

## DIODE(THREE PHASES BRIDGE TYPE)

# DF60LA/LB80/160

TOP



Power Diode Module **DF60LA/LB** 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 60Amp ( $T_c=111^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 1600V.

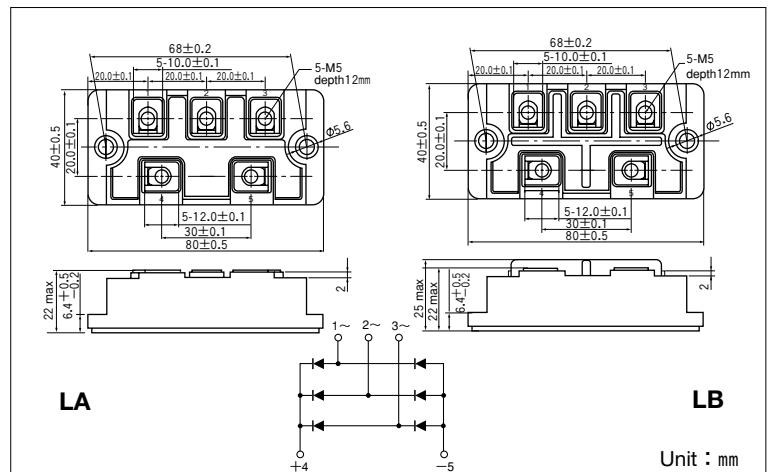
●  $T_{j\text{MAX}}=150^\circ\text{C}$

● Isolated Mounting Base

(Applications)

AC. DC Motor Drive/AVR/Switching

—for three phase rectification



### Maximum Ratings

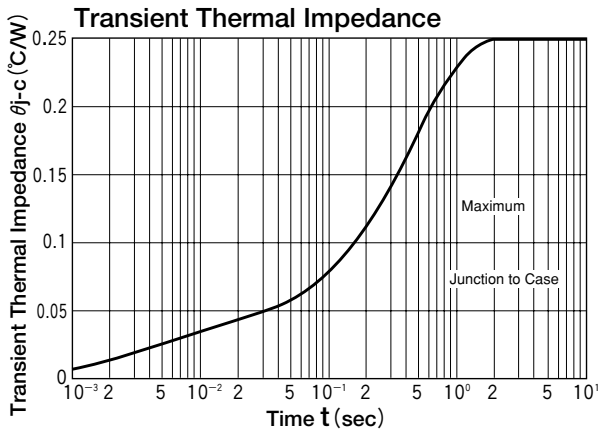
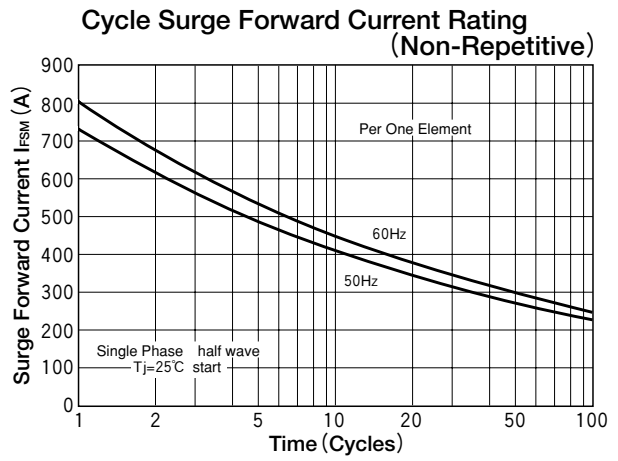
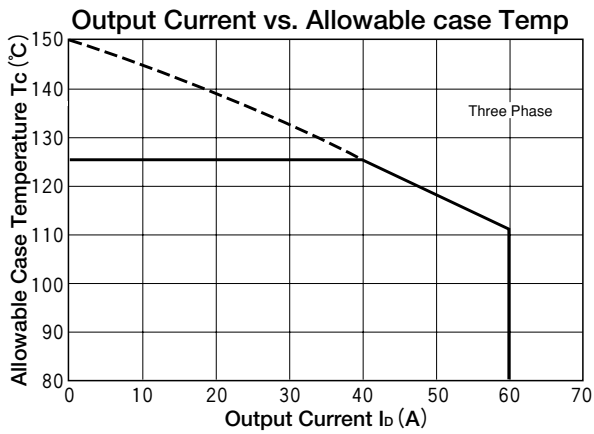
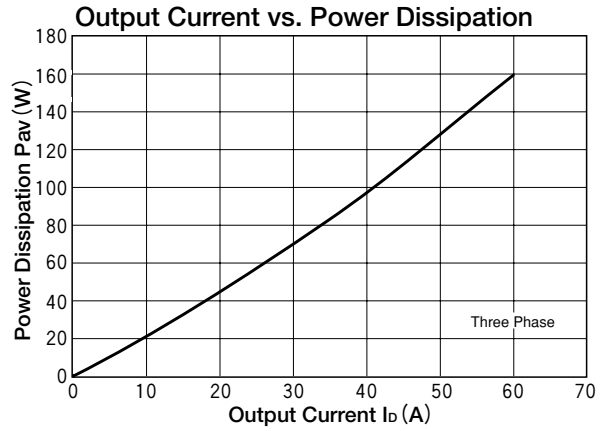
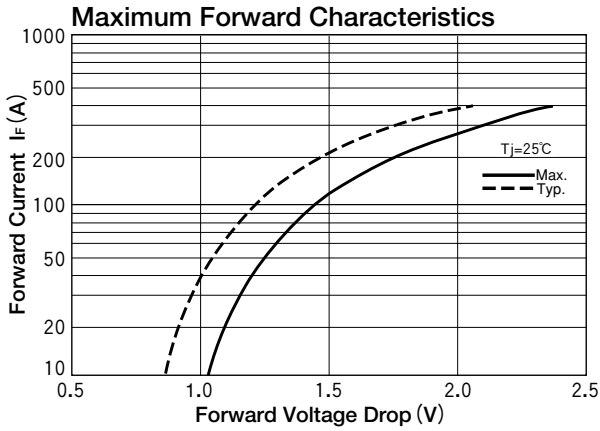
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		unit
		DF60LA/LB80	DF60LA/LB160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	800	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	960	1700	V

Symbol	Item	Conditions	Ratings	unit	
$I_D$	Output Current (D.C.)	Three phase full wave, $T_c=111^\circ\text{C}$	60	A	
$I_{FSM}$	Surge Forward Current	$\frac{1}{2}$ cycle, 50/60Hz, Peak value, non-repetitive	730/800	A	
$T_j$	Operating 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.)	A.C. 1minute	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	100	g	

### Electrical Characteristics

Symbol	Item	Conditions	Ratings	unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ , $V_R=V_{RRM}$	8	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_F=60\text{A}$ , Inst. measurement	1.30	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.25	$^\circ\text{C/W}$



# DIODE(THREE PHASES BRIDGE TYPE)

# DF75LA/LB80/160

TOP

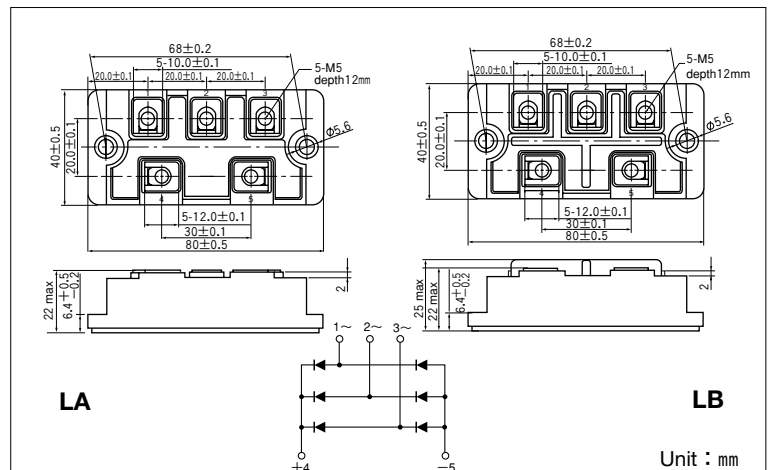


Power Diode Module DF75LA/LB is designed for three phase full wave rectification, which has six diodes connected in a three phase bridge configuration. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction output DC current is 75Amp ( $T_c=101^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 1600V.

- $T_{j\text{MAX}}=150^\circ\text{C}$
- Isolated Mounting Base

### (Applications)

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



### Maximum Ratings

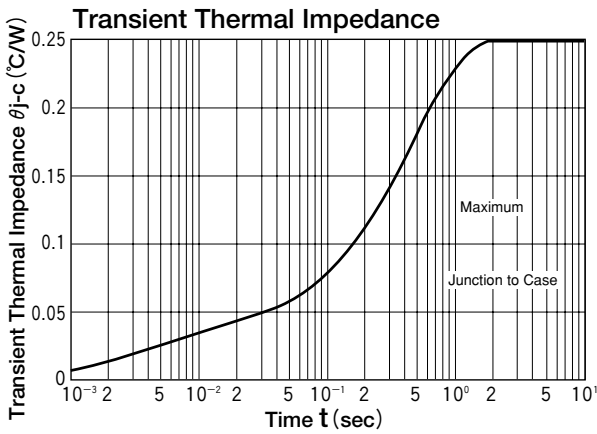
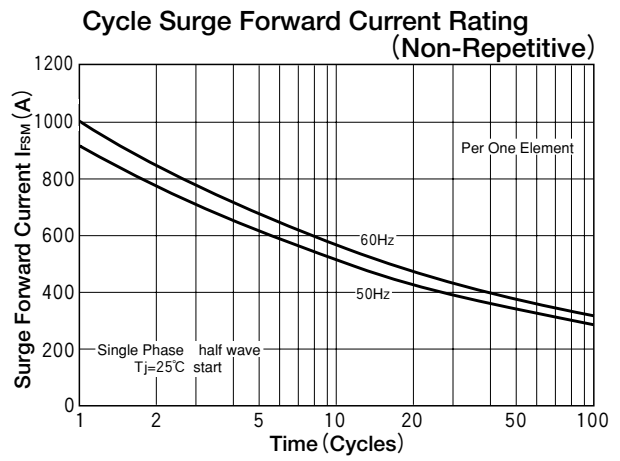
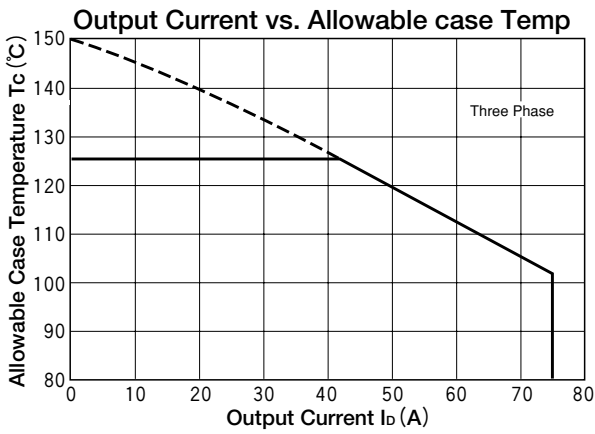
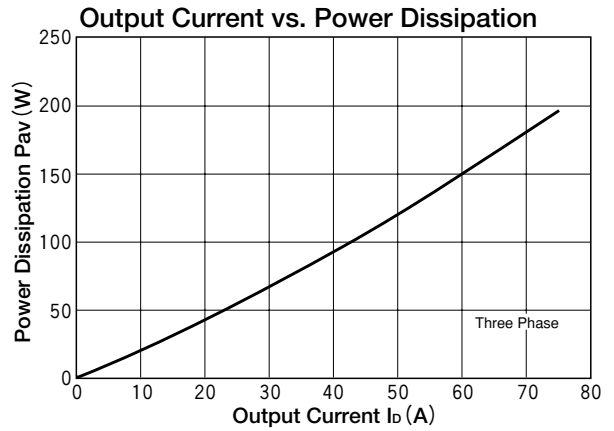
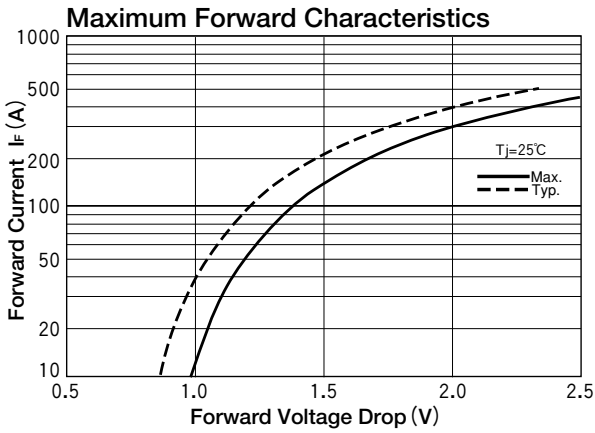
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		unit
		DF75LA/LB80	DF75LA/LB160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	800	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	960	1700	V

Symbol	Item	Conditions	Ratings	unit	
$I_D$	Output Current (D.C.)	Three phase full wave, $T_c=101^\circ\text{C}$	75	A	
$I_{FSM}$	Surge Forward Current	$\frac{1}{2}$ cycle, 50/60Hz, Peak value, non-repetitive	910/1000	A	
$T_j$	Operating 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.)	A.C. 1minute	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	100	g	

### Electrical Characteristics

Symbol	Item	Conditions	Ratings	unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ , $V_R=V_{RRM}$	8	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_F=75\text{A}$ , Inst. measurement	1.30	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.25	$^\circ\text{C/W}$



# DIODE(THREE PHASES BRIDGE TYPE)

# DF100LA/LB80/160

TOP

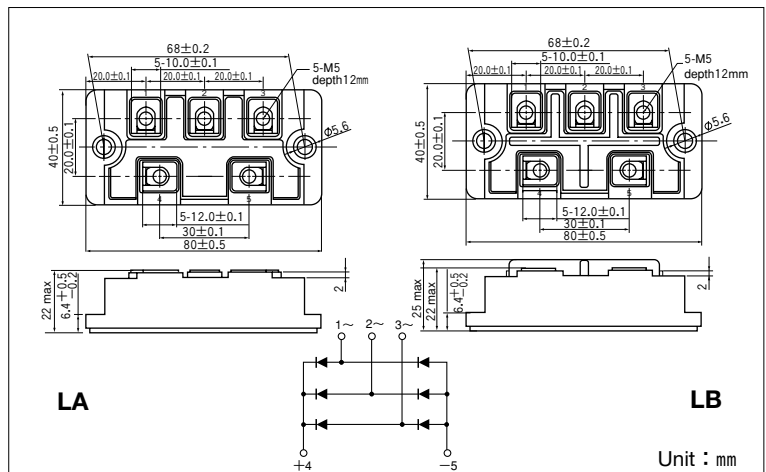


Power Diode Module DF100LA/LB is designed for three phase full wave rectification, which has six diodes connected in a three phase bridge configuration. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction output DC current is 100Amp (Tc=90°C) Repetitive peak reverse voltage is up to 1600V.

- TjMAX=150°C
- Isolated Mounting Base

**(Applications)**

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



**Maximum Ratings**

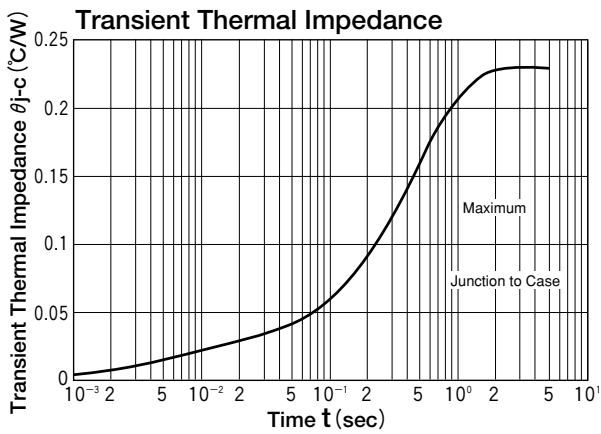
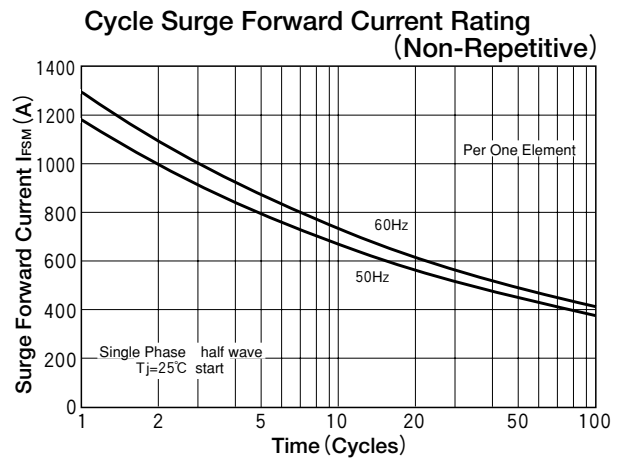
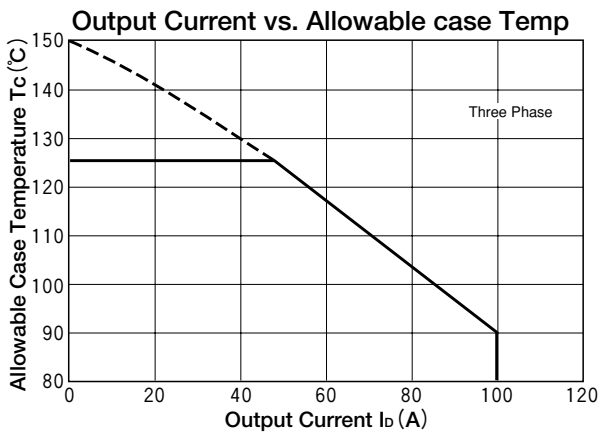
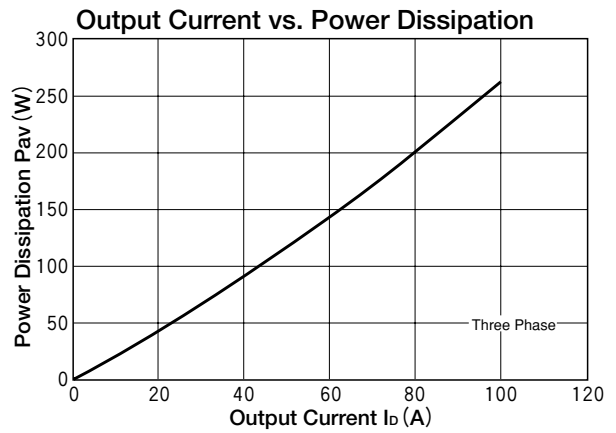
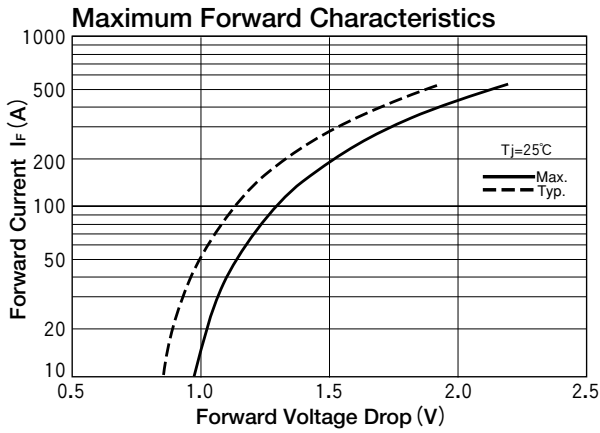
(Tj=25°C unless otherwise specified)

