Thyristor/Diode Module, 106A

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°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)
NTD106B	20	200	300	200	10
	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°C unless otherwise noted)

Parameter	Symbol	Values	Units
Maximum average forward current @ T_J = 85°C	$I_{T(AV)}$	106	A
Maximum average RMS forward current	$I_{T(RMS)}$	166	A
Maximum non-repetitive surge current	I_{TSM}	2250	A
Maximum I^2t for fusing	I^2t	25300	A^2s
Forward voltage drop	V_{TM}	1.3	V
Critical rate of rise of on-state current	di/dt	150	A/µs
Critical rate of rise of off-state voltage	dv/dt	1000	V/µs
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°C unless otherwise noted)

Parameter		Symbol	Values	Units
Operating junction temperature range		T_J	-40 to +125	°C
Storage temperature		T_{stg}	-40 to +125	°C
Thermal resistance, junction to case		$R_{th(JC)}$	0.4	°C/W
Mounting torque	to heatsink	F	4 ± 15%	Nm
	to terminals		3 ± 15%	
Weight		W	100	g

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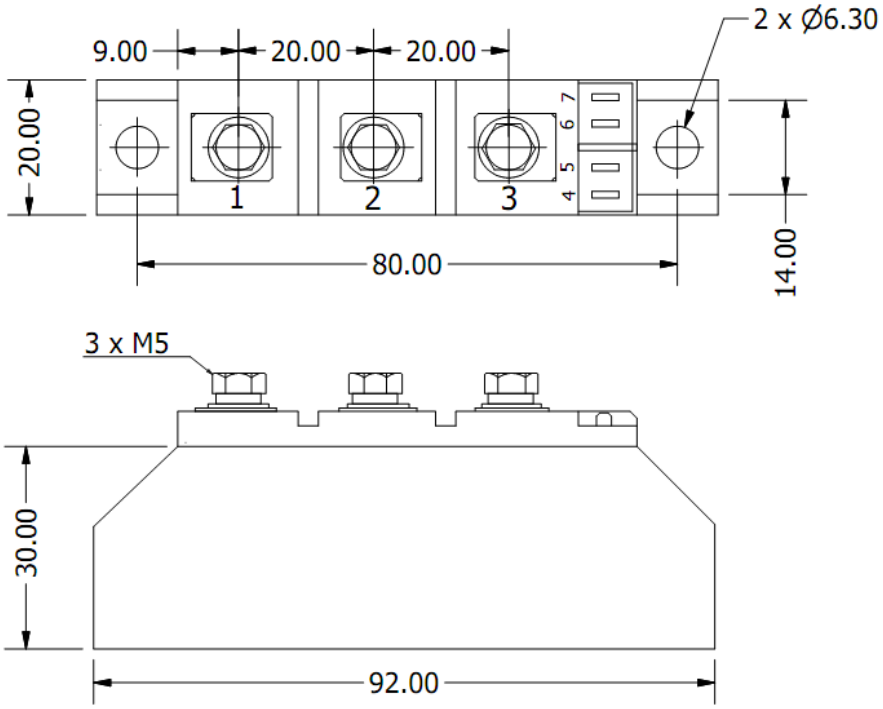
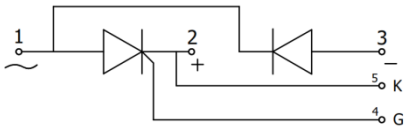
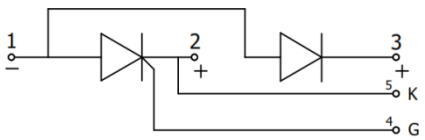
Package Outline

(All dimensions in mm)



Circuit Configuration

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

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Ordering Table

NTD	*106*	*B*	*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)

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