

Diode Module

DF75LA/LB80/160

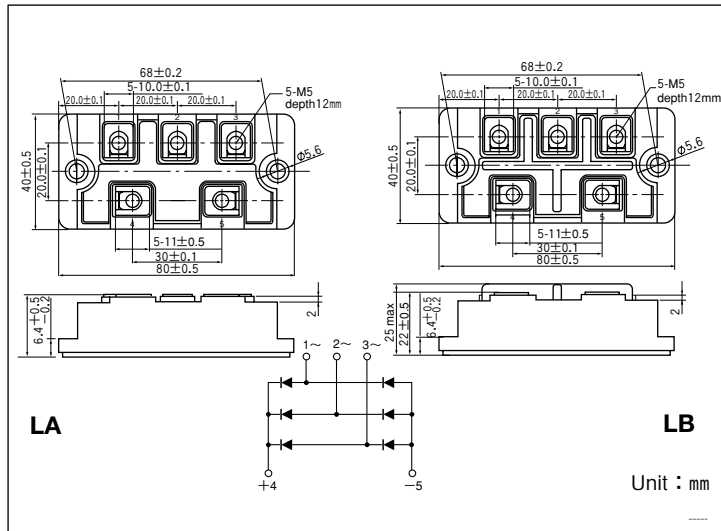
《Features》

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)

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

Item	Symbol	Unit	Ratings	Conditions
Output Current (D.C.)	I_D	A	75	Three phase full wave, $T_c=101^\circ\text{C}$
Surge Forward Current	I_{FSM}	A	910/1000	1/2cycle, 50/60Hz, Peak value, non-repetitive
I^2t	I^2t	A^2s	4100	Value for one cycle of surge current
Operating Junction Temperature	T_j	$^\circ\text{C}$	-40 to +150	
Storage Temperature	T_{stg}	$^\circ\text{C}$	-40 to +125	
Isolation Breakdown Voltage(R.M.S.)	V_{ISO}	V	2500	A.C. 1minute
Mounting torque	Mounting (M5)	N·m (kgf·cm)	2.7 (28)	Recommended Value 1.5 to 2.5(15 to 25)
	Terminal (M5)		2.7 (28)	Recommended Value 1.5 to 2.5(15 to 25)
Mass		g	100	Typical value

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

Item	Symbol	Unit	Ratings	Conditions
Repetitive Peak Reverse Current	I_{RRM}	mA	8	$T_j=150^\circ\text{C}$ at V_{RRM}
Forward Voltage Drop	V_{FM}	V	1.30	$I_F=75\text{A}$, Inst. measurement
Threshold Voltage	$V_{(TO)}$	V	0.85	$T_j=150^\circ\text{C}$
Dynamic Resistance	r_t	$\text{m}\Omega$	4.2	$T_j=150^\circ\text{C}$
Thermal Resistance	$R_{th(j-c)}$	$^\circ\text{C}/\text{W}$	0.25	Junction to case
Interface Thermal Resistance	$R_{th(c-f)}$	$^\circ\text{C}/\text{W}$	0.1	Case to Heat sink Thermal conductivity(Silicon grease) $\cong 7 \times 10^{-3}[\text{W}/\text{cm}^2\cdot^\circ\text{C}]$

