



RD160FF180C3H

Rectifier Diode Module

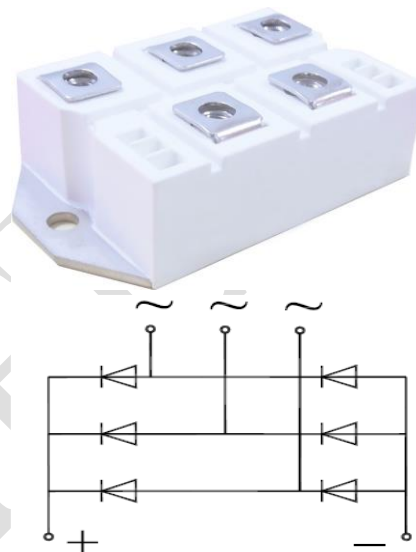
Preliminary Data

Features:

- Blocking voltage:1800 V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- Three phase bridge rectifier

Applications:

- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers
- Input rectifiers for variable frequency drives



Maximum Rated

Symbol	Description	Conditions	Min.	Typ.	Max.	Units
VRRM	Repetitive Peak Reverse Voltage	Tvj=25°C	1800			V
ID	Average Forward Current	Three phase, full wave, Tc=100°C			160	A
IFSM	Surge Current @tp=10 ms	tp=10ms, Tvj=25°C			1800	A
i²t	I²t - value	tp=10ms , Tvj=25°C			16200	A²s
Viso	Isolation Voltage(All Terminals Shorted)	AC 50Hz;r.m.s.;1s	3600			V
Tvj	Operating Junction Temperature Range		-40		150	°C
Tstg	Storage Temperature		-40		125	°C
T	Power Terminals Screw:M6		4.0		6.0	Nm
T	Mounting Screw:M6		4.0		6.0	Nm
G	Weight			240		g



Thermal Characteristics

Symbol	Description	Min.	Typ.	Max.	Unit
Rth(j-c)	Diode Thermal Resistance: Junction-To-Case			0.455	°C/W
Rth(c-s)	Case-To-Sink thermally (Conductive Grease Applied)			0.041	°C/W

Electrical Characteristics

Symbol	Description	Conditions	Values			Unit
			Min	Typ	Max	
VF	Forward Voltage	IF=160A, Tvj=25°C			1.40	V
		IF=300A, Tvj=25°C			1.65	V
IR	Reverse Current	VRD=1800V, Tvj=25°C			100	uA
		VRD=1800V, Tvj=125°C			2	mA
		VRD=1800V, Tvj=150°C			6	mA

Ordering Information Table

Device code	RD	160	FF	180	C3	H
	①	②	③	④	⑤	⑥

- ① - Rectifier Module
- ② - Rated Current (160=160A)
- ③ - Circuit Configuration (Full Bridge)
- ④ - Rated Voltage (180=1800V)
- ⑤ - Package Type
- ⑥ - Test Level (Pass the Important Reliability Test-Industrial Grade)

