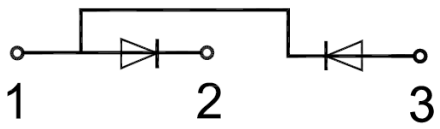
DD200HF170T1WH

Diode Module

Features:

- Low V_F
- Low I_{RR}
- Soft Reverse Recovery
- Ultrafast Recovery Time
- Wide Safe Working Area
- Low Inductance Package

Circuit Diagram



Applications：

- UPS
- Plating Power Supply
- Inverter Welder
- PFC
- Chopper Application

Absolute Maximum Ratings (T_C=25℃ unless otherwise specified)

Symbol	Description		Values	Units
V_{RRM}	Repetitive Peak Reverse Voltage		1700	V
I_F	DC Forward Current		200	A
I_{FRM}	Repetitive Peak Forward Current		400	A
I_{FSM}	Surge Current	50Hz, Sine, t_p=10ms	3600	A
i^2t	i^2t–value	50Hz, Sine, t_p=10ms	64800	A^2s
P_{tot}	Power Dissipation		714	W

Electrical Characteristics of Diode (T_J=25℃ unless otherwise specified)

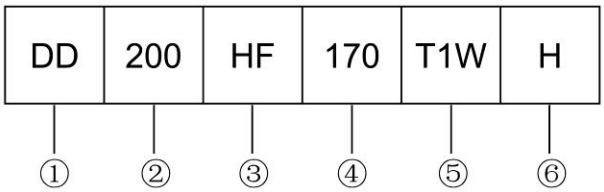
Symbol	Description	Test conditions		Min.	Typ.	Max.	Units
V_R	Breakdown Voltage	I_R=1mA	T_J=25℃	1700			V
V_{FM}	Forward Voltage	I_F=200A	T_J=25℃		1.80	2.40	V
			T_J=125℃		2.00		V
			T_J=150℃		2.05		V
I_R	Reverse Leakage Current	V_R=1700V	T_J=25℃			1	mA
t_{rr}	Reverse Recovery Time	V_R=900V, I_F=200A, -diF/dt =1360A/μs (T_J=150℃)	T_J=25℃		513		ns
			T_J=125℃		842		
			T_J=150℃		878		
I_{rr}	Peak Reverse Recovery Current		T_J=25℃		240		A
			T_J=125℃		245		
			T_J=150℃		250		
Q_{rr}	Reverse Recovery Charge		T_J=25℃		60.7		μC
			T_J=125℃		78.4		
			T_J=150℃		82.1		
E_{rec}	Reverse Recovery Energy		T_J=25℃		33.6		mJ
			T_J=125℃		44.1		
			T_J=150℃		45.6		
$R_{\theta JC}$	Junction-to-Case (Diode)					0.21	℃/W

Module

Symbol	Description		Min.	Typ.	Max.	Units
V_{iso}	Isolation Voltage (All Terminals Shorted)	AC 50Hz, 1min	2500			V
T_{VJ}	Maximum Junction Temperature				175	℃
T_{JOP}	Maximum Operating Temperature		-40		+150	℃
T_{stg}	Storage Temperature		-40		+125	℃
CTI	Comparative Tracking Index		200			
$R_{\theta CS}$	Case-to-Sink Thermally (Conductive Grease Applied)				0.07	℃/W
T	Power Terminals Screw:M6		3.0		5.0	N·m
	Mounting Screw:M6		4.0		6.0	N·m
Weight	Weight of Module			155		g

Ordering Information Table

Device code



① - Fast Recovery Diode Module
② - Rated Current (200=200A)
③ - Circuit Configuration (Half Bridge)
④ - Rated Voltage (170=1700V)
⑤ - Package Type
⑥ - Test Level (Pass the Important Reliability Test-Industrial Grade)