Symbol	Item	Ratings		unit
		DF100LA/LB80	DF100LA/LB160	
VRRM	Repetitive Peak Reverse Voltage	800	1600	V
VRSM	Non-Repetitive Peak Reverse Voltage	960	1700	V

Symbol	Item	Conditions	Ratings	unit	
Id	Output Current (D.C.)	Three phase full wave, Tc=90°C	100	A	
IfSM	Surge Forward Current	1/2cycle, 50/60Hz, Peak value, non-repetitive	1186/1300	A	
Tj	Operating Junction Temperature		-40 to +150	°C	
Tstg	Storage Temperature		-40 to +125	°C	
Viso	Isolation Breakdown Voltage (R.M.S.)	A.C. 1minute	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	100	g	

**Electrical Characteristics**

Symbol	Item	Conditions	Ratings	unit
IRRM	Repetitive Peak Reverse Current, max.	Tj=150°C, VR=VRRM	12	mA
VFM	Forward Voltage Drop, max.	If=100A, Inst. measurement	1.30	V
Rth(j-c)	Thermal Impedance, max.	Junction to case	0.23	°C/W



# DIODE(THREE PHASES BRIDGE TYPE)

## DF20BA40/80



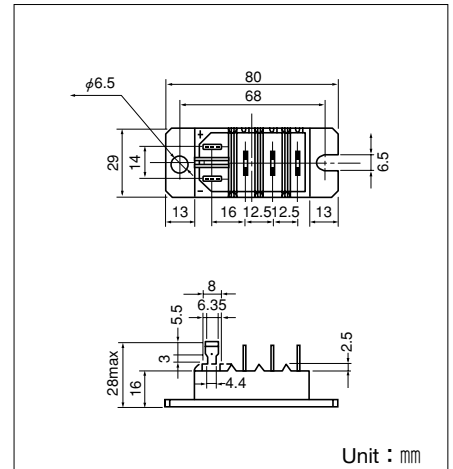
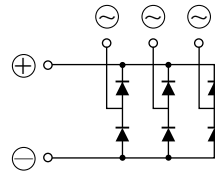
UL;E76102 (M)

Power Diode Module **DF20BA** 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 ( $T_c=123^{\circ}\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

- $T_{j\text{Max}}=150^{\circ}\text{C}$
- Isolated Mounting Base
- High reliability by unique glass passivation
- Easy Assemble by the #250 terminal Tab

### (Applications)

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



Unit : mm

### Maximum Ratings

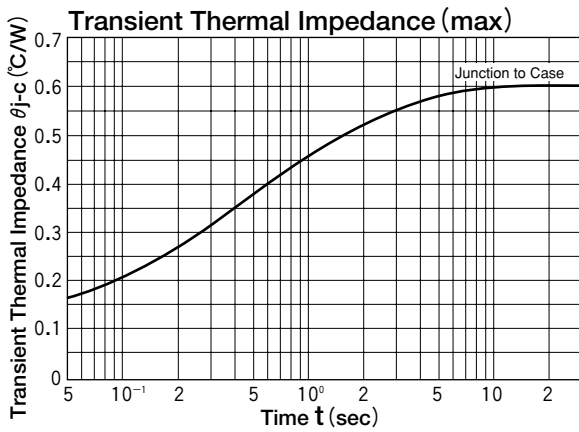
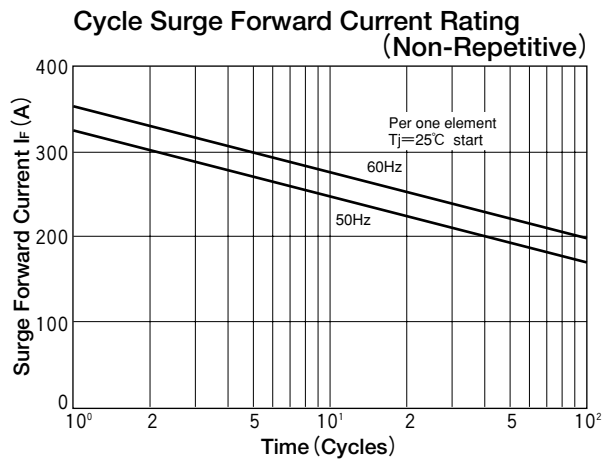
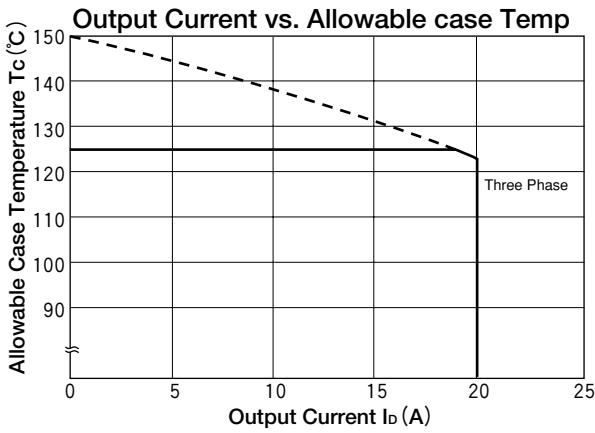
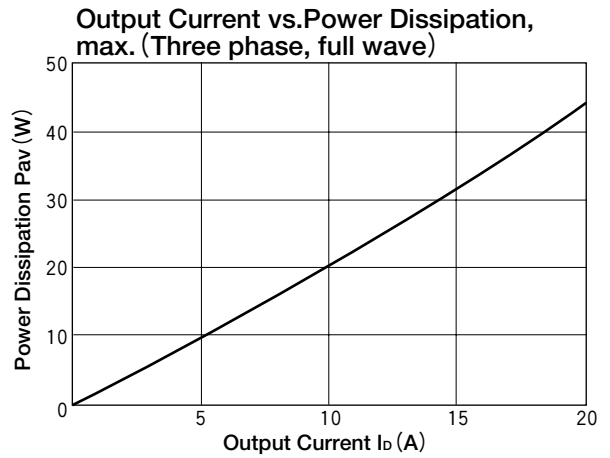
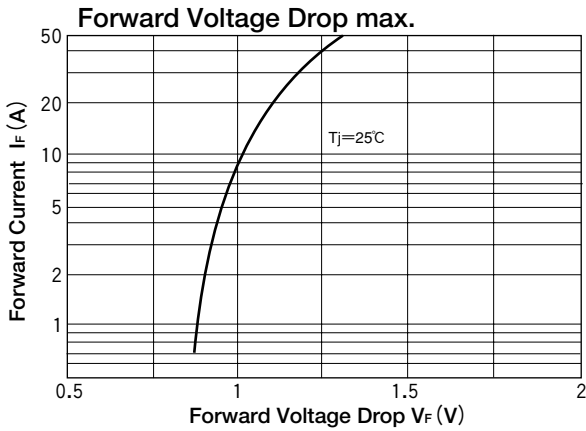
( $T_j=25^{\circ}\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF20BA40	DF20BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output current (D.C.)	Three phase. full wave. $T_c=123^{\circ}\text{C}$	20	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	320/350	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	Tab 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 $V_{RRM}$	1.5	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=20\text{A}$ , $T_j=25^{\circ}\text{C}$ Inst. measurement	1.1	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.6	$^{\circ}\text{C}/\text{W}$





# DIODE(THREE PHASES BRIDGE TYPE)

# DF20AA120/160

TOP



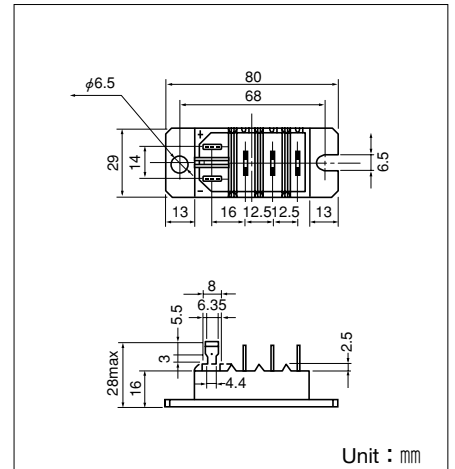
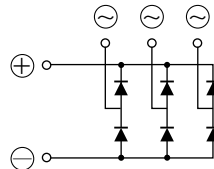
UL;E76102(M)

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 Moter Drive/AVR/Switching  
—for three phase rectification



**Maximum Ratings**

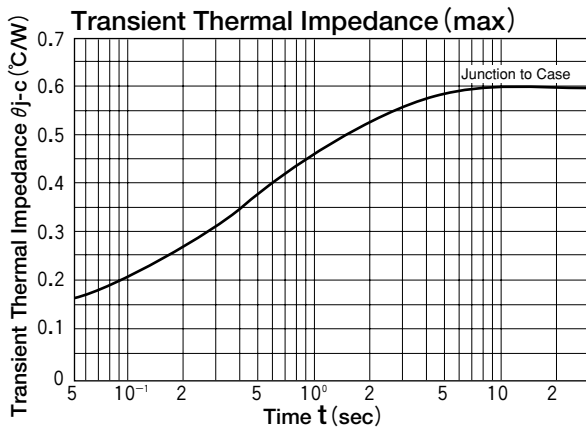
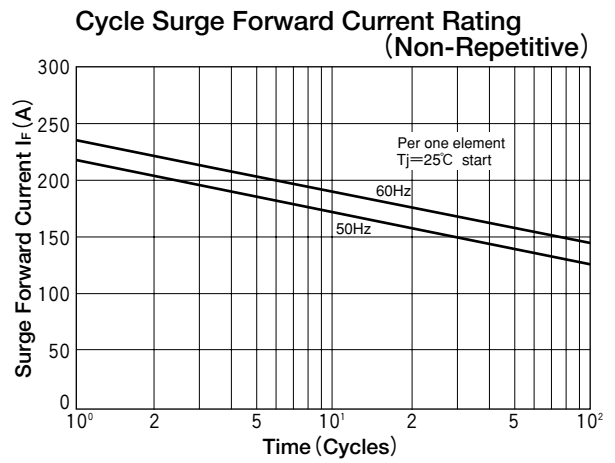
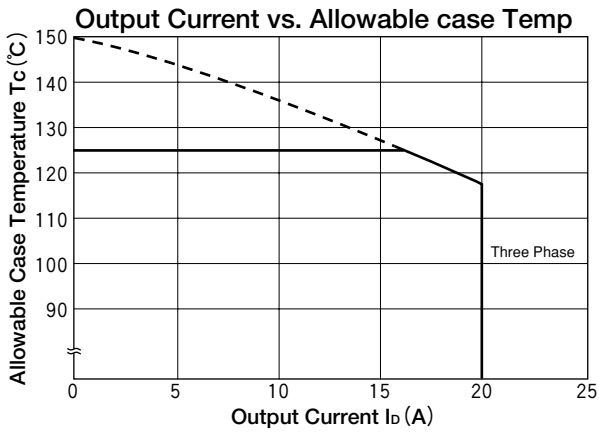
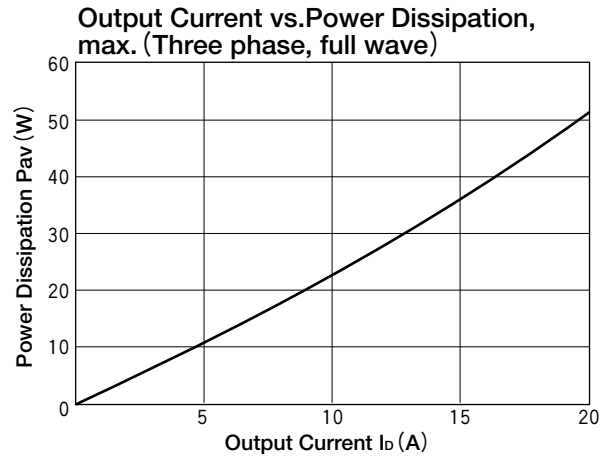
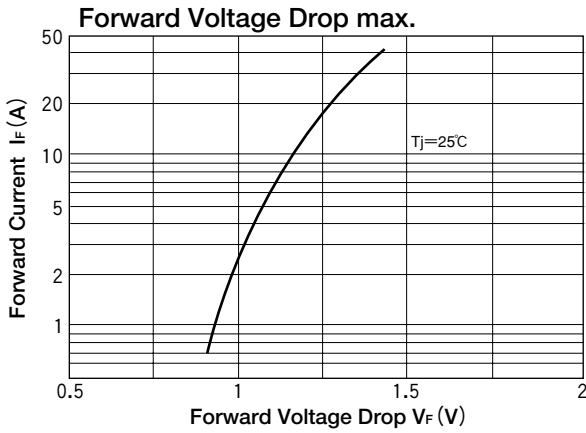
( $T_j=25^\circ\text{C}$  unless otherwise specified)

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 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	Tab 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	$^\circ\text{C/W}$



# DIODE(THREE PHASES BRIDGE TYPE)

# DF20CA80/120/160



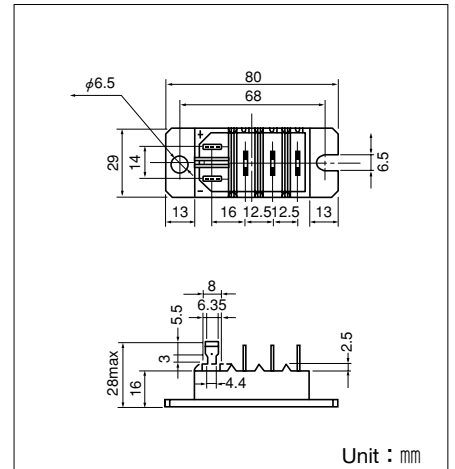
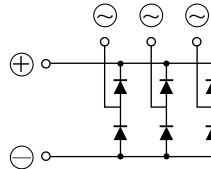
UL;E76102 (M)

Power Diode Module **DF20CA** 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 ( $T_c=123^{\circ}\text{C}$ ) Repetitive peak reverse voltage is up to 1,600V.

- IFSM=550/600A (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 Moter Drive/AVR/Switching  
—for three phase rectification



Unit : mm

**Maximum Ratings**

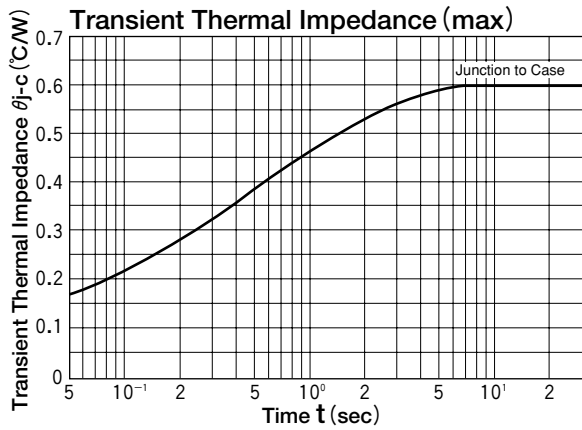
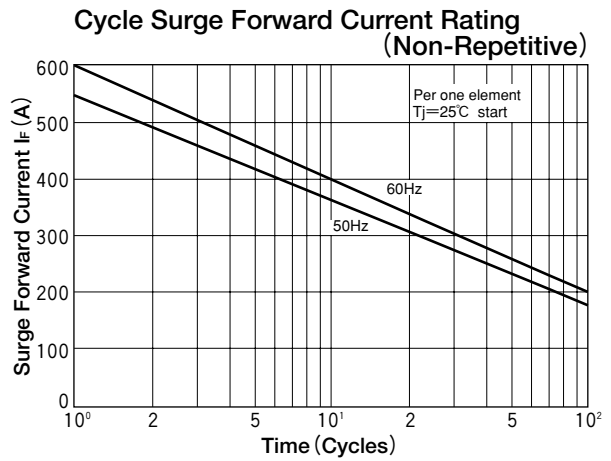
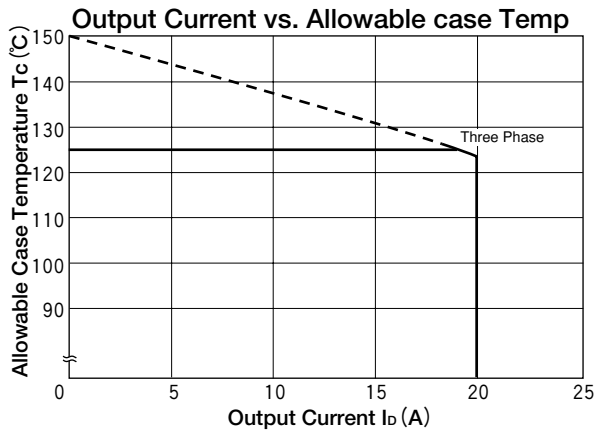
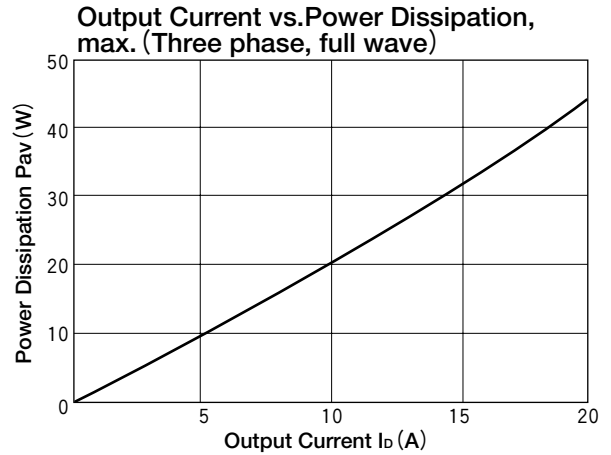
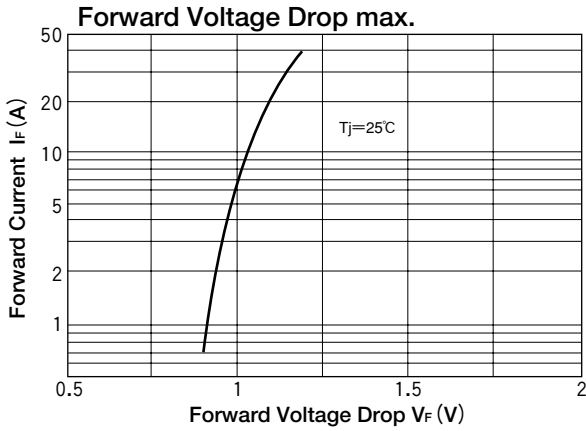
( $T_j=25^{\circ}\text{C}$  unless otherwise specified)

