Diode-Diode Module, 380 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°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)	I_{RRM}, Maximum reverse leakage current @ T_{JMAX} (mA)
NDD380 H	200	2000	2100	max. 10
	220	2200	2300	

Electrical Characteristics (T_A = 25°C unless otherwise noted)			
Parameter	Symbol	Values	Units
Maximum average forward current @ T_C = 85°C	$I_{F(AV)}$	380	A
Maximum average RMS forward current	$I_{F(RMS)}$	595	A
Maximum non-repetitive surge current	I_{FSM}	11000	A
Maximum I^2t for fusing	I^2t	605000	A^2s
Forward voltage drop	V_{FM}	max. 1.3	V
Isolation voltage, 1 min.	V_{ISO}	4000	V

Thermal & Mechanical Specifications (T_A = 25°C unless otherwise noted)				
Parameter		Symbol	Values	Units
Operating junction temperature range		T_J	-40 to +150	°C
Storage temperature		T_{stg}	-40 to +130	°C
Thermal resistance, junction to case	per diode	$R_{th(JC)}$	0.11	°C/W
Mounting torque	to heatsink	F	5 ± 15%	Nm
	to terminals		8 ± 15%	
Weight		W	620	g

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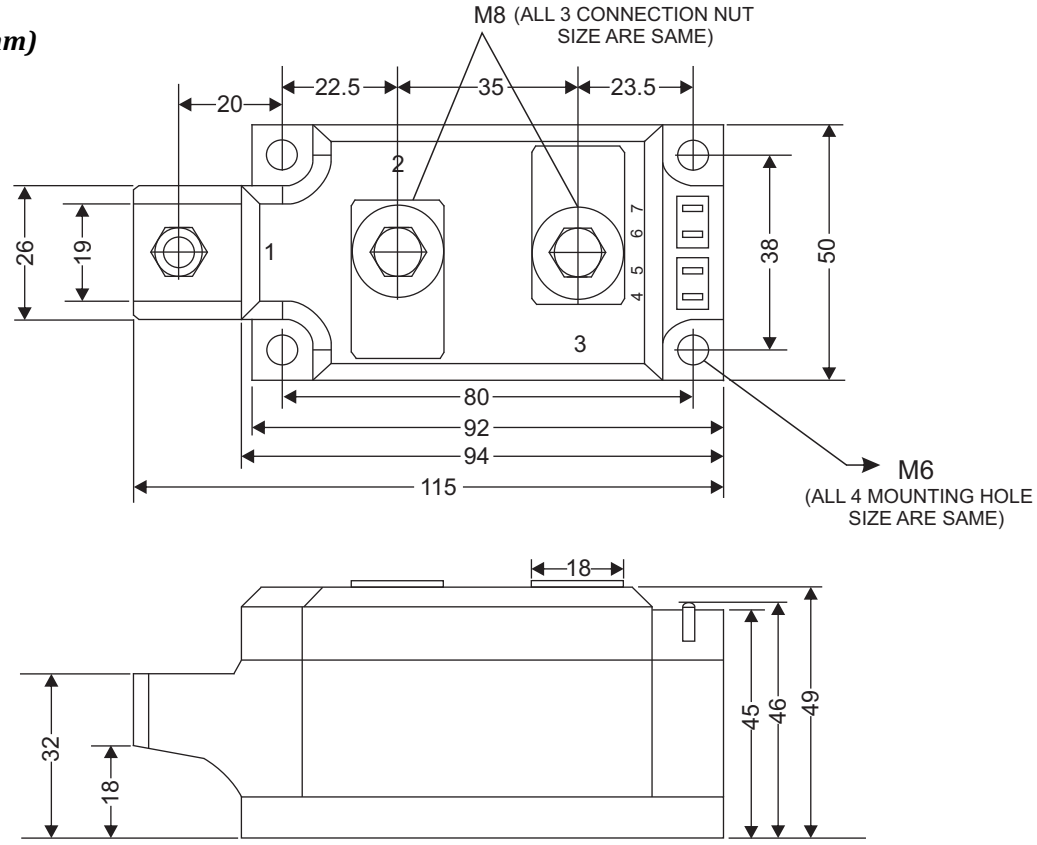
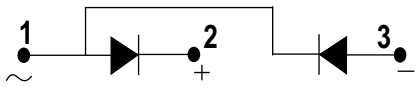
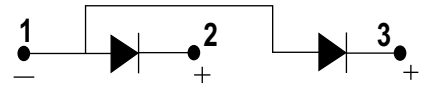
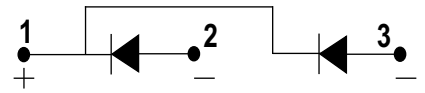
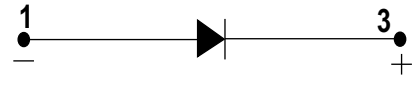
Package Outline

(All dimensions in mm)



Circuit Configuration

Circuit Description	Configuration Code	Circuit Drawing
Series Connection (doubler circuit)	N	
Common Anode	A	
Common Cathode	K	
Single Diode	E	

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Ordering Table

NDD	380	N	220	H
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–Isolation Voltage
- > None = 3000V, 1 min.
- > H = 4000V, 1 min.

