



## MBR10200C

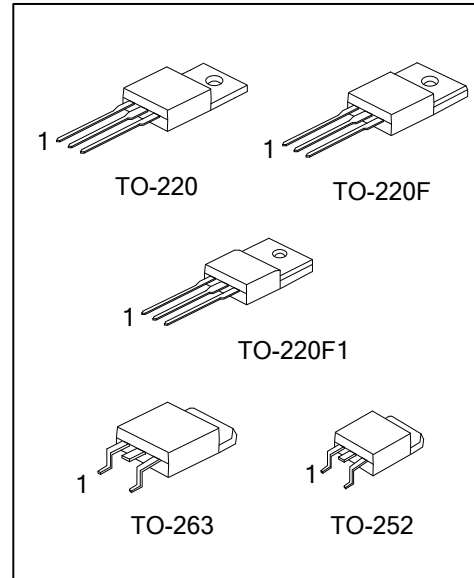
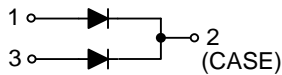
DIODE

### SCHOTTKY BARRIER RECTIFIER

#### FEATURES

- \* 10 amps total (5 amps per diode leg)
- \* Guard ring for transient protection
- \* Low forward voltage drop
- \* High surge capability
- \* Low power loss/High efficiency

#### SYMBOL



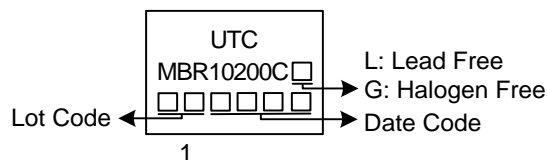
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR10200CL-TA3-T	MBR10200CG-TA3-T	TO-220	A	K	A	Tube
MBR10200CL-TF3-T	MBR10200CG-TF3-T	TO-220F	A	K	A	Tube
MBR10200CL-TF1-T	MBR10200CG-TF1-T	TO-220F1	A	K	A	Tube
MBR10200CL-TN3-R	MBR10200CG-TN3-R	TO-252	A	K	A	Tape Reel
MBR10200CL-TQ2-T	MBR10200CG-TQ2-T	TO-263	A	K	A	Tube
MBR10200CL-TQ2-R	MBR10200CG-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR10200CG-TA3-T</p>	<p>(1) T: Tube, R: Tape Reel                  (2) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1                  TN3: TO-252, TQ2: TO-263                  (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



■ **ABSOLUTE MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	200	V
Maximum non-repetitive Peak Reverse Voltage		$V_{RM}$	200	V
Maximum DC Blocking Voltage		$V_R$	200	V
Average Forward Rectified Output Current	Per Leg	$I_O$	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave		$I_{FSM}$	150	A
Junction Capacitance (Note 4)		$C_J$	300	pF
Operating Temperature		$T_J$	-65 ~ +150	$^{\circ}\text{C}$
Storage Temperature		$T_{STG}$	-65 ~ +150	$^{\circ}\text{C}$

■ **THERMAL CHARACTERISTICS (PER LEG)**

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C}/\text{W}$
	TO-220F/TO-220F1		4	$^{\circ}\text{C}/\text{W}$
	TO-252		6	$^{\circ}\text{C}/\text{W}$

■ **ELECTRICAL CHARACTERISTICS (Note 3)**

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	$V_F$	$I_F=5\text{A}, T_C=25^{\circ}\text{C}$			0.95	V
		$I_F=5\text{A}, T_C=125^{\circ}\text{C}$			0.85	V
		$I_F=10\text{A}, T_C=25^{\circ}\text{C}$			1	V
		$I_F=10\text{A}, T_C=125^{\circ}\text{C}$			0.95	V
Instantaneous Reverse Current	$I_R$	Rated DC Voltage, $T_C=25^{\circ}\text{C}$			500	$\mu\text{A}$
		Rated DC Voltage, $T_C=125^{\circ}\text{C}$			20	mA

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

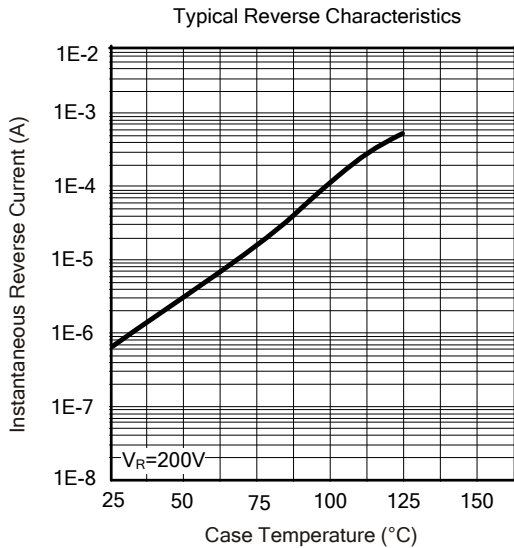
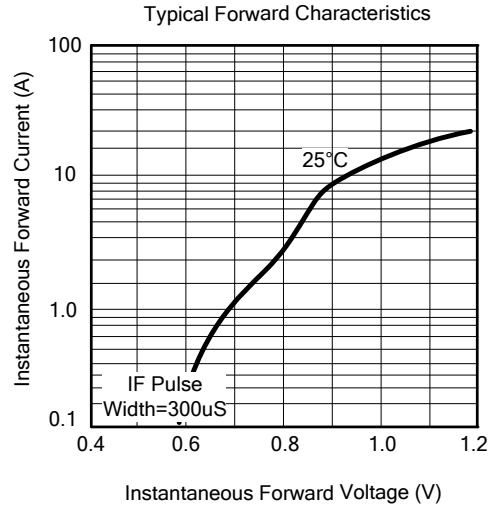
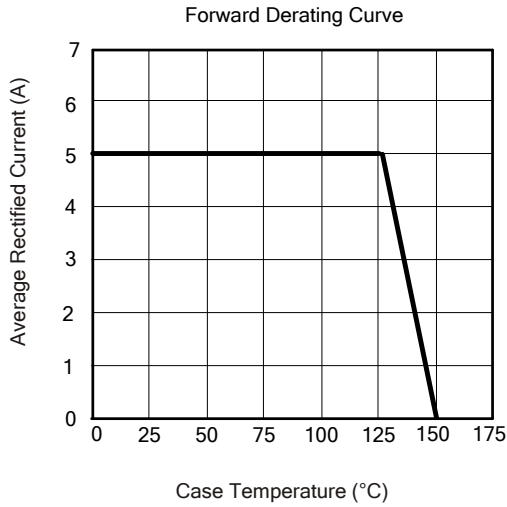
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. 2.0 $\mu\text{s}$  Pulse Width,  $f = 1.0\text{KHz}$ .

3. Pulse Test: Pulse Width = 300 $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .

4. Applied  $V_R = 4.0\text{V}$  and  $f = 1.0\text{MHz}$ .

## ■ TYPICAL CHARACTERISTICS



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