

Thyristor-Thyristor Module, 460 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)
NTT460 H	200	2000	2100	2000	max. 200
	220	2200	2300	2200	

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

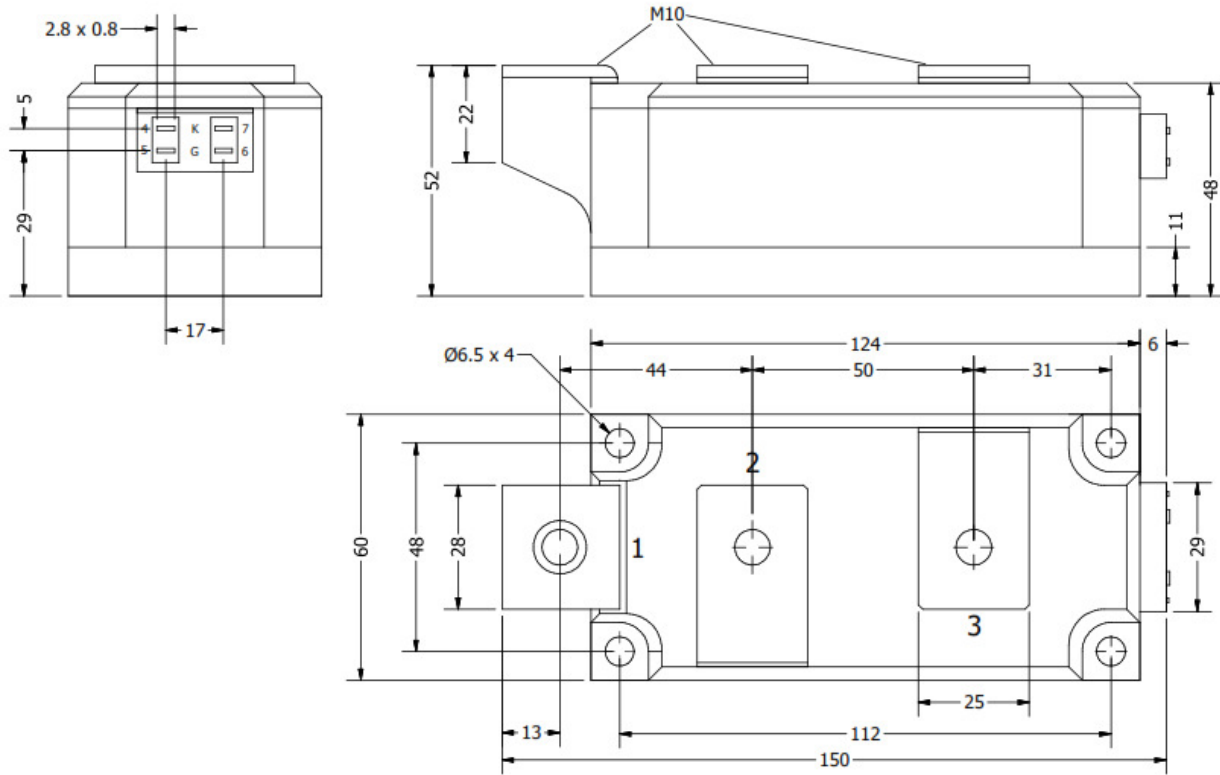
Parameter	Symbol	Values	Units
Maximum average forward current @ $T_J = 85^\circ\text{C}$	$I_{T(AV)}$	460	A
Maximum average RMS forward current	$I_{T(RMS)}$	720	A
Maximum non-repetitive surge current	I_{TSM}	18000	A
Maximum I^2t for fusing	I^2t	1620000	A^2s
Forward voltage drop @ $I_T = 1400\text{A}$	V_{TM}	max. 1.5	V
Critical rate of rise of on-state current	di/dt	max. 250	$\text{A}/\mu\text{s}$
Critical rate of rise of off-state voltage	dv/dt	max. 1000	$\text{V}/\mu\text{s}$
Gate current required to trigger	I_{GT}	200	mA
Gate voltage required to trigger	V_{GT}	3	V
Maximum holding current	I_H	500	mA
Maximum latching current	I_L	2000	mA
Isolation voltage, 1 min.	V_{ISO}	4000	V

Thermal & Mechanical Specifications ($T_A = 25^\circ\text{C}$ unless otherwise noted)

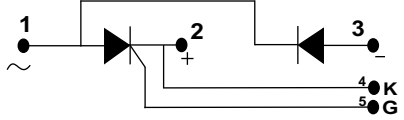
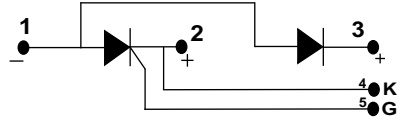
Parameter	Symbol	Values	Units
Operating junction temperature range	T_J	-40 to +130	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +125	$^\circ\text{C}$
Thermal resistance, junction to case	$R_{th(jc)}$	0.07	$^\circ\text{C}/\text{W}$
Mounting torque	to heatsink	$5 \pm 15\%$	Nm
	to terminals	$10 \pm 15\%$	
Weight	W	1500	g

Package Outline

(All dimensions in mm)



Circuit Configuration

Circuit Description	Configuration Code	Circuit Drawing
Series Connection (doubler circuit)	N	 The circuit drawing for the Series Connection (doubler circuit) shows two diodes connected in series. The first diode has its anode connected to terminal 1 (AC input) and its cathode connected to terminal 2 (+). The second diode has its anode connected to terminal 2 (+) and its cathode connected to terminal 3 (-). The package pins are labeled 4 (K), 5 (G), and 6 (G).
Common Anode	A	 The circuit drawing for the Common Anode configuration shows two diodes connected in series. The first diode has its anode connected to terminal 1 (-) and its cathode connected to terminal 2 (+). The second diode has its anode connected to terminal 2 (+) and its cathode connected to terminal 3 (+). The package pins are labeled 4 (K), 5 (G), and 6 (G).



Ordering Table

<i>NTT</i>	<i>460</i>	<i>N</i>	<i>200</i>	<i>H</i>
1	2	3	4	5

1 – Power Module

- > NDD = Diode-Diode
- > NTD = Thyristor-Diode
- > NTT = Thyristor-Thyristor

2 – Current Rating = $I_{T(AV)}$

3 – Circuit Configuration (see Table)

4 – Voltage Code (see Voltage Ratings table)

5 – Isolation Voltage, Viso

- > None = 3000V, 1 min.
- > H = 4000V, 1 min.