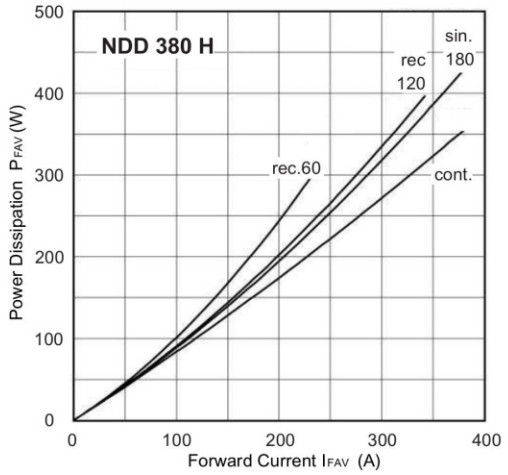

Fig. 1 Power dissipation per diode vs. Forward Current

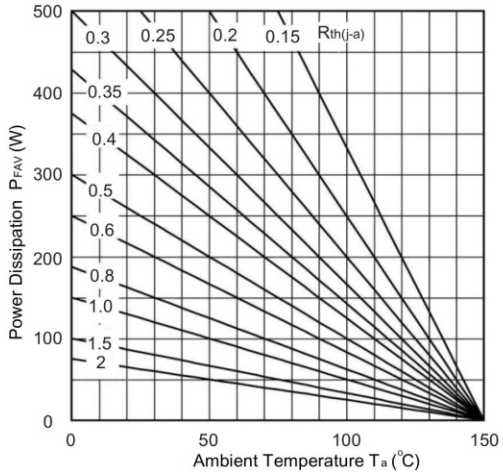

Fig. 2 Power dissipation per diode vs. Ambient Temp.

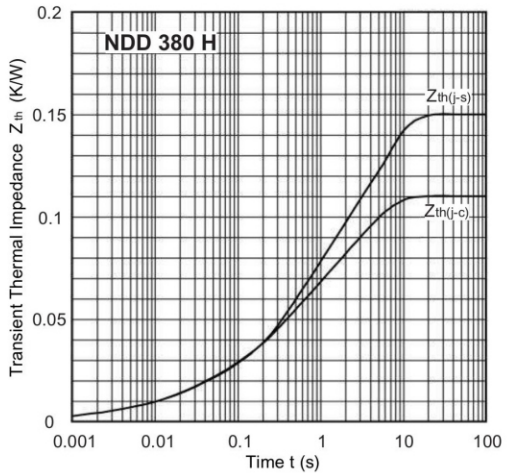

Fig. 3 Transient thermal impedance vs. Time

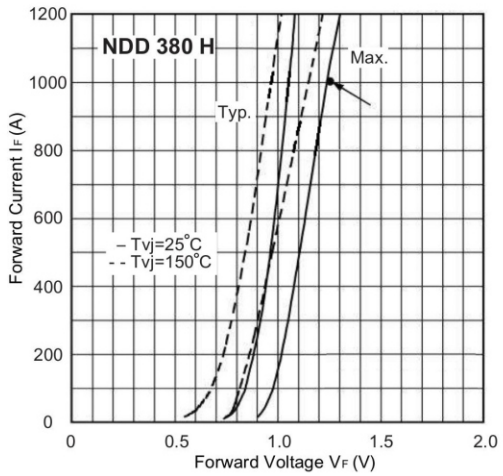

Fig. 4 Forward characteristics

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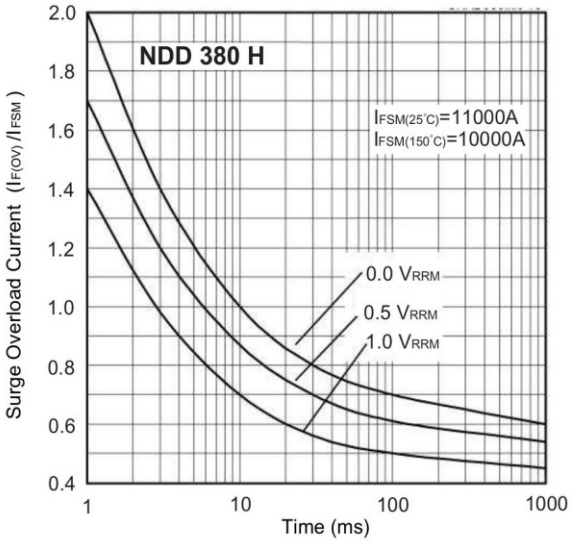

Fig. 5 Surge overload current vs. time

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