

## UNISONIC TECHNOLOGIES CO., LTD

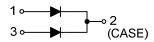
MBR20100C

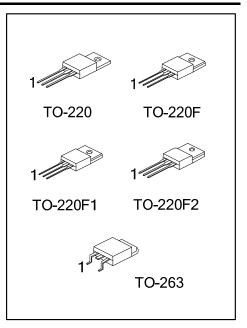
# SCHOTTKY BARRIER RECTIFIER

#### **■** FEATURES

- \* 20 Amps Total (10 Amps Per Diode Leg)
- \* Guard Ring for Transient Protection
- \* Low Forward Voltage Drop
- \* High Surge Capability
- \* Low Power Loss/High Efficiency

#### ■ SYMBOL

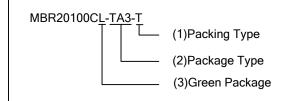




#### **■ ORDERING INFORMATION**

Ordering Number		Dookses	Pin Assignment			Dealing	
Lead Free	Halogen Free	Package	1	2	3	Packing	
MBR20100CL-TA3-T	MBR20100CG-TA3-T	TO-220	Α	K	Α	Tube	
MBR20100CL-TF3-T	MBR20100CG-TF3-T	TO-220F	Α	K	Α	Tube	
MBR20100CL-TF1-T	MBR20100CG-TF1-T	TO-220F1	Α	K	Α	Tube	
MBR20100CL-TF2-T	MBR20100CG-TF2-T	TO-220F2	Α	K	Α	Tube	
MBR20100CL-TQ2-T	MBR20100CG-TQ2-T	TO-263	Α	K	Α	Tube	
MBR20100CL-TQ2-R	MBR20100CG-TQ2-R	TO-263	Α	K	Α	Tape Reel	

Note: Pin Assignment: A: Anode K: Cathode

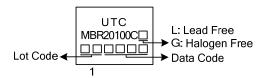


- (1) T: Tube, R: Tape Reel
- (2) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1

TF2: TO-220F2, TQ2: TO-263

(3) L: Lead Free, G: Halogen Free and Lead Free

#### MARKING



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MBR20100C

#### ■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT	
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	100	V	
Maximum DC Blocking Voltage		$V_R$	100	V	
Working Peak Reverse Voltage		$V_{RWM}$	100	V	
Maximum PMS Reverse Voltage		$V_{R(RMS)}$	70	V	
Average Forward Rectified	Per Leg	_	10	Α	
Output Current	Total	I <sub>0</sub>	20	Α	
Non-Repetitive Peak Forward Surge Current			150	۸	
8.3ms Single Half-Sine-Wave		I <sub>FSM</sub>	150	Α	
Junction Capacitance (Note 4)		CJ	1000	pF	
Operating Temperature		TJ	-55 ~ <b>+</b> 150	°C	
Storage Temperature		T <sub>STG</sub>	-55 ~ <b>+</b> 150	°C	

#### **■ THERMAL DATA (Pre Diode)**

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient		$\theta_{JA}$	55	°C/W
	TO-220/TO-263		2	°C/W
Junction to Case	TO-220F/TO-220F1 TO-220F2	$\theta_{JC}$	2.5	°C/W

#### ■ ELECTRICAL CHARACTERISTICS

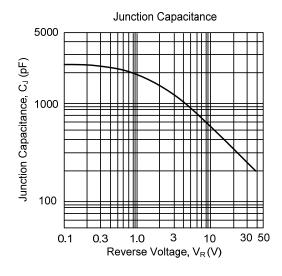
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Instantaneous Ferward Voltage Dren (Note 2)	I V⊏	I <sub>F</sub> =10A, T <sub>C</sub> =25°C			0.85	V	
Instantaneous Forward Voltage Drop (Note 3)		I <sub>F</sub> =10A, T <sub>C</sub> =125°C			0.75	·	
Instantanceus Deverse Current (Note 2)		Rated DC Voltage, T <sub>C</sub> =25°C			0.15		
Instantaneous Reverse Current (Note 3)	IR	Rated DC Voltage, T <sub>C</sub> =125°C		0.5	10	mA	

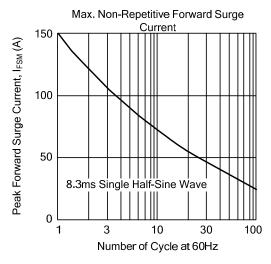
Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

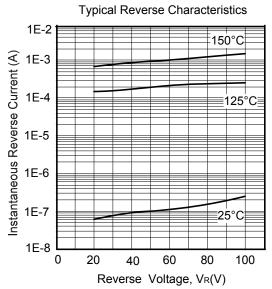
- 2. 2.0µs Pulse Width, f = 1.0KHz.
- 3. Pulse Test: Pulse Width=300µs, Duty Cycle ≤ 2.0%.
- 4. Applied  $V_R = 4.0V$  and f = 1.0MHz.

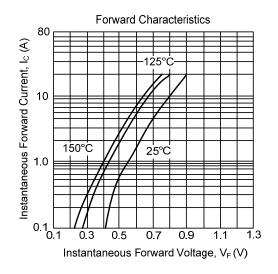
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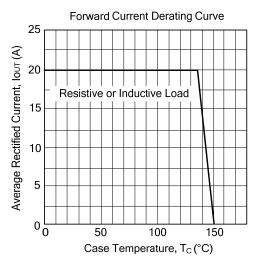
#### **■ TYPICAL CHARACTERISTICS**











MBR20100C

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