

POWER DIODE MODULE

Features

- All the terminals and the mounting plate are electrically isolated. These modules can be installed in the same cooling fin as other modules, thus saving installation space – a cost-effective feature.
- The diode chips are coated with a glass of zinc oxide, making them highly resistant to temperature and humidity variation.
- 6 diode chips are connected to the 3-phase bridge rectifying circuit inside the module-a cost-effective feature.

Applications

- Inverters for AC motors
- Power supply units for DC motors
- DC power supply units for battery chargers
- General purpose DC power supply units

■ Maximum Ratings and Characteristics

• Absolute Maximum Ratings

Items	Symbols	Conditions	6RI100G		Units
			-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	50/60 Hz Sinewave, T _C = 97°C	100		A
Surge current	I _{FSM}	Rated load conditions	1200		A
I ² _t	I ² _t	Rated load conditions	6000		A ² s
Junction temperature	T _j		-40~+150		°C
Storage temperature	T _{stg}		-40~+125		°C
Tightening torque		Mounting screw: M5	25±5		kg.cm
Vibration resistance			5		G
Dielectric strength		Between terminals and base	2500 VAC 1 min		
Net. Weight			230		g

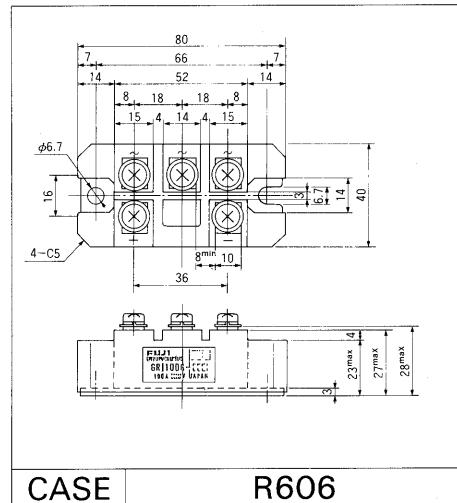
• Electrical Characteristics

Items	Symbols	Conditions	Min	Typ	Max	Units
Forward voltage	V _{FM}	T _j =25°C, I _{FM} =100 A			1.25	V
Reverse current	I _{RRM}	T _j =150°C, V _R =V _{RRM}			20	mA

• Thermal Characteristics

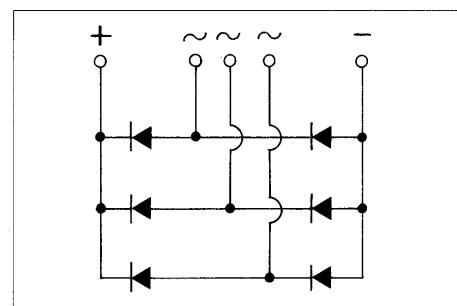
Items	Symbols	Conditions	Min	Typ	Max	Units
Thermal resistance (Junction to case)	R _{th(j-c)}	50/60 Hz Sinewave, Thermal resistance for total loss			0.22	°C/W
Thermal resistance	R _{th(c-f)}	With thermal compound			0.06	°C/W

