

1FI150B-060(150A)

FAST RECOVERY DIODE MODULE

600V / 150A 1 in one-package
FAST RECOVERY DIODE MODULE

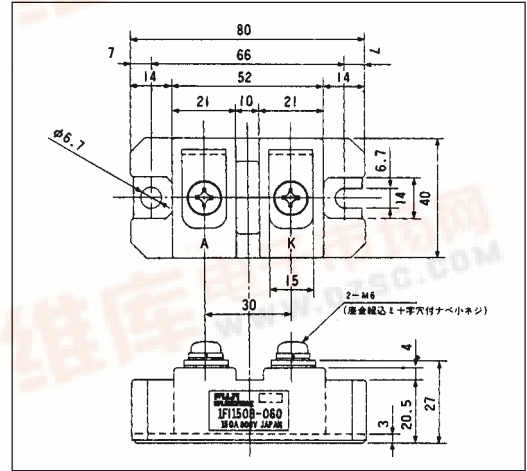
Features

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

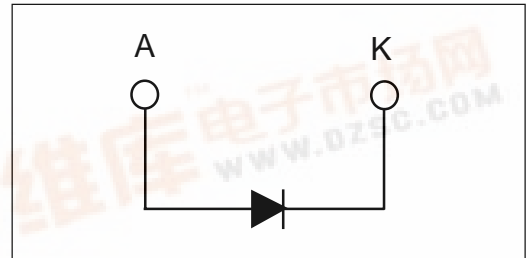
Applications

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

Outline Drawings, mm



Inner Circuit Schematic



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, $T_c=92^{\circ}C$	150	A
Surge current	I_{FSM}	From rated load, Sine wave 10ms	2000	A
I^2t	I^2t	From rated load	16000	A^2s
Operating junction temperature	T_j		-40 to +150	$^{\circ}C$
Storage temperature	T_{stg}		-40 to +125	$^{\circ}C$
Isolation voltage	V_{is}		AC2000(1min.)	V
Screw torque	Terminals	(M6)	3.5	N·m
	Mountings	(M5)	2.5	N·m

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

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

Thermal Characteristics

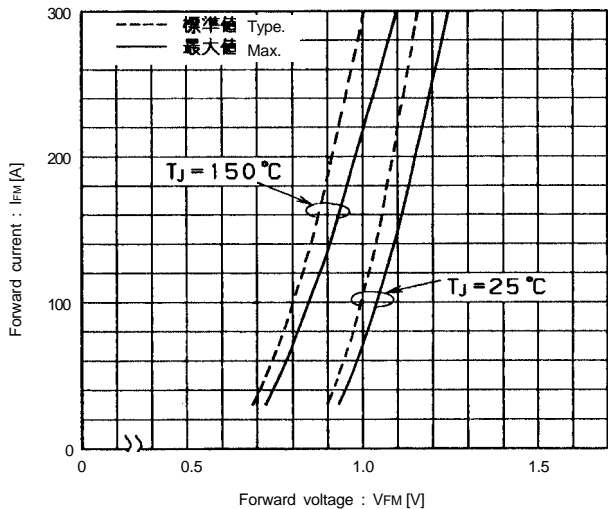
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Thermal resistance	$R_{th(j-c)}$	Junction to case			0.32	$^{\circ}C/W$
	$R_{th(c-f)}$	the base to cooling fin *			0.06	$^{\circ}C/W$

* : With Thermal Compound

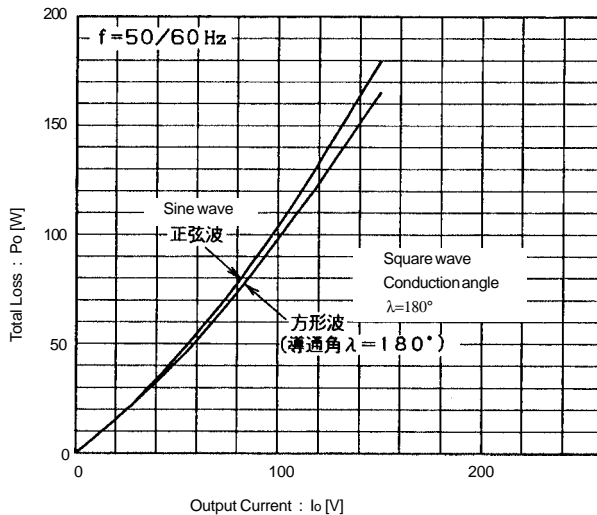


■ Characteristics

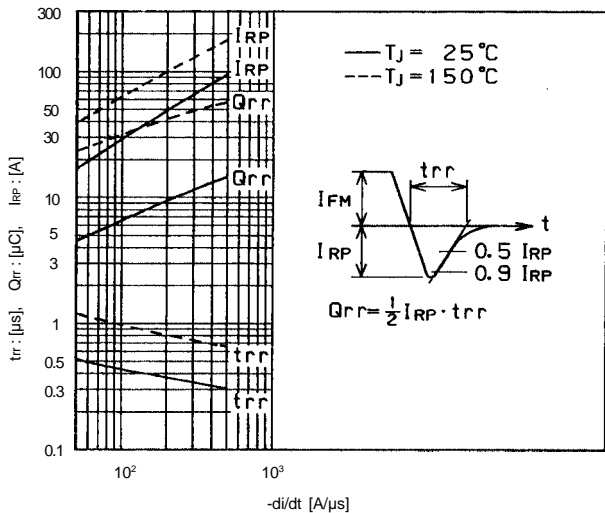
Forward Characteristics



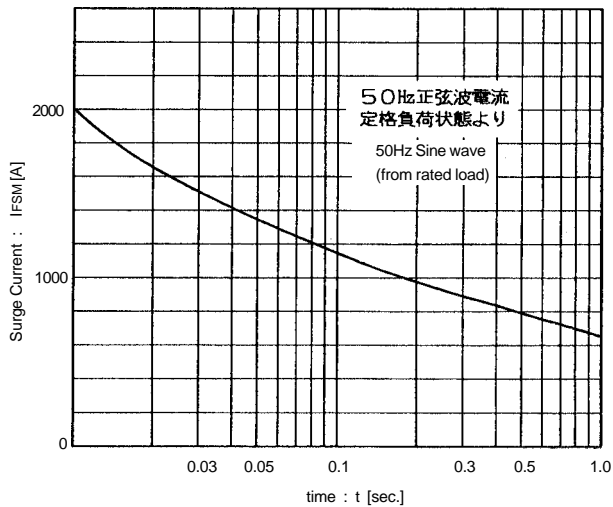
Output Current vs. Total Loss



Reverse Recovery Characteristics



Surge Current



Transient Thermal Impedance

