THREE PHASE DIODE＋THYRISTOR

DFA200AA80/160

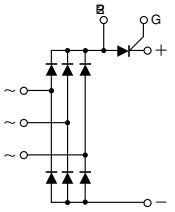
SanRex Power Module, **DFA200AA**, is complex isolated module which is designed for rash current circuit.

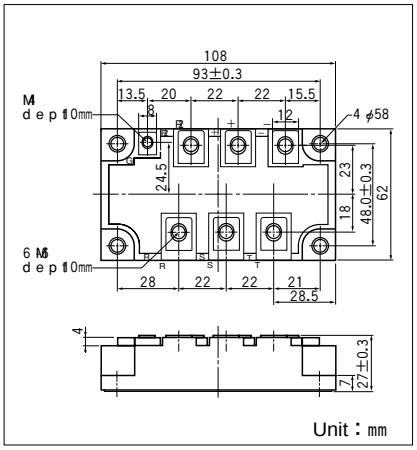
It contains six diodes connected in a three phase bridge configuration, and a thyristor connected to a direct current line.

- This Module is designed very compactly. Because diode module and thyristor put together.
- This Module is also isolated type between electorode terminal and mounting base. So you can put this Module and other one together in a same fin.

(Application)

- Inverter for AC or DC motor control, Current stabilized power supply, Switching power supply.





●DIODE

■Mximum Ratings

(Tj＝25℃Cu n l)

Symbol	Item	Ratings		Unit
		DFA200AA80	DFA200AA160	
VRRM	Repetitive Peak Reverse Voltage	800	1600	V
VRSM	Non-Repetitive Peak Reverse Voltage	960	1700	V

Symbol	Item		Conditions	Ratings	Unit
ID	Output Current (D.C.)		Three phase full wave, Tc＝96℃	200	A
IFSM	Surge forward current		1 cycle, 50/60Hz, peak value, non-repetitive	1850/2000	kA
Tj	Operating Junction Temperature			−30 to ＋150	℃
Tstg	Storage Temperature			−30 to ＋135	℃
VISO	Isolation Breakdown Voltage (R.M.S.)		A.C. 1minute	2500	V
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	N･m (kgf･cm)
		Terminal (M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	
		Terminal (M4)	Recommended Value 1.0-1.4 (10-14)	1.5 (15)	
	Mass		Typical Value	460	g

■Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
IRRM	Repetitive Peak Reverse Current,max.	Tj＝150℃, VR=VRRM	20	mA
VFM	Forward Voltage Drop,max.	IF＝200A Inst. measurement	1.35	V
Rth(j-c)	Thermal Impedance, max.	Junction to Case (TOTAL)	0.10	℃/W

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●THYRISTOR

■Maximum Ratings

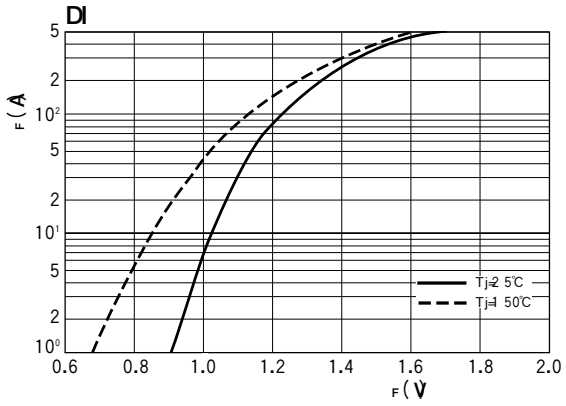
(Tj= 25℃Cu n l)

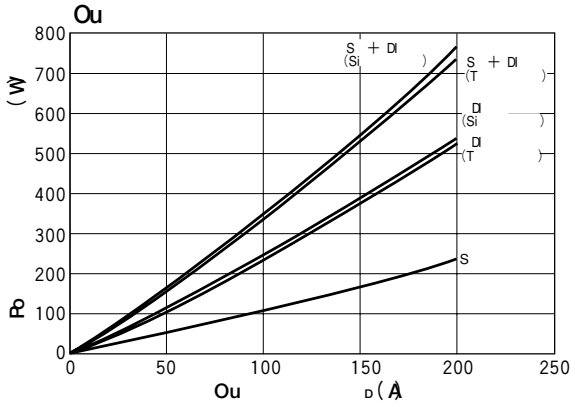
Symbol	Item	Ratings		Unit
		DFA200AA80	DFA200AA160	
VRRM	Repetitive Peak Reverse Voltage	800	1600	V
VRSM	Non-Repetitive Peak Reverse Voltage	960	1700	V
VDRM	Repetitive Peak Off-State Voltage	800	1600	V

Symbol	Item		Conditions	Ratings	Unit
IT(AV)	Average On-State Current		Singl phase half wave. 180° conduction, Tc=93℃	200	A
ITSM	Surge On-State Current		½cycle, 50/60Hz, peak value, non-repetitive	1850/2000	A
I²t	I²t (for fusing)		Value for one of surge current	17000	A²S
di／dt	Critical Rate of Rise of On-State Current		IG=100mA, VD=½VDRM, diG/dt=0.1A/μs	200	A/μs
VISO	Isolation Breakdown Voltage (R.M.S.)		A.C. 1minute	2500	V
Tj	Operating Junction Temperature		Tj=125℃～135℃	−30 to +135	℃
Tstg	Storage Temperature			−30 to +135	℃
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	N·m (kgf·cm)
		Terminal (M6)	Recommended Value 2.5-3.9 (15-25)	4.7 (48)	
		Terminal (M4)	Recommended Value 1.0-1.4 (15-25)	1.5 (15)	
	Mass		Typical Value	460	g

■Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
IDRM	Repetitive Peak off-State Current,max.	Tj=135℃, VD=VDRM	50	mA
IRRM	Repetitive Peak Reverse Current,max.	Tj=135℃, VD=VDRM	50	mA
VTM	Peak on-State Voltagea,max.	IT=200A Inst. measurement	1.15	V
IGT	Gate Trigger Current,max.	VD=6V, IT=1A	100	mA
VGT	Gate Trigger Voltage,max.	VD=6V, IT=1A	3	V
dv／dt	Critical Rate of off-State Voltaget,min.	Tj=125℃, VD=⅔VDRM	500	V/μs
Rth(j-c)	Thermal Impedance, max.	Junction to Case	0.18	℃/W





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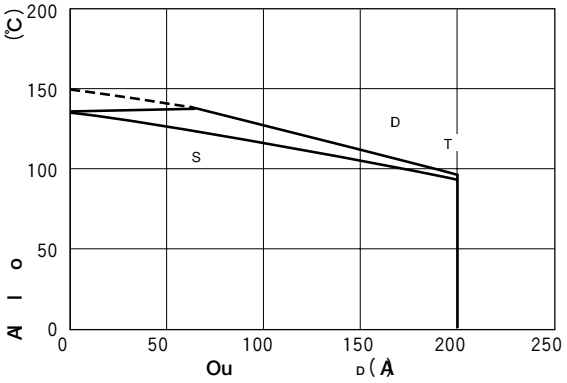
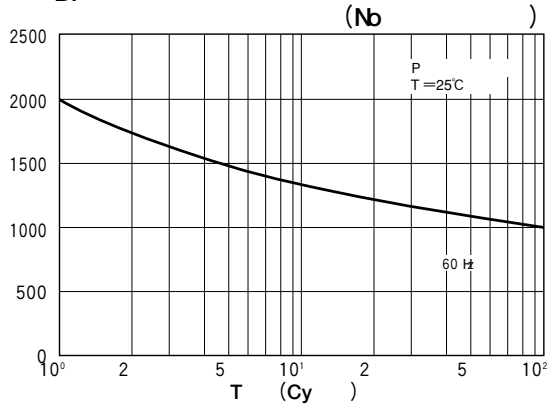
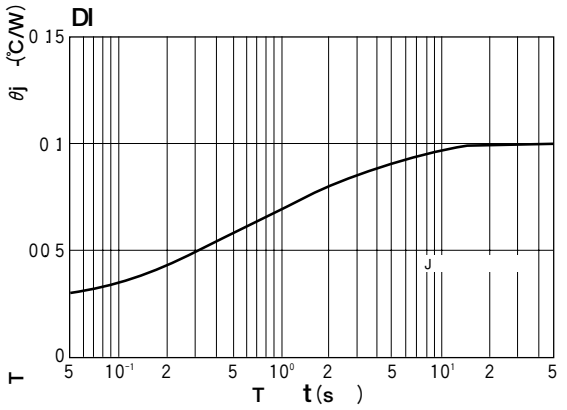


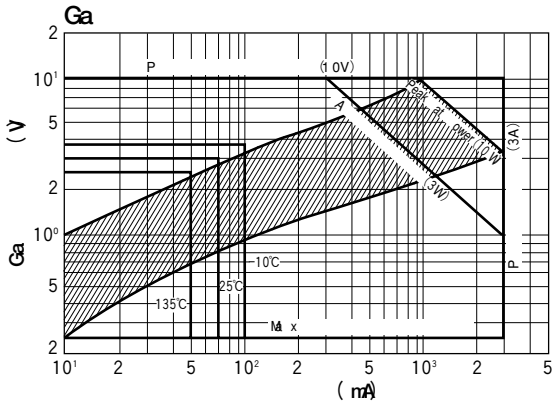
Dl (Nb)



Dl



Ga



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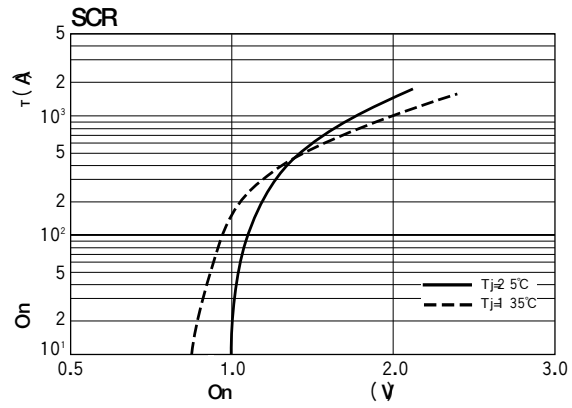

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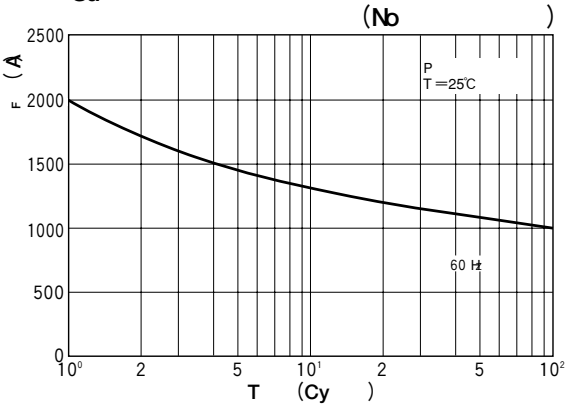

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