ratings table)
- 4 – Polarity
  - > None = common cathode
  - > R = common anode