



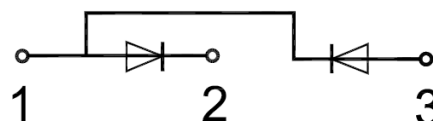
DD400HF65T1WH

Diode Module

Features:

- Low V_F
- Low Reverse Recovery Losses
- Small Temperature Coefficient
- Low Inductance Package
- Lead Free, Compliant with RoHS Requirement

Circuit Diagram



Applications:

- Switch Mode Power Supplies
- Hard Switched PFC Boost Diode
- UPS Free Wheeling Diode
- Motor Drive FW

Absolute Maximum Ratings ($T_C=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Description		Values	Units
V_{RRM}	Repetitive Peak Reverse Voltage		650	V
I_F	DC Forward Current	$T_C=80^{\circ}\text{C}$	400	A
I_{FRM}	Repetitive Peak Forward Current	$t_p=1\text{ms}$	800	A
I_{FSM}	Surge Current	50Hz, Sine, $t_p=10\text{ms}$	6000	A
I^2t	I^2t value	50Hz, Sine, $t_p=10\text{ms}$	180000	A^2s
P_D	Maximum Power Dissipation	$T_C=25^{\circ}\text{C}$, $T_J=150^{\circ}\text{C}$	847	W



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

Symbol	Description	Test conditions		Min.	Typ.	Max.	Units
V _{FM}	Forward Voltage	I _F =400A	T _J = 25℃		1.60	2.00	V
			T _J =125℃		1.65		
			T _J =150℃		1.60		
I _{RM}	Maximum Reverse Leakage Current	V _R =650V	T _J = 25℃			1	mA
			T _J =125℃			5	
			T _J =150℃			10	
t _{rr}	Reverse Recovery Time	I _F =400A, di/dt=1577A/μs (T _J =150℃), V _{rr} =300V, V _{GE} =-15V	T _J = 25℃		154		ns
			T _J =125℃		204		
			T _J =150℃		212		
I _{rr}	Peak Reverse Recovery Current		T _J = 25℃		108		A
			T _J =125℃		156		
			T _J =150℃		163		
Q _{rr}	Reverse Recovery Charge		T _J = 25℃		10.5		μC
			T _J =125℃		19.8		
			T _J =150℃		21.5		
E _{rec}	Reverse Recovery Energy		T _J = 25℃		1.6		mJ
			T _J =125℃		3.1		
			T _J =150℃		3.4		
R _{θJC}	Thermal Resistance: Junction-to-Case (per Diode)					0.15	℃/W



