

DIODE(THREE PHASES BRIDGE TYPE)

DF40AA120/160

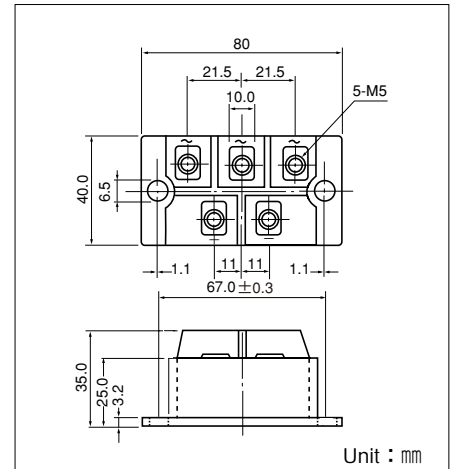
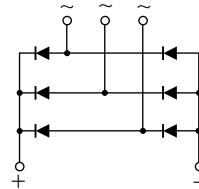
UL:E76102(M)

Power Diode Module **DF40AA** 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 40Amp ($T_c=116^\circ\text{C}$) 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

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

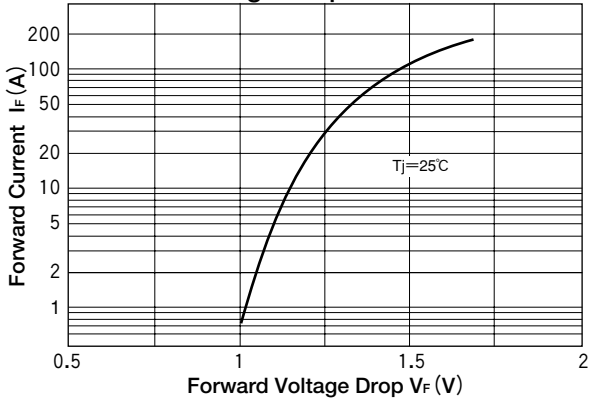
Symbol	Item	Ratings		Unit
		DF40AA120	DF40AA160	
V_{RRM}	Repetitive Peak Reverse Voltage	1200	1600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item	Conditions	Ratings	Unit	
I_D	Output current (D.C.)	Three phase. full wave. $T_c=116^\circ\text{C}$	40	A	
I_{FSM}	Surge Forward Current	$\frac{1}{2}$ cycle, 50/60Hz, Peak value, non-repetitive	640/700	A	
T_j	Junction Temperature		-40 to +150	$^\circ\text{C}$	
T_{stg}	Storage Temperature		-40 to +125	$^\circ\text{C}$	
V_{iso}	Isolation Voltage	Terminal to case, AC RMS 1minute	2500	V	
	Mounting Torque	Mounting (M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	200	g	

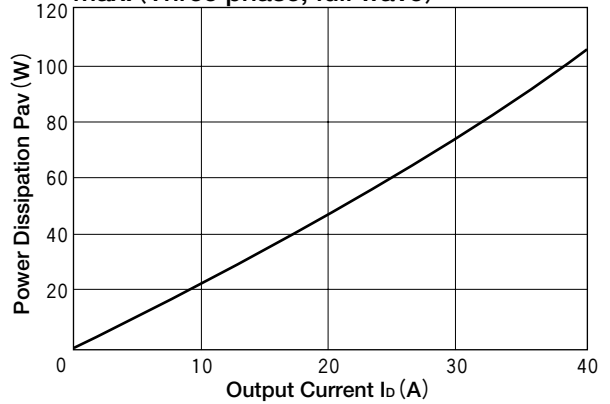
Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I_{RRM}	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at V_{RRM}	8.0	mA
V_{FM}	Forward Voltage Drop, max.	$I_F=40\text{A}$, $T_j=25^\circ\text{C}$ Inst. measurement	1.3	V
$R_{th(j-c)}$	Thermal Resistance, max.	Junction to case	0.32	$^\circ\text{C/W}$

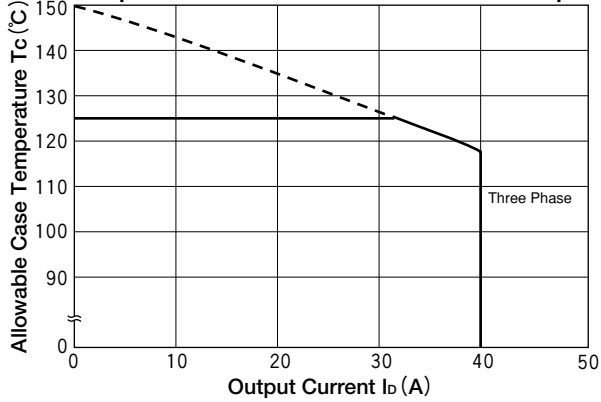
Forward Voltage Drop max.



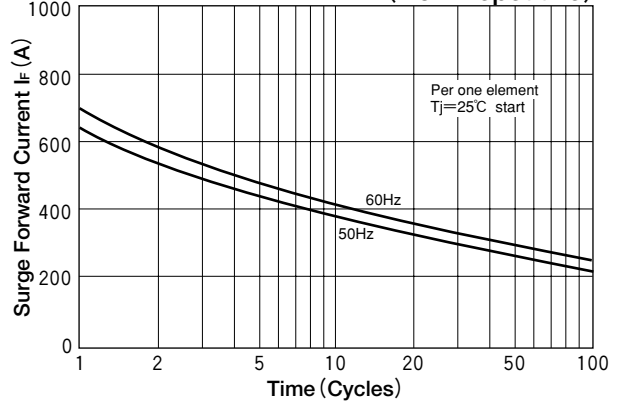
Output Current vs. Power Dissipation, max. (Three phase, full wave)



Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)

