

# 3-Phase Diode Bridge

# DF20AA120/160

UL; E76102

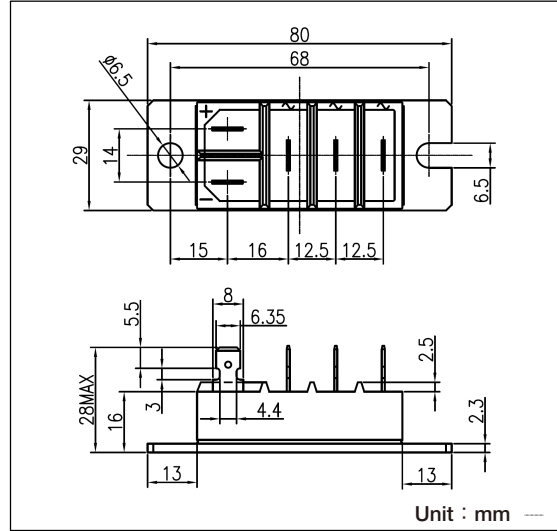
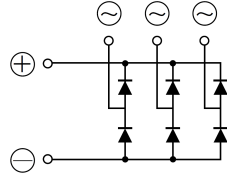
## 《Features》

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 (Tc=119°C). Repetitive peak reverse voltage is up to 1,600V.

- TjMax=150°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 (Tj=25°C unless otherwise specified)

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

Item	Symbol	Unit	Ratings	Conditions
Out put Current (D.C)	$I_D$	A	20	$T_C=119^\circ\text{C}$
Surge Forward Current	$I_{FSM}$	A	220/240	1/2cycle, 50/60Hz, Peak value, non-repetitive
Junction Temperature	$T_j$	°C	-40 to +150	
Storage Temperature	$T_{stg}$	°C	-40 to +125	
Isolation Breakdown Voltage(R.M.S.)	$V_{ISO}$	V	2500	A.C. 1minute
Mounting torque	Mounting M6	N·m (kgf·cm)	4.7(48)	Recommended Value 2.5 to 3.9 (25 to 40)
	Mounting M5		2.7(28)	Recommended Value 1.5 to 2.5 (15 to 25)
Mass		g	90	Typical value

## ■ Electrical Characteristics (Tj=25°C unless otherwise specified)

Item	Symbol	Unit	Ratings			Conditions
			Min.	Typ.	Max.	
Repetitive Peak Reverse Current	$I_{RRM}$	mA			3.0	$V_R=V_{RRM}$ , $T_j=150^\circ\text{C}$
Forward Voltage Drop	$V_{FM}$	V			1.25	$I_F=20\text{A}$ , Inst. measurement
Threshold Voltage	$V_{(TO)}$	V			0.85	$T_j=150^\circ\text{C}$
Dynamic Resistance	$r_t$	mΩ			10.3	$T_j=150^\circ\text{C}$
Thermal Resistance	$R_{th(j-c)}$	°C/W			0.6	Junction to case
Interface Thermal Resistance	$R_{th(C-S)}$	°C/W			0.1	Case to Heat Sink Thermal conductivity(Silicon grease) $\cong 7 \times 10^{-3} [\text{W}/\text{cm} \cdot ^\circ\text{C}]$

