

DIODE (THREE PHASES BRIDGE TYPE)

DF50AA120/160

TOP



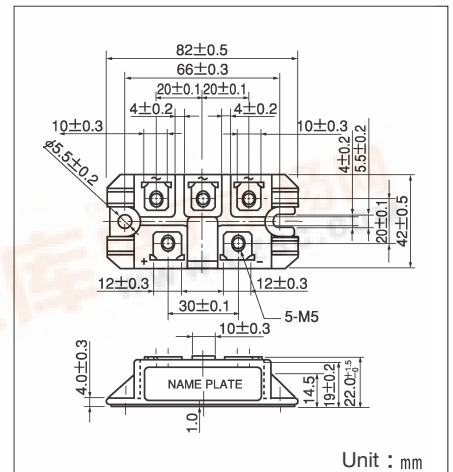
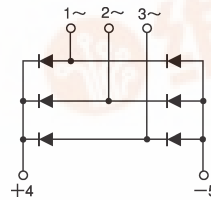
UL;E76102 (M)

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 ($T_c = 114^\circ\text{C}$). Repetitive peak reverse voltage is up to 1,600V.

- $T_{j\text{Max}} = 150^\circ\text{C}$
- Isolated mounting base
- High reliability by unique glass passivation

(Applications)

AC, DC Motor Drive/AVR/Switching
-for three phase rectification



Maximum Ratings

(T_j = 25°C)

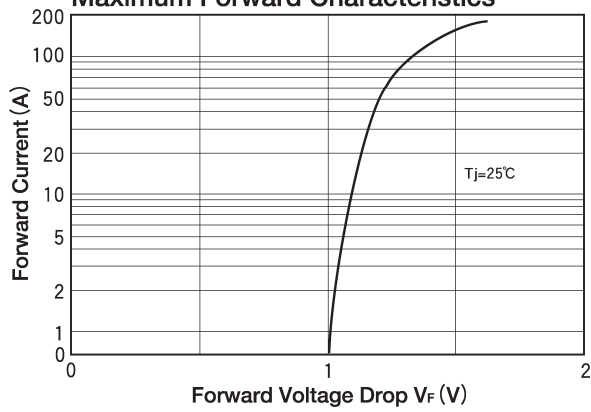
Symbol	Item	Ratings		Unit
		DF50AA120	DF50AA160	
V _{RRM}	Repetitive Peak Reverse Voltage	1200	1600	V
V _{RSM}	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item		Conditions	Ratings	Unit
I _D	Output Current (D.C.)		Three phase full wave. T _c : 114°C	50	A
I _{FSM}	Surge Forward Current		1 cycle, 50/60Hz, peak value, non-repetitive	640/700	A
I _{2t}	I _{2t}		Value for one cycle of surge current	2000	A ² S
T _j	Operating Junction Temperature			-40 ~ +150	°C
T _{stg}	Storage Temperature			-40 ~ +125	°C
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

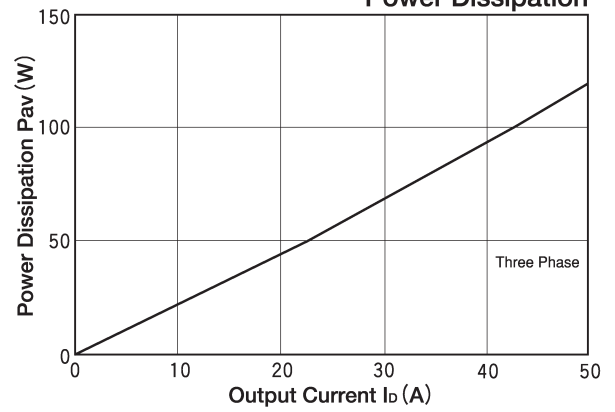
Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I _{RRM}	Repetitive Peak Reverse Current	T _j = 150°C at V _{RRM}			8.0	mA
V _{FM}	Forward Voltage Drop	T _j = 25°C, I _{FM} = 50A, Inst. measurement			1.2	V
R _{th(j-c)}	Thermal Impedance	Junction to case			0.3	°C/W

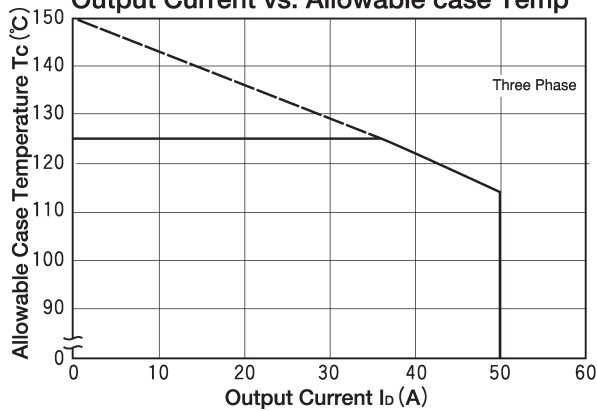
Maximum Forward Characteristics



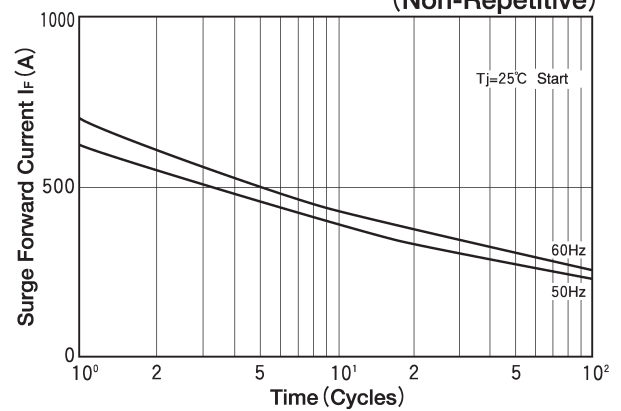
Average Forward Current vs. Power Dissipation



Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)

