1FI150B-060(150A) FAST RECOVERY DIODE MODULE

600V / 150A 1 in one-package

FAST RECOVERY DIODE MODULE

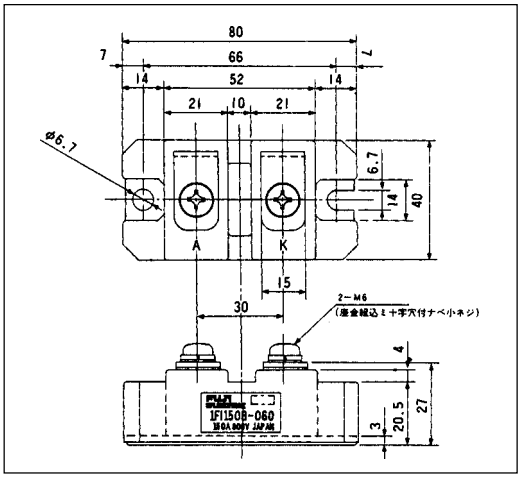
■ Features

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

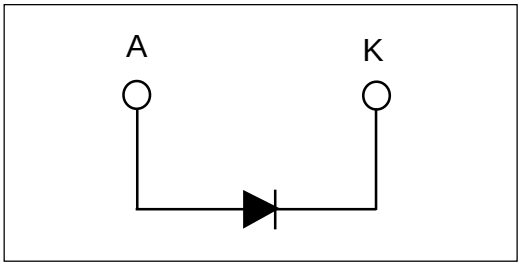
■ Applications

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

■ Outline Drawings, mm



■ Inner Curcuit 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, Tc=92°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	°C
Storage temperature		T_{stg}		-40 to +125	°C
Isolation voltage		V_{is}		AC2000(1min.)	V
Screw torque	Terminals		(M6)	3.5	N·m
	Mountings		(M5)	2.5	N·m

●**Electrical characteristics (Ta=25°C Unless otherwise specified)**

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage drop	V_{FM}	Tj=25°C, I_{FM}=150A			1.10	V
Reverse current	I_{RRM}	Tj=150°C, V_R=V_{RRM}			15	mA
Reverse recovery time	trr	Tj=25°C, I_F=75A, -di/dt=375A/µs			0.5	µs

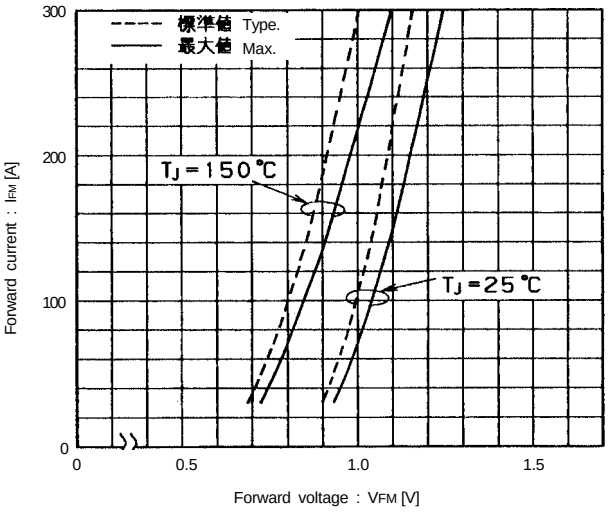
● **Thermal Characteristics**

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

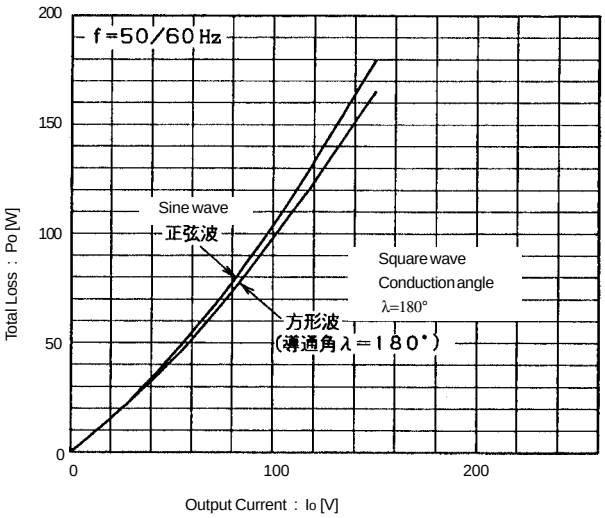
* : With Thermal Compound

■ Characteristics

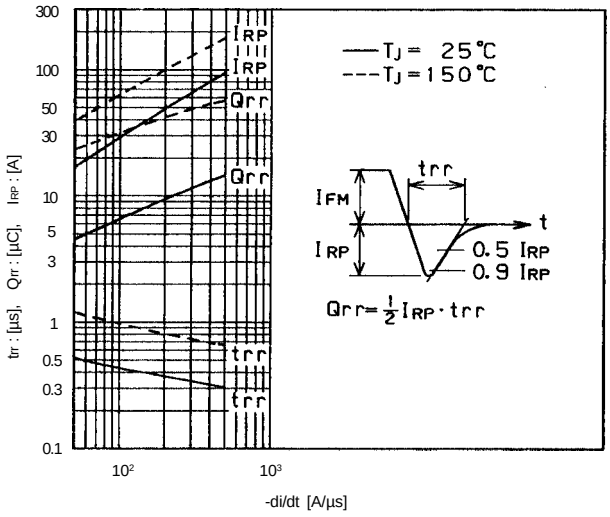
Forward Characteristics



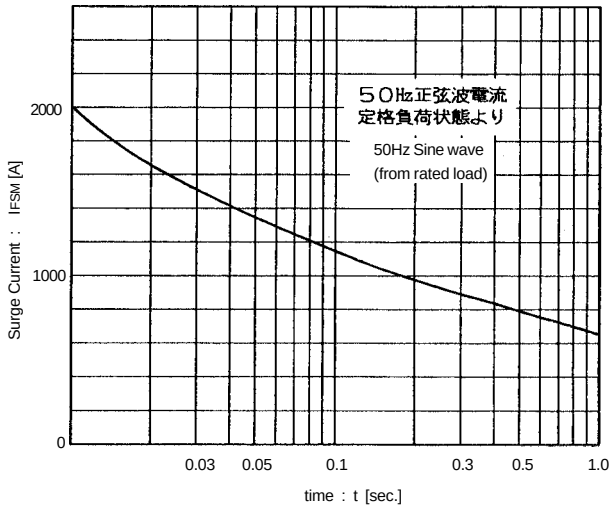
Output Current vs. Total Loss



Reverse Recovery Characteristics



Surge Current



Transient Thermal Impedance