

3-Phase Diode Bridge

DF60NB160

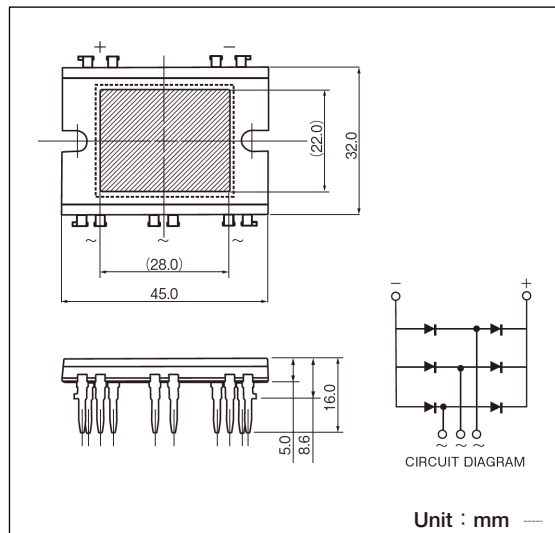
UL; E76102

《Features》

- Power cycle capability (Long-term reliability) is 3 times better than before thanks to the use of "Transfer Molding Package" (at $\Delta T_j = 100^\circ\text{C}$)
- Volume ratio of 1/10, footprint size 1/2 compare to our existing product
- Reduced thermal resistance with unique internal structure and copper heat plate
- Dual terminals for high capability and reliable solder contacts

《Applications》

- Packaged Air Conditioner / Motor Drives / Servo Controller / Battery Charger / Power Supply



■ Maximum Ratings (T_j = 25°C Unless Otherwise Specified)

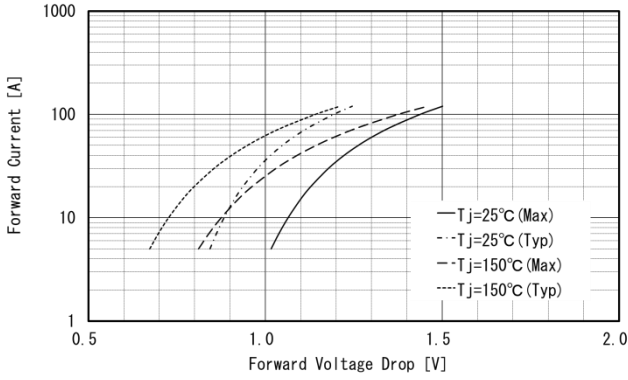
Item	Symbol	Unit	Ratings
Repetitive Peak Reverse Voltage	V _{RRM}	V	1600
Non-Repetitive Peak Reverse Voltage	V _{RSM}	V	1700

Item	Symbol	Unit	Ratings	Conditions
Output Current (DC)	I _D	A	60	T _C = 110°C
Surge Forward Current	I _{FSM}	A	730/800	50/60Hz sine wave, Non-repetitive 1/2 cycle peak value
I ² t	I ² t	A ² s	2600	Value for 1 cycle of surge current
Operating Junction Temperature	T _j	°C	-40~+150	
Storage Temperature	T _{stg}	°C	-40~+125	
Isolation Voltage	V _{ISO}	V	2500	Terminal to Base, AC 1minute, R.M.S.
Mounting Torque	M4	N·m	1.5	Recommended Torque : 1.0~1.4
Mass		g	24	Typical Value

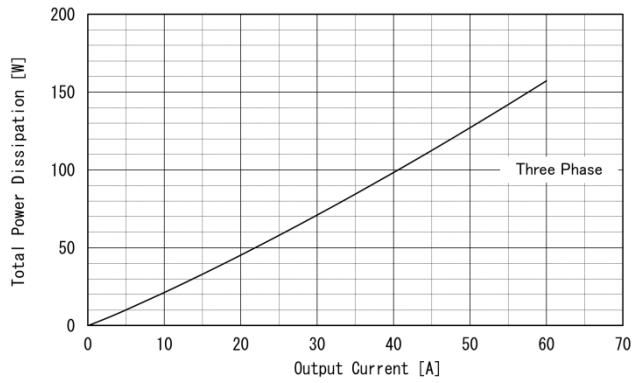
■ Electrical Characteristics (T_j = 25°C Unless Otherwise Specified)

Item	Symbol	Unit	Ratings			Conditions
			Min.	Typ.	Max.	
Repetitive Peak Reverse Current	I _{RRM}	mA			8.00	T _j = 150°C, V _{RRM} = 1600V
Forward Voltage Drop	V _{FM}	V		1.08	1.30	I _{FM} = 60A Inst. Measurement
Threshold Voltage	V _(T0)	V			0.91	T _j = 150°C
Slope Resistance	r _t	mΩ			4.90	T _j = 150°C
Thermal Resistance	R _{th(j-c)}	°C/W			0.25	Junctuon to case per module
Interface Thermal Resistance	R _{th(c-f)}	°C/W			0.20	Case to Heat sink Thermal Conductivity (Silicon grease) = 9x10 ⁻³ [W/cm·°C]

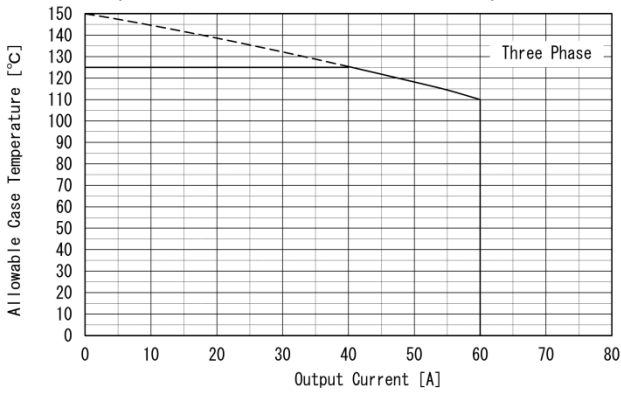
Maximum Forward Characteristics



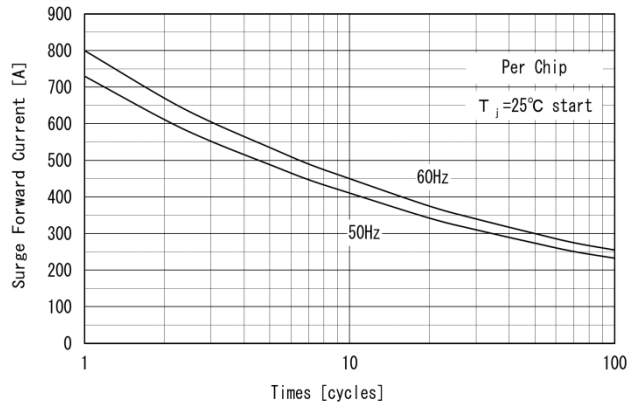
Output Current vs. Power Dissipation



Output Current vs. Allowable Case Temperature



Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance

