DIODE MODULE

DD(KD)100HB120/160

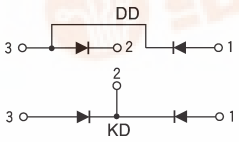
UL;E76102 (M)

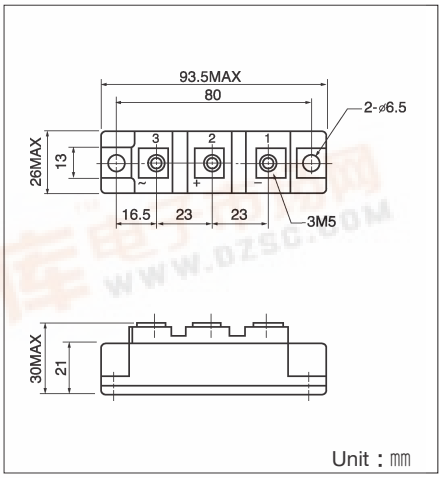
Power Diode Module **DD100HB** series are designed for various rectifier circuits. **DD100HB** has two diode chips connected in series and the mounting base is elctrically isolated from elements for simple heatsink construction. Wide voltage rating up to, 1,600V is avaiable for various input voltage.

- Isolated mounting base
- Two elements in a package for simple (single and three phase) bridge connections
- Highly reliable glass passivated chips
- High surge current capability

(Applications)

Various rectifiers, Battery chargers, DC motor drives





■Maximum Ratings

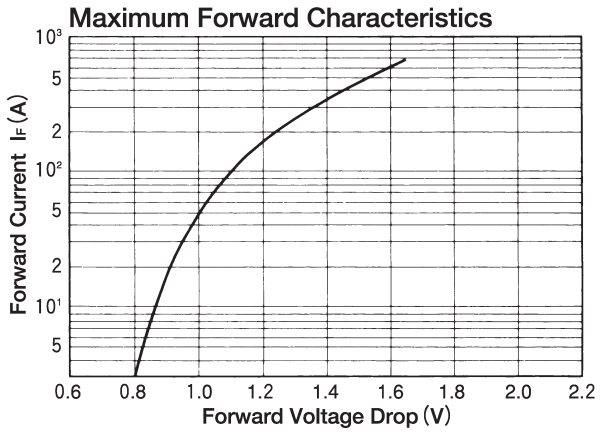
(Tj=25℃)

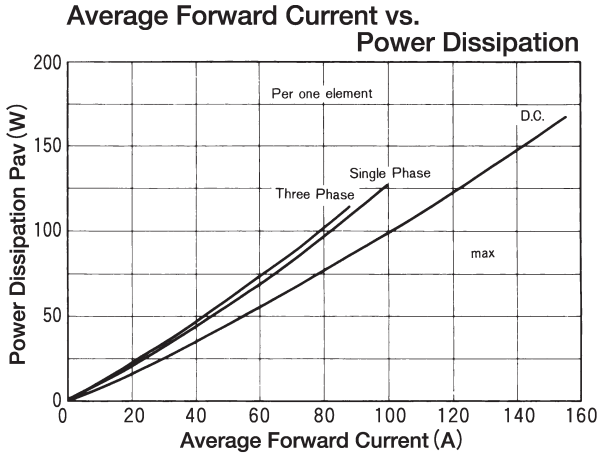
Symbol	Item	Ratings		Unit
		DF100HB120	DD100HB160	
VRRM	Repetitive Peak Reverse Voltage	1200	1600	V
VRSM	Non-Repetitive Peak Reverse Voltage	1350	1700	V

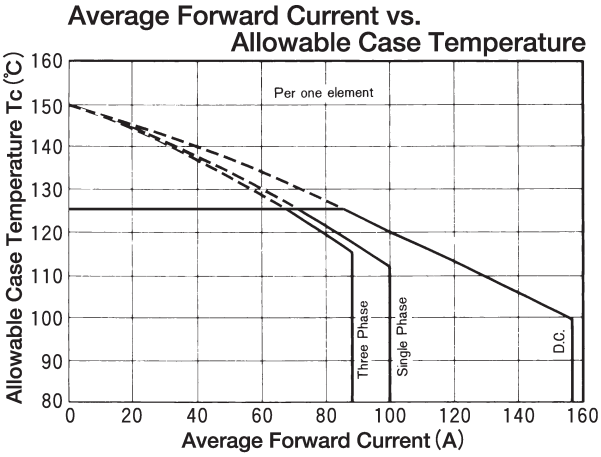
Symbol	Item		Conditions	Ratings	Unit
IF (AV)	Average Forward Current		Single phase, half wave, 180° conduction, Tc : 111℃	100	A
IF (RMS)	R.M.S. Forward Current		Single phase, half wave, 180° conduction, Tc : 111℃	155	A
IFSM	Surge Forward Current		½ cycle, 50/60Hz, peak value, non-repetitive	1800/2000	A
I²t	I²t		Value for one cycle of surge current	16500	A²S
Tj	Junction Temperature			−40～+150	℃
Tstg	Storage Temperature			−40～+125	℃
VISO	Isolation Voltage		A.C.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			170	g

