DIODE (THREE PHASES BRIDGE TYPE)

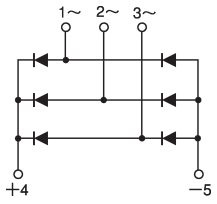
DF50AA120/160

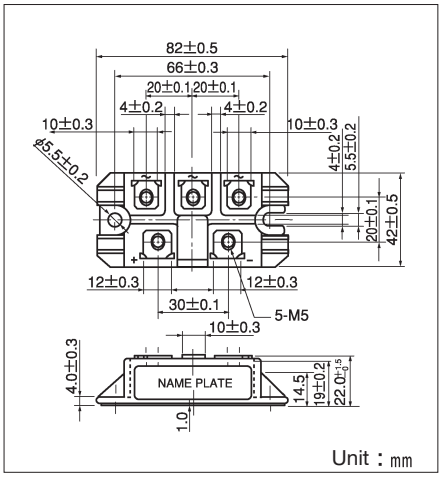
UL;E76102 (M)

Power Diode Module **DF50AA** is designed for three phase full wave rectification, which has six diodes connected in a three phase bridge configuration. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction Output DC current is 50Amp (Tc＝114℃) Repetitive peak reverse voltage is up to 1,600V.

- TjMax＝150℃
- Isolated mounting base
- High reliability by unique glass passivation

(**Applications**)
AC, DC Motor Drive/AVR/Switching
-for three phase rectification





■Maximum Ratings

(Tj＝25℃)

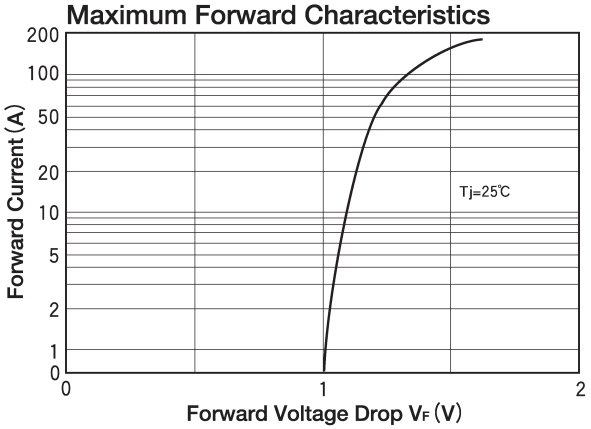
Symbol	Item	Ratings		Unit
		DF50AA120	DF50AA160	
V_{RRM}	Repetitive Peak Reverse Voltage	1200	1600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item		Conditions	Ratings	Unit
I_D	Output Current (D.C.)		Three phase full wave. Tc：114℃	50	A
I_{FSM}	Surge Forward Current		1cycle, 50/60Hz, peak value, non-repetitive	640/700	A
I^2t	I^2t		Value for one cycle of surge current	2000	A^2S
Tj	Operating Junction Temperature			−40～+150	℃
Tstg	Storage Temperature			−40～+125	℃
V_{ISO}	Isolation Breakdown Voltage (R.M.S.)		A.C. 1 minute	2500	V
	Mounting Torque	Mounting (M5)	Recommended Value 1.5～2.5 (15～25)	2.7 (28)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5～2.5 (15～25)	2.7 (28)	
	Mass		Typical Value	160	g

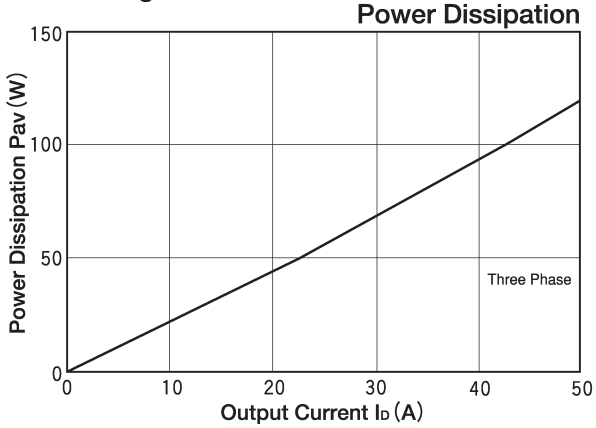
■Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	Tj＝150℃ at V_{RRM}			8.0	mA
V_{FM}	Forward Voltage Drop	Tj＝25℃, I_{FM}＝50A, Inst. measurement			1.2	V
Rth (j-c)	Thermal Impedance	Junction to case			0.3	℃/W

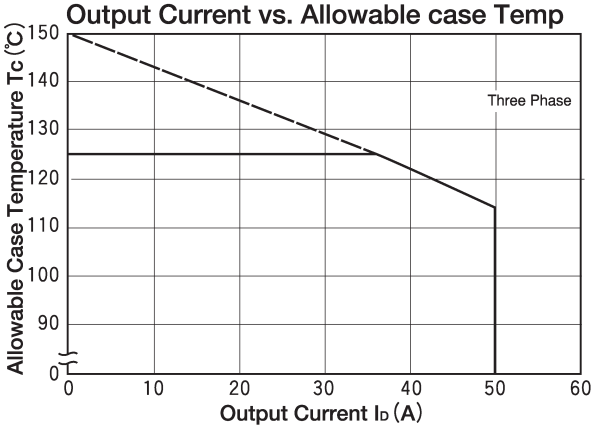
Maximum Forward Characteristics



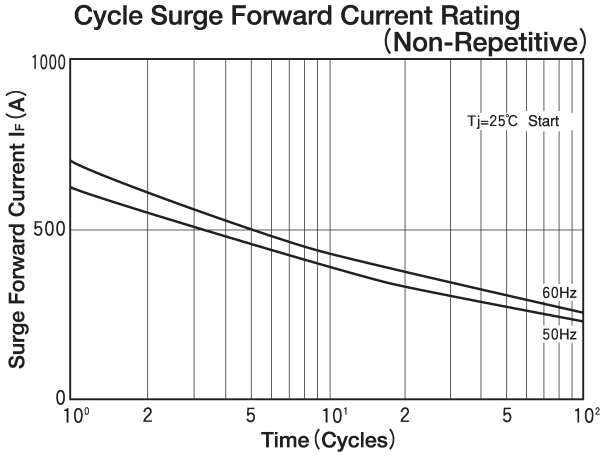
Average Forward Current vs. Power Dissipation



Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)