

# 1FI150B-060(150A)

## FAST RECOVERY DIODE MODULE

### 600V / 150A 1 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	$V_{RRM}$		600	V
Non-repetitive peak reverse voltage	$V_{RSM}$		650	V
Average output current	$I_{F(AV)}$	50/60Hz Sine wave, $T_c=92^\circ\text{C}$	150	A
Surge current	$I_{FSM}$	From rated load, Sine wave 10ms	2000	A
$I^2t$	$I^2t$	From rated load	16000	$\text{A}^2\text{s}$
Operating junction temperature	$T_j$		-40 to +150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-40 to +125	$^\circ\text{C}$
Isolation voltage	$V_{is}$		AC2000(1min.)	V
Screw torque	Terminals	(M6)	3.5	N·m
	Mountings	(M5)	2.5	N·m

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

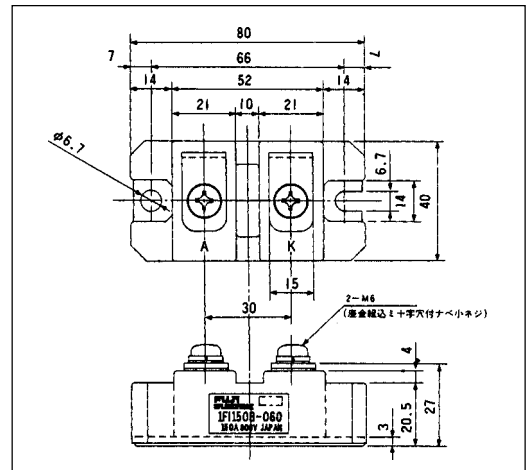
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage drop	$V_{FM}$	$T_j=25^\circ\text{C}$ , $I_{FM}=150\text{A}$			1.10	V
Reverse current	$I_{RRM}$	$T_j=150^\circ\text{C}$ , $V_R=V_{RRM}$			15	mA
Reverse recovery time	$t_{rr}$	$T_j=25^\circ\text{C}$ , $I_F=75\text{A}$ , $-di/dt=375\text{A}/\mu\text{s}$			0.5	$\mu\text{s}$

##### ● Thermal Characteristics

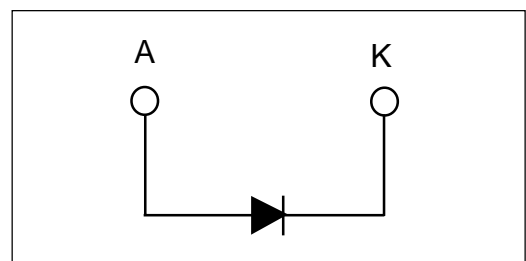
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Thermal resistance	$R_{th(j-c)}$	Junction to case			0.32	$^\circ\text{C}/\text{W}$
	$R_{th(c-f)}$	the base to cooling fin *			0.06	$^\circ\text{C}/\text{W}$

\* : With Thermal Compound

#### ■ Outline Drawings, mm

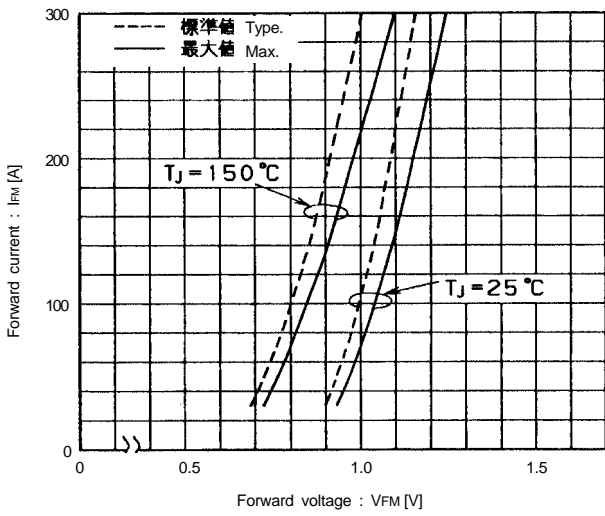


#### ■ Inner Circuit Schematic

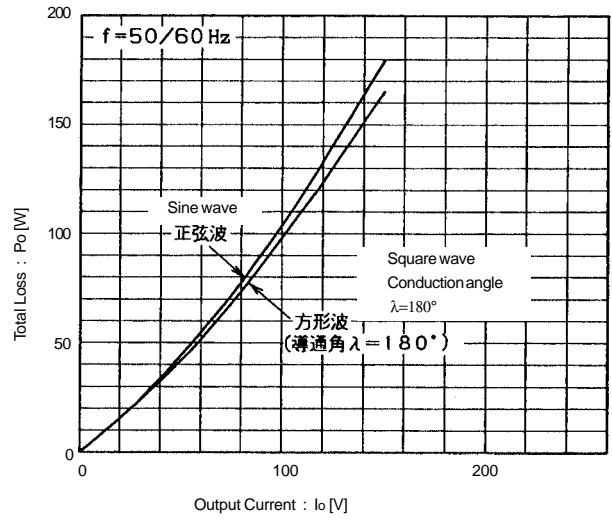


■ Characteristics

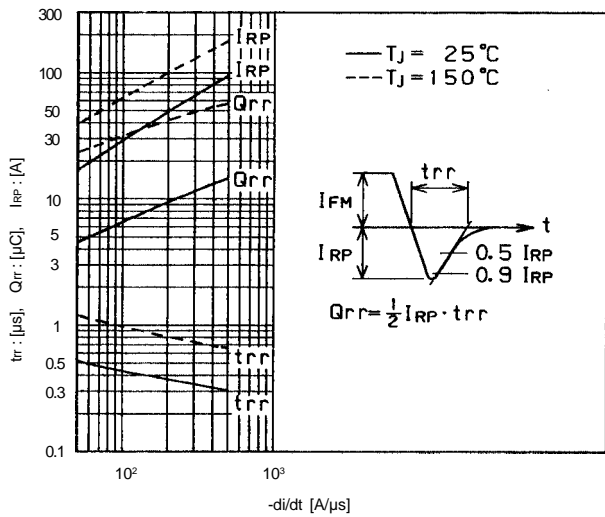
Forward Characteristics



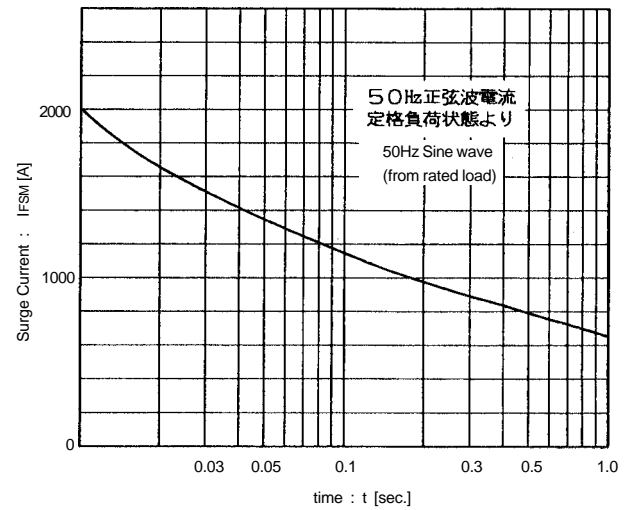
Output Current vs. Total Loss



Reverse Recovery Characteristics



Surge Current



Transient Thermal Impedance