Module

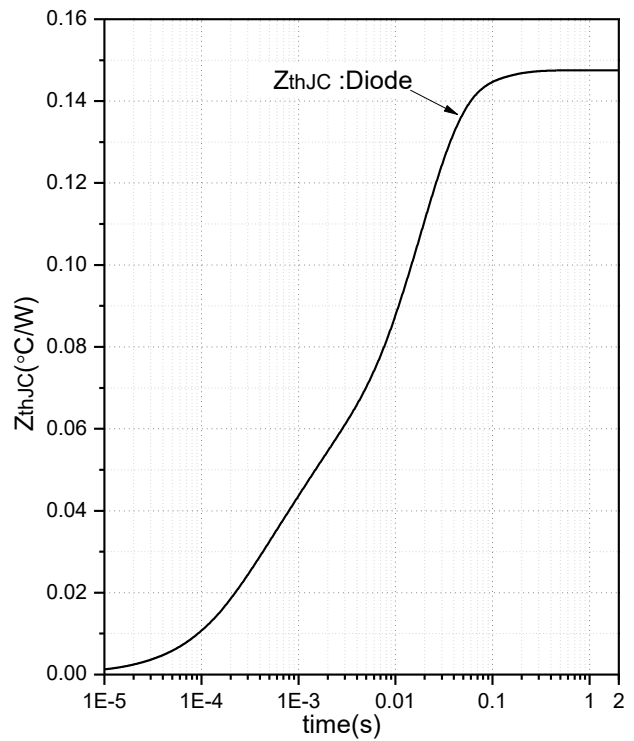
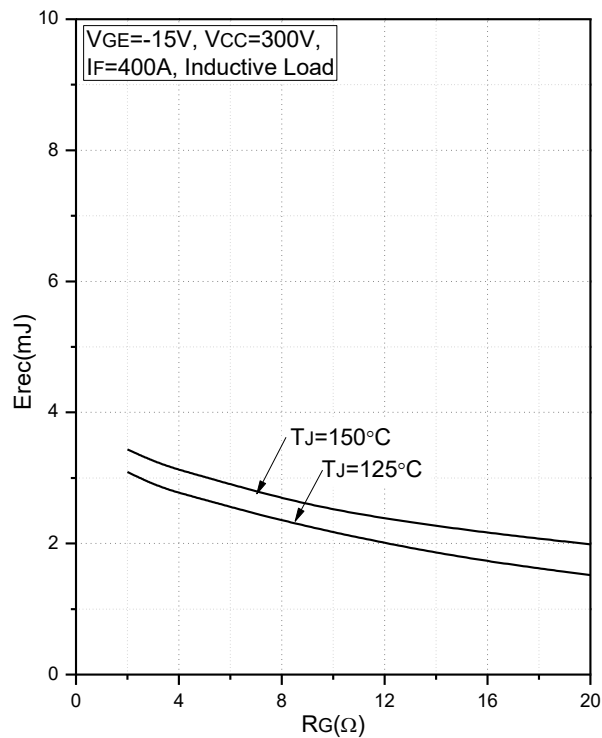
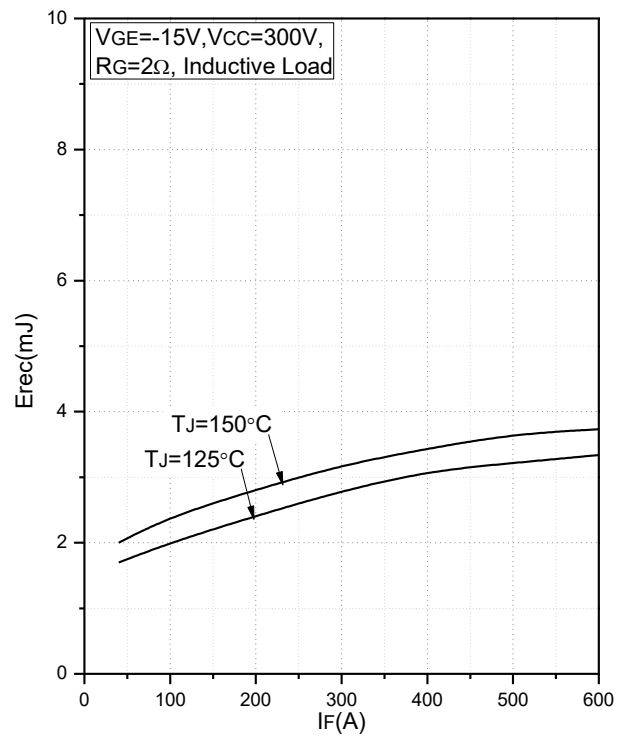
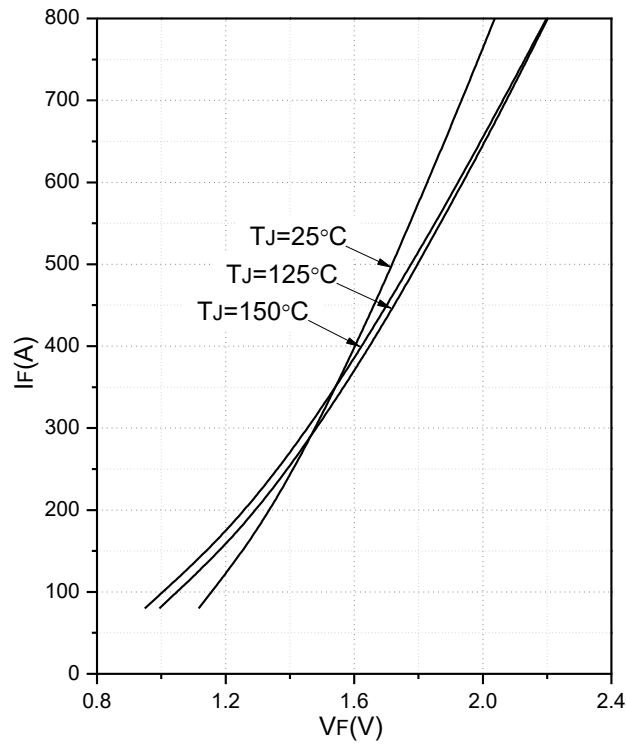
Symbol	Description	Min.	Typ.	Max.	Units
V _{iso}	Isolation Voltage (All Terminals Shorted)	RMS, f=50Hz, 1minute		2500	V
T _{VJ}	Maximum Junction Temperature			150	°C
T _{JOP}	Maximum Operating Temperature	-40		+125	°C
T _{stg}	Storage Temperature	-40		+125	°C
CTI	Comparative Tracking Index	200			
R _{θCS}	Case-to-Sink Thermally (Conductive Grease Applied)			0.07	°C/W
T	Power Terminals Screw:M6	4.0		6.0	N·m
	Mounting Screw:M6	4.0		6.0	N·m
G	Weight of Module		155		g

Ordering Information Table

Device code

DD	400	HF	65	T1W	H
①	②	③	④	⑤	⑥

- ① - Fast Recovery Diode Module
- ② - Rated Current (400=400A)
- ③ - Circuit Configuration (Half Bridge)
- ④ - Rated Voltage (65=650V)
- ⑤ - Package Type
- ⑥ - Test Level (Pass the Important Reliability Test-Industrial Grade)





Revision	Notes
01	Initial Release
A	Final Version

Announcement

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The released datasheet would be issued with “REV.” + “alphabet characters”.