

Thyristor-Diode Module, 143 Amps

Features

- Improved glass passivation for high reliability
- Exceptional stability at high temperatures
- High di/dt and dv/dt capabilities
- Low thermal resistance



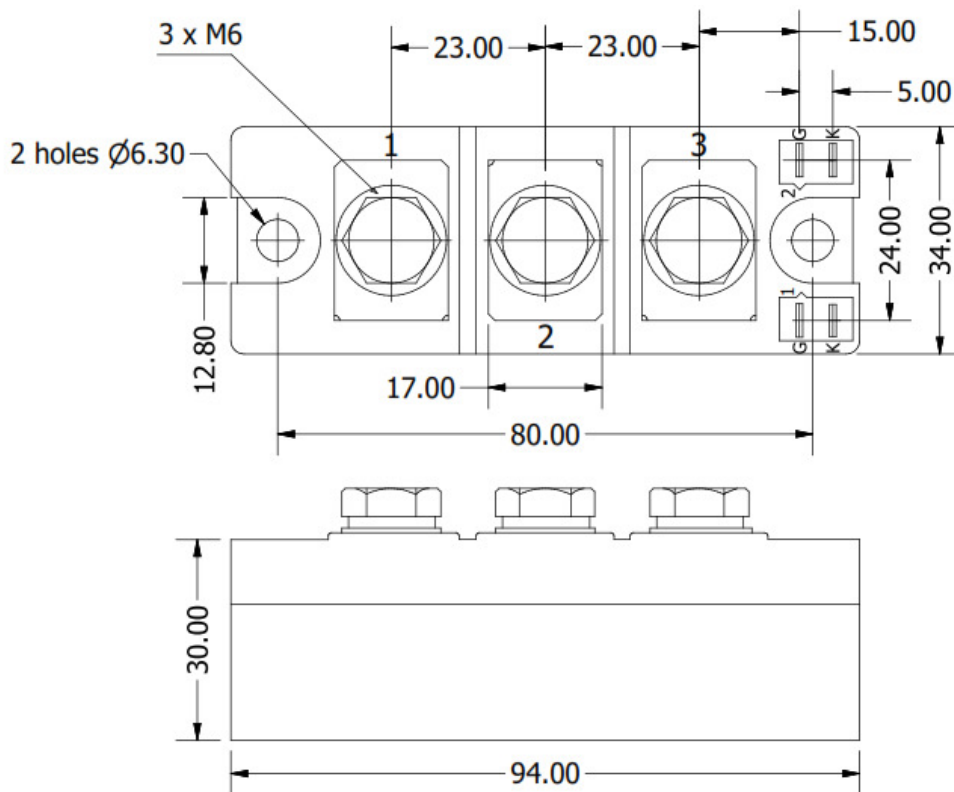
Voltage Ratings ($T_A = 25^\circ\text{C}$, unless otherwise noted)					
Type number	Voltage Code	V_{RRM} , Maximum repetitive peak reverse voltage (V)	V_{RSM} , Maximum non-repetitive peak reverse voltage (V)	V_{DRM} , Maximum repetitive peak off-state voltage (V)	I_{RRM} , Maximum reverse leakage current @ T_{JMAX} (mA)
NTD162 H	200	2000	2100	2000	max. 30
	220	2200	2300	2200	

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Values	Units
Maximum average forward current @ $T_J = 85^\circ\text{C}$	$I_{T(AV)}$	143	A
Maximum average RMS forward current	$I_{T(RMS)}$	225	A
Maximum non-repetitive surge current	I_{TSM}	5200	A
Maximum I^2t for fusing	I^2t	135200	A^2s
Forward voltage drop	V_{TM}	max. 1.6	V
Critical rate of rise of on-state current	di/dt	max. 200	$\text{A}/\mu\text{s}$
Critical rate of rise of off-state voltage	dv/dt	max. 1000	$\text{V}/\mu\text{s}$
Gate current required to trigger	I_{GT}	min. 150	mA
Gate voltage required to trigger	V_{GT}	min. 2	V
Maximum holding current	I_H	150	mA
Maximum latching current	I_L	300	mA
Isolation voltage	V_{ISO}	4000	V

Thermal & Mechanical Specifications ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Values	Units
Operating junction temperature range	T_J	-40 to +125	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +125	$^\circ\text{C}$
Thermal resistance, junction to case	$R_{th(jc)}$	0.16	$^\circ\text{C}/\text{W}$
Mounting torque	to heatsink	F	Nm
	to terminals		
Weight	W	220	g

Package Outline

(All dimensions in mm)



Circuit Configuration

Circuit Description	Configuration Code	Circuit Drawing
Series Connection (doubler circuit)	N	<p>The diagram shows two diodes connected in series. The first diode has its anode connected to terminal 1 and its cathode to terminal 2 (+). The second diode has its anode connected to terminal 2 (+) and its cathode to terminal 3 (-). Terminal 4 (G) is connected to the common ground. Terminal 5 (K) is also connected to the common ground.</p>
Common Anode	A	<p>The diagram shows two diodes connected in common anode. The anodes of both diodes are connected to terminal 1. The cathode of the first diode is connected to terminal 2 (+). The cathode of the second diode is connected to terminal 3 (+). Terminal 4 (G) is connected to the common ground. Terminal 5 (K) is also connected to the common ground.</p>



Ordering Table

<i>NTD</i>	<i>162</i>	<i>N</i>	<i>200</i>	<i>H</i>
1	2	3	4	5

1 – Power Module

- > DD = Diode-Diode
- > TD = Thyristor-Diode
- > TT = Thyristor-Thyristor

2 – Current Rating = $I_{T(AV)}$

3 – Circuit Configuration (see Table)

4 – Voltage Code (see Voltage Ratings table)

5 – High Voltage (2000V, 2200V)