

## Thyristor/Thyristor Module, 40A

**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)
NTT42A	20	200	300	200	5.0
	40	400	500	400	
	60	600	700	600	
	80	800	900	800	
	100	1000	1100	1000	
	120	1200	1300	1200	
	160	1600	1700	1600	

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

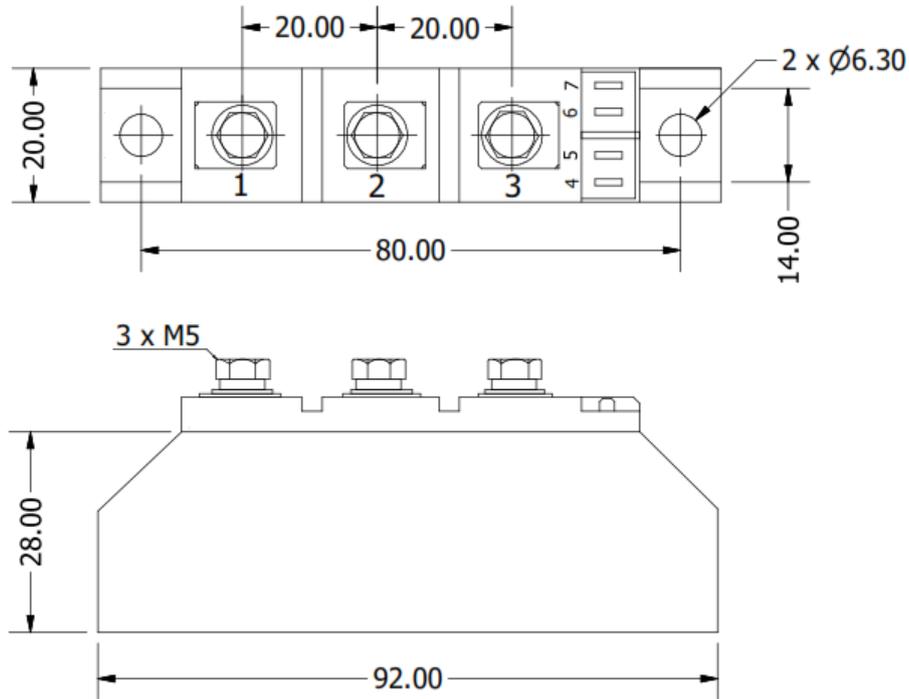
Parameter	Symbol	Values	Units
Maximum average forward current @ $T_J = 85^\circ\text{C}$	$I_{T(AV)}$	40	A
Maximum average RMS forward current	$I_{T(RMS)}$	63	A
Maximum non-repetitive surge current	$I_{TSM}$	1000	A
Maximum $I^2t$ for fusing	$I^2t$	5000	$\text{A}^2\text{s}$
Forward voltage drop	$V_{TM}$	1.2	V
Critical rate of rise of on-state current	di/dt	150	$\text{A}/\mu\text{s}$
Critical rate of rise of off-state voltage	dv/dt	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	$I_H$	200	mA
Maximum latching current	$I_L$	400	mA
Isolation voltage	$V_{ISO}$	3000	V

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

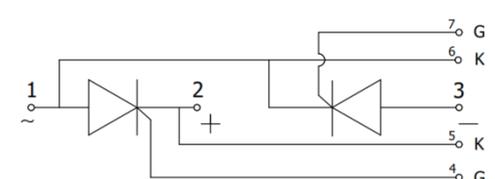
Parameter	Symbol	Values	Units
Operating junction temperature range	$T_J$	-40 to +125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +125	$^\circ\text{C}$
Thermal resistance, junction to case	$R_{th(jc)}$	0.75	$^\circ\text{C}/\text{W}$
Mounting torque	to heatsink	F	Nm
	to terminals		
Weight	W	$3 \pm 15\%$	g

## Package Outline

(All dimensions in mm)



## Circuit Configuration

Circuit Description	Configuration Code	Circuit Drawing
Series Connection (doubler circuit)	N	

## Ordering Table

NTT	42	A	N	160
1	2	3	4	5

- 1 – Power Module
  - > DD = Diode-Diode
  - > TD = Thyristor-Diode
  - > TT = Thyristor-Thyristor
- 2 – Current Rating =  $I_F (AV)$
- 3 – Package Type
- 4 – Circuit Configuration (see Table)
- 5 – Voltage Code (see Voltage Ratings table)