Symbol	Item	Ratings			Unit
		DF20CA80	DF20CA120	DF20CA160	
$V_{RRM}$	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. $T_c=123^{\circ}\text{C}$	20	A	
$I_{FSM}$	Surage Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	550/600	A	
$T_j$	Junction Temperature		-40 to +150	$^{\circ}\text{C}$	
$T_{stg}$	Storge 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	Tab 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 $V_{RRM}$	8.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=20\text{A}$ , $T_j=25^{\circ}\text{C}$ Inst. measurement	1.1	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.6	$^{\circ}\text{C/W}$



## DIODE(THREE PHASES BRIDGE TYPE)

# DF20DB40/80

TOP

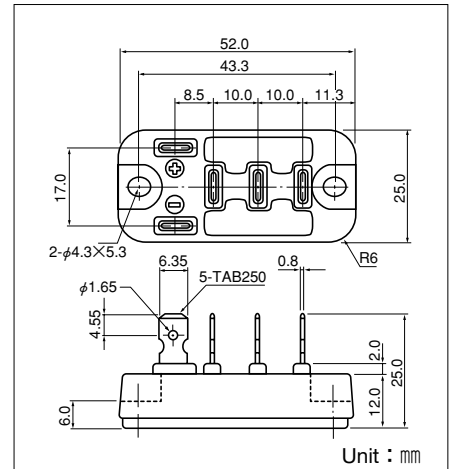
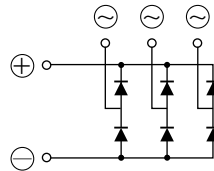


Power Diode Module **DF20DB** is designed for three phase full wave rectification, which has six diodes connected in a three phase bridge configuration. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction output DC current is 20Amp ( $T_c=97^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

- $T_{j\text{Max}}=150^\circ\text{C}$
- Isolated Mounting Base
- High reliability by unique glass passivation
- Easy Assemble by the #250 terminal Tab

### (Applications)

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



### Maximum Ratings

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

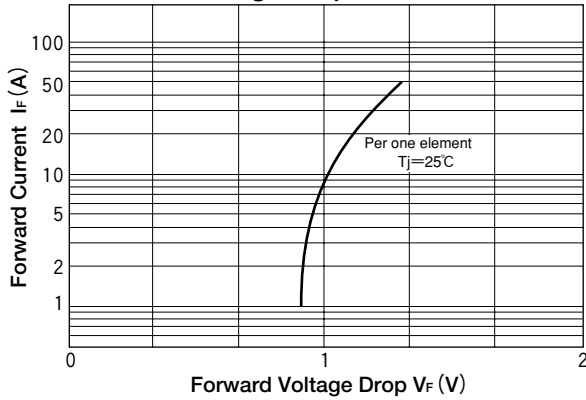
Symbol	Item	Ratings		Unit
		DF20DB40	DF20DB80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	500	900	V

Symbol	Item	Conditions	Ratings	Unit
$I_D$	Output current (D.C.)	Three phase. full wave. $T_c=97^\circ\text{C}$	20	A
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	320/350	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	2000	V
	Mounting Torque (M4)	Recommended Value 1.0-1.4 (10-14)	1.5 (15)	N·m (kgf·cm)
	Mass	Typical Value	32	g

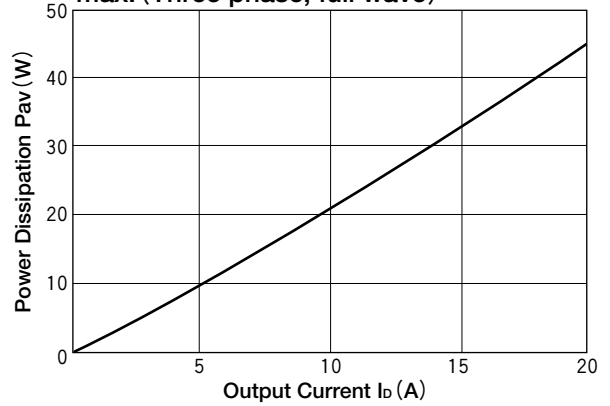
### Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	1.5	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=20\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.1	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	1.2	$^\circ\text{C/W}$

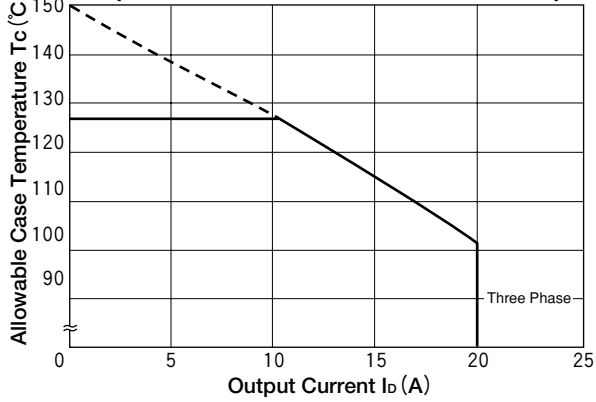
Forward Voltage Drop max.



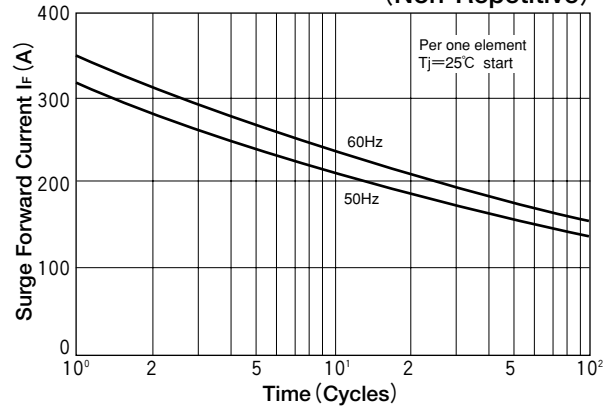
Output Current vs. Power Dissipation, max. (Three phase, full wave)



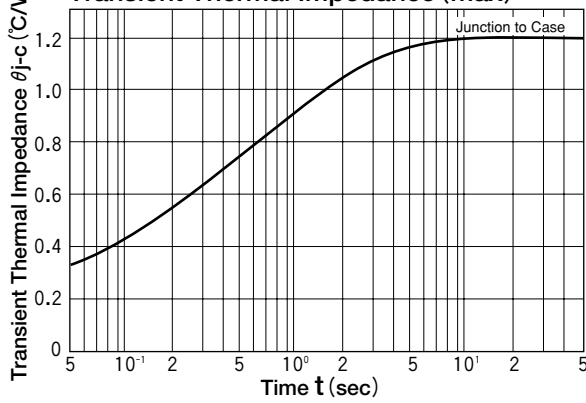
Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)



# DIODE(THREE PHASES BRIDGE TYPE)

## DF30BA40/80

TOP



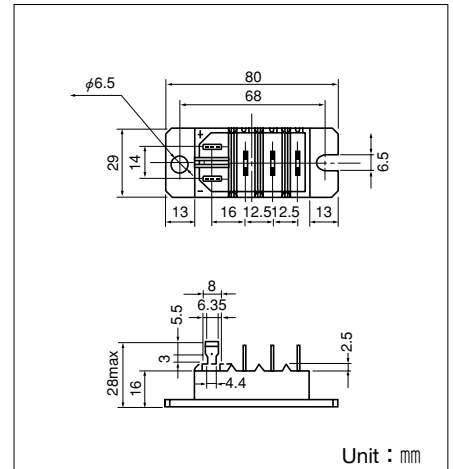
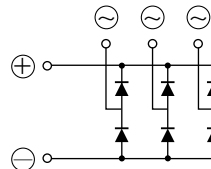
UL;E76102 (M)

Power Diode Module **DF30BA** 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 800V.

- $T_{j\text{Max}}=150^\circ\text{C}$
- 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

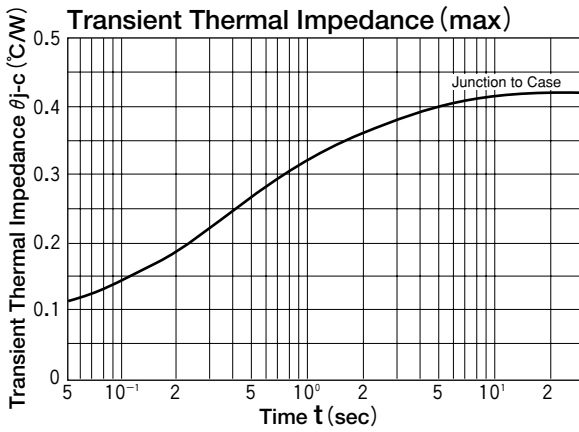
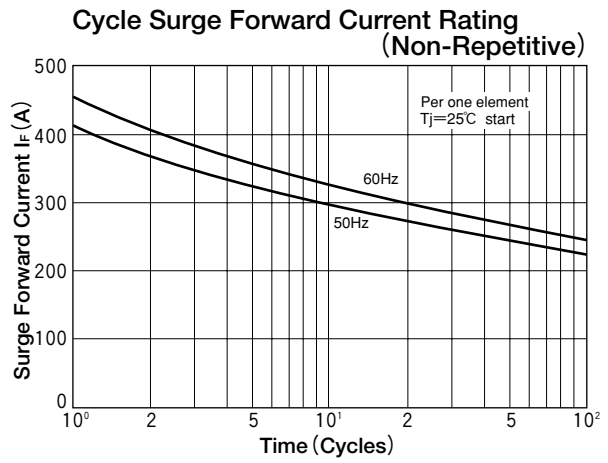
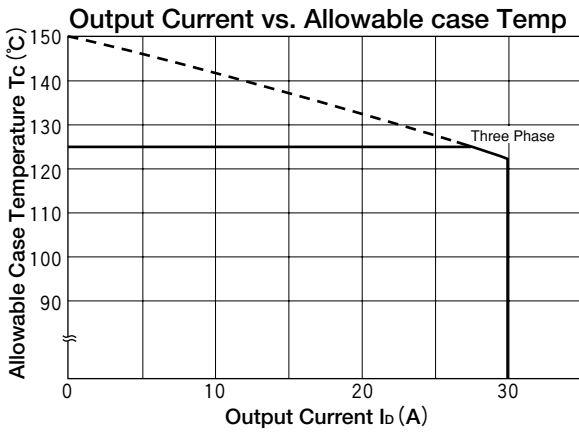
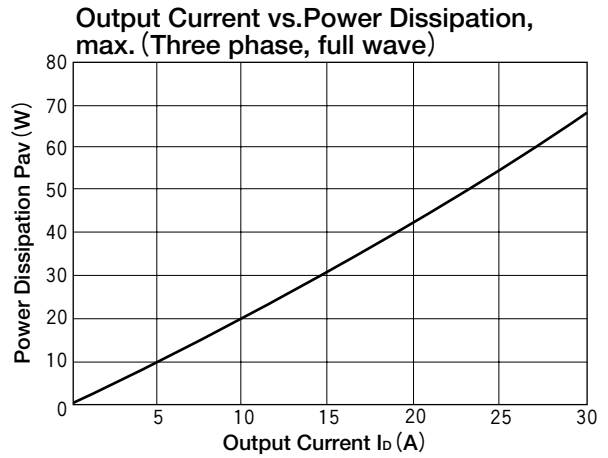
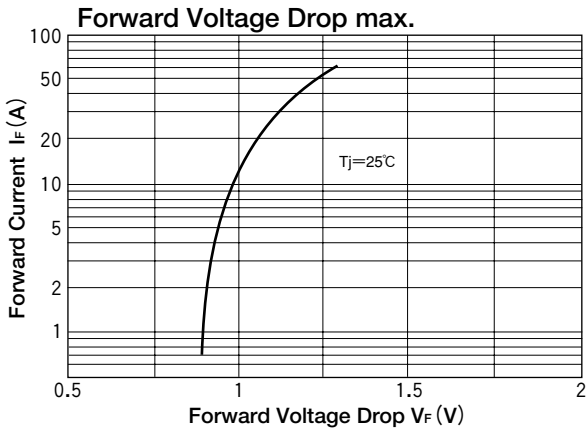
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF30BA40	DF30BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	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	410/450	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	Tab 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 $V_{RRM}$	1.5	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	$^\circ\text{C/W}$





## DIODE(THREE PHASES BRIDGE TYPE)

# DF30AA120/160

TOP



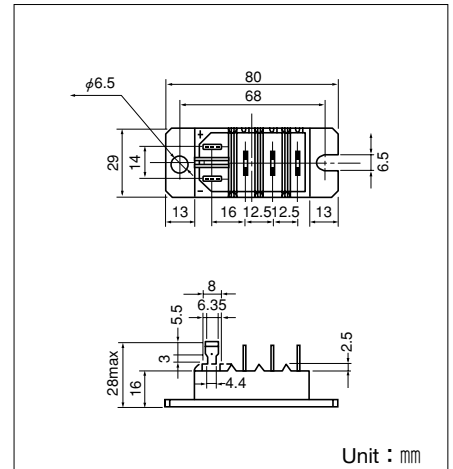
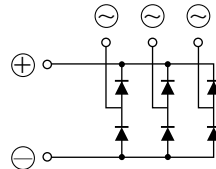
UL;E76102 (M)

Power Diode Module **DF30AA** 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 ( $T_c=117^\circ\text{C}$ ) 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

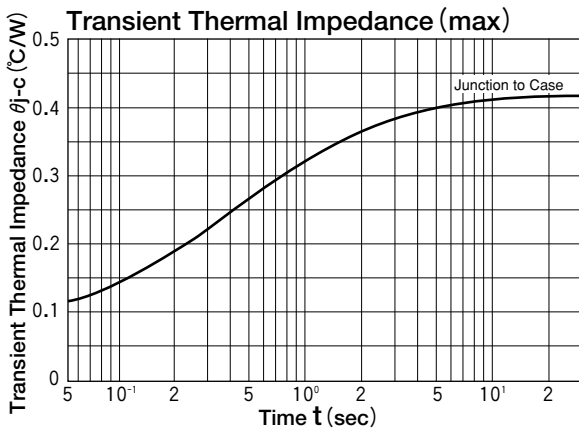
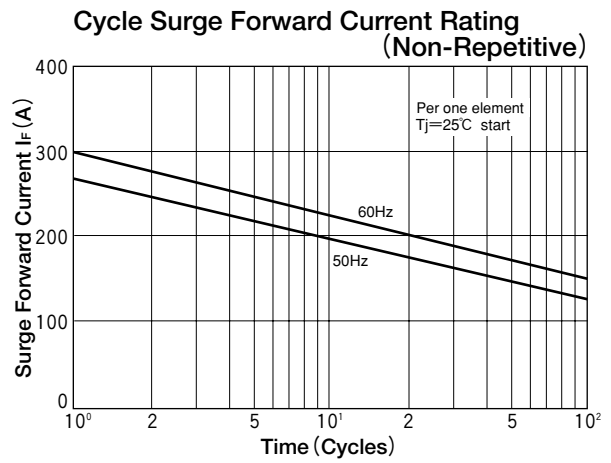
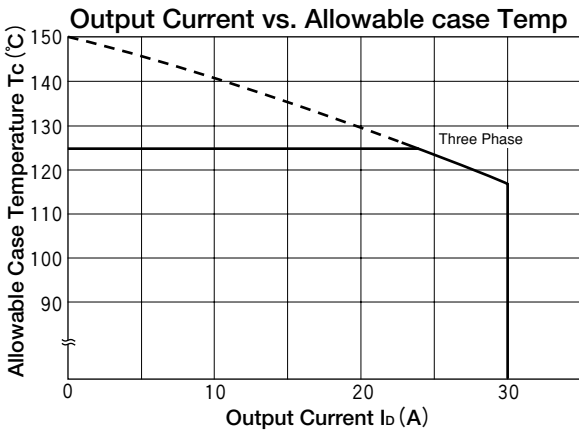
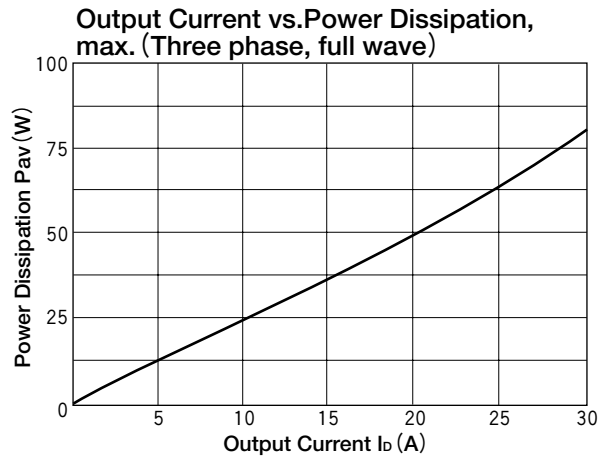
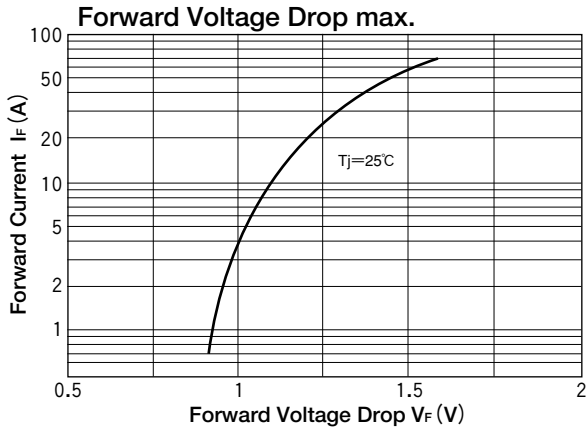
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF30AA120	DF30AA160	
$V_{RRM}$	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. $T_c=117^\circ\text{C}$	30	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	270/300	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	Tab 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.	$I_{FM}=30\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.3	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.42	$^\circ\text{C/W}$



