

6RI100G(100A)

POWER DIODE MODULE

1200V,1600V / 100A

6 in one-package

Features

- Glass Passivation Chip
- Easy Connection
- Insulated Type

Applications

- Inverters
- Battery Chargers
- DC Motors
- General Purpose DC Power Supplies

Maximum ratings and characteristics

Absolute maximum ratings

Item	Symbol	Conditions	Rating		Unit
			-120	-160	
Repetitive peak reverse voltage	V_{RRM}		1200	1600	V
Non-repetitive peak reverse voltage	V_{RSM}		1320	1760	V
Average output current	I_O	50/60Hz Sine wave, $T_c=97^\circ\text{C}$	100		A
Surge current	I_{FSM}	From rated load, Sine wave 10ms	1200		A
I^2t	I^2t	From rated load	6000		A^2s
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}		AC2500(1min.)		V
Screw torque			3.5	*1	N·m

*1: Recommendable value : 2.5 to 3.0 N·m(M5)

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

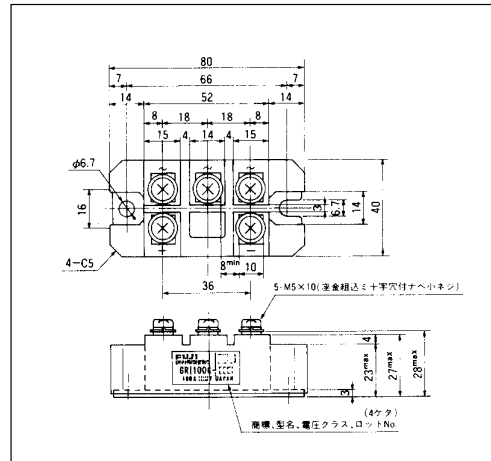
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage drop	V_{FM}	$T_j=25^\circ\text{C}$, $I_{FM}=100\text{A}$			1.25	V
Reverse current	I_{RRM}	$T_j=150^\circ\text{C}$, $V_R=V_{RRM}$			20	mA

Thermal Characteristics

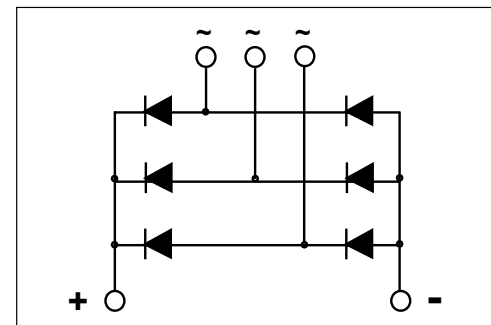
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Thermal resistance	$R_{th(j-c)}$	Junction to case			0.22	$^\circ\text{C}/\text{W}$
	$R_{th(c-f)}$	the base to cooling fin *			0.06	$^\circ\text{C}/\text{W}$

* : With Thermal Compound

Outline Drawings, mm

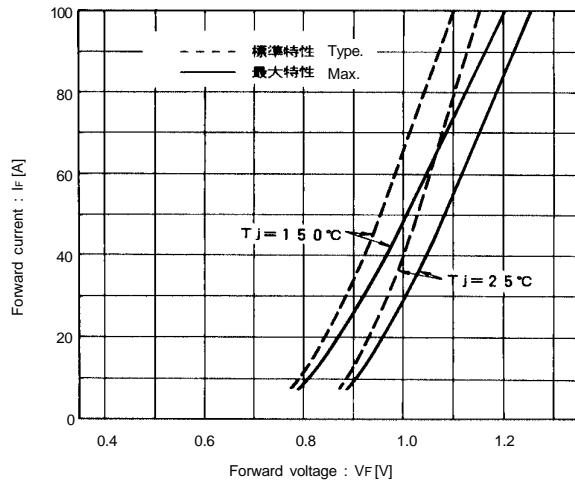


Inner Circuit Schematic

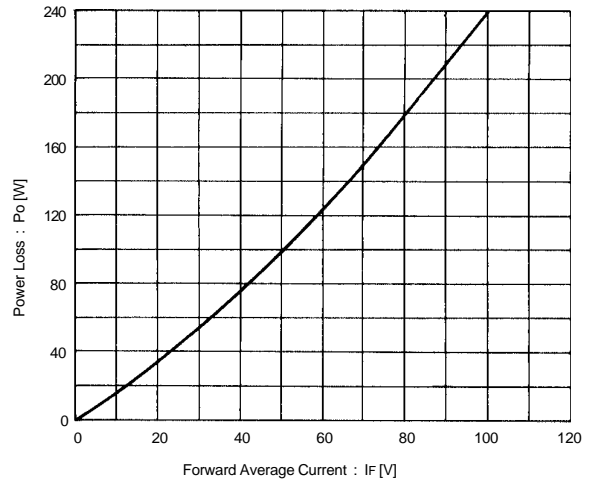


■ Characteristics

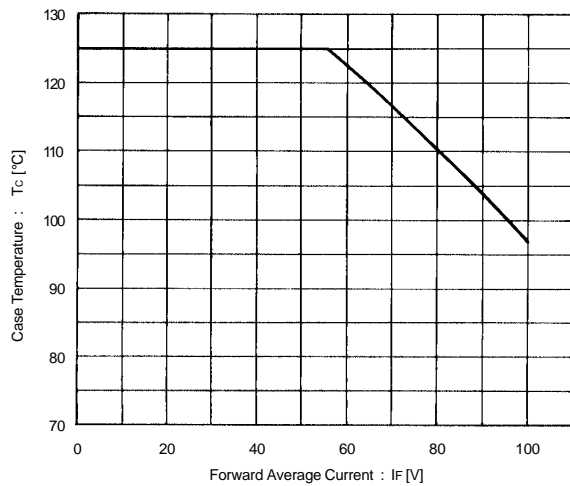
Forward Characteristics



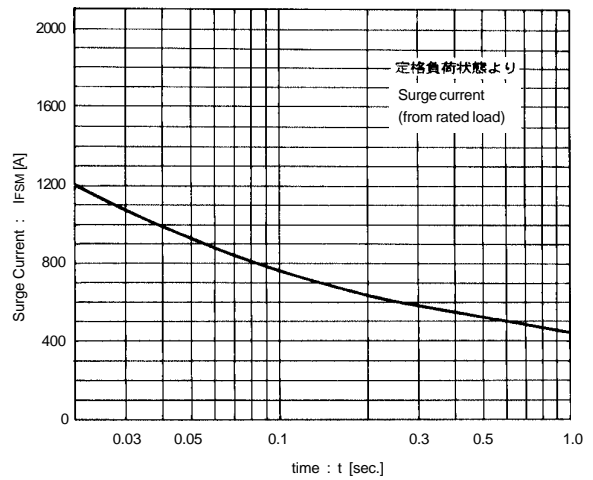
Forward Average Current vs. Power Loss



Forward Average Current vs. Case Temperature



Surge Current



Transient Thermal Impedance

