

## TO-220F SCHOTTKY BARRIER RECTIFIER

### Features

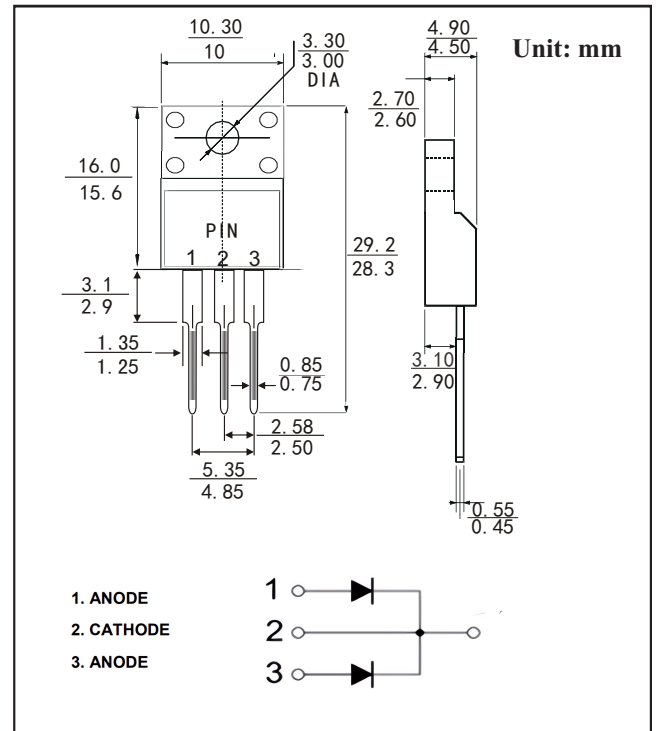
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 260 °C max. 7 s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** TO-220F  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

PARAMETER	SYMBOL	UNIT	MBR30100FCT	MBR30150FCT	MBR30200FCT
Device marking code			MBR30100FCT	MBR30150FCT	MBR30200FCT
Repetitive Peak Reverse Voltage	VRRM	V	100	150	200
Average Rectified Output Current @60Hz sine wave, R-load, T <sub>a</sub> =25°C	I <sub>O</sub>	A		30	
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C	IFSM	A		250	
Current Squared Time @1ms≤t<8.3ms T <sub>j</sub> =25°C,	I <sup>2</sup> t	A <sup>2</sup> s		176	
Storage Temperature	T <sub>stg</sub>	°C		-55 ~ +175	
Junction Temperature	T <sub>j</sub>	°C		-55 ~ +175	

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR30100FCT	MBR30150FCT	MBR30200FCT
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	IFM=15.0A	0.85	0.9	0.95
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	V <sub>RM</sub> =V <sub>VRRM</sub> T <sub>a</sub> =25°C		0.1	
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>VRRM</sub> T <sub>a</sub> =125°C		20	

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR30100FCT	MBR30150FCT	MBR30200FCT
Thermal Resistance	Between junction and case	R <sub>θJ-C</sub>	°C/W	2.0		

## RATINGS AND CHARACTERISTIC CURVES

FIG1: I<sub>o</sub> -T<sub>c</sub> Curve

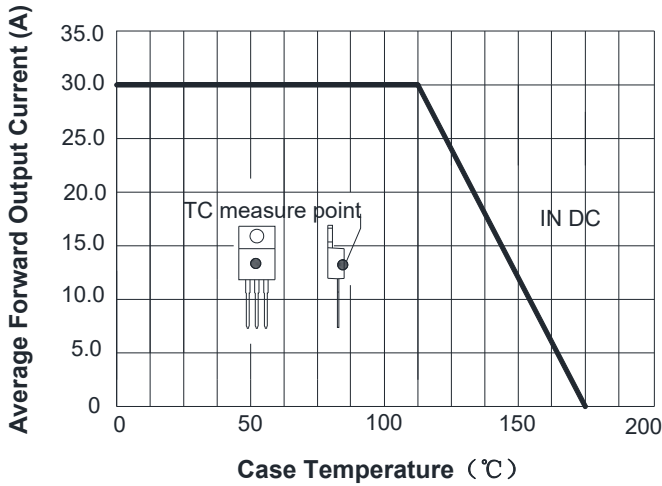


FIG2: Surge Forward Current Capability

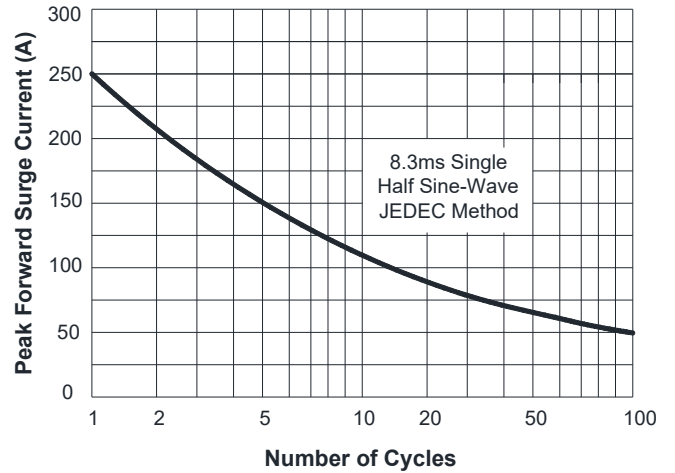


FIG3: Forward Voltage

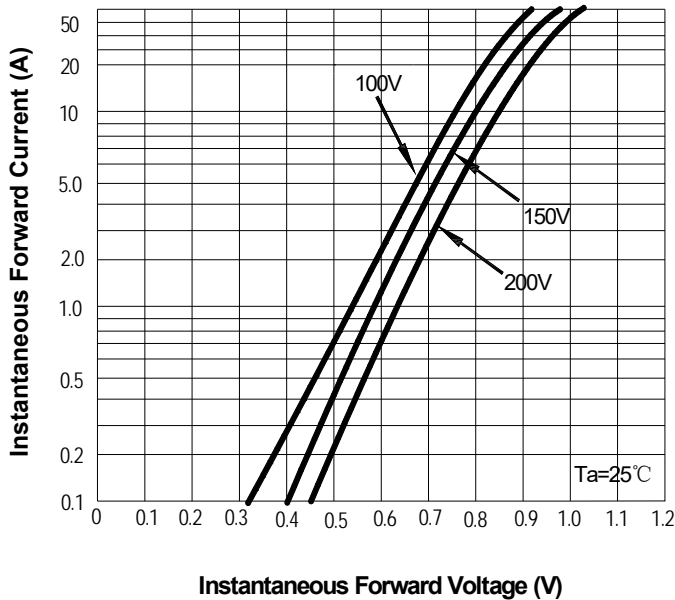


FIG.4: Instantaneous Reverse Characteristics