# DIODE(THREE PHASES BRIDGE TYPE)

# DF30CA80/120/160



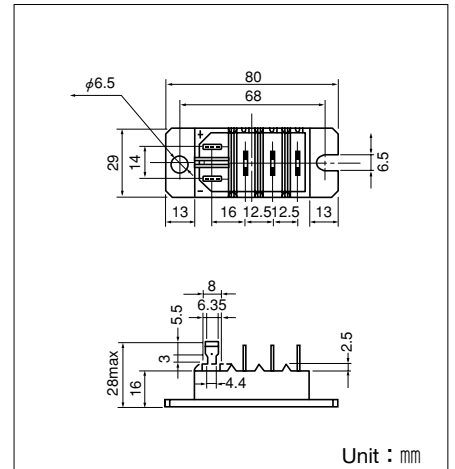
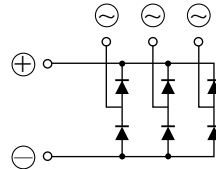
UL;E76102 (M)

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**

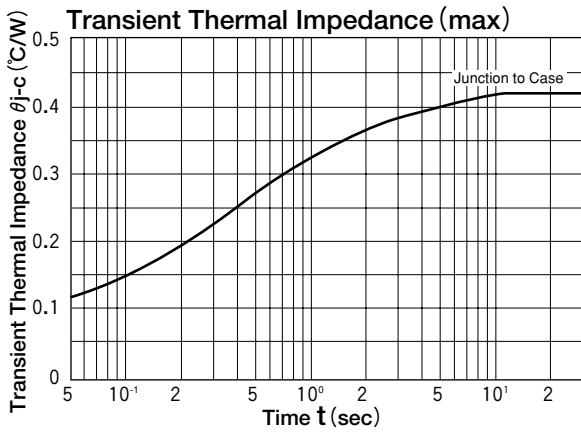
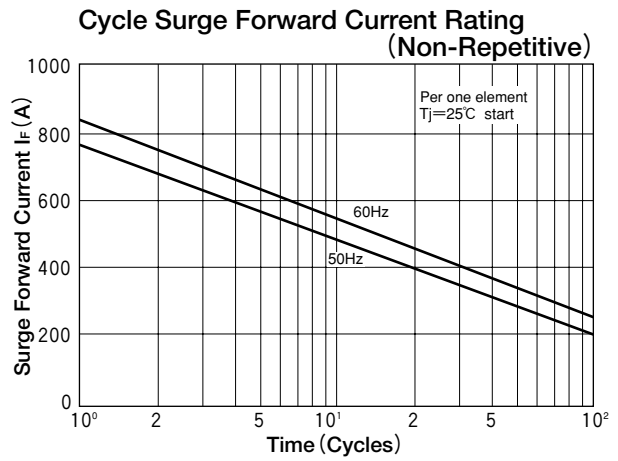
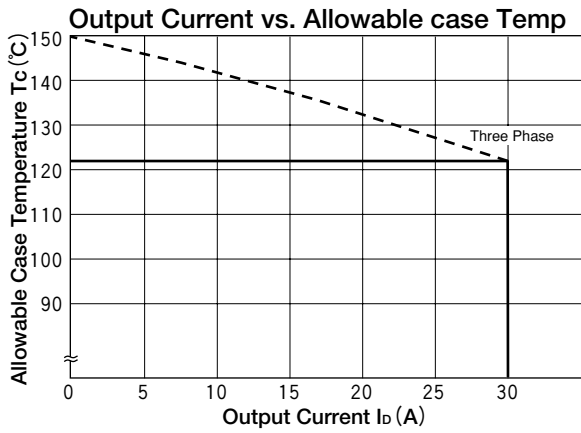
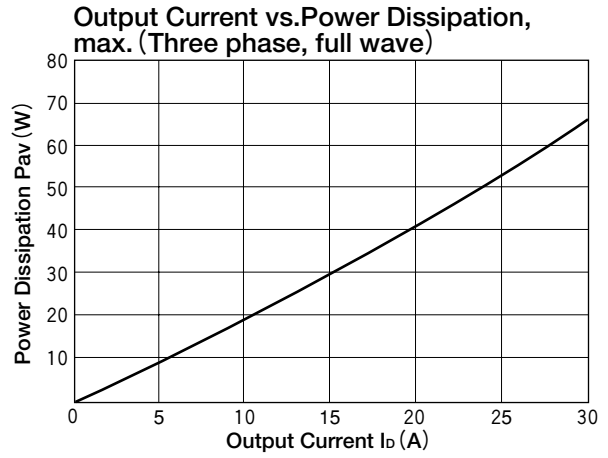
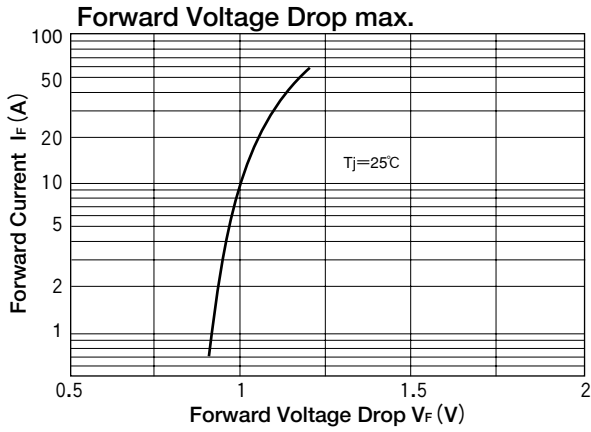
( $T_j=25^\circ\text{C}$  unless otherwise specified)

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	Tab 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	$^\circ\text{C/W}$



## DIODE(THREE PHASES BRIDGE TYPE)

# DF30DB40/80

TOP

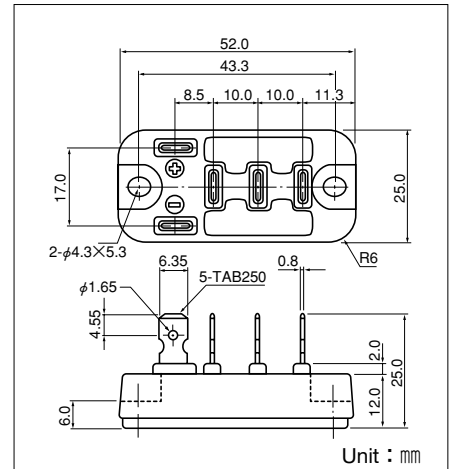
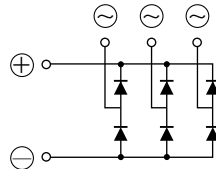


Power Diode Module **DF30DB** is designed for three phase full wave rectification, which has six diodes connected in a three phase bridge configuration. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction output DC current is 30Amp ( $T_c=83^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

- $T_{j\text{Max}}=150^\circ\text{C}$
- 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

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

Symbol	Item	Ratings		Unit
		DF30DB40	DF30DB80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	500	900	V

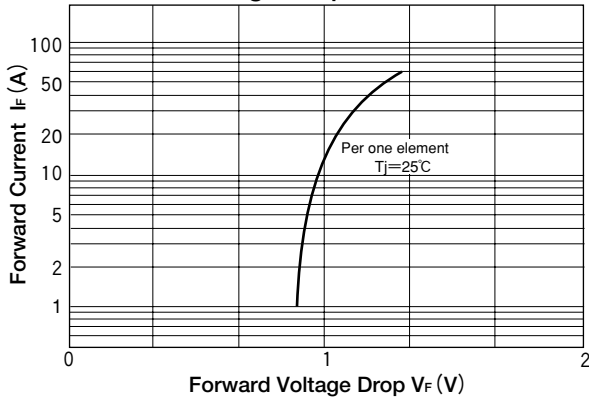
Symbol	Item	Conditions	Ratings	Unit
$I_D$	Output current (D.C.)	Three phase. full wave. $T_c=83^\circ\text{C}$	30	A
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	365/400	A
$T_j$	Junction Temperature		-40 to +150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature		-40 to +125	$^\circ\text{C}$
$V_{ISO}$	Isolation Breakdown Voltage (R.M.S.)	Main Terminal to case 1minute	2000	V
	Mounting Torque (M4)	Recommended Value 1.0-1.4 (10-14)	1.5 (15)	N·m (kgf·cm)
	Mass	Typical Value	32	g

### Electrical Characteristics

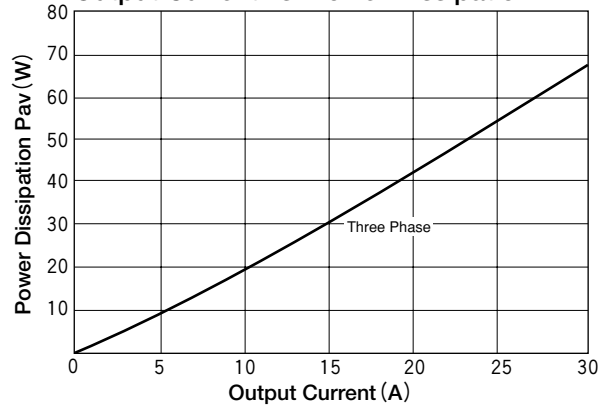
Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	1.5	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=30\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.1	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	1.0	$^\circ\text{C/W}$



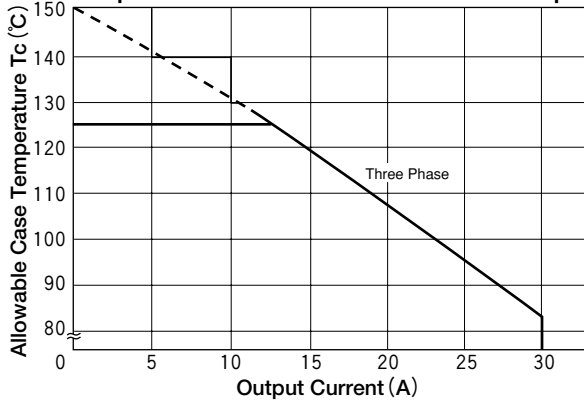
Forward Voltage Drop max.



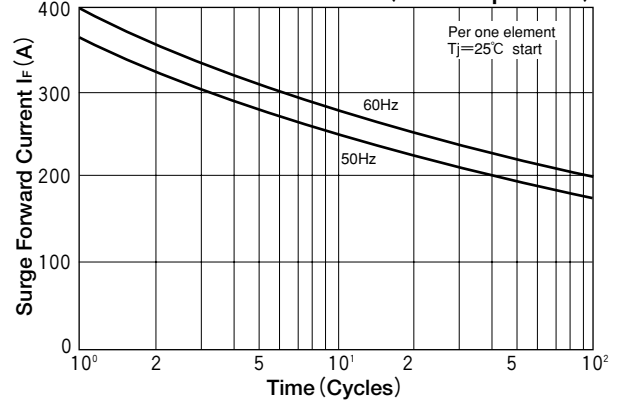
Output Current vs. Power Dissipation



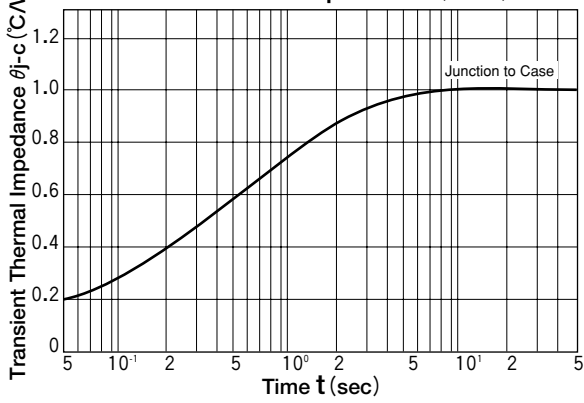
Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)



# DIODE(THREE PHASES BRIDGE TYPE)

## DF40BA40/80

TOP



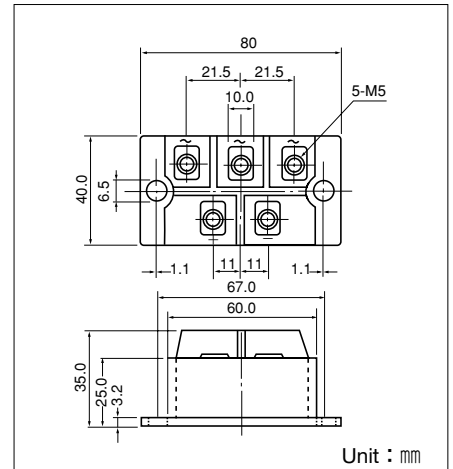
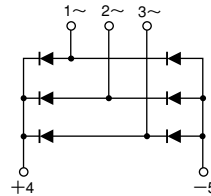
UL;E76102 (M)

Power Diode Module **DF40BA** 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 ( $T_c=119^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

- $T_{j\text{Max}}=150^\circ\text{C}$
- 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)

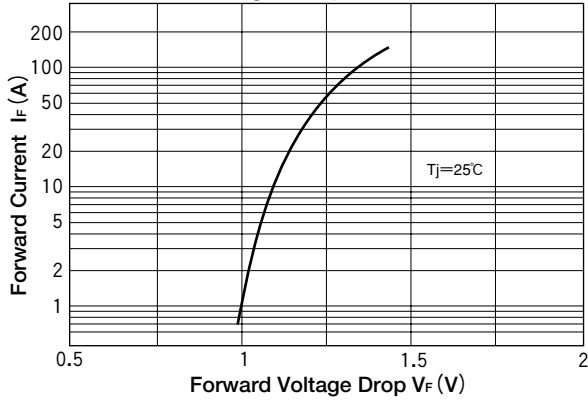
Symbol	Item	Ratings		Unit
		DF40BA40	DF40BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output current (D.C.)	Three phase. full wave. $T_c=119^\circ\text{C}$	40	A	
$I_{FSM}$	Surge Forward Current	1 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 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 (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	200	g	

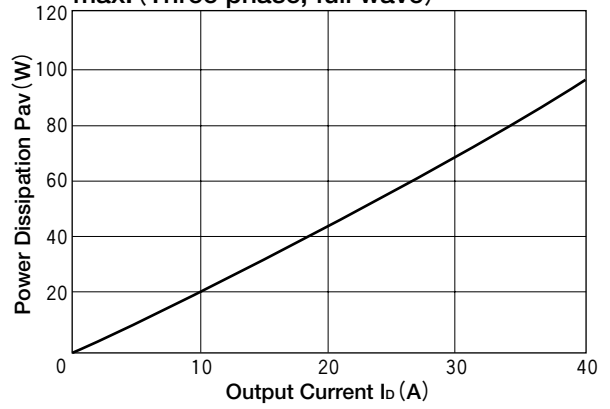
**Electrical Characteristics**

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	4.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=40\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.2	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.32	$^\circ\text{C/W}$

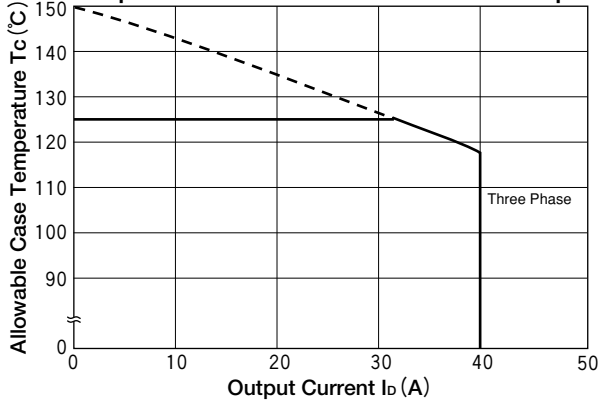
Forward Voltage Drop max.



