



MBR1080C

Preliminary

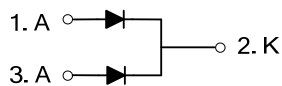
DIODE

10A SCHOTTKY BARRIER RECTIFIER DIODES

■ FEATURES

- * Schottky Barrier Chip
- * Guard Ring Die Construction for Transient Protection
- * Low Power Loss, High Efficiency
- * High Surge Capability
- * High Current Capability and Low Forward Voltage Drop
- * For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

■ SYMBOL



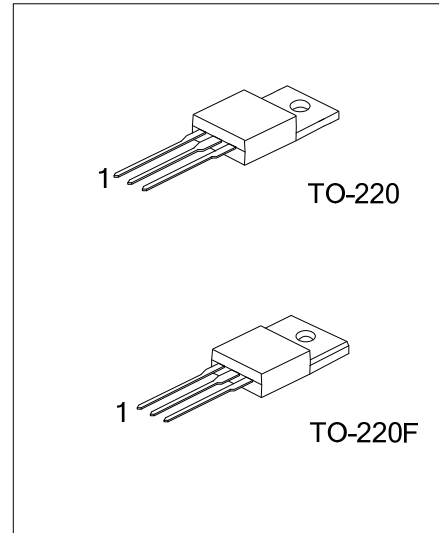
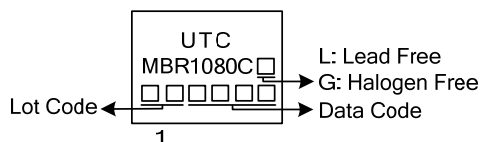
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR1080CL-TA3-T	MBR1080CG-TA3-T	TO-220	A	K	A	Tube
MBR1080CL-TF3-T	MBR1080CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR1080CL-TA3-T</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
------------------------	--

■ MARKING



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

PARAMETER		SYMBOL	RATINGS	UNIT
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	80	V
Working Peak Reverse Voltage		V_{RWM}	80	V
Maximum DC Blocking Voltage		V_R	80	V
Average Forward Rectified Output Current ($T_C=105^{\circ}\text{C}$)	Per Leg	I_O	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave		I_{FSM}	120	A
Typical Junction Capacitance (Note 2)		C_J	300	pF
Operating Temperature		T_J	-55 ~ +150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

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

■ THERMAL CHARACTERISTICS (PER LEG)

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

■ ELECTRICAL CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	80			V
Instantaneous Forward Voltage Drop	V_{FM}	$I_F=5\text{A}$, $T_C=25^{\circ}\text{C}$			0.85	V
		$I_F=5\text{A}$, $T_C=125^{\circ}\text{C}$			0.75	V
		$I_F=10\text{A}$, $T_C=25^{\circ}\text{C}$			0.95	V
		$I_F=10\text{A}$, $T_C=125^{\circ}\text{C}$			0.85	V
Peak Reverse Current at Rated DC Blocking Voltage	I_{RM}	Rated DC Voltage, $T_C=25^{\circ}\text{C}$			100	μA
		Rated DC Voltage, $T_C=125^{\circ}\text{C}$			15	mA

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

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.