

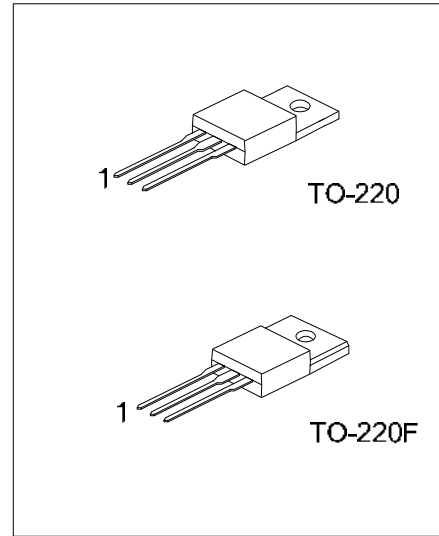


MBR1080C

Preliminary

DIODE

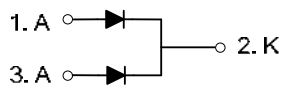
10A SCHOTTKY BARRIER RECTIFIER DIODES



■ **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**



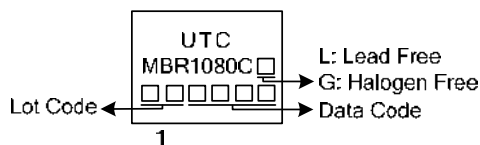
■ **ORDERING INFORMATION**

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 (2) TA3: TO-220, TF3: TO-220F (3) L: Lead Free, G: Halogen Free and 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}	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 $\leq 2\%$.

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