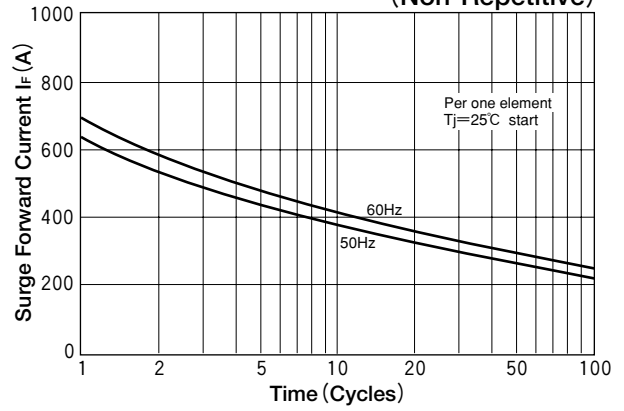
Output Current vs. Power Dissipation, max. (Three phase, full wave)



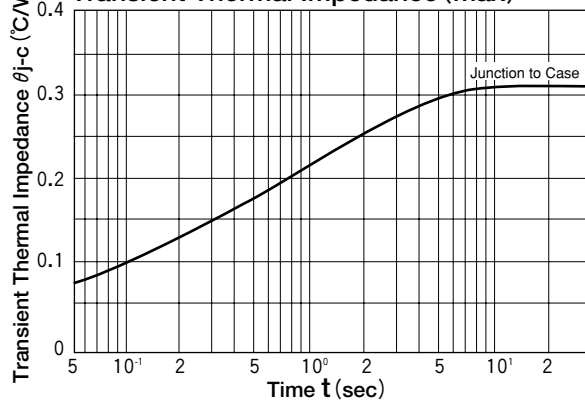
Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)





# DIODE(THREE PHASES BRIDGE TYPE)

# DF40AA120/160



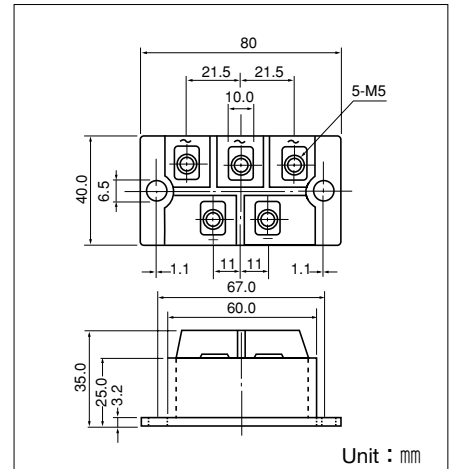
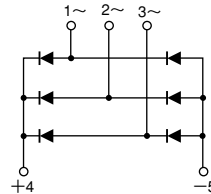
UL;E76102 (M)

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)

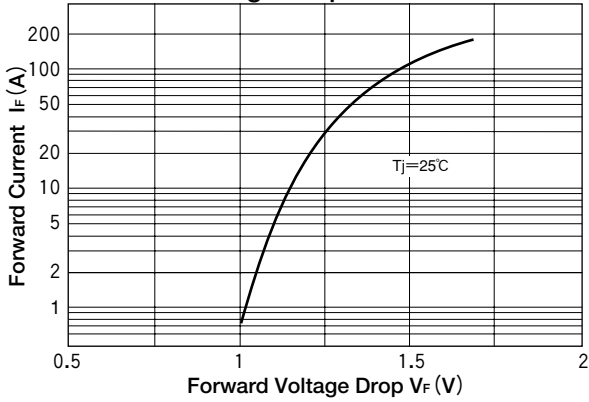
Symbol	Item	Ratings		Unit
		DF40AA120	DF40AA160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	1200	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	1300	1700	V

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	1 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 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 (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	200	g	

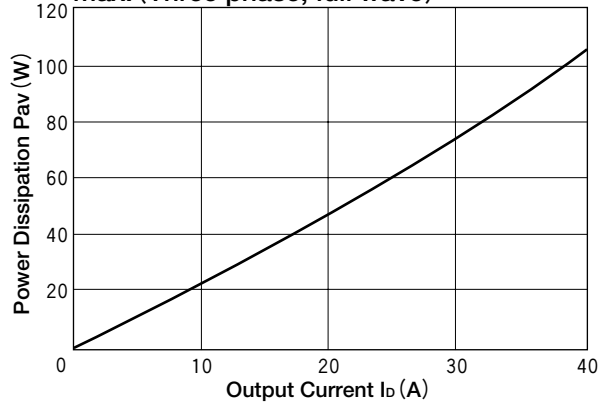
**Electrical Characteristics**

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.	$I_{FM}=40\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.3	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.32	$^\circ\text{C/W}$

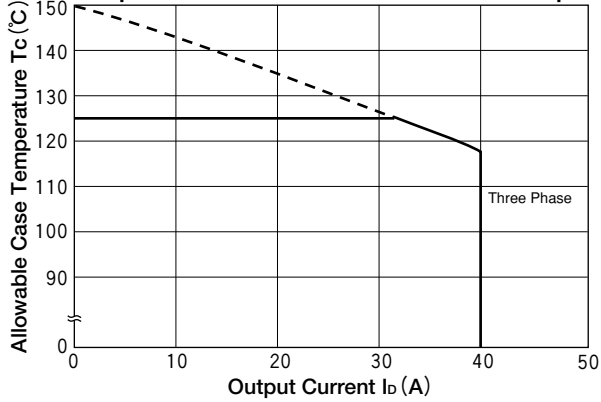
Forward Voltage Drop max.



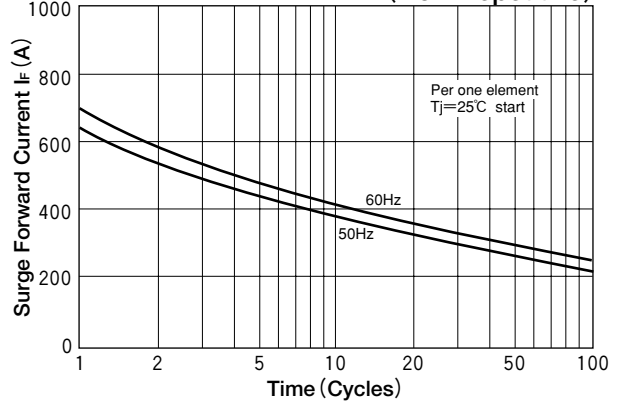
Output Current vs. Power Dissipation, max. (Three phase, full wave)



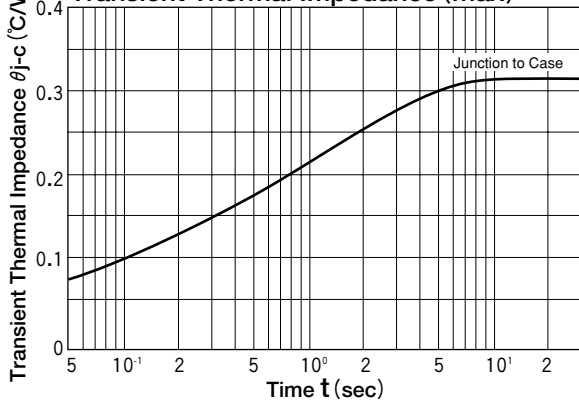
Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)



# DIODE(THREE PHASES BRIDGE TYPE)

## DF50BA40/80



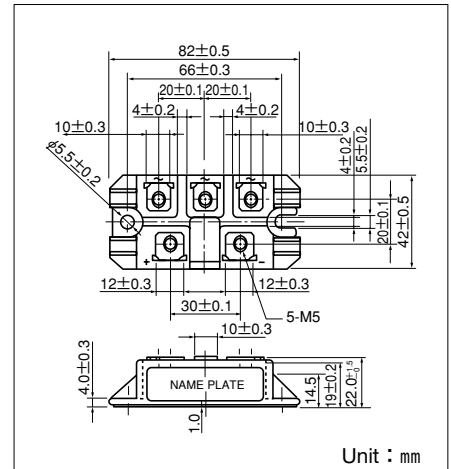
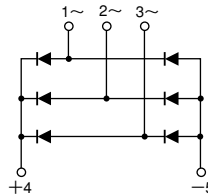
UL;E76102(M)

Power Diode Module **DF50BA** 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 50Amp ( $T_c=114^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

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

**(Applications)**

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



Unit : mm

**Maximum Ratings**

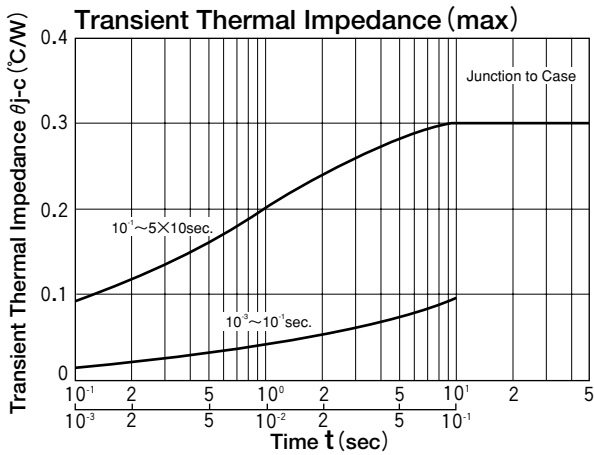
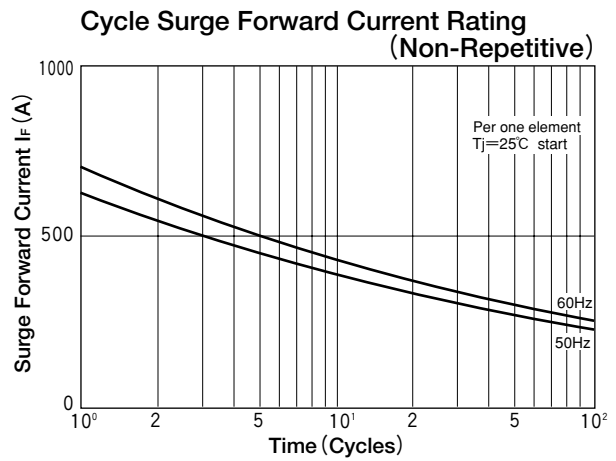
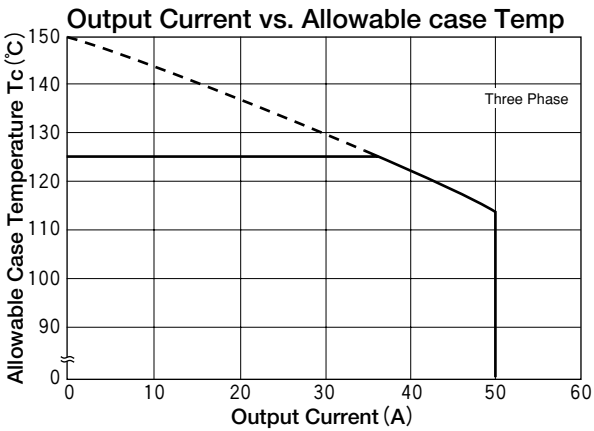
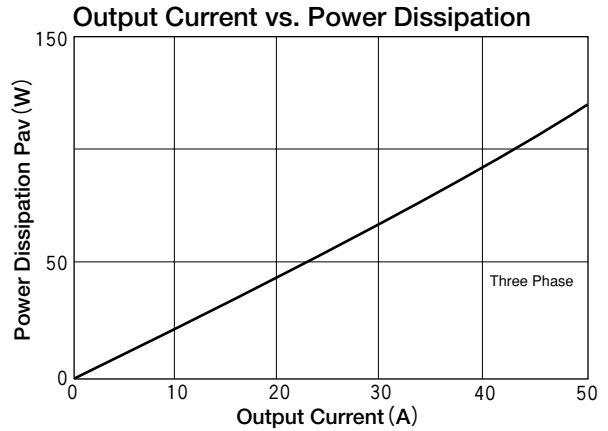
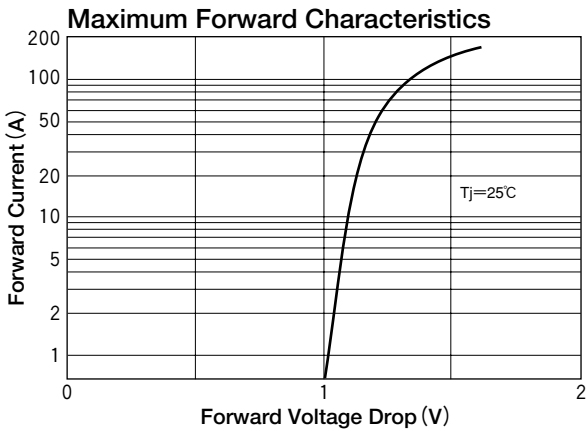
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF50BA40	DF50BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output Current (D.C.)	Three phass full wave. $T_c : 114^\circ\text{C}$	50	A	
$I_{FSM}$	Surge Forward Current	1cycle, 50/60Hz, peak value, non-repetitive	640/700	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	2000	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	A.C. 1 minute	2500	V	
	Mounting Torque	Monting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	N·m ( $\text{kgf}\cdot\text{cm}$ )
		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
			Min.	Typ.	Max.	
$I_{RRM}$	Repetitive Peak Reverse Current	$T_j=150^\circ\text{C}$ at $V_{RRM}$			4.0	mA
$V_{FM}$	Forward Voltage Drop	$T_j=25^\circ\text{C}$ , $I_{FM}=50\text{A}$ , Inst measurement			1.2	V
$R_{th(j-c)}$	Thermal Impedance	Junction to case			0.3	$^\circ\text{C}/\text{W}$



## DIODE (THREE PHASES BRIDGE TYPE)

# DF50AA120/160



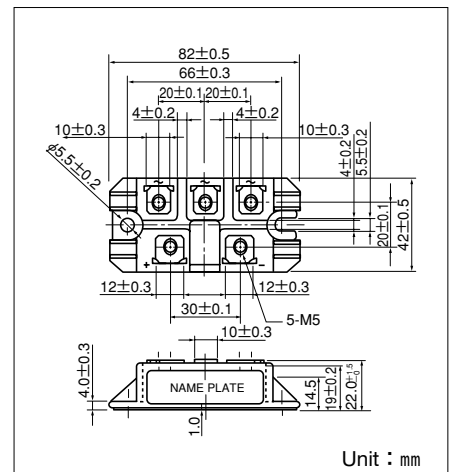
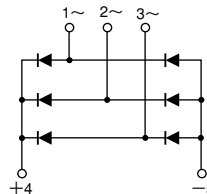
UL;E76102 (M)

Power Diode Module **DF50AA** 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 50Amp ( $T_c=114^\circ\text{C}$ ) 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

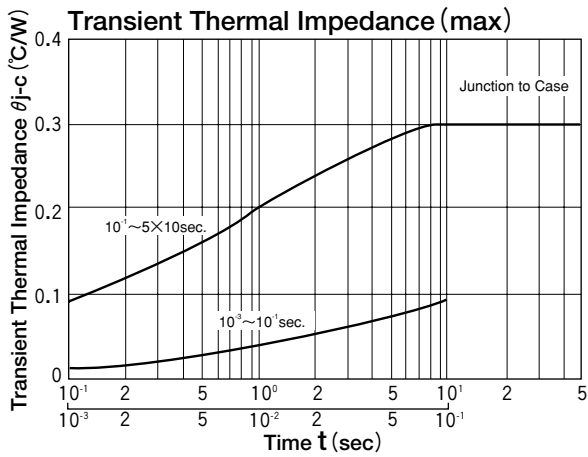
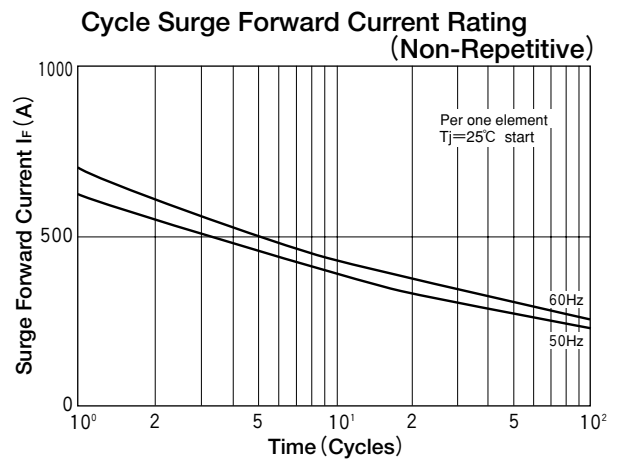
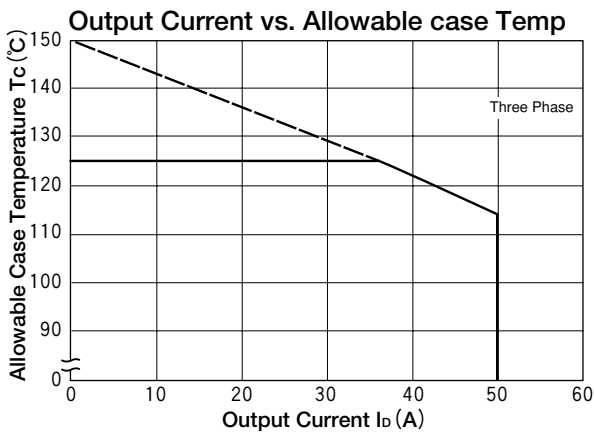
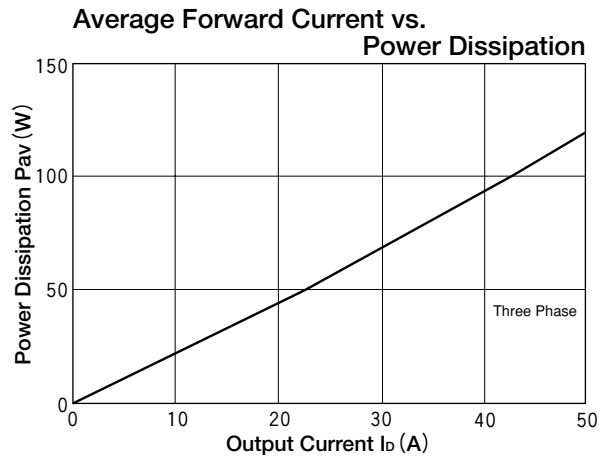
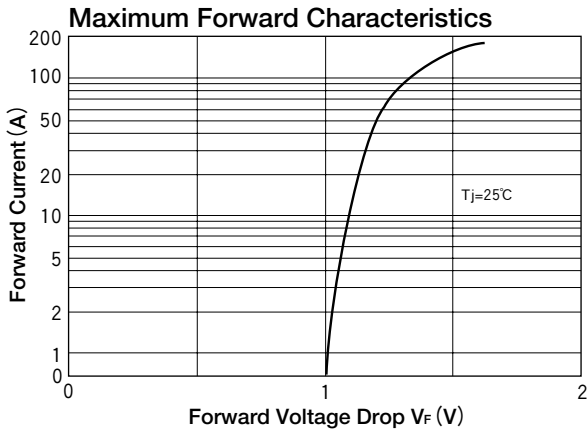
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF50AA120	DF50AA160	
$V_{RRM}$	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. $T_c : 114^\circ\text{C}$	50	A	
$I_{FSM}$	Surge Forward Current	1cycle, 50/60Hz, peak value, non-repetitive	640/700	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	2000	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	N·m ( $\text{kgf}\cdot\text{cm}$ )
		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
			Min.	Typ.	Max.	
$I_{RRM}$	Repetitive Peak Reverse Current	$T_j=150^\circ\text{C}$ at $V_{RRM}$			8.0	mA
$V_{FM}$	Forward Voltage Drop	$T_j=25^\circ\text{C}$ , $I_{FM}=50\text{A}$ , Inst. measurement			1.2	V
$R_{th(j-c)}$	Thermal Impedance	Junction to case			0.3	$^\circ\text{C}/\text{W}$



# DIODE (THREE PHASES BRIDGE TYPE)

## DF60BA40/80

TOP



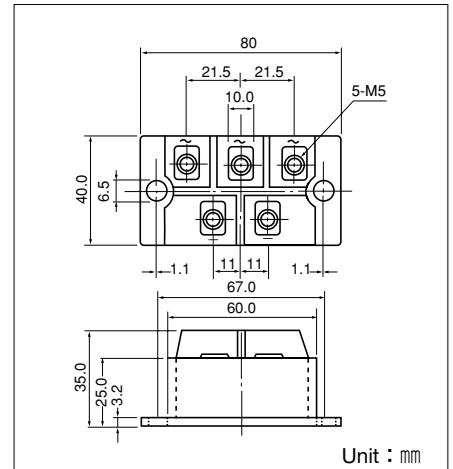
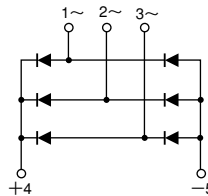
UL;E76102 (M)

Power Diode Module **DF60BA** 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 60Amp ( $T_c=115^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

- $T_{j\text{Max}}=150^\circ\text{C}$
- 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)

