

2FI50G-100(2x50A)

FAST RECOVERY DIODE MODULE

1000V / 50A

2 in one-package

FAST RECOVERY DIODE MODULE

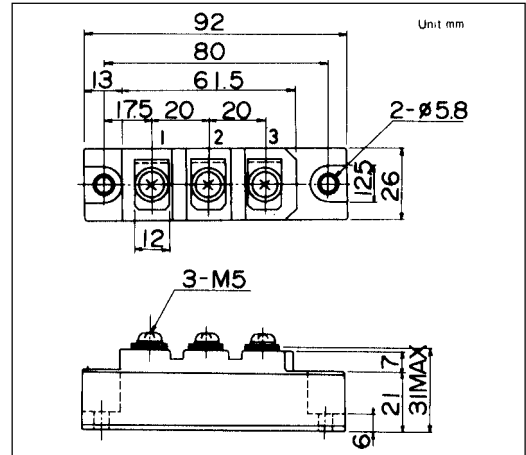
■ Features

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

■ Applications

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

■ Outline Drawings, mm



■ Inner Circuit Schematic

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

■ 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 (Ta=25°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

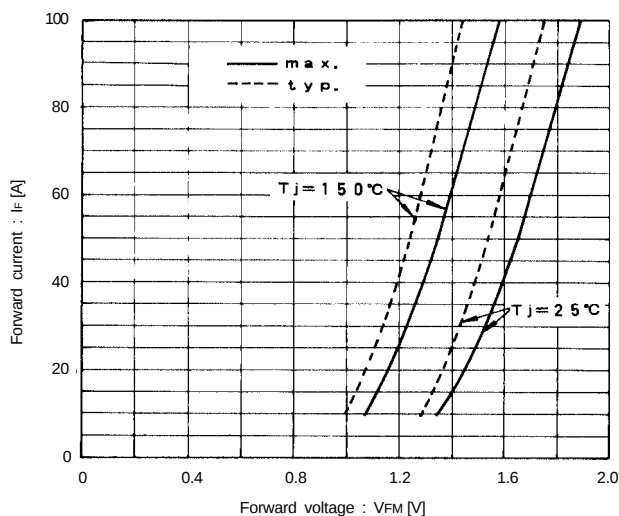
● Thermal Characteristics

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	$^{\circ}\text{C/W}$

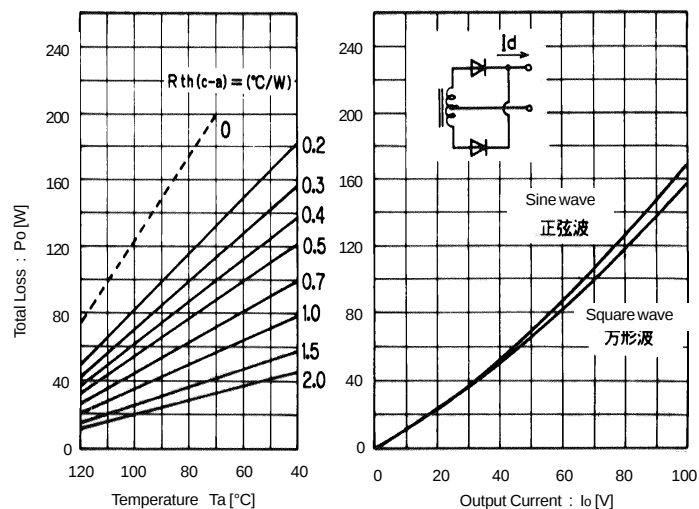
* : With Thermal Compound

■ Characteristics

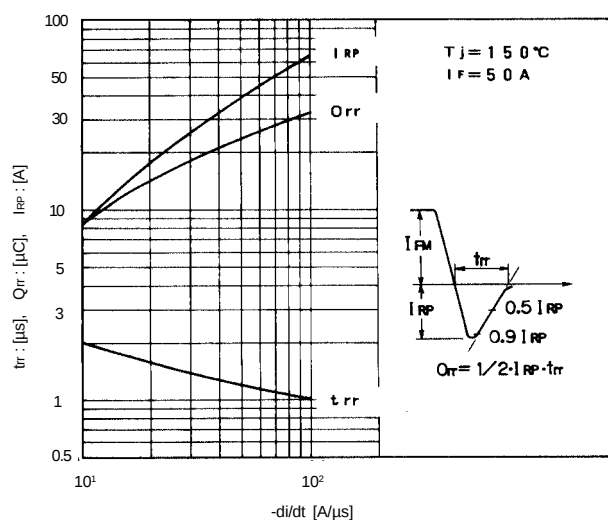
Forward Characteristics



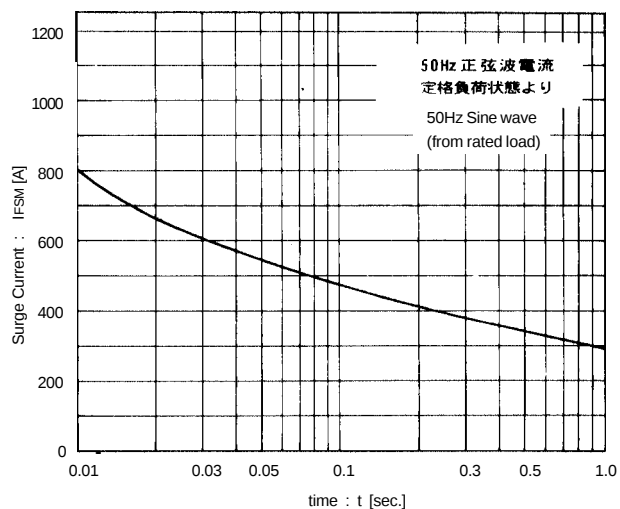
Output Current - Total Loss - Ambient Temperature



Reverse Recovery Characteristics



Surge Current



Transient Thermal Impedance