■ Outline Drawings

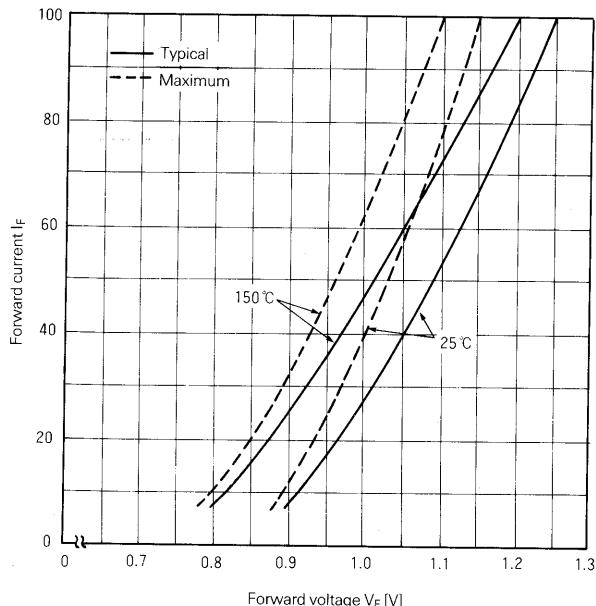


CASE R606

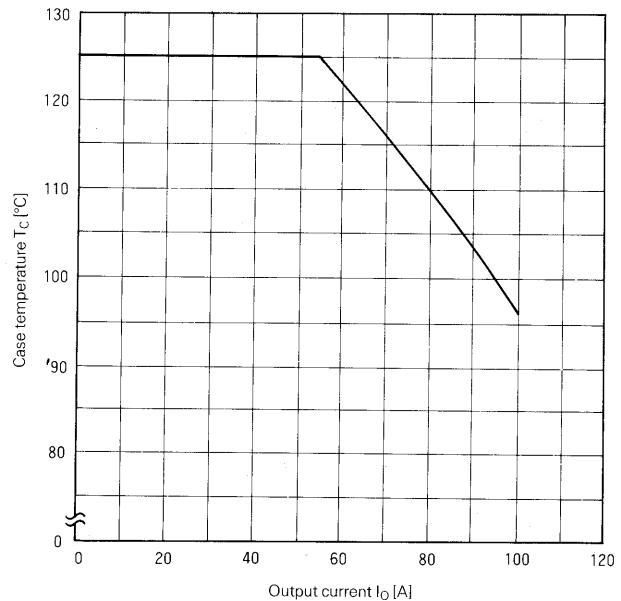
■ Inner Circuit Schematic



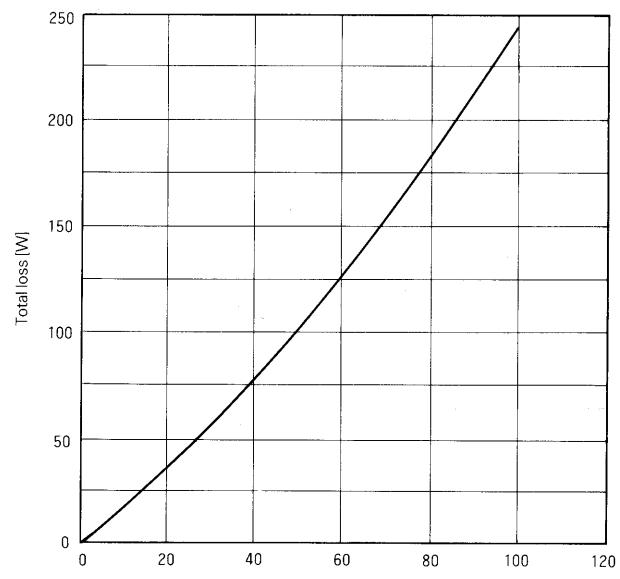
■ Characteristic curves



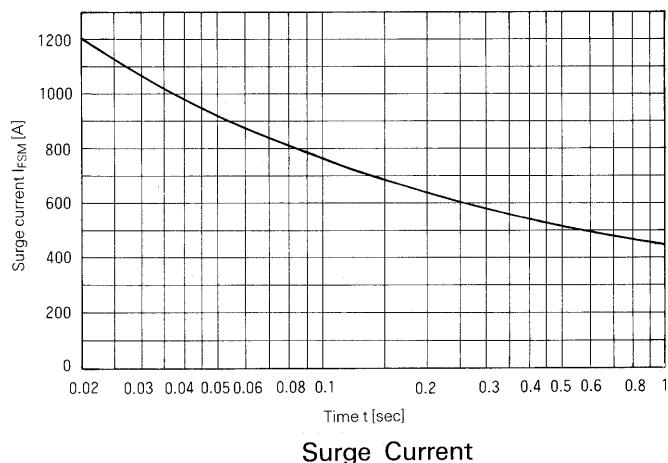
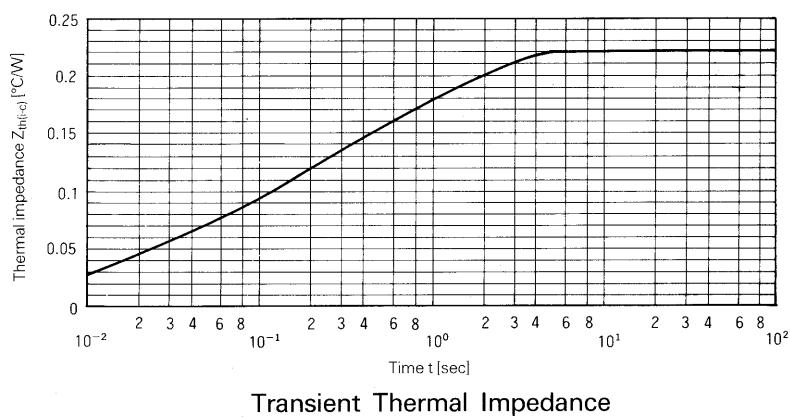
Forward Characteristics



Case Temperature—Output Current



Output Current—Total Loss

**Surge Current****Transient Thermal Impedance**

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