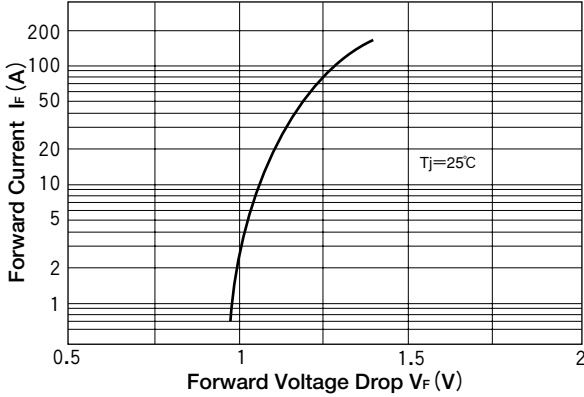
Symbol	Item	Ratings		Unit
		DF60BA40	DF60BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output current (D.C.)	Three phase. full wave. $T_c=115^\circ\text{C}$	60	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	910/1000	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 (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	200	g	

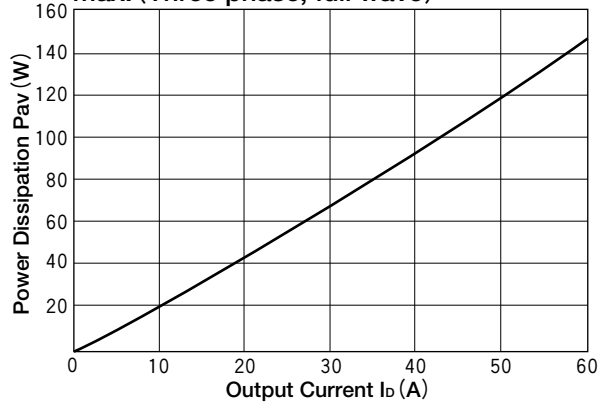
### Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	6.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=60\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.2	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.24	$^\circ\text{C/W}$

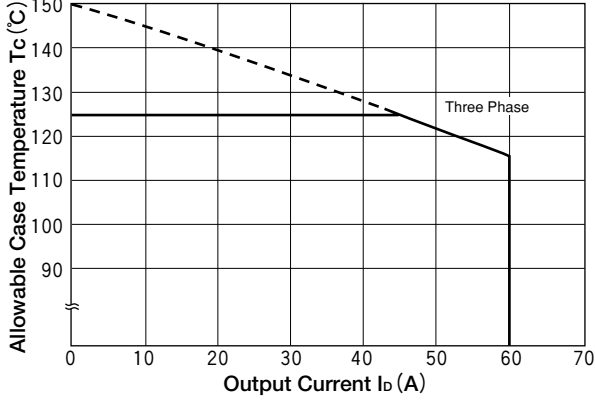
**Forward Voltage Drop max.**



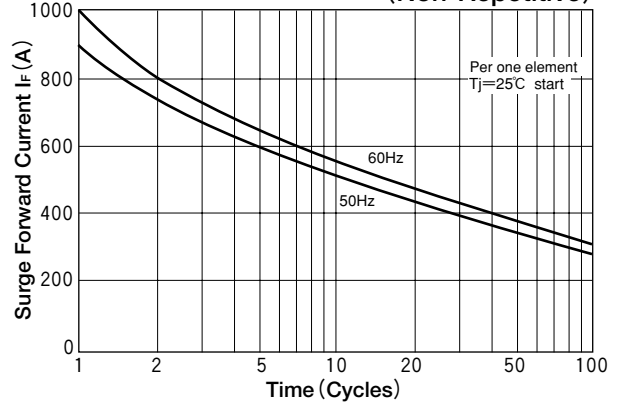
**Output Current vs. Power Dissipation, max. (Three phase, full wave)**



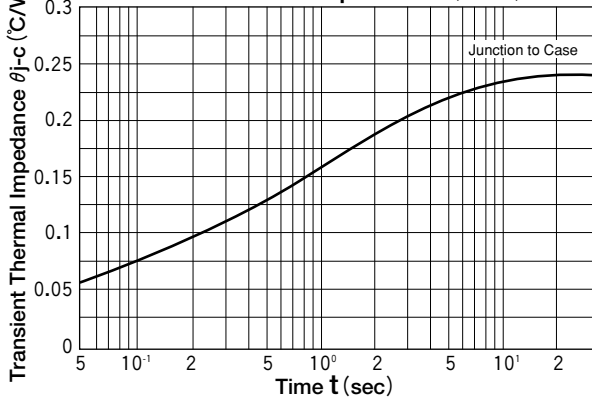
**Output Current vs. Allowable case Temp**



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



**Transient Thermal Impedance (max)**





## DIODE(THREE PHASES BRIDGE TYPE)

# DF60AA120/160

TOP



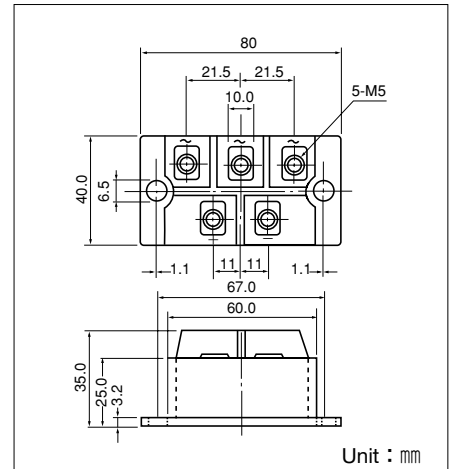
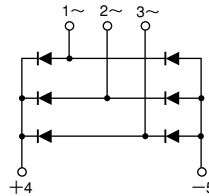
UL;E76102 (M)

Power Diode Module **DF60AA** 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 60Amp ( $T_c=112^\circ\text{C}$ ) 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)

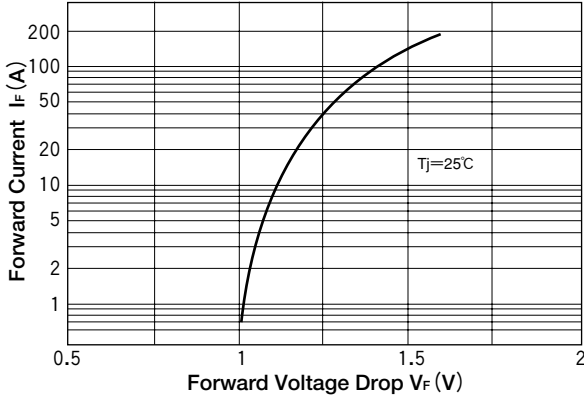
Symbol	Item	Ratings		Unit
		DF60AA120	DF60AA160	
$V_{RRM}$	Repetitive Peak Reverse Voltage	1200	1600	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output current (D.C.)	Three phase. full wave. $T_c=112^\circ\text{C}$	60	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	910/1000	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 (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	200	g	

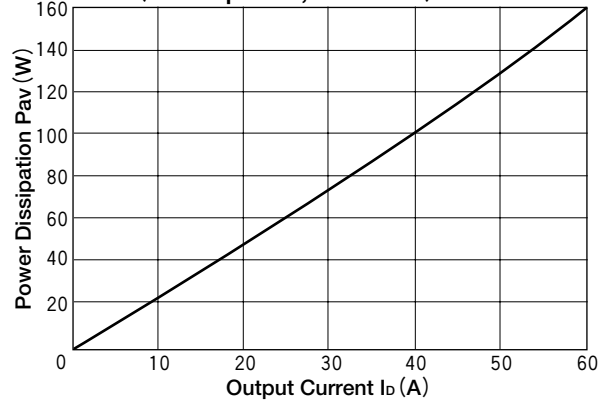
### Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	12.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$I_{FM}=60\text{A}$ , $T_j=25^\circ\text{C}$ Inst. measurement	1.3	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.24	$^\circ\text{C/W}$

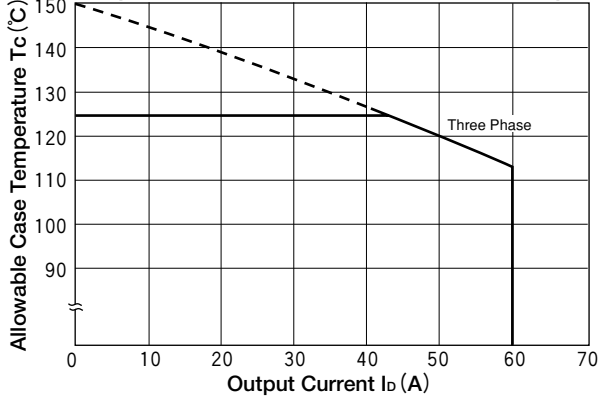
Forward Voltage Drop max.



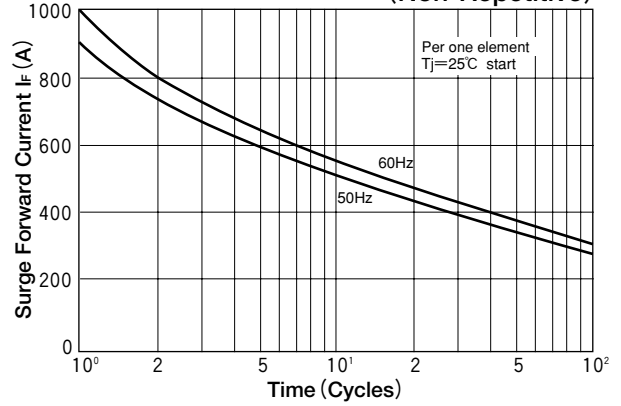
Output Current vs. Power Dissipation, max. (Three phase, full wave)



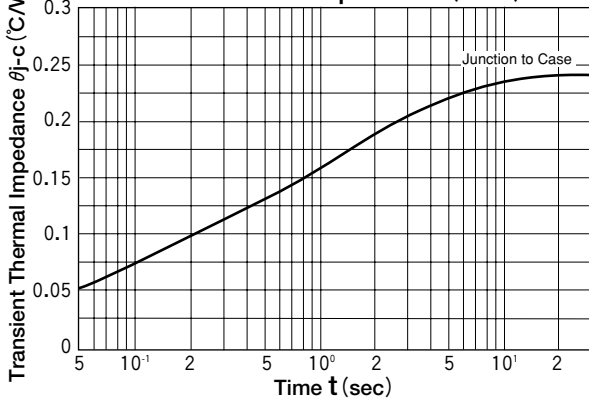
Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)



# DIODE(THREE PHASES BRIDGE TYPE)

# DF75BA40/80



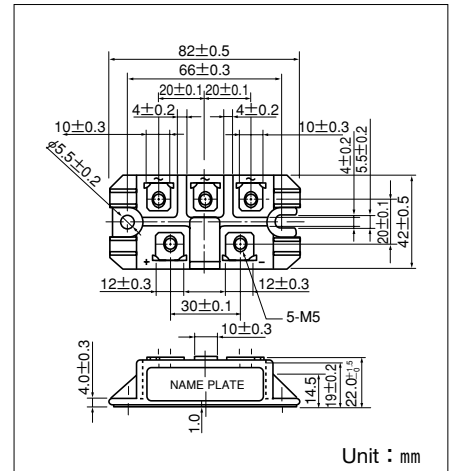
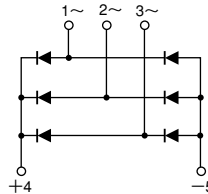
UL;E76102 (M)

Power Diode Module **DF75BA** 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 ( $T_c=107^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

- $T_{j\text{Max}}=150^\circ\text{C}$
- 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)

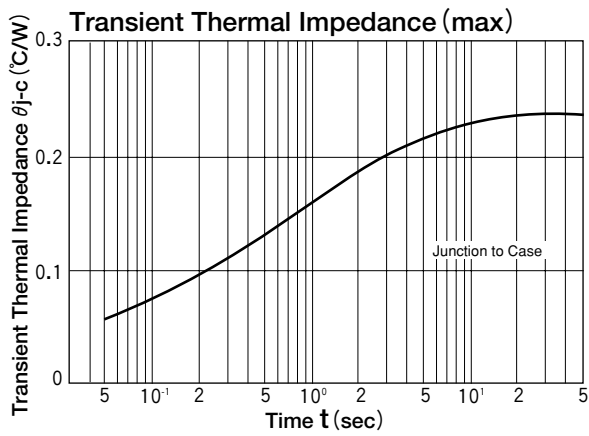
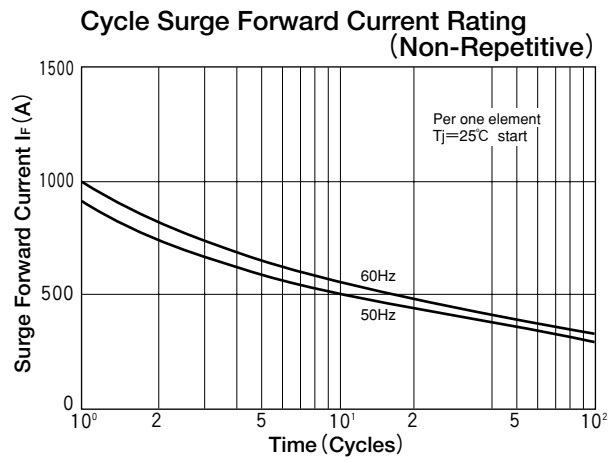
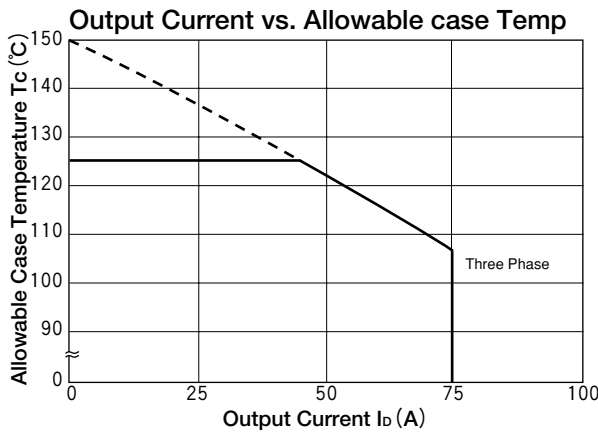
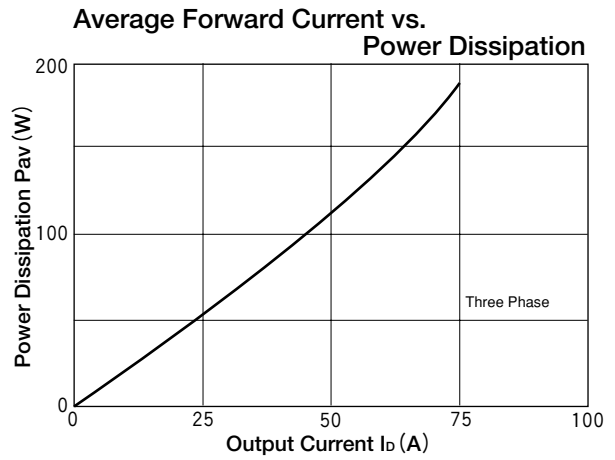
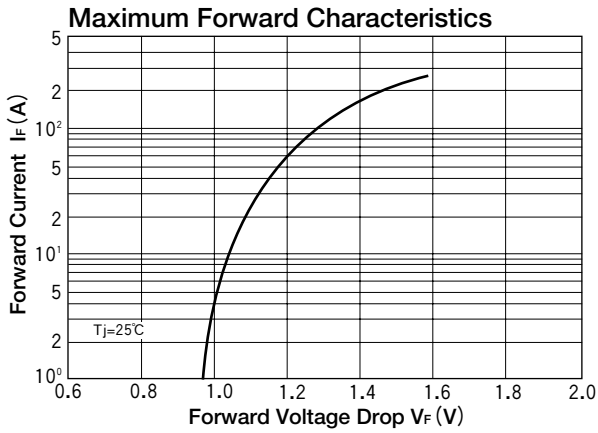
Symbol	Item	Ratings		Unit
		DF75BA40	DF75BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output Current (D.C.)	Three Phase full wave. $T_c=107^\circ\text{C}$	75	A	
$I_{FSM}$	Surge Forward Current	1cycle, 50/60Hz, peak value, non-repetitive	910/1000	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	4100	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	N·m ( $\text{kgf}\cdot\text{cm}$ )
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	160	g	

**Electrical Characteristics**

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

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	1.20	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.24	$^\circ\text{C}/\text{W}$



## DIODE(THREE PHASES BRIDGE TYPE)

# DF75AA120/160

TOP



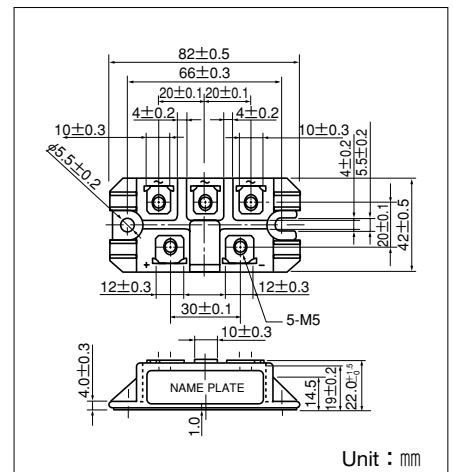
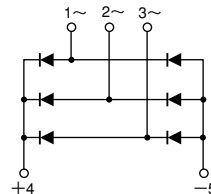
UL;E76102 (M)

