



## MBR40200C

Preliminary

DIODE

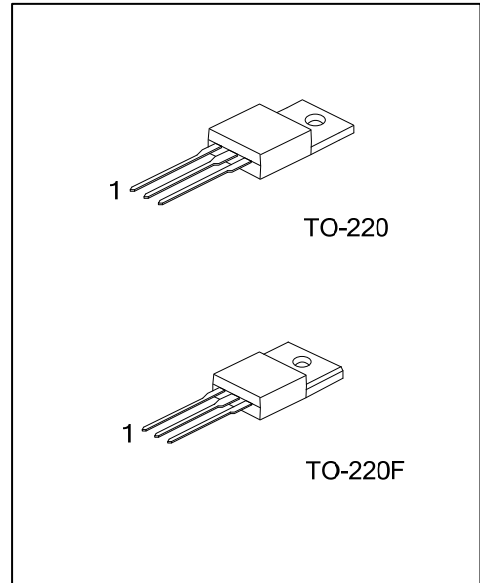
### SCHOTTKY BARRIER RECTIFIERS

#### DESCRIPTION

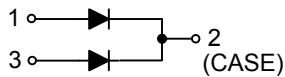
The UTC **MBR40200C** is a Schottky Barrier Rectifier with high efficiency, low power dissipation and high current capacity. It can be applied in low voltage, high frequency inverters, polarity protection and free wheeling applications.

#### FEATURES

- \* High surge capability
- \* High efficiency, low power dissipation, high current capability, low forward voltage drop



#### SYMBOL



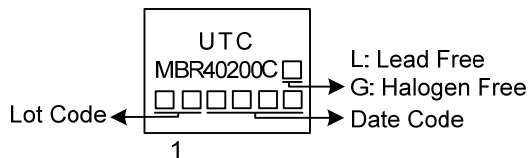
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR40200CL-TA3-T	MBR40200CG-TA3-T	TO-220	A	K	A	Tube
MBR40200CL-TF3-T	MBR40200CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR40200CG-TA3-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) T: Tube (2) TA3: TO-220, TF3: TO-220F (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



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

PARAMETER		SYMBOL	RATINGS	UNIT
Recurrent Peak Reverse Voltage		V <sub>RRM</sub>	200	V
RMS Voltage		V <sub>R(RMS)</sub>	140	V
DC Blocking Voltage		V <sub>R</sub>	200	V
Average Forward Rectified Output Current (T <sub>C</sub> =105°C)	Per Leg	I <sub>O</sub>	20	A
	Total		40	
DC Reverse Current	T <sub>C</sub> =25°C	I <sub>R</sub>	0.5	mA
	T <sub>C</sub> =100°C		30	mA
Peak Repetitive Forward Current (Rated V <sub>R</sub> , Square Wave, 20 kHz) (T <sub>C</sub> =135°C)		I <sub>FRM</sub>	40	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave		I <sub>FSM</sub>	180	A
Peak Repetitive Reverse Surge Current (Note 3)		I <sub>RRM</sub>	1.0	A
Voltage Rate of Change (Rated V <sub>R</sub> )		dv/dt	10000	V/μs
Junction Capacitance (Note 4)		C <sub>J</sub>	150	pF
Operating Junction Temperature		T <sub>J</sub>	+150	°C
Storage Temperature		T <sub>STG</sub>	-55 ~ +150	°C

■ THERMAL DATA (PER LEG)

PARAMETER		SYMBOL	RATING	UNIT
Junction to Case	TO-220	θ <sub>JC</sub>	2	°C/W
	TO-220F		4	°C/W

■ ELECTRICAL CHARACTERISTICS (NOTE 3)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	V <sub>F</sub>	I <sub>F</sub> =20A, T <sub>C</sub> =25°C		0.87	0.92	V
		I <sub>F</sub> =20A, T <sub>C</sub> =125°C		0.75	0.85	V
		I <sub>F</sub> =40A, T <sub>C</sub> =25°C		0.99	1.04	V
		I <sub>F</sub> =40A, T <sub>C</sub> =125°C		0.90	0.95	V
Instantaneous Reverse Current	I <sub>R</sub>	Rated DC Voltage, T <sub>C</sub> =25°C			10	μA
		Rated DC Voltage, T <sub>C</sub> =125°C			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<sub>R</sub> = 4.0V and f = 1.0MHz.

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