

Thyristor-Thyristor Module, 27 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)
NTT27 H	200	2000	2100	2000	max. 10
	220	2200	2300	2200	

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

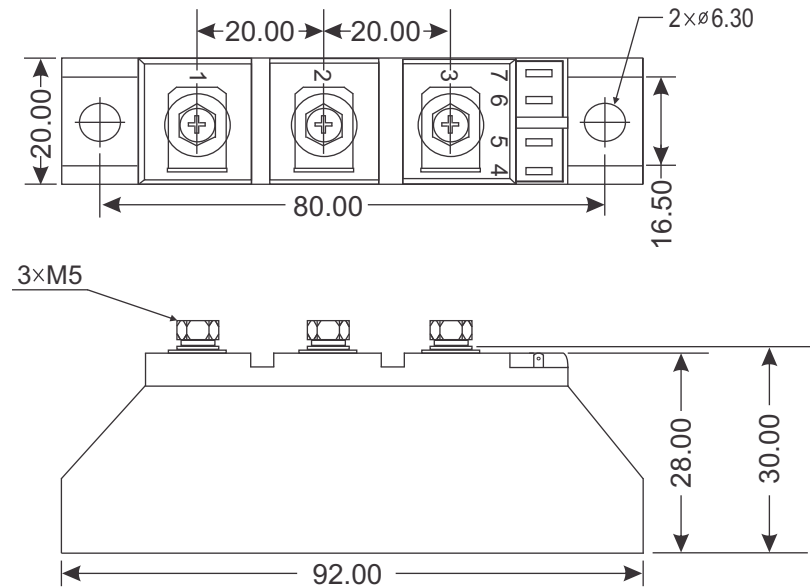
Parameter	Symbol	Values	Units
Maximum average forward current @ $T_J = 85^\circ\text{C}$	$I_{T(AV)}$	27	A
Maximum average RMS forward current	$I_{T(RMS)}$	42	A
Maximum non-repetitive surge current	I_{TSM}	550	A
Maximum I^2t for fusing	I^2t	1500	A^2s
Forward voltage drop	V_{TM}	max. 1.7	V
Critical rate of rise of on-state current	di/dt	max. 150	$\text{A}/\mu\text{s}$
Critical rate of rise of off-state voltage	dv/dt	max. 1000	$\text{V}/\mu\text{s}$
Gate current required to trigger	I_{GT}	150	mA
Gate voltage required to trigger	V_{GT}	3	V
Maximum holding current	I_H	100	mA
Maximum latching current	I_L	250	mA
Isolation voltage, 1 min.	V_{ISO}	4000	V

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

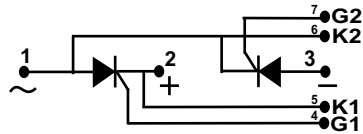
Parameter	Symbol	Values	Units
Operating junction temperature range	T_J	-40 to +125	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +125	$^\circ\text{C}$
Thermal resistance, junction to case	$R_{th(jc)}$	0.9	$^\circ\text{C}/\text{W}$
Mounting torque	to heatsink	F	Nm
	to terminals		
Weight	W	100	g

Package Outline

(All dimensions in mm)



Circuit Configuration

Circuit Description	Configuration Code	Circuit Drawing
Series Connection (doubler circuit)	N	 The circuit drawing shows a series connection of two thyristors. The input is connected to the anode of the first thyristor (1). The cathode of the first thyristor (2) is connected to the anode of the second thyristor (3). The cathode of the second thyristor (4) is connected to the output (5). The gate terminals are labeled G1 (4), G2 (7), K1 (5), and K2 (6).

Ordering Table

NTT	27	N	200	H
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.