

# DIODE(THREE PHASES BRIDGE TYPE)

## DF100BA40/80

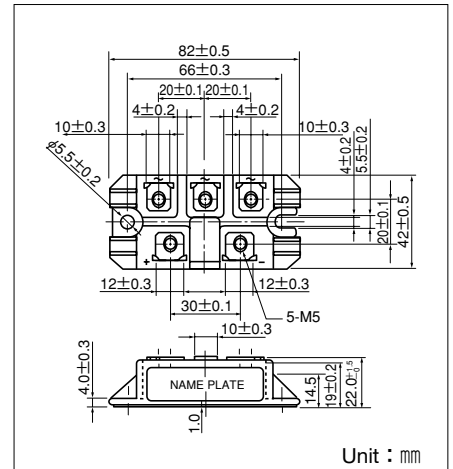
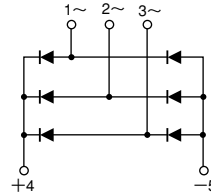
UL;E76102(M)

Power Diode Module DF100BA 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 800V.

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

### (Applications)

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



### Maximum Ratings

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

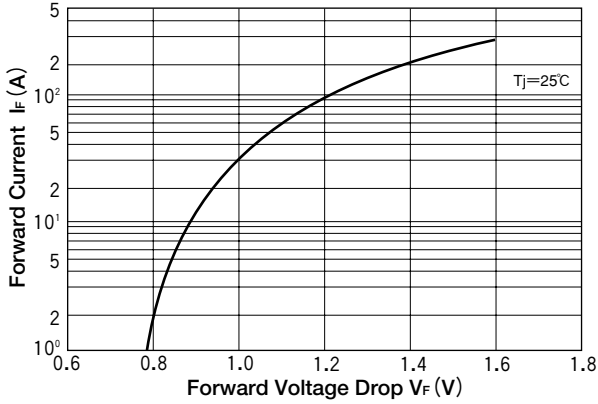
Symbol	Item	Ratings		Unit
		DF100BA40	DF100BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

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	
$I^2t$	$I^2t$	Value for one cycle of surge current	4100	$\text{A}^2\text{S}$	
$T_j$	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature		-40 to +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)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	160	g	

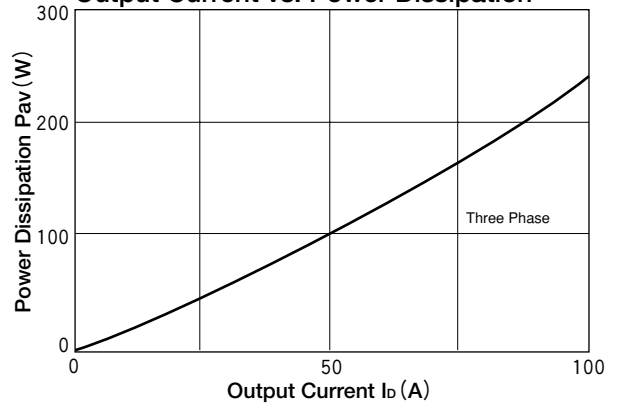
### Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
$I_{RRM}$	Repetitive Peak Reverse Current	$T_j=150^\circ\text{C}$ at $V_{RRM}$			10	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	$^\circ\text{C}/\text{W}$

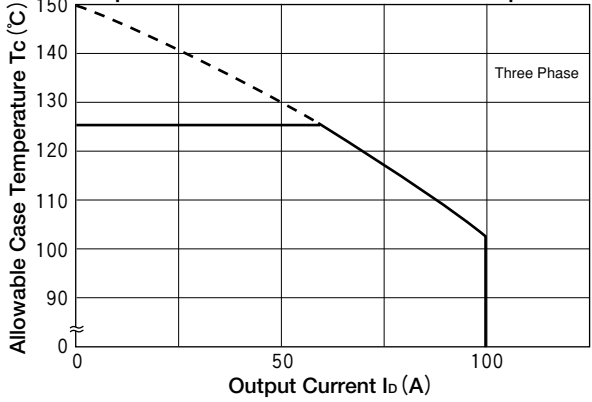
**Maximum Forward Characteristics**



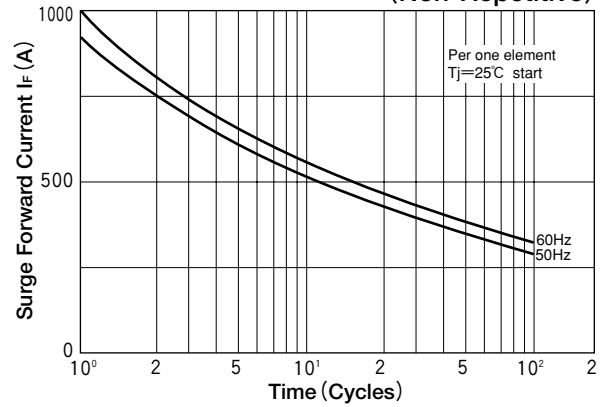
**Output Current vs. Power Dissipation**



**Output Current vs. Allowable case Temperature**



**Cycle Surge Forward Current Rating (Non-Repetitive)**



**Transient Thermal Impedance (max)**

