

# 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

### ■ 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	$\text{A}^2\text{s}$
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)

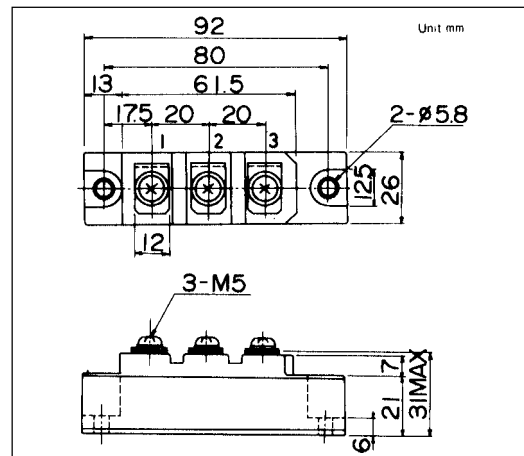
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage drop	$V_{FM}$	$T_j=25^\circ\text{C}$ , $I_{FM}=50\text{A}$			1.65	V
Reverse current	$I_{RRM}$	$T_j=150^\circ\text{C}$ , $V_R=V_{RRM}$			30	mA
Reverse recovery time	$t_{rr}$	$T_j=25^\circ\text{C}$ , $I_F=I_R=0.1\text{A}$			0.6	$\mu\text{s}$

#### ● Thermal Characteristics

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

\* : With Thermal Compound

### ■ Outline Drawings, mm

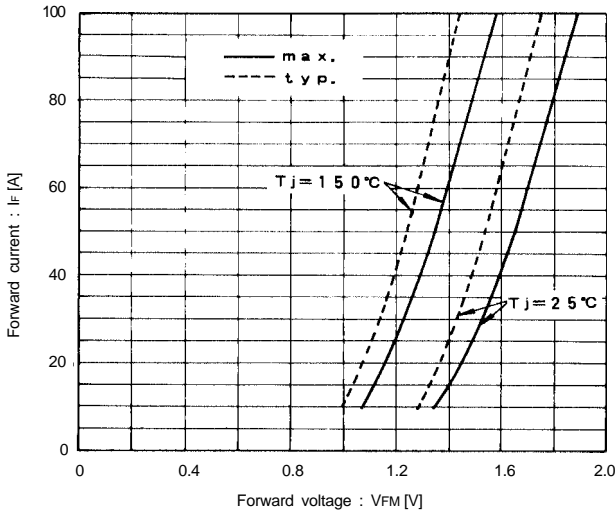


### ■ Inner Circuit Schematic

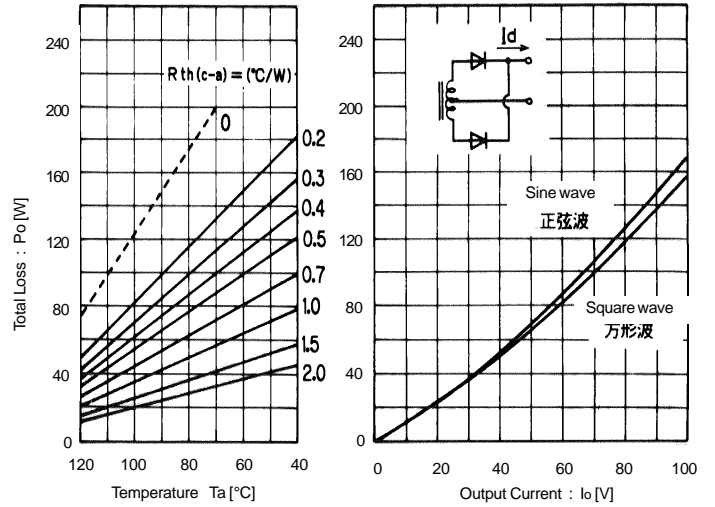
Symbol	Inner Circuit
C	A 1 — >— 2 O K — <— 3 A
N	K 1 — <— 2 O A — >— 3 K
D	A 1 — >— 2 O A — >— 3 K

■ Characteristics

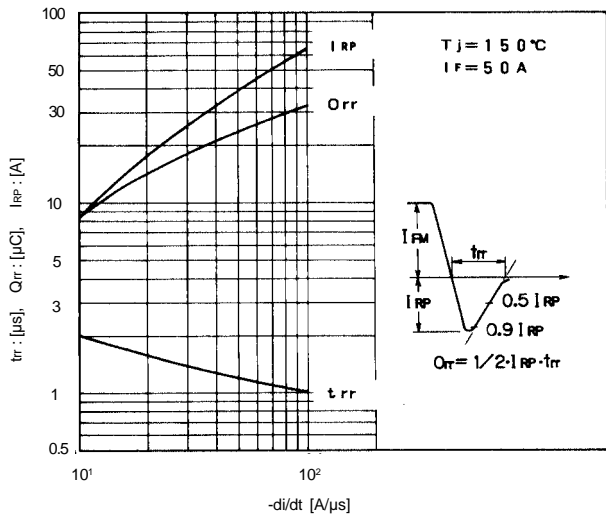
Forward Characteristics



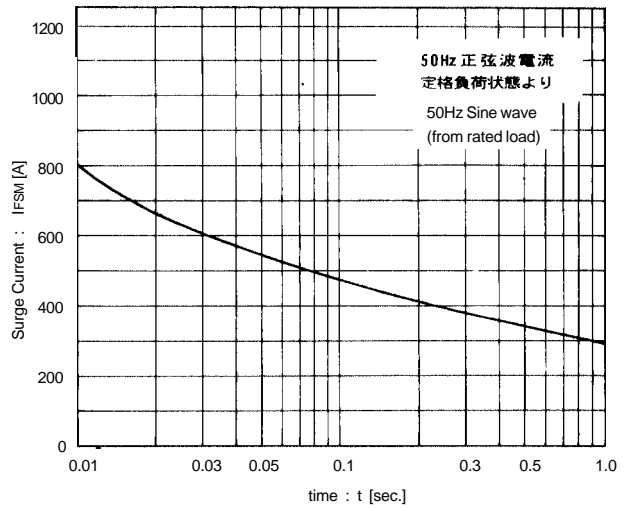
Output Current - Total Loss - Ambient Temperature



Reverse Recovery Characteristics



Surge Current



Transient Thermal Impedance