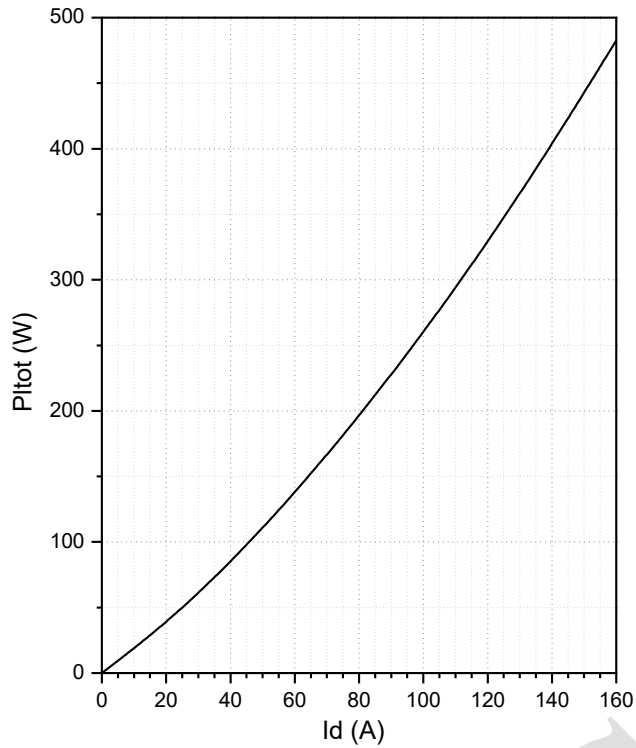


Fig.1 Power Dissipation

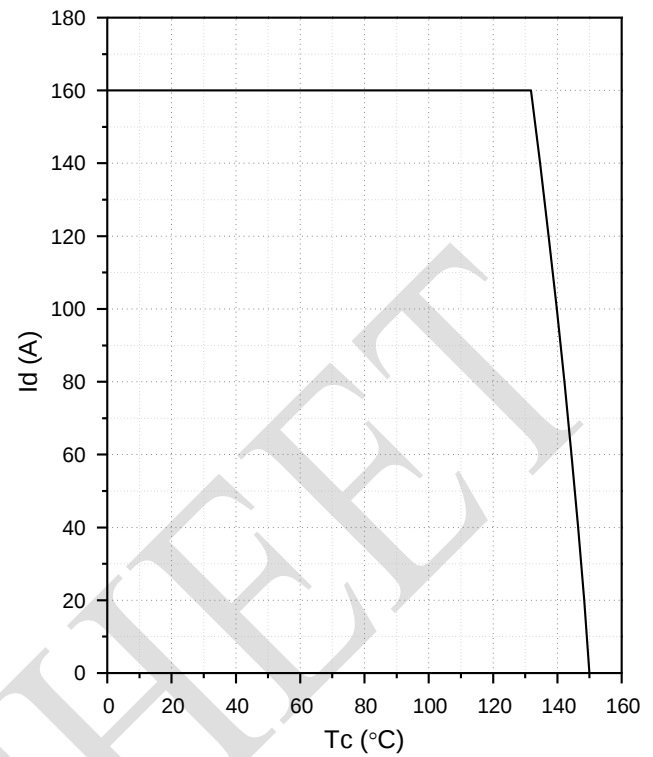


Fig.2 Forward Current Derating Curve

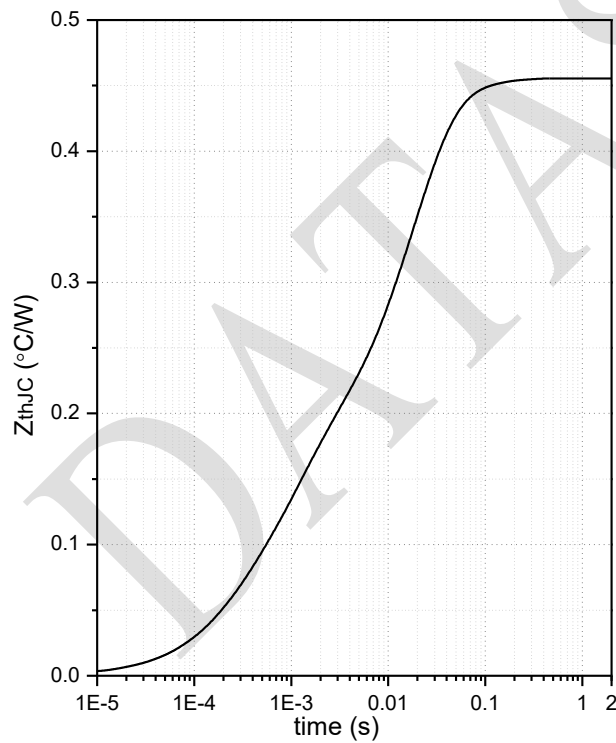


Fig.3 Transient Thermal Impedance

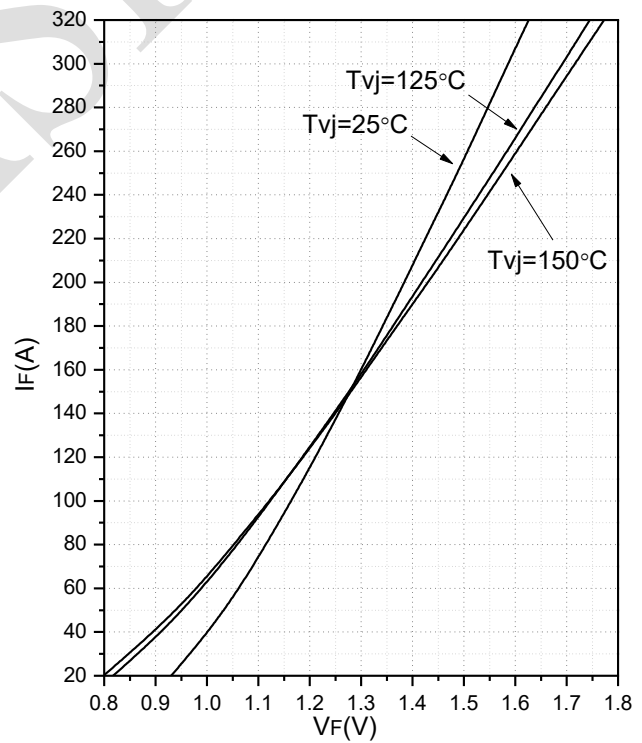


Fig.4 Forward Characteristics



Date	Revision	Notes
10/21/2020	01	Initial Release

Announcement

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