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

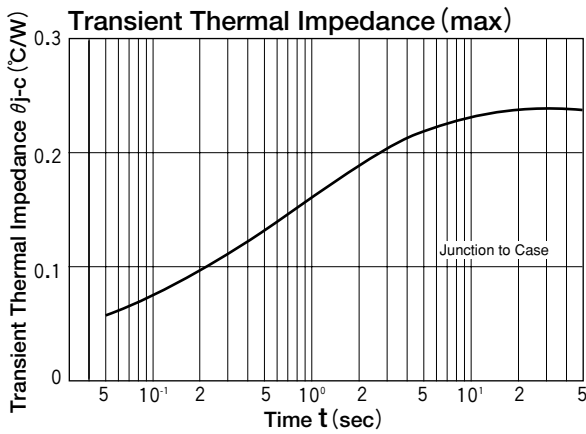
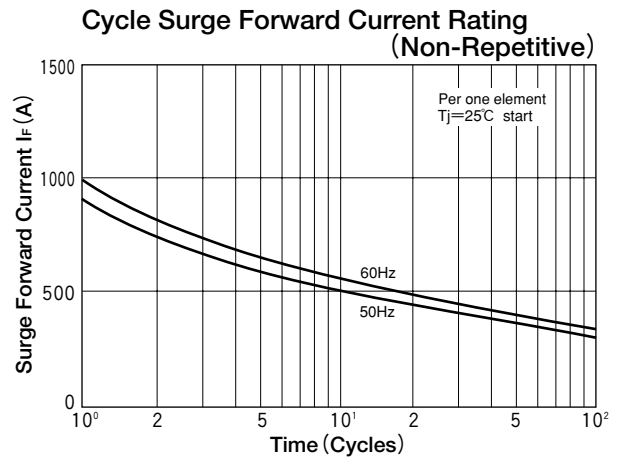
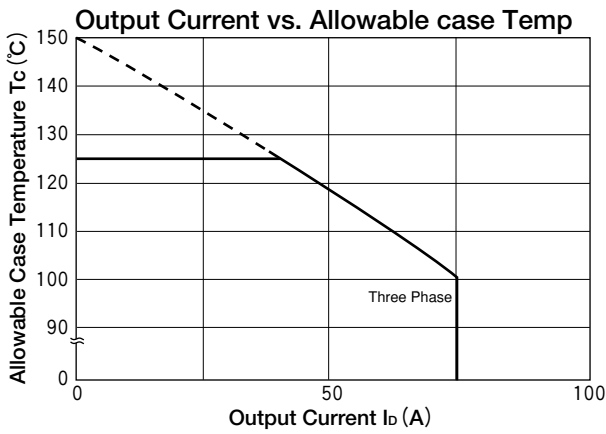
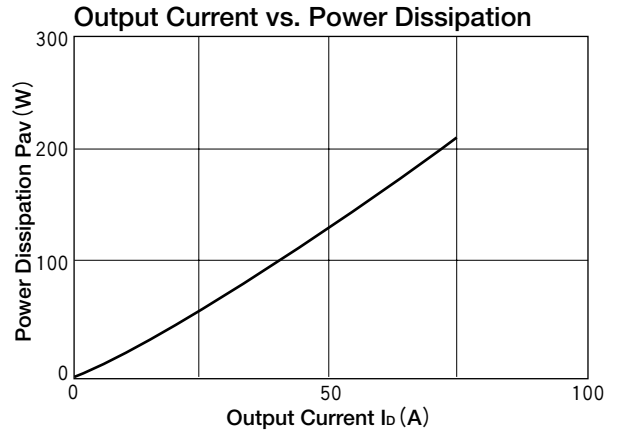
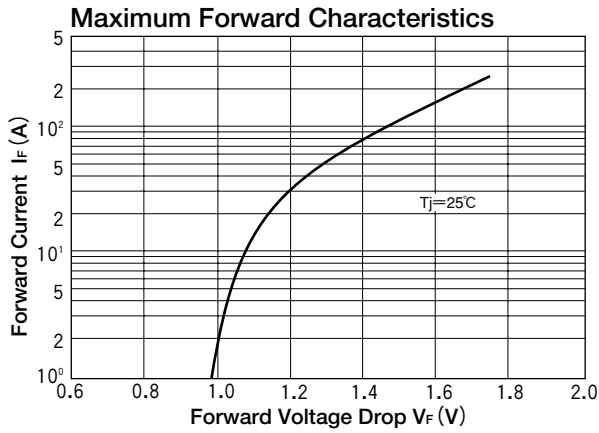
( $T_j=25^\circ\text{C}$  unless otherwise specified)

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 to +150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature		-40 to +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	$^\circ\text{C}/\text{W}$



# DIODE(THREE PHASES BRIDGE TYPE)

## DF100BA40/80



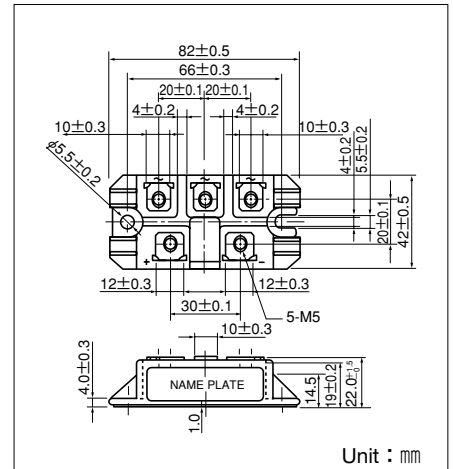
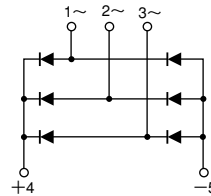
UL;E76102 (M)

Power Diode Module DF100BA 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 100Amp ( $T_c=102^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

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

### (Applications)

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



### Maximum Ratings

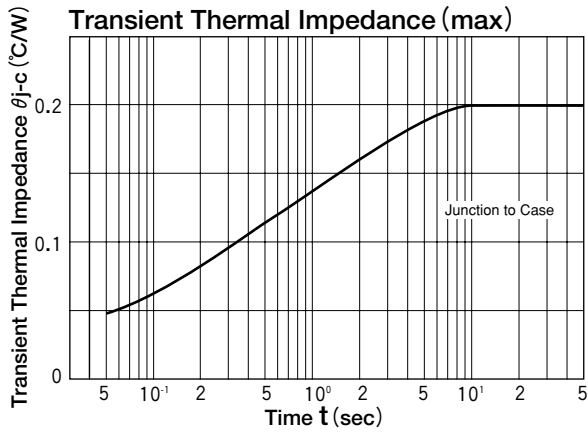
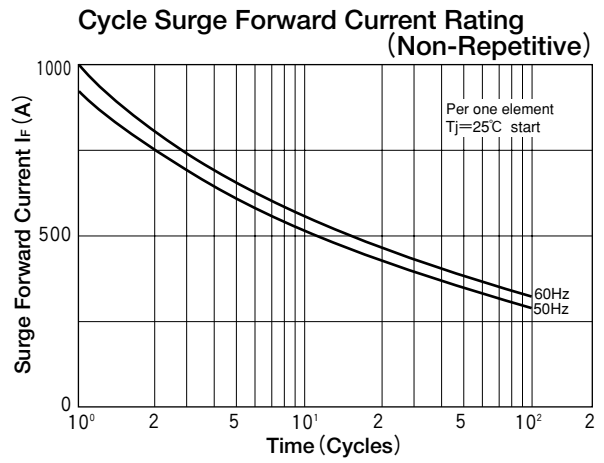
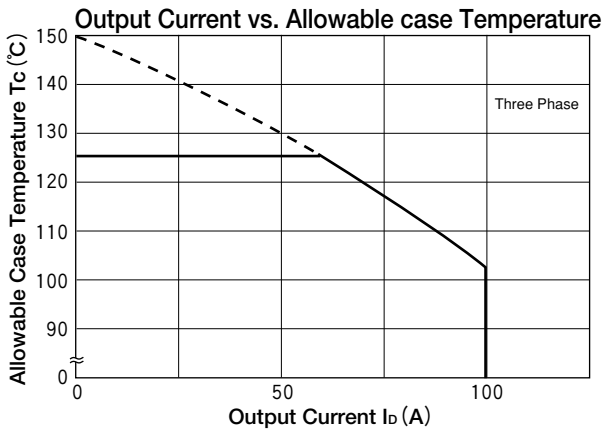
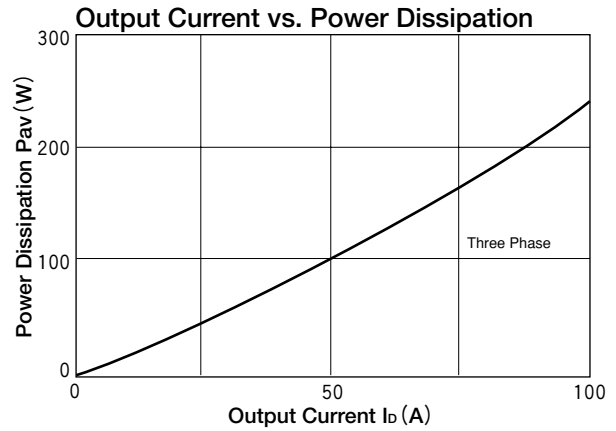
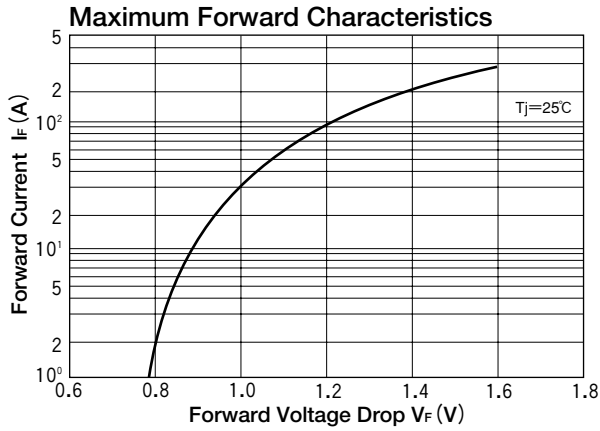
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF100BA40	DF100BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output Current (D.C.)	Three phase full wave. $T_c : 102^\circ\text{C}$	100	A	
$I_{FSM}$	Surge Forward Current	1cycle, 50/60Hz, peak value, non-repetitive	910/1000	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	4100	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	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
			Min.	Typ.	Max.	
$I_{RRM}$	Repetitive Peak Reverse Current	$T_j=150^\circ\text{C}$ at $V_{RRM}$			10	mA
$V_{FM}$	Forward Voltage Drop	$T_j=25^\circ\text{C}$ , $I_{FM}=100\text{A}$ , Inst. measurement			1.2	V
$R_{th(j-c)}$	Thermal Impedance	Junction to case			0.2	$^\circ\text{C}/\text{W}$





# DIODE(THREE PHASES BRIDGE TYPE)

# DF100AA120/160



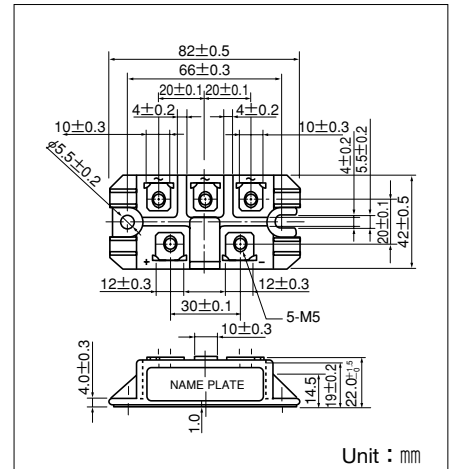
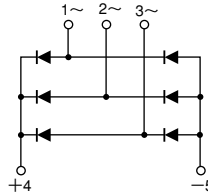
UL;E76102 (M)

Power Diode Module DF100AA 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 100Amp (Tc=102°C) Repetitive peak reverse voltage is up to 1,600V.

- TjMax=150°C
- Isolated mounting base
- High reliability by unique glass passivation

**(Applications)**

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



Unit : mm

**Maximum Ratings**

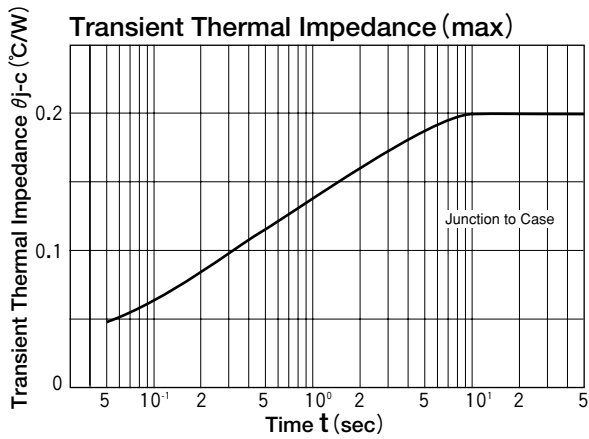
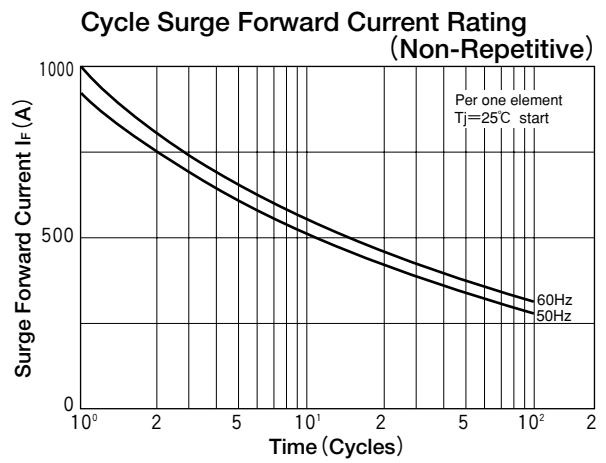
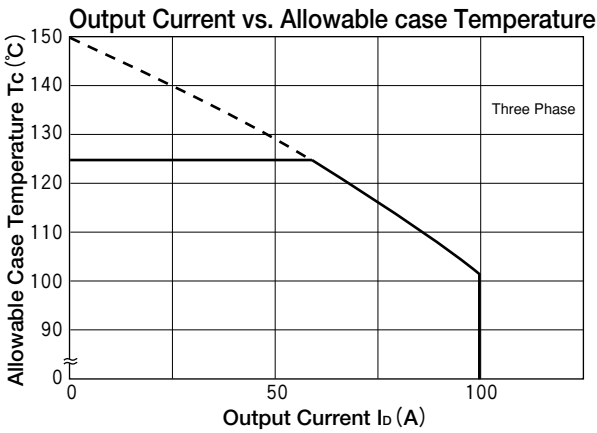
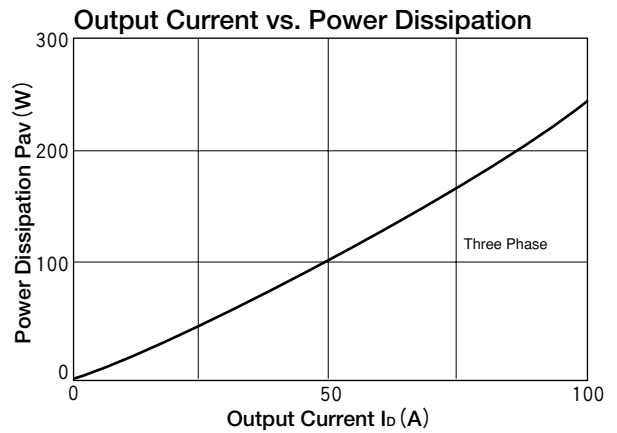
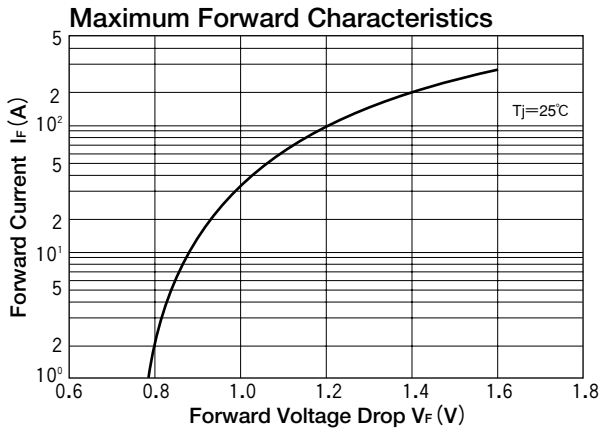
(Tj=25°C unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF100AA120	DF100AA160	
VRRM	Repetitive Peak Reverse Voltage	1200	1600	V
VRSM	Non-Repetitive Peak Reverse Voltage	1300	1700	V

Symbol	Item	Conditions	Ratings	Unit	
Id	Output Current (D.C.)	Three phase full wave. Tc : 102°C	100	A	
IFSM	Surge Forward Current	1cycle, 50/60Hz, peak value, non-repetitive	910/1000	A	
I <sup>2</sup> t	I <sup>2</sup> t	Value for one cycle of surge current	4100	A <sup>2</sup> S	
Tj	Operating Junction Temperature		-40 to +150	°C	
Tstg	Storage Temperature		-40 to +125	°C	
Viso	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
			Min.	Typ.	Max.	
IRRM	Repetitive Peak Reverse Current	Tj=150°C at VRRM			15	mA
VFM	Forward Voltage Drop	Tj=25°C, IFM=100A, Inst. measurement			1.2	V
Rth(j-c)	Thermal Impedance	Junction to case			0.2	°C/W



# DIODE(THREE PHASES BRIDGE TYPE)

## DF150BA40/80



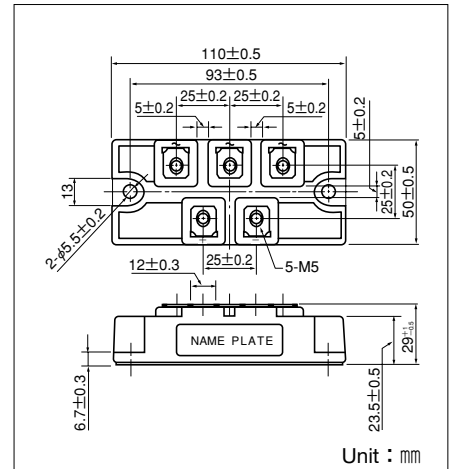
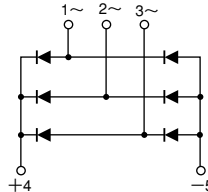
UL;E76102 (M)

Power Diode Module **DF150BA** 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 150Amp ( $T_c=100^\circ\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

