

DIODE MODULE

DD130F

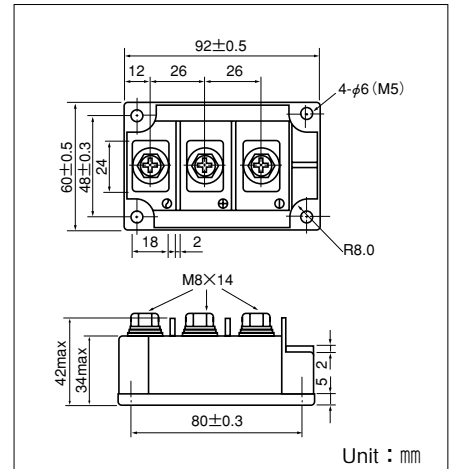
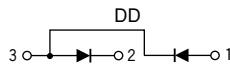
UL:E76102(M)

Power Diode Module **DD130F** series are designed for various rectifier circuits. **DD130F** 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)

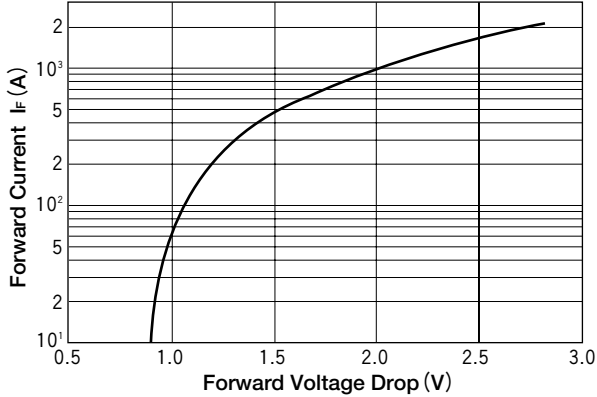
| Symbol | Item | Ratings | | | | Unit |
|------------------|-------------------------------------|----------|----------|-----------|-----------|------|
| | | DD130F40 | DD130F80 | DD130F120 | DD130F160 | |
| V _{RRM} | Repetitive Peak Reverse Voltage | 400 | 800 | 1200 | 1600 | V |
| V _{RSM} | Non-Repetitive 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 : 90°C | 130 | A | |
| I _{F(RMS)} | R.M.S. Forward Current | Single phase, half wave, 180° conduction, T _c : 90°C | 205 | A | |
| I _{FSM} | Surge Forward Current | 1/2 cycle, 50/60Hz, peak value, non-repetitive | 4000/4400 | A | |
| I ² t | I ² t | Value for one cycle of surge current | 80000 | A ² S | |
| V _{ISO} | Isolation Breakdown Voltage (R.M.S) | A.C.1minute | 2500 | °C | |
| T _j | Junction Temperature | | -40 to +125 | °C | |
| T _{stg} | Storage Temperature | | -40 to +125 | V | |
| | Mounting Torque | Mounting (M5) | Recommended Value 1.5-2.5 (15-25) | 2.7 (28) | N·m (kgf·cm) |
| | | Terminal (M8) | Recommended Value 8.8-10 (90-105) | 11 (115) | |
| | Mass | | | 510 | g |

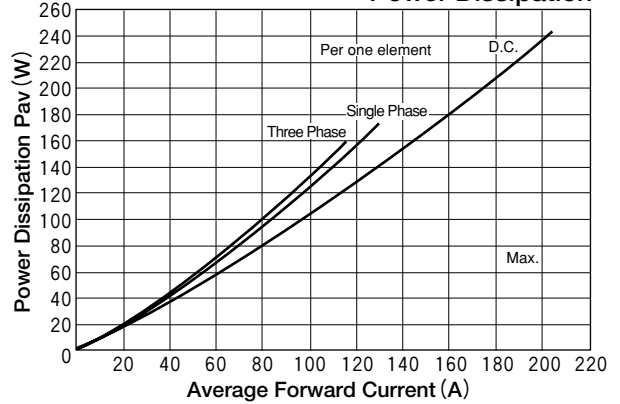
Electrical Characteristics

| 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 400A, T _j =25°C, Inst. measurement | 1.40 | V |
| R _{th(j-c)} | Thermal Impedance, max. | Junction to case | 0.20 | °C/W |

