

DIODE(THREE PHASES BRIDGE TYPE)

DF30CA80/120/160

TOP



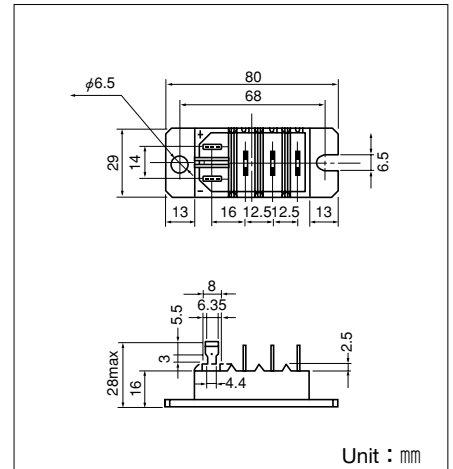
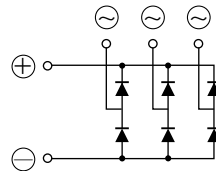
UL;E76102 (M)

Power Diode Module **DF30CA** 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 30Amp ($T_c=122^\circ\text{C}$) Repetitive peak reverse voltage is up to 1,600V.

- IFSM=775/850A (50/60Hz)
- $T_{j\text{Max}}=150^\circ\text{C}$
- 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



Unit : mm

Maximum Ratings

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

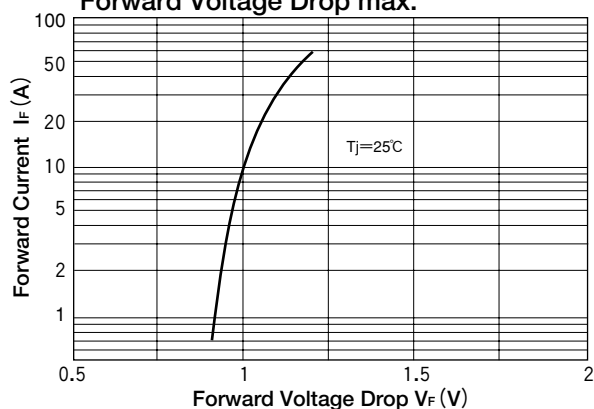
Symbol	Item	Ratings			Unit
		DF30CA80※	DF30CA120	DF30CA160※	
V_{RRM}	Repetitive Peak Reverse Voltage	800	1200	1600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	960	1300	1700	V

Symbol	Item		Conditions	Ratings	Unit
I_D	Output current (D.C.)		Three phase. full wave. $T_c=122^\circ\text{C}$	30	A
I_{FSM}	Surge Forward Current		1 cycle, 50/60Hz, peak value, non-repetitive	775/850	A
T_j	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.)		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

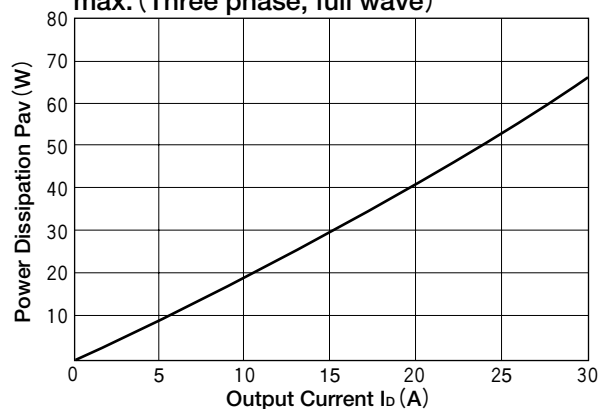
Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I_{RRM}	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at V_{RRM}	12.0	mA
V_{FM}	Forward Voltage Drop, max.	$I_{FM}=30\text{A}$, $T_j=25^\circ\text{C}$ Inst. measurement	1.1	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.42	$^\circ\text{C/W}$

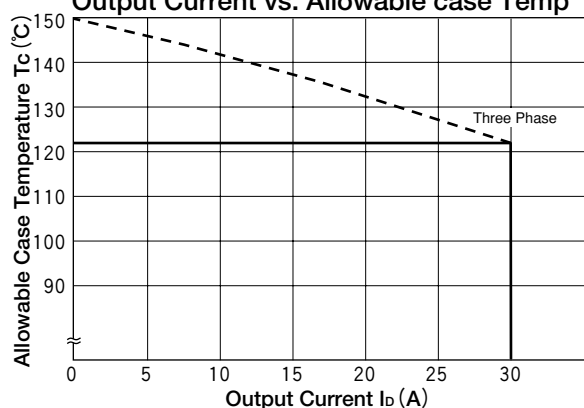
Forward Voltage Drop max.



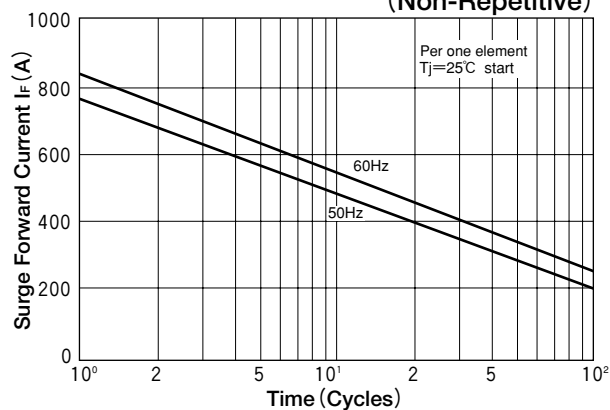
Output Current vs. Power Dissipation, max. (Three phase, full wave)



Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)