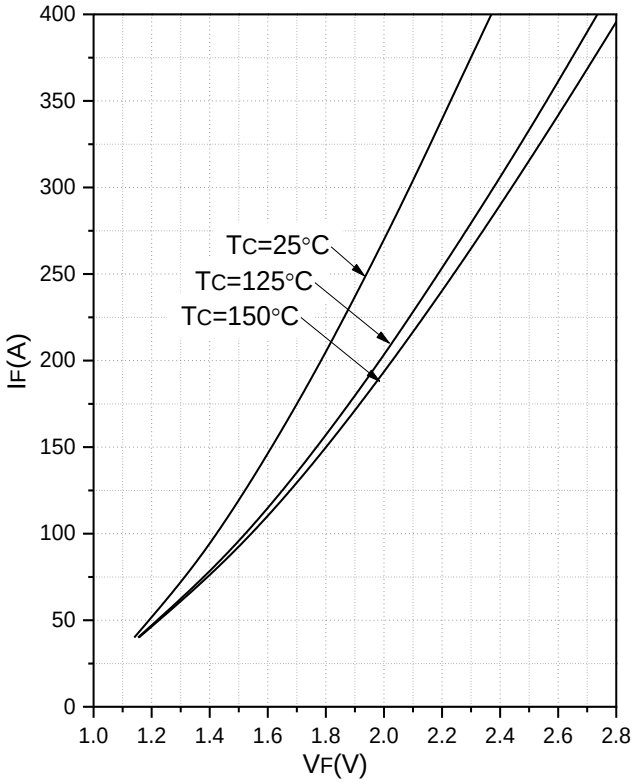


Fig.1 Forward Characteristics of Diode

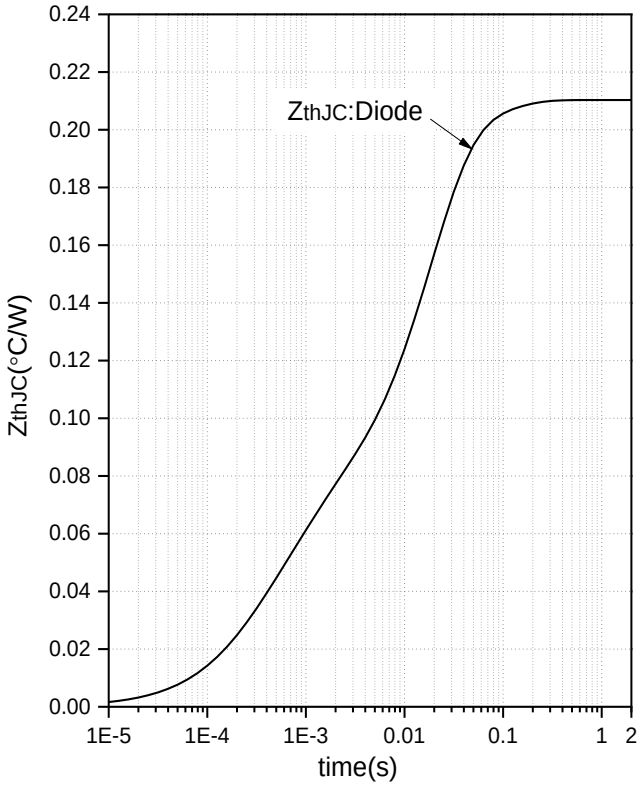
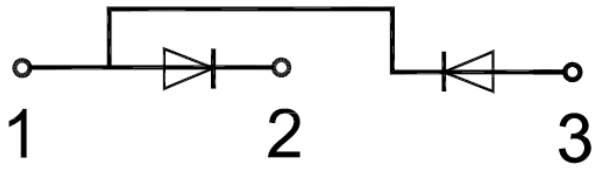
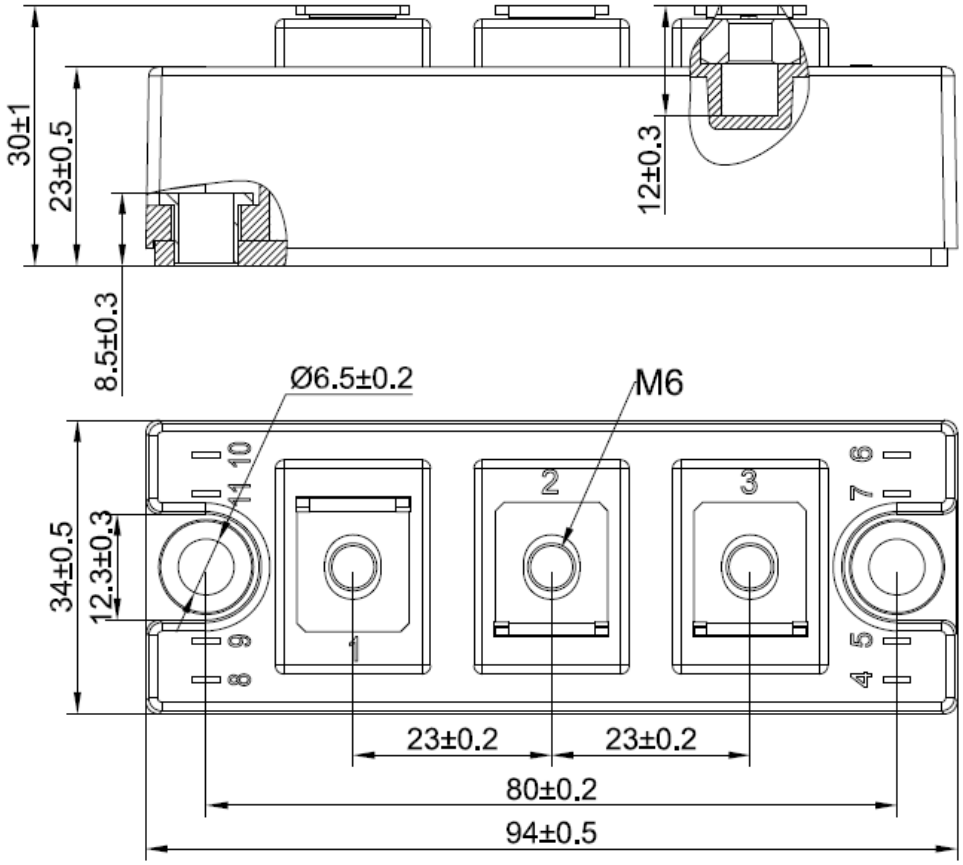


Fig.2 Transient Thermal Impedance

Internal Circuit Diagram:



Package Outline (Unit: mm):



Revision	Notes
A	Final Version

Announcement

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