



MBR20120C

Preliminary

DIODE

20A SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

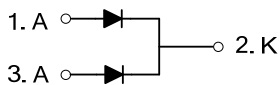
The UTC **MBR20120C** is a 20A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR20120C** is suitable for free wheeling and polarity protection, etc.

FEATURES

- * High surge capability
- * High efficiency
- * Low power Loss and low forward voltage drop

SYMBOL



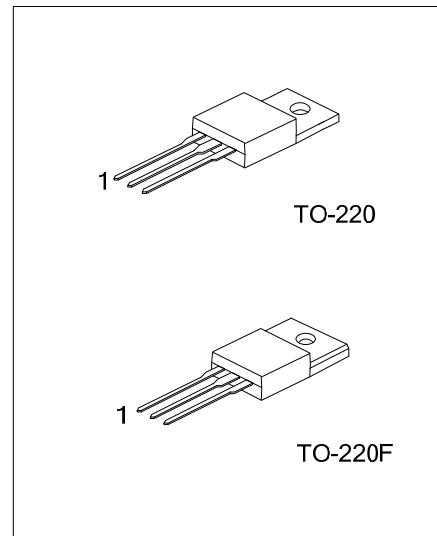
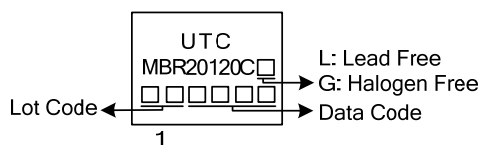
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR20120CL-TA3-T	MBR20120CG-TA3-T	TO-220	A	K	A	Tube
MBR20120CL-TF3-T	MBR20120CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR20120CL-TA3-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Free</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) L: Lead Free, G: Halogen Free</p>
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MARKING



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

PARAMETER		SYMBOL	RATINGS	UNIT
Peak Repetitive Reverse Voltage		V_{RRM}	120	V
Working Peak Reverse Voltage		V_{RWM}	120	V
DC Blocking Voltage		V_R	120	V
RMS Reverse Voltage		$V_{R(RMS)}$	84	V
Average Forward Rectified Output Current ($T_C=125^{\circ}\text{C}$)	Per Leg	I_O	10	A
	Total		20	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave		I_{FSM}	150	A
Junction Temperature		T_J	-55~+150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-55~+150	$^{\circ}\text{C}$

Note: 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. Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

■ THERMAL CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient		θ_{JA}	62.5	$^{\circ}\text{C}/\text{W}$
Junction to Case	TO-220	θ_{JC}	2	$^{\circ}\text{C}/\text{W}$
	TO-220F		2.2	

■ ELECTRICAL CHARACTERISTICS(Note 2)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	V_F	$I_F=10\text{A}$, $T_C=25^{\circ}\text{C}$			0.88	V
		$I_F=10\text{A}$, $T_C=125^{\circ}\text{C}$			0.78	
		$I_F=20\text{A}$, $T_C=25^{\circ}\text{C}$			0.95	
		$I_F=20\text{A}$, $T_C=125^{\circ}\text{C}$			0.85	
Instantaneous Reverse Current	I_R	Rated DC Voltage, $T_C=25^{\circ}\text{C}$			100	μA
		Rated DC Voltage, $T_C=125^{\circ}\text{C}$			15	mA

Notes: 1. $2.0\mu\text{s}$ Pulse Width, $f = 1.0\text{KHz}$.

2. Pulse Test: Pulse Width= $380\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

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

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