

DIODE MODULE

DD160F

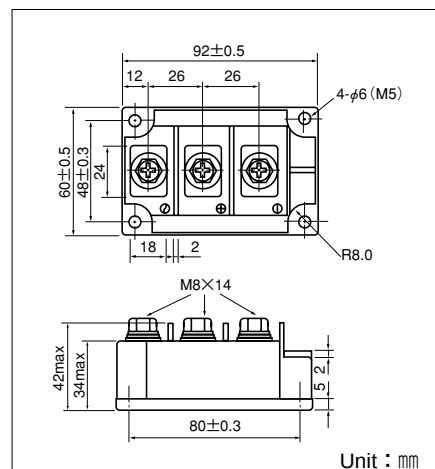
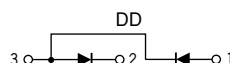
UL:E76102 (M)

Power Diode Module **DD160F** series are designed for various rectifier circuits. **DD160F** has two diode chips connected in series in a package and the mounting base is electrically isolated from elements for simple heatsink construction. Wide voltage rating up to, 1,600V is available 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

(T_j=25°C unless otherwise specified)

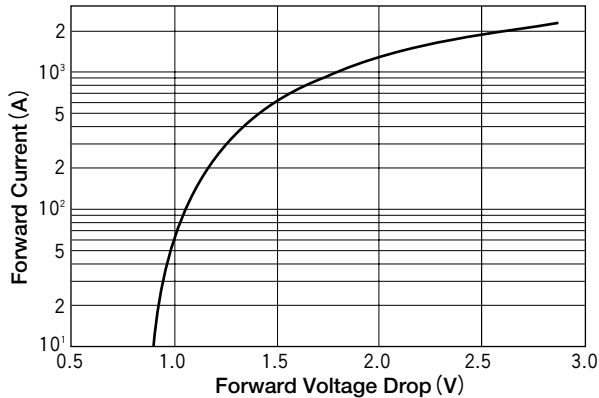
Symbol	Item	Ratings				Unit
		DD160F40	DD160F80	DD160F120	DD160F160	
V _{RRM}	Repetitive Peak Reverse Voltage	400	800	1200	1600	V
V _{RSM}	Non-Repetitive Peak Reverse Voltage	480	960	1300	1700	V

Symbol	Item	Conditions	Ratings	Unit
I _{F(AV)}	Average Forward Current	Single phase, half wave, 180° conduction, T _c : 87°C	160	A
I _{F(RMS)}	R.M.S. Forward Current	Single phase, half wave, 180° conduction, T _c : 87°C	250	A
I _{FSM}	Surge Forward Current	1/2 cycle, 50/60Hz, peak value, non-repetitive	5000/5500	A
I ² t	I ² t	Value for one cycle of surge current	125000	A ² S
V _{ISO}	Isolation Breakdown Voltage (R.M.S)	A.C.1minute	2500	V
T _j	Junction Temperature		-40 to +125	°C
T _{stg}	Storage Temperature		-40 to +125	°C
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)
		Terminal (M8)	Recommended Value 8.8-10 (90-105)	11 (115)
	Mass		510	g

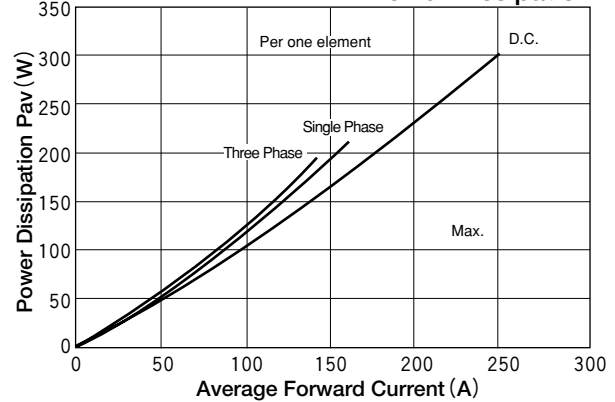
Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I _{RRM}	Repetitive Peak Reverse Current, max.	at V _{DRM} , single phase, half wave. T _j =125°C	50	mA
V _{FM}	Forward Voltage Drop, max.	Forward current 500A, T _j =25°C, Inst. measurement	1.42	V
R _{th(j-c)}	Thermal Impedance, max.	Junction to case	0.18	°C/W

