

SCHOTTKY BARRIER RECTIFIER

Features

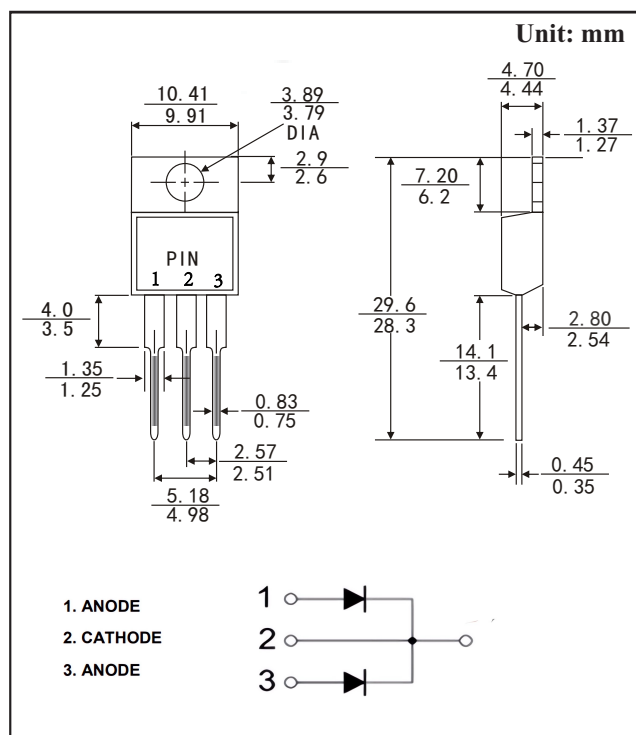
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 260 °C max. 7 s, per JESD 22-B106

Typical Applications

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

Mechanical Data

- **Package:** TO-220AB
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	MBR30100CT	MBR30150CT	MBR30200CT
Device marking code			MBR30100CT	MBR30150CT	MBR30200CT
Repetitive Peak Reverse Voltage	VRRM	V	100	150	200
Average Rectified Output Current @60Hz sine wave, R-load, T _a =25°C	I _O	A	30		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	250		
Current Squared Time @1ms≤t<8.3ms T _j =25°C,	I ² t	A ² s	176		
Storage Temperature	T _{stg}	°C	-55 ~ +175		
Junction Temperature	T _j	°C	-55 ~ +175		

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR30100CT	MBR30150CT	MBR30200CT
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =15.0A	0.85	0.9	0.95
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _a =25°C	0.1		
	I _{RRM2}		V _{RM} =V _{RRM} T _a =125°C	20		

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

Note2:Pulse test:pulse width 40mS

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

PARAMETER		SYMBOL	UNIT	MBR30100CT	MBR30150CT	MBR30200CT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	2.0		

RATINGS AND CHARACTERISTIC CURVES

FIG1: I_o - T_c Curve

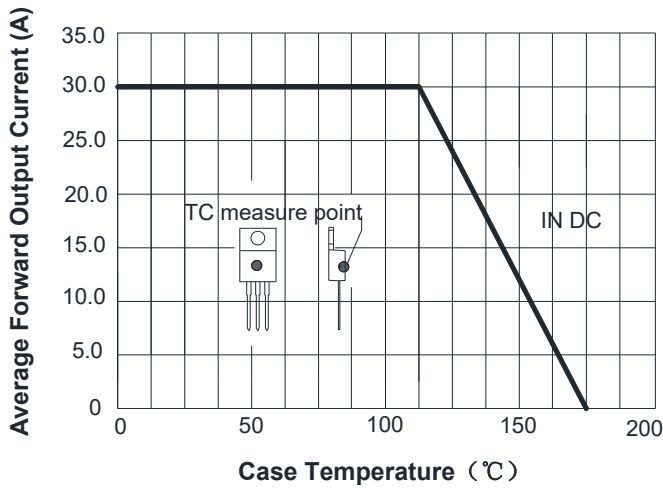


FIG2: Surge Forward Current Capability

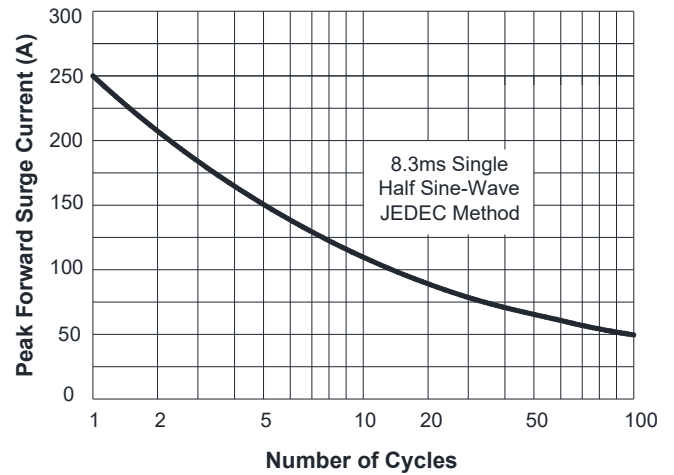


FIG3: Forward Voltage

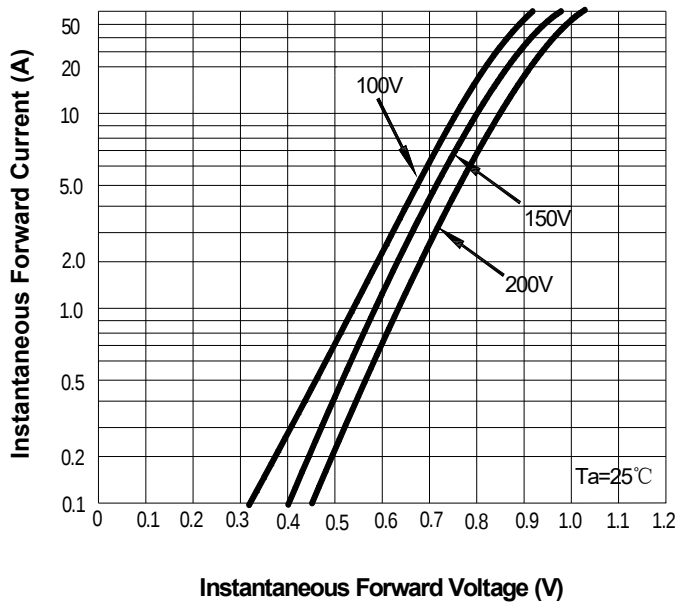


FIG4: Instantaneous Reverse Characteristics