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

**(Applications)**

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



**Maximum Ratings**

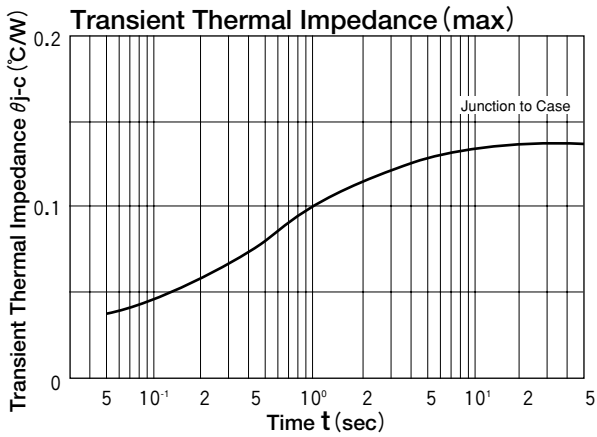
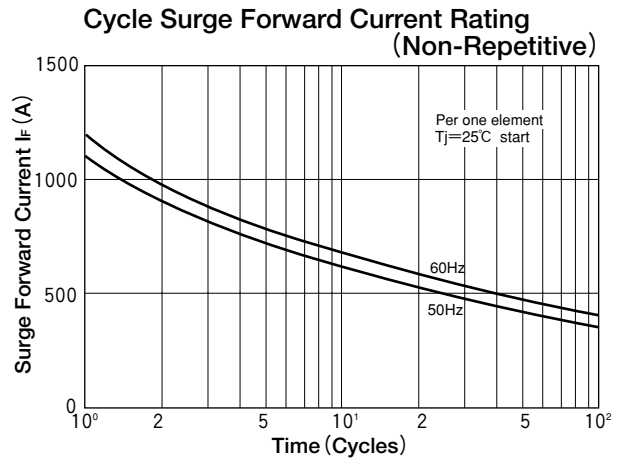
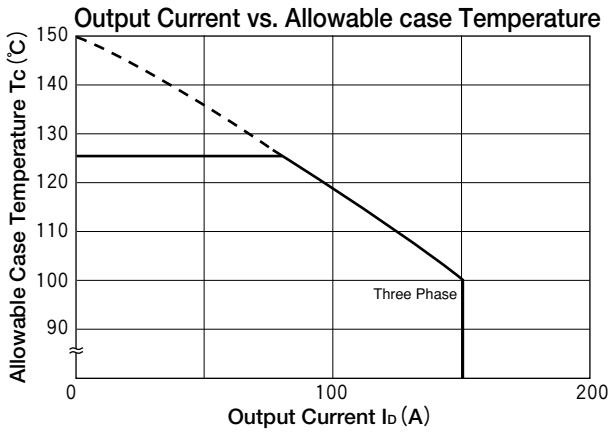
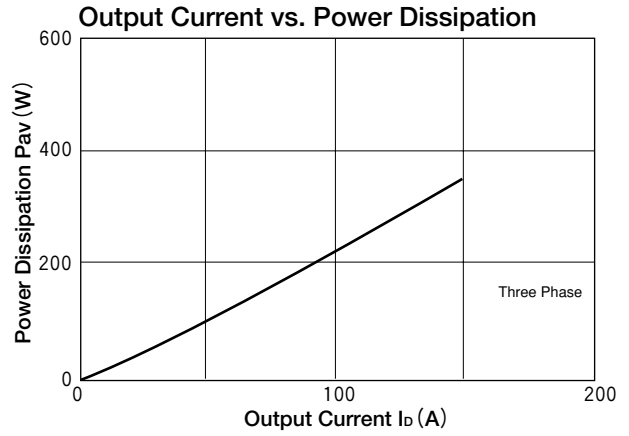
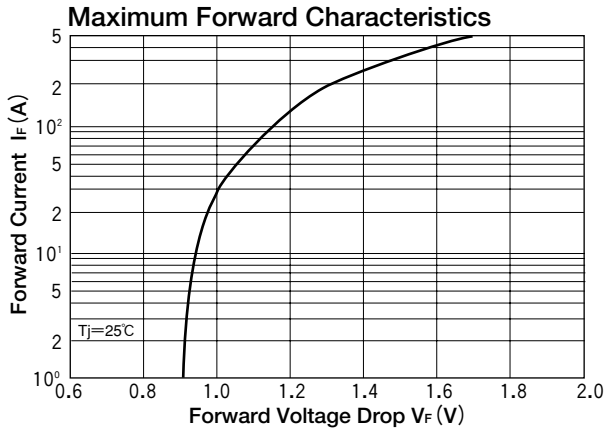
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF150BA40	DF150BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output Current (D.C.)	Three Phase full wave. $T_c=100^\circ\text{C}$	150	A	
$I_{FSM}$	Surge Forward Current	1cycle, 50/60Hz, peak value, non-repetitive	1100/1200	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	6000	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	$\text{N}\cdot\text{m}$ ( $\text{kgf}\cdot\text{cm}$ )
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	360	g	

**Electrical Characteristics**

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	15.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$T_j=25^\circ\text{C}$ , $I_{FM}=150\text{A}$ , Inst. measurement	1.20	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.14	$^\circ\text{C}/\text{W}$



# DIODE(THREE PHASES BRIDGE TYPE)

## DF150AA120/160



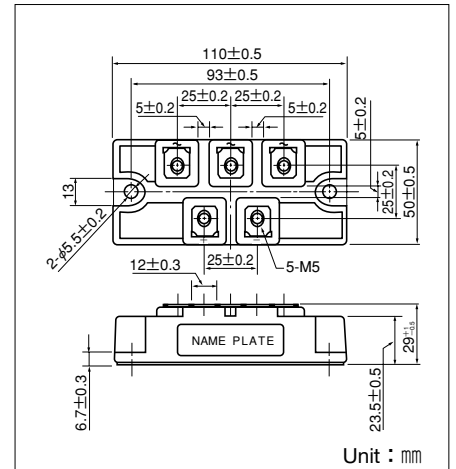
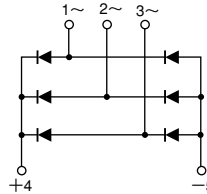
UL;E76102 (M)

Power Diode Module DF150AA 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 150Amp ( $T_c=94^\circ\text{C}$ ) 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**

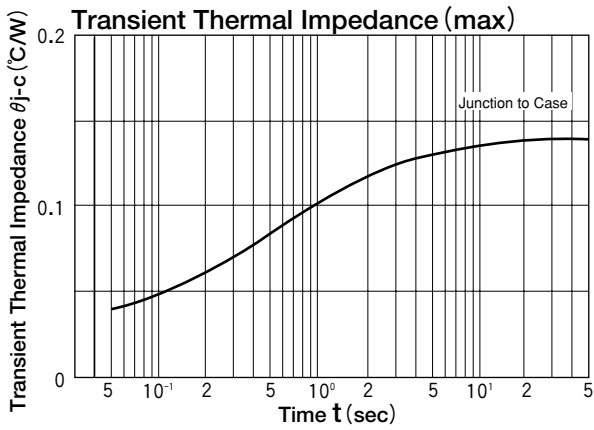
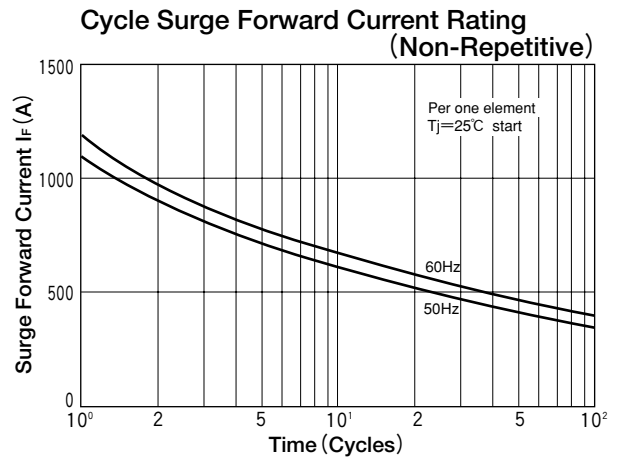
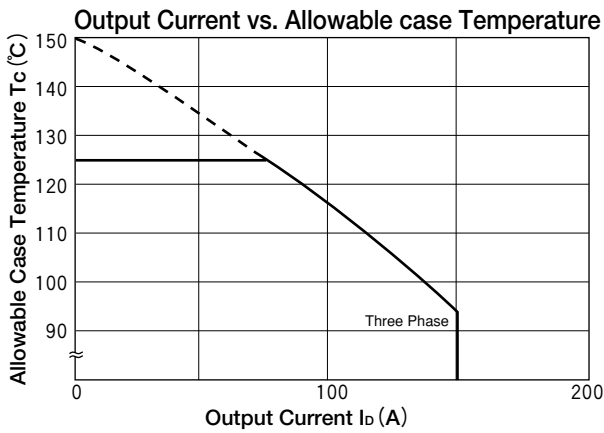
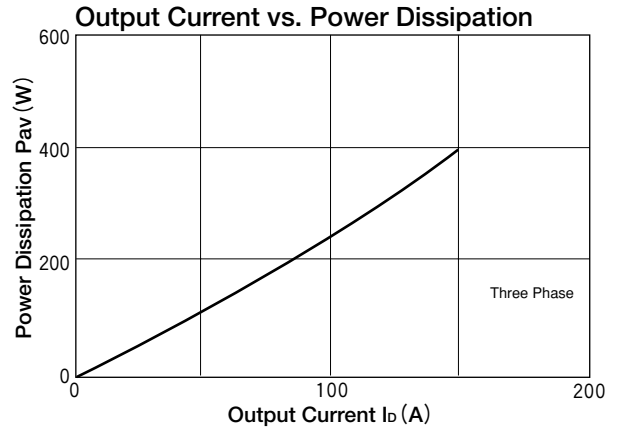
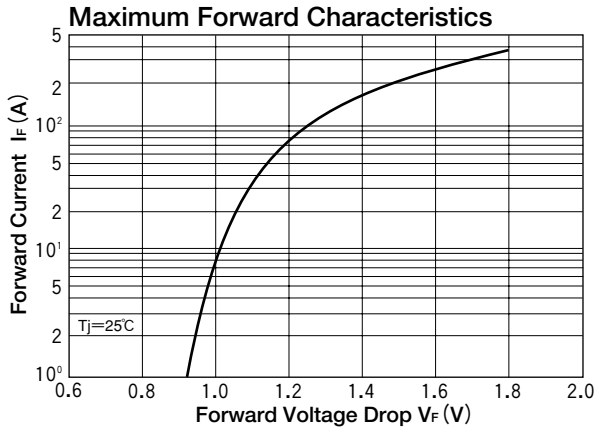
( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF150AA120	DF150AA160	
$V_{RRM}$	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. $T_c=94^\circ\text{C}$	150	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	1100/1200	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	6000	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	$\text{N}\cdot\text{m}$ ( $\text{kgf}\cdot\text{cm}$ )
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	360	g	

**Electrical Characteristics**

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	15.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$T_j=25^\circ\text{C}$ , $I_{FM}=150\text{A}$ , Inst. measurement	1.35	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.14	$^\circ\text{C}/\text{W}$



# DIODE(THREE PHASES BRIDGE TYPE)

## DF200BA40/80



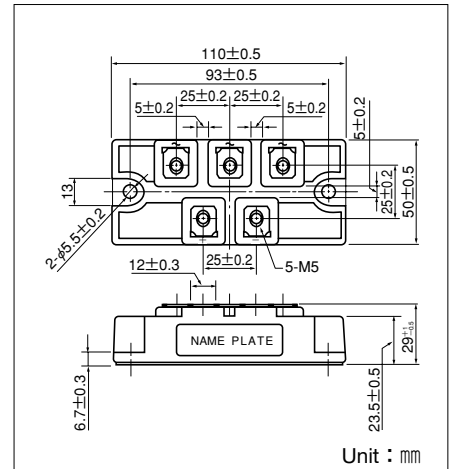
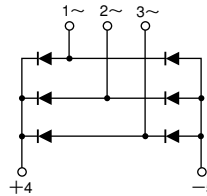
UL;E76102(M)

Power Diode Module **DF200BA** 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 200Amp ( $T_c=102^{\circ}\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

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

**(Applications)**

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



**Maximum Ratings**

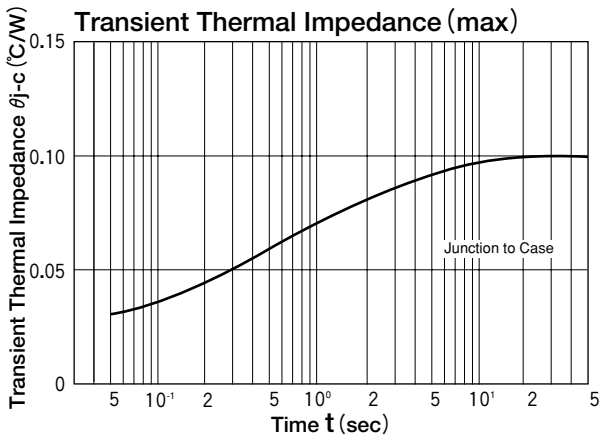
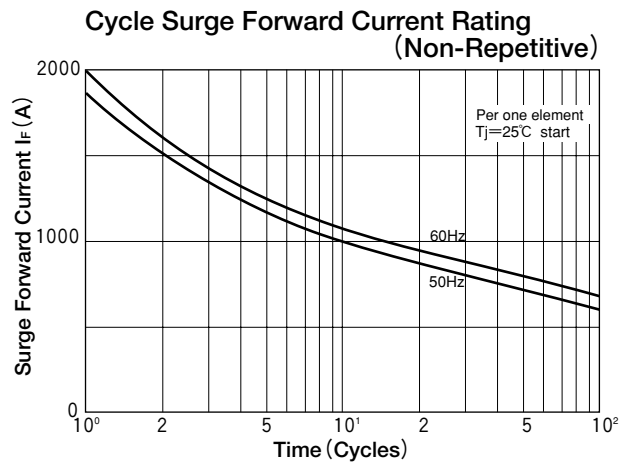
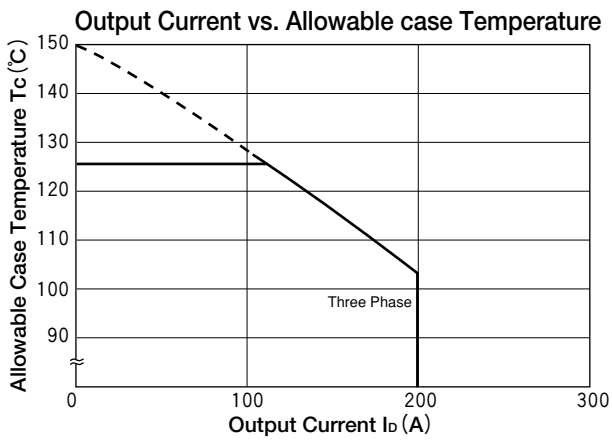
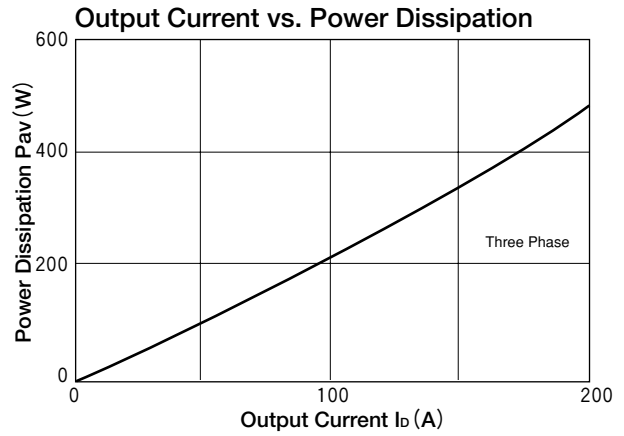
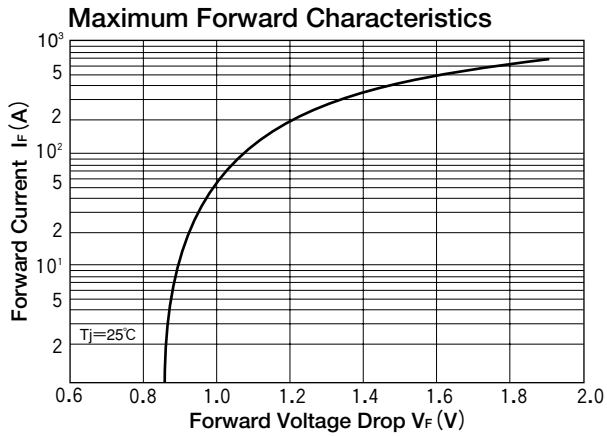
( $T_j=25^{\circ}\text{C}$  unless otherwise specified)

Symbol	Item	Ratings		Unit
		DF200BA40	DF200BA80	
$V_{RRM}$	Repetitive Peak Reverse Voltage	400	800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	480	960	V

Symbol	Item	Conditions	Ratings	Unit	
$I_D$	Output Current (D.C.)	Three Phase full wave, $T_c=102^{\circ}\text{C}$	200	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	1850/2000	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	17000	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	$\text{N}\cdot\text{m}$ ( $\text{kgf}\cdot\text{cm}$ )
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	360	g	

**Electrical Characteristics**

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^{\circ}\text{C}$ at $V_{RRM}$	20.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$T_j=25^{\circ}\text{C}$ , $I_{FM}=200\text{A}$ , Inst measurement	1.20	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.10	$^{\circ}\text{C}/\text{W}$





# DIODE(THREE PHASES BRIDGE TYPE)

## DF200AA120/160



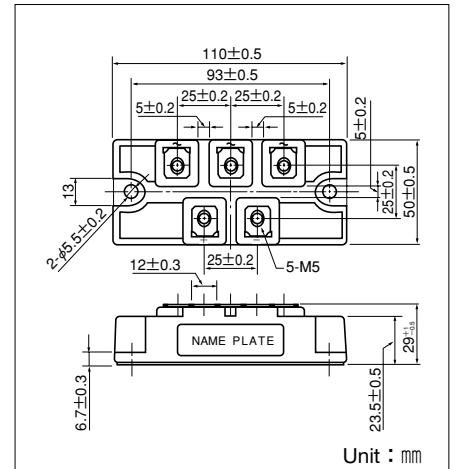
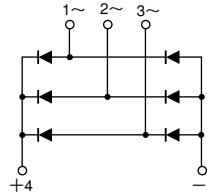
UL;E76102 (M)

Power Diode Module DF200AA 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 200Amp ( $T_c=96^\circ\text{C}$ ) 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
		DF200AA120	DF200AA160	
$V_{RRM}$	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. $T_c=96^\circ\text{C}$	200	A	
$I_{FSM}$	Surge Forward Current	1 cycle, 50/60Hz, peak value, non-repetitive	1850/2000	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	6000	$\text{A}^2\text{S}$	
$T_j$	Operating 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.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	$\text{N}\cdot\text{m}$ ( $\text{kgf}\cdot\text{cm}$ )
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass	Typical Value	360	g	

**Electrical Characteristics**

Symbol	Item	Conditions	Ratings	Unit
$I_{RRM}$	Repetitive Peak Reverse Current, max.	$T_j=150^\circ\text{C}$ at $V_{RRM}$	15.0	mA
$V_{FM}$	Forward Voltage Drop, max.	$T_j=25^\circ\text{C}$ , $I_{FM}=200\text{A}$ , Inst. measurement	1.35	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.10	$^\circ\text{C}/\text{W}$

