

## DIODE(THREE PHASES BRIDGE TYPE)

# DF75AA120/160

TOP



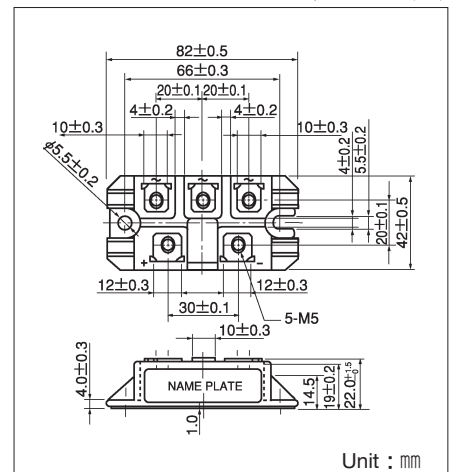
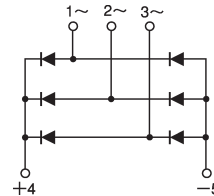
UL;E76102 (M)

Power Diode Module **DF75AA** 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 75Amp ( $T_c = 100^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 1600V.

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

### (Applications)

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



### Maximum Ratings

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

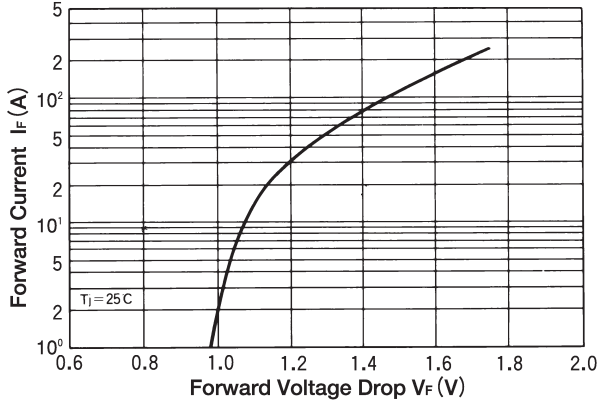
Symbol	Item	Ratings		Unit
		DF75AA120	DF75AA160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	1200	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output Current (D.C.)	Three Phase full wave. $T_c = 100^\circ\text{C}$	75	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	910/1000	A	
$I^2t$	$I^2t$	Value for one 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)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5~2.5 (15~25)	2.7 (28)	
	Mass	Typical Value	160	g	

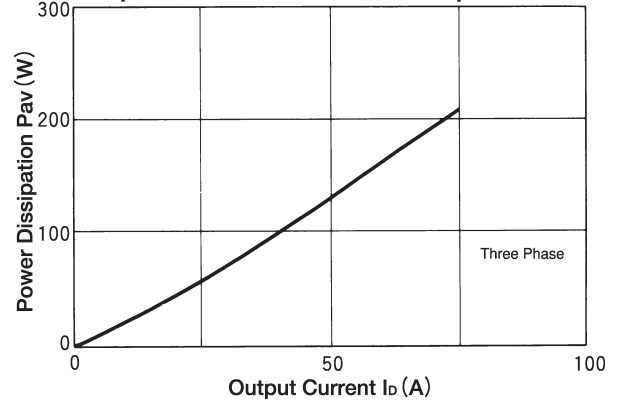
### Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j = 150^\circ\text{C}$ at $V_{RRM}$	10.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$T_j = 25^\circ\text{C}$ , $I_{FM} = 75\text{A}$ , Inst. measurement	1.40	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.24	$^\circ\text{C}/\text{W}$

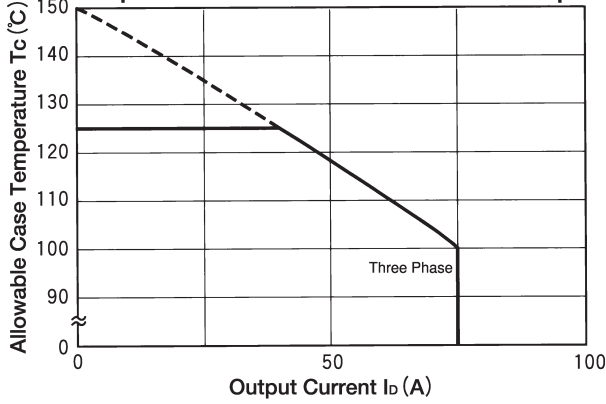
**Maximum Forward Characteristics**



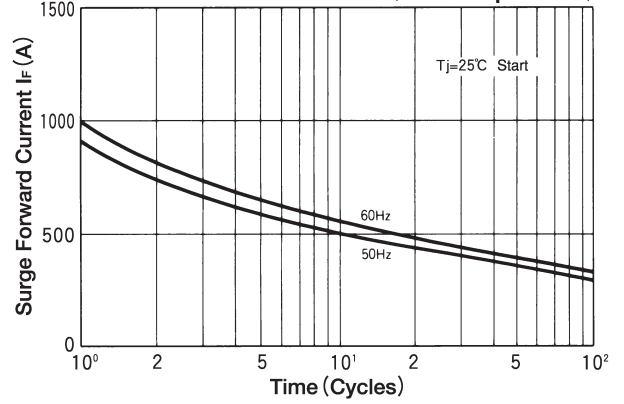
**Output Current vs. Power Dissipation**



**Output Current vs. Allowable case Temp**



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



**Transient Thermal Impedance (max)**

