

SCHOTTKY BARRIER RECTIFIER

Features

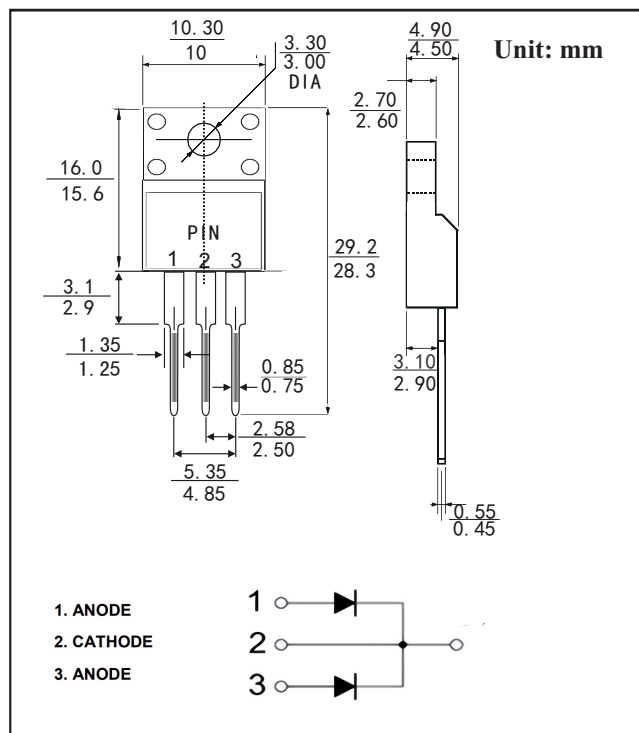
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 260 °C max. 7 s, per JESD 22-B106

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

PARAMETER	SYMBOL	UNIT	MBR20100FCT	MBR20150FCT	MBR20200FCT
Device marking code			MBR20100FCT	MBR20150FCT	MBR20200FCT
Repetitive Peak Reverse Voltage	V_{RRM}	V	100	150	200
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^\circ\text{C}$	I_O	A	20		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$	I_{FSM}	A	200		
Current Squared Time @1ms≤t<8.3ms $T_j=25^\circ\text{C}$,	I^2t	A ² s	166		
Storage Temperature	T_{stg}	°C	-55 ~ +175		
Junction Temperature	T_j	°C	-55 ~ +175		

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR20100FCT	MBR20150FCT	MBR20200FCT
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=10.0\text{A}$	0.84	0.90	0.95
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	mA	$V_{RM}=V_{RRM}$ $T_a=25^\circ\text{C}$	0.1		
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_a=125^\circ\text{C}$	20		

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

Note2:Pulse test:pulse width 40mS

■ Thermal Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR20100FCT	MBR20150FCT	MBR20200FCT
Thermal Resistance	Between junction and case	R _{θJ-C}	℃/W	2.0		

RATINGS AND CHARACTERISTIC CURVES

FIG1: I_o -T_c Curve

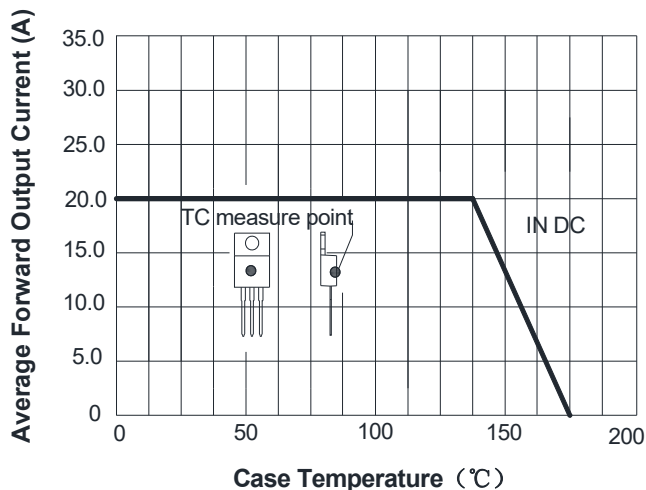


FIG2: Surge Forward Current Capability

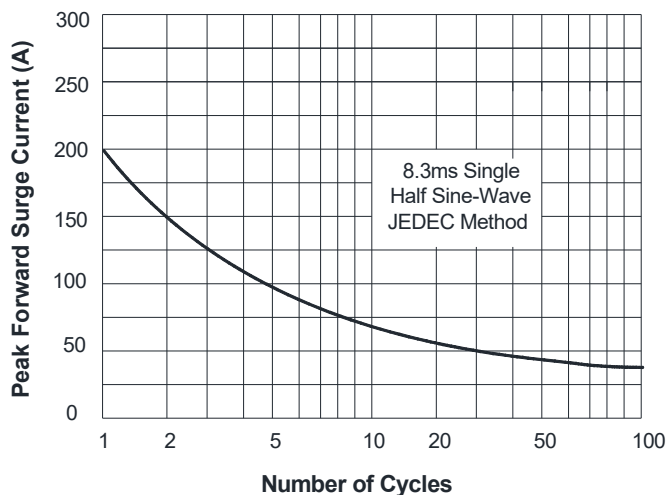


FIG3: Forward Voltage

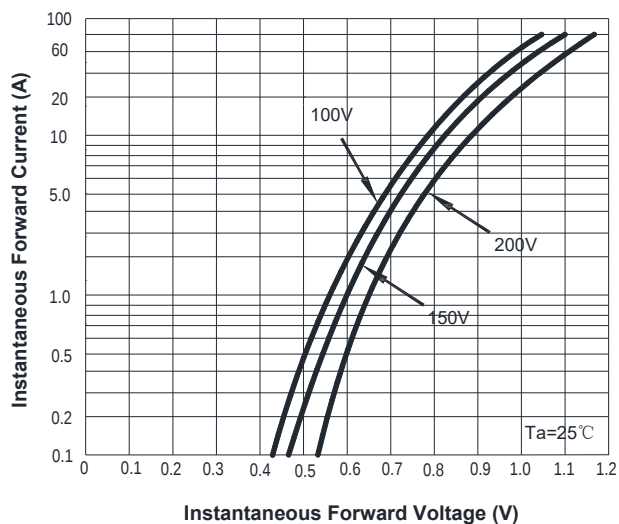


FIG4: Instantaneous Reverse Characteristics

