DIODE MODULE

DD160KB

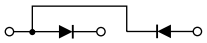
UL;E76102(M)

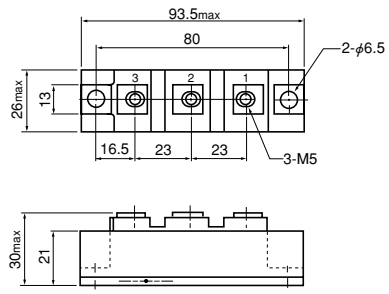
Power Diode Module **DD160KB** Series are designed for various rectifier circuits. **DD160KB** has two diode chips connected in series and the mounting base is electrically isolated from elements for simple heatsink construction. Wide voltage rating up to, 1600V is available for various input voltages.

- 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





Unit : mm

■Maximum Ratings

(Tj=25℃ unless otherwise specified)

Symbol	Item	Ratings				Unit
		DD160KB40	DD160KB80	DD160KB120	DD160KB160	
V_{RRM}	Repetitive Peak Reverse Voltage	400	800	1200	1600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	480	960	1300	1700	V

Symbol	Item		Conditions	Ratings	Unit
$I_{F(AV)}$	Average Forward Current		Single phase, half wave, 180℃ conduction, Tc=90℃	160	A
$I_{F(RMS)}$	R.M.S. Forward Current		Single phase, half wave, 180℃ conduction, Tc=90℃	250	A
I_{FSM}	Surge Forward Current		½cycle, 60Hz, peak value, non-repetitive	3200	A
I^2t	I^2t		Value for one cycle of surge current	42600	A^2S
Tj	Operating Junction Temperature			−40 to +150	℃
Tstg	Storage Temperature			−40 to +125	℃
V_{ISO}	Isolation Breakdown Voltage (R.M.S.)		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		Typical Value	170	g

■Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I_{RRM}	Repetitive Peak Reverse Current, max.	Tj=150℃, $V_R=V_{RRM}$	30	mA
V_{FM}	Forward Voltage Drop, max.	Forward current 500A, Inst measurement	1.35	V
Rth(j-c)	Thermal Impedance, max.	Junction to case	0.3	℃/W

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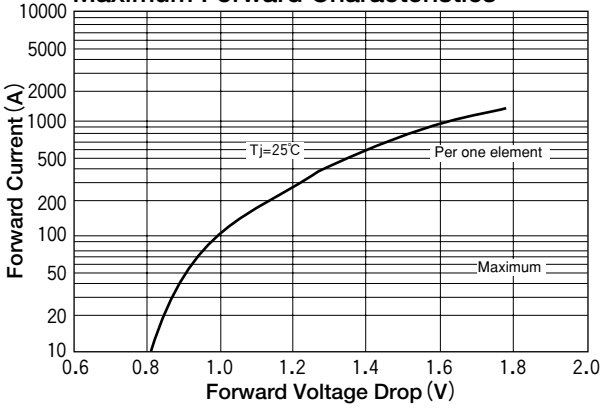
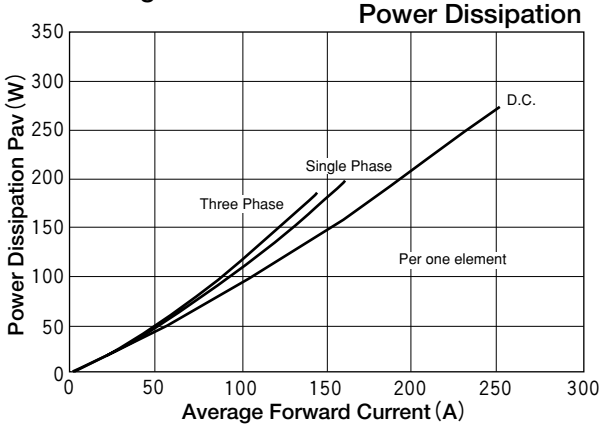
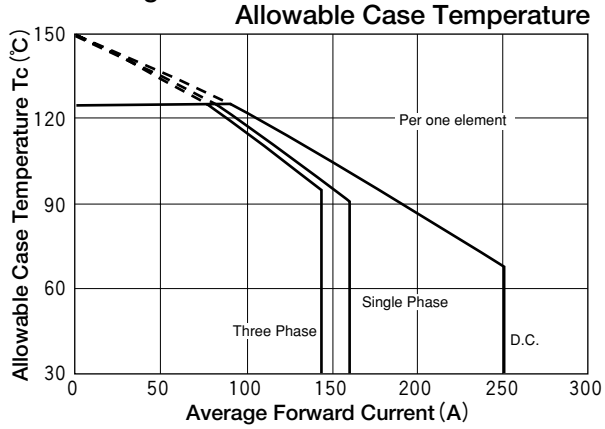
Maximum Forward Characteristics



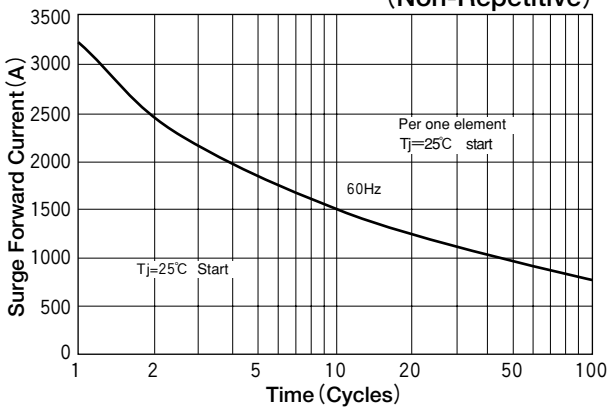
Average Forward Current vs. Power Dissipation



Average Forward Current vs. Allowable Case Temperature



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance

