

# DIODE(THREE PHASES BRIDGE TYPE)

# DF20AA120/160



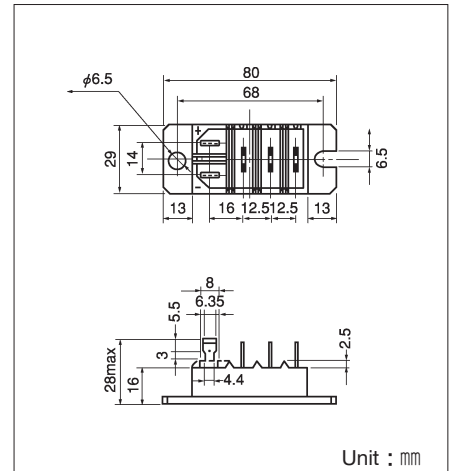
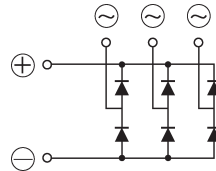
UL;E76102 (M)

Power Diode Module **DF20AA** 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 20Amp ( $T_c=119^\circ\text{C}$ ) 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
- Easy Assemble by the #250 terminal Tab

**(Applications)**

AC. DC Motor Drive/AVR/Switching  
—for three phase rectification



**Maximum Ratings**

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

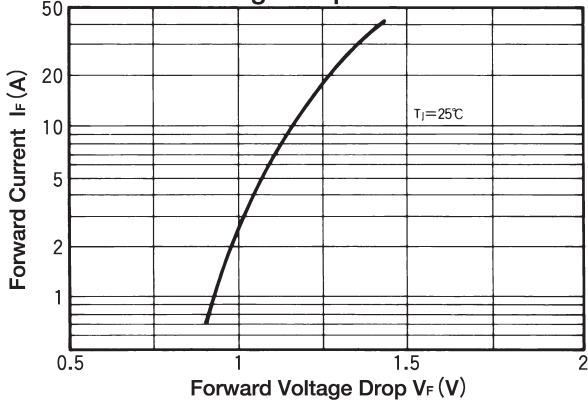
Symbol	Item	Ratings		Unit
		DF20AA120	DF20AA160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	1200	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output current (D.C.)	Three phase. full wave. $T_c=119^\circ\text{C}$	20	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	220/240	A	
$T_j$	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.)	Main Terminal to case 1minute	2500	V	
	Mounting Torque	Mounting (M6)	Recommended Value 2.5~3.9 (25~40)	4.7 (48)	N·m (kgf·cm)
		Terminal	Tub Terminal #250	—	
	Mass	Typical Value	90	g	

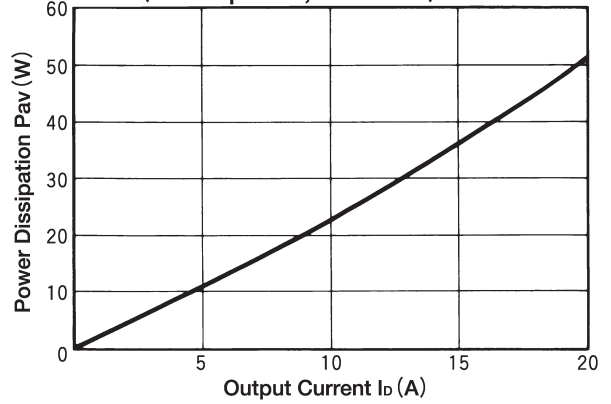
**Electrical Characteristics**

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	3.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=20\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.25	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.6	$^\circ\text{C/W}$

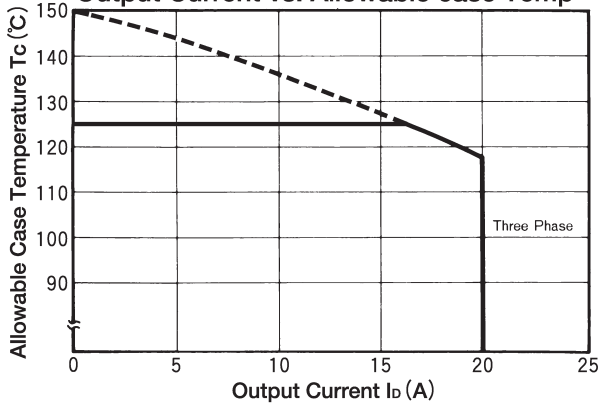
**Forward Voltage Drop max.**



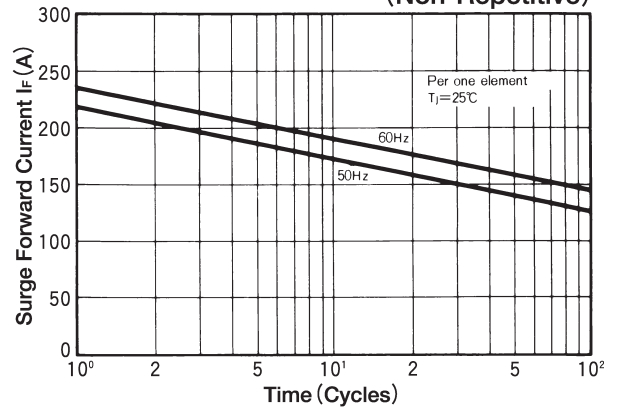
**Output Current vs. Power Dissipation, max. (Three phase, full wave)**



**Output Current vs. Allowable case Temp**



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



**Transient Thermal Impedance (max)**