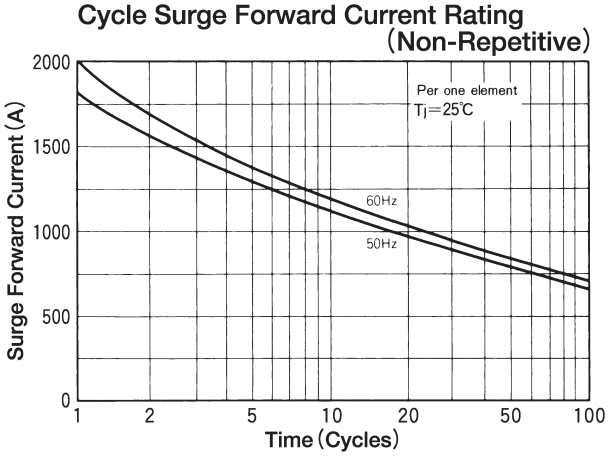
■Electrical Characteristics

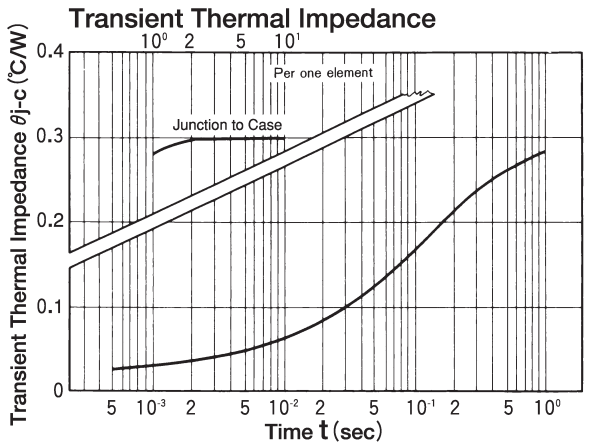
Symbol	Item	Conditions	Ratings	Unit
IRRM	Repetitive Peak Reverse Current, max.	at VDRM, single phase, half wave. Tj=150℃	30	mA
VFM	Forward Voltage Drop, max.	Foward current 320A, Tj=25℃, Inst. measurement	1.35	V
Rth (j-c)	Thermal Impedance, max.	Junction to case	0.30	℃/W

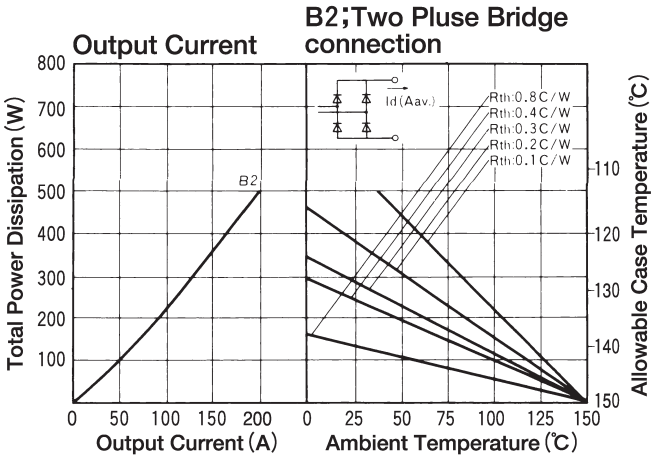

Maximum Forward Characteristics
Forward Current IF (A)
Forward Voltage Drop (V)

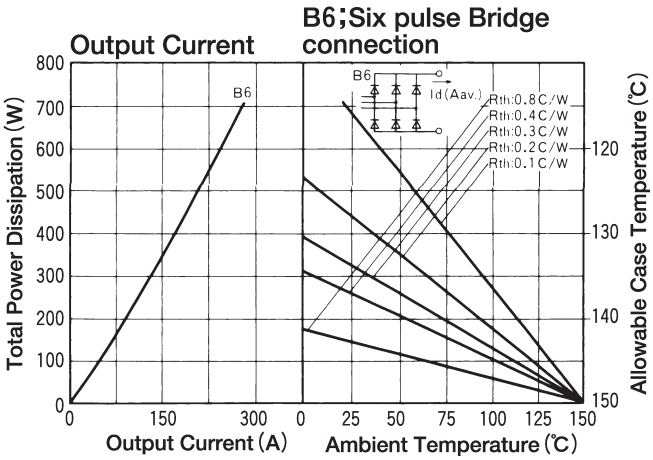

Average Forward Current vs.
Power Dissipation
Per one element
D.C.
Single Phase
Three Phase
max
Power Dissipation Pav (W)
Average Forward Current (A)


Average Forward Current vs.
Allowable Case Temperature
Per one element
Three Phase
Single Phase
D.C.
Allowable Case Temperature Tc (℃)
Average Forward Current (A)


Cycle Surge Forward Current Rating
(Non-Repetitive)
Per one element
Tj=25℃
60Hz
50Hz
Surge Forward Current (A)
Time (Cycles)


Transient Thermal Impedance
Per one element
Junction to Case
Transient Thermal Impedance θj-c (℃/W)
Time t (sec)


Output Current
B2;Two Pluse Bridge
connection
B2
Id(Aav.)
Rth:0.8℃/W
Rth:0.4℃/W
Rth:0.3℃/W
Rth:0.2℃/W
Rth:0.1℃/W
Total Power Dissipation (W)
Output Current (A)
Ambient Temperature (℃)
Allowable Case Temperature (℃)


Output Current
B6;Six pulse Bridge
connection
B6
Id(Aav.)
Rth:0.8℃/W
Rth:0.4℃/W
Rth:0.3℃/W
Rth:0.2℃/W
Rth:0.1℃/W
Total Power Dissipation (W)
Output Current (A)
Ambient Temperature (℃)
Allowable Case Temperature (℃)