

2FI50G-100(2x50A)

FAST RECOVERY DIODE MODULE

1000V / 50A

2 in one-package

FAST RECOVERY DIODE MODULE

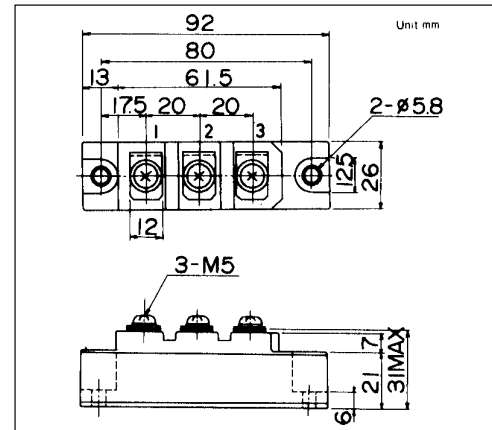
Features

- Short Reverse Recovery Time
- Variety of Connection Menu
- Insulated Type

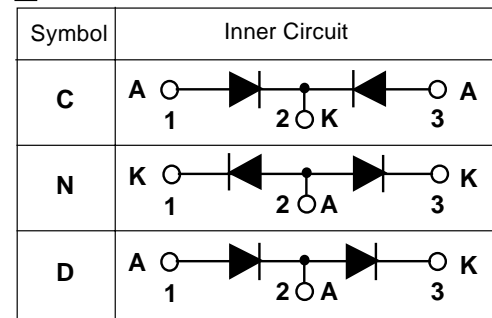
Applications

- Arc-Welders
- Free-Wheeling Diode
- High Speed Rectifiers

Outline Drawings, mm



Inner Circuit Schematic



Maximum ratings and characteristics

Absolute maximum ratings

| Item | Symbol | Conditions | Rating | Unit |
|-------------------------------------|-------------|---|---------------|----------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 1000 | V |
| Non-repetitive peak reverse voltage | V_{RSM} | | 1200 | V |
| Average output current | $I_{F(AV)}$ | 50/60Hz Square wave, $T_c=80^\circ\text{C}$ | 2 x 50 | A |
| Surge current | I_{FSM} | From rated load, Sine wave 10ms | 800 | A |
| I^2t | I^2t | From rated load | 2560 | A^2s |
| Operating junction temperature | T_j | | -40 to +150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -40 to +150 | $^\circ\text{C}$ |
| Isolation voltage | V_{is} | | AC1500(1min.) | V |
| Screw torque | | (M5) | 3.5 *1 | N·m |

*1: Recommendable value : 2.5 to 3.0 N·m(M5)

Electrical characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|-----------------------|-----------|--|------|------|------|---------------|
| Forward voltage drop | V_{FM} | $T_j=25^\circ\text{C}$, $I_{FM}=50\text{A}$ | | | 1.65 | V |
| Reverse current | I_{RRM} | $T_j=150^\circ\text{C}$, $V_R=V_{RRM}$ | | | 30 | mA |
| Reverse recovery time | t_{rr} | $T_j=25^\circ\text{C}$, $I_F=I_R=0.1\text{A}$ | | | 0.6 | μs |

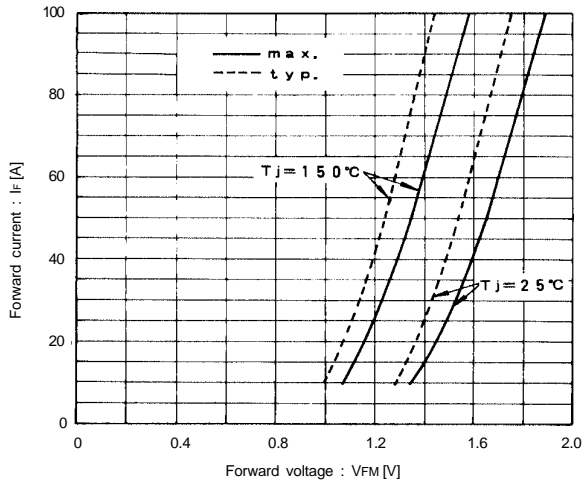
Thermal Characteristics

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|--------------------|---------------|---------------------------|------|------|------|--------------------|
| Thermal resistance | $R_{th(j-c)}$ | Junction to case | | | 0.40 | $^\circ\text{C/W}$ |
| | $R_{th(c-f)}$ | the base to cooling fin * | | | 0.10 | $^\circ\text{C/W}$ |

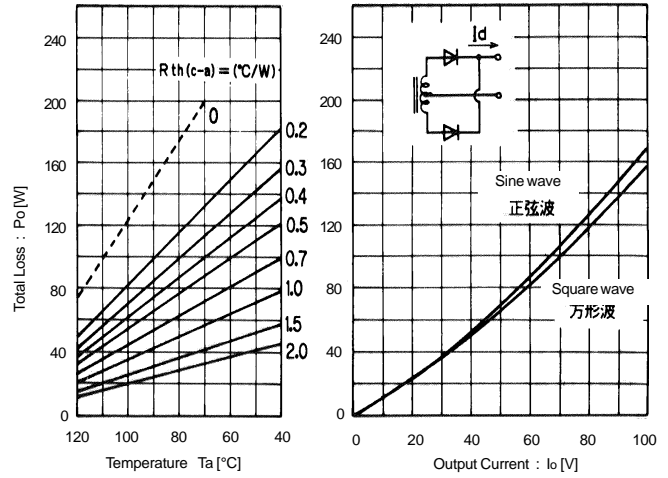
* : With Thermal Compound

■ Characteristics

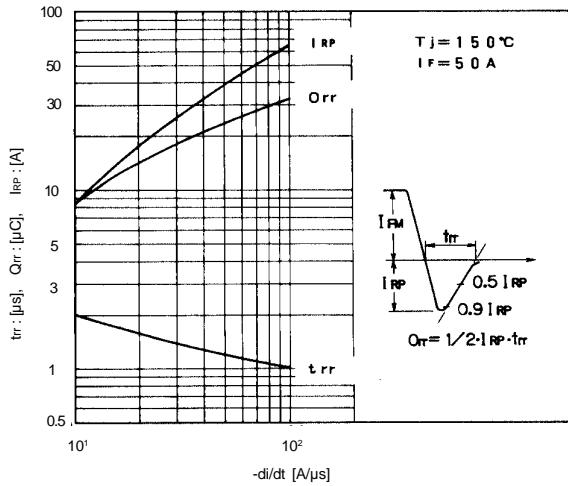
Forward Characteristics



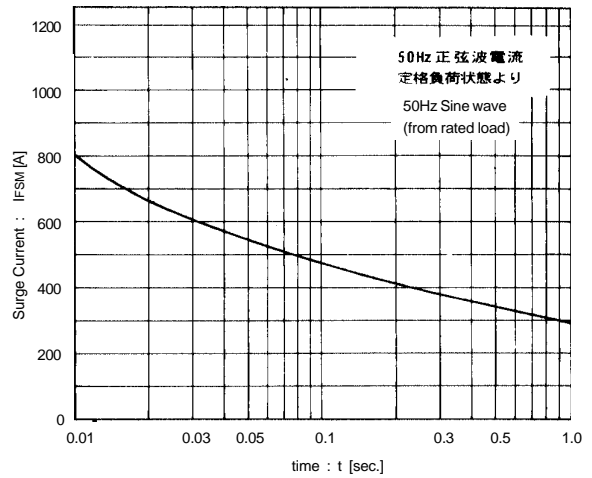
Output Current - Total Loss - Ambient Temperature



Reverse Recovery Characteristics



Surge Current



Transient Thermal Impedance