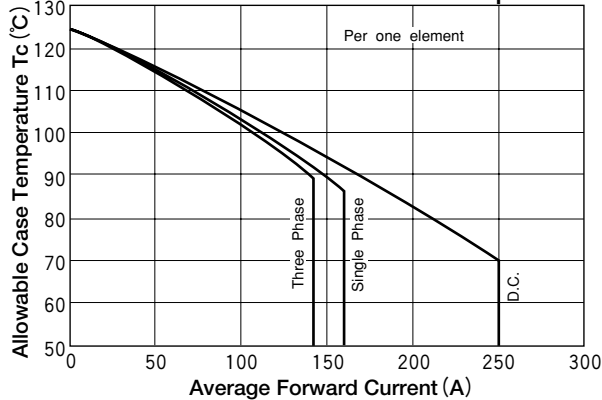
Maximum Forward Characteristics



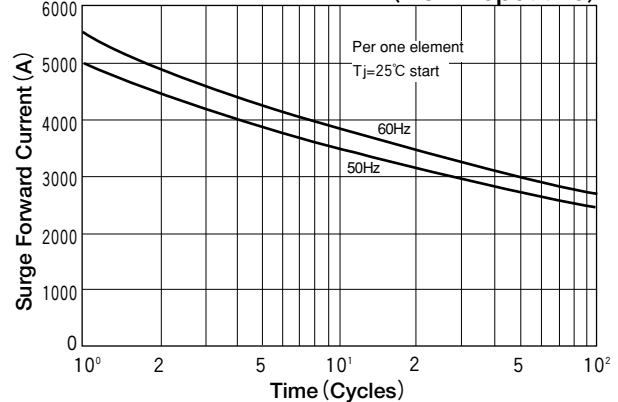
Average Forward Current vs. Power Dissipation



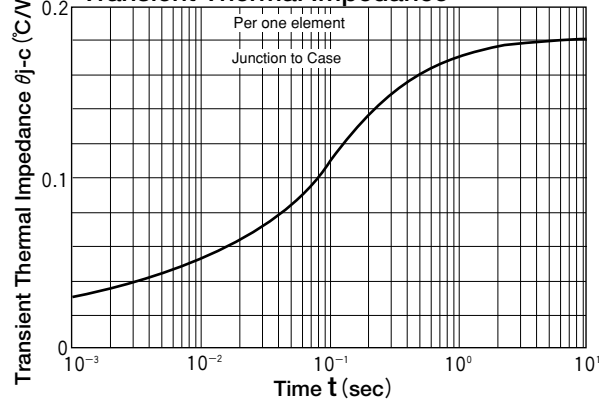
Average Forward Current vs. Allowable Case Temperature



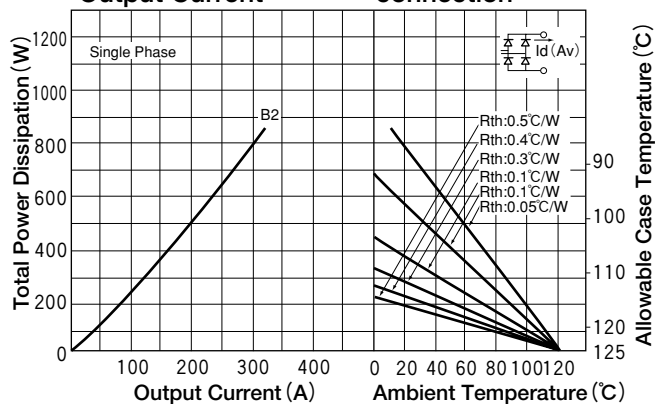
Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance

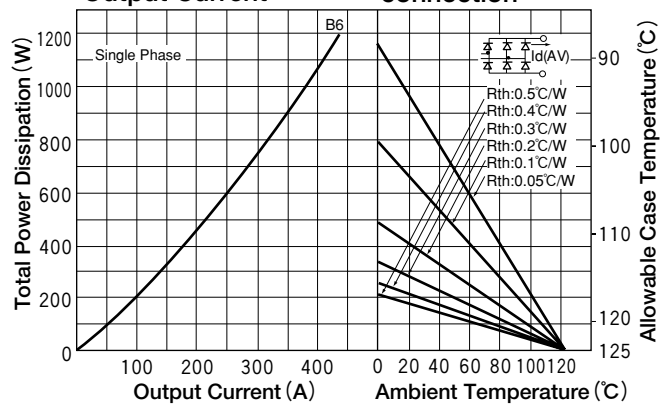


Output Current



B2; Two Pulse Bridge connection

Output Current



B6; Six pulse Bridge connection