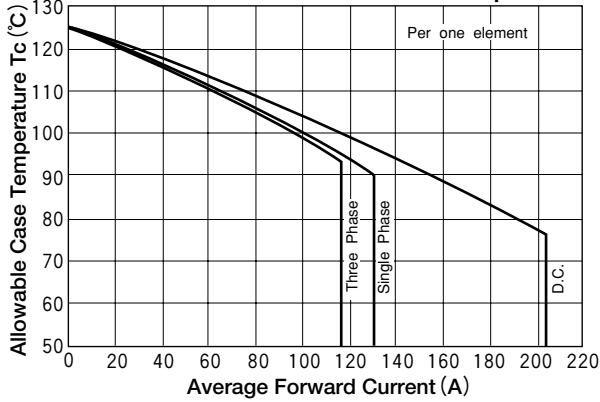
Maximum Forward Characteristics



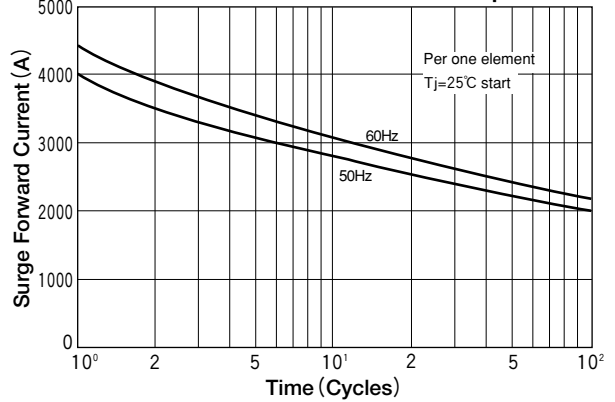
Average Forward Current vs. Power Dissipation



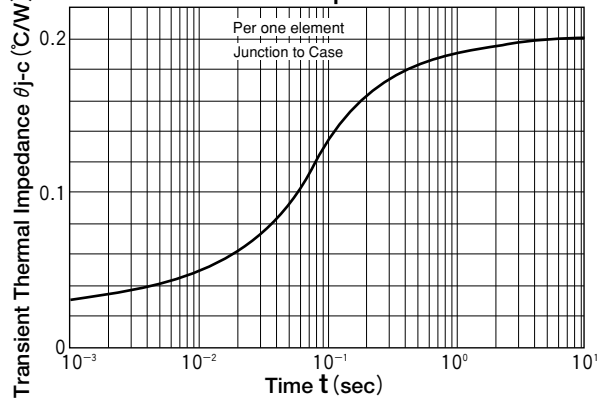
Average Forward Current vs. Allowable Case Temperature



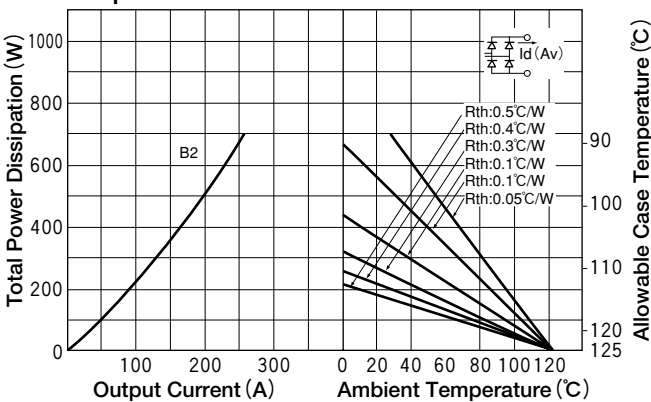
Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance



B2; Two Pulse Bridge connection



B6; Six pulse Bridge connection

