

# DIODE(THREE PHASES BRIDGE TYPE)

## DF100AA120/160

TOP



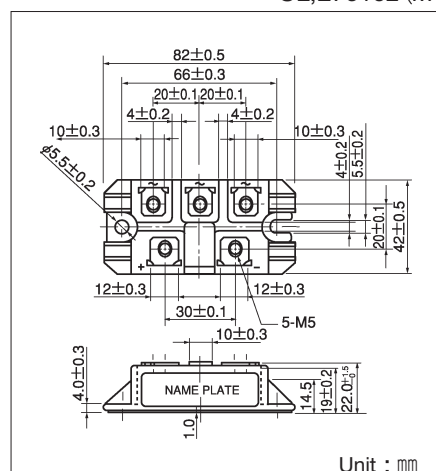
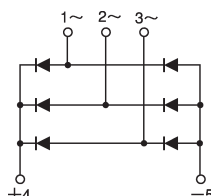
UL;E76102 (M)

Power Diode Module **DF100AA** 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 100Amp ( $T_c = 102^\circ\text{C}$ ) 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

( $T_j = 25^\circ\text{C}$ )

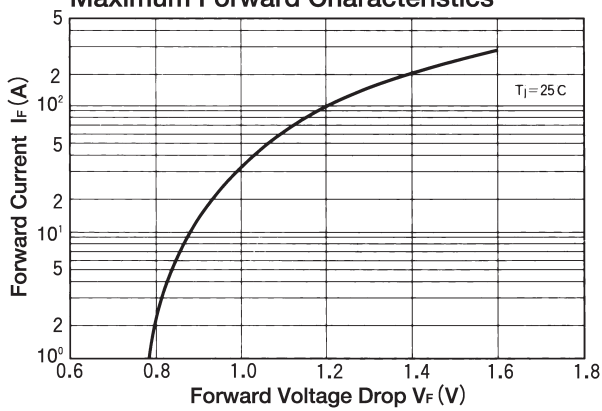
Symbol	Item	Ratings		Unit
		DF100AA120	DF100AA160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	1200	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item		Conditions	Ratings	Unit
$I_D$	Output Current (D.C.)		Three phase full wave. $T_c : 102^\circ\text{C}$	100	A
$I_{FSM}$	Surge Forward Current		1cycle, 50/60Hz, peak value, non-repetitive	910/1000	A
$I^2_t$	$I^2_t$		Value for one cycle of surge current	4100	$\text{A}^2\text{S}$
$T_j$	Operating Junction Temperature			$-40 \sim +150$	$^\circ\text{C}$
$T_{stg}$	Storage Temperature			$-40 \sim +125$	$^\circ\text{C}$
$V_{iso}$	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)	$\text{N} \cdot \text{m}$
		Terminal (M5)	Recommended Value 1.5~2.5 (15~25)	2.7 (28)	$(\text{kgf} \cdot \text{cm})$
	Mass		Typical Value	160	g

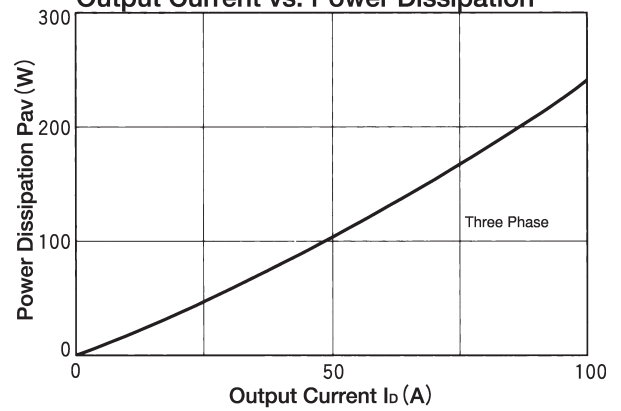
### Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
$I_{RRM}$	Repetitive Peak Reverse Current	$T_j = 150^\circ\text{C}$ at $V_{RRM}$			15	mA
$V_{FM}$	Forward Voltage Drop	$T_j = 25^\circ\text{C}$ , $I_{FM} = 100\text{A}$ , Inst. measurement			1.2	V
$R_{th(j-c)}$	Thermal Impedance	Junction to case			0.2	$^\circ\text{C}/\text{W}$

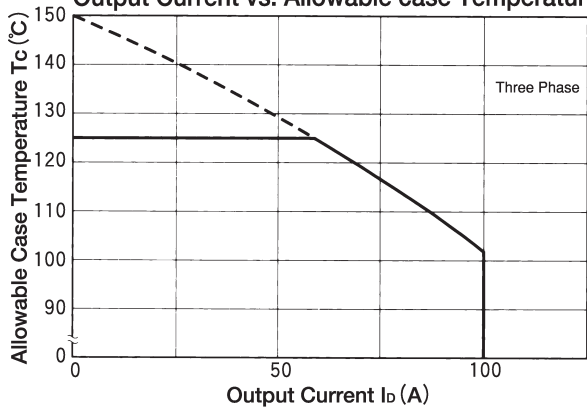
Maximum Forward Characteristics



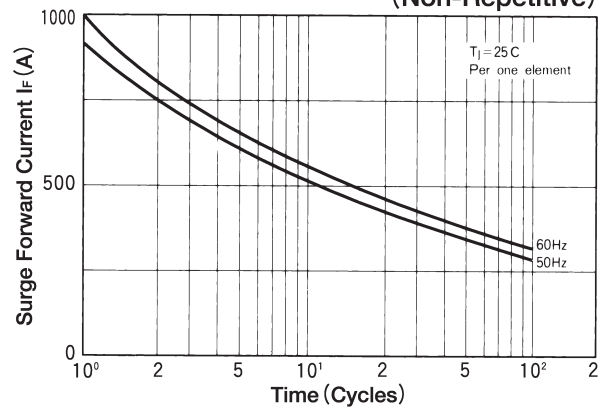
Output Current vs. Power Dissipation



Output Current vs. Allowable case Temperature



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)

