



MGBR30L80

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

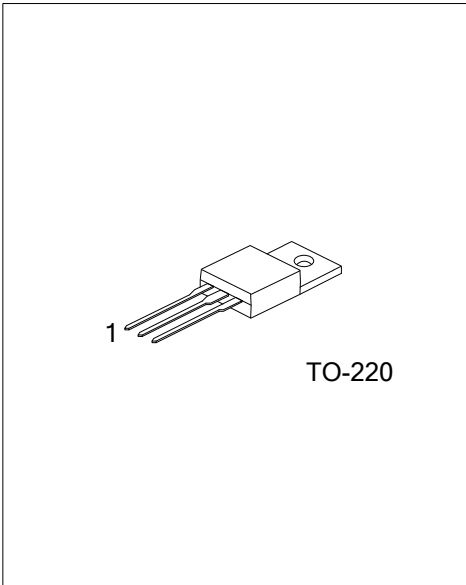
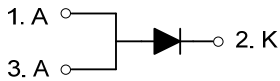
DESCRIPTION

The UTC MGBR30L80 is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

FEATURES

- \* Low forward voltage drop
- \* High switching speed

SYMBOL



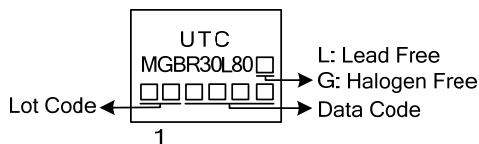
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR30L80L-TA3-T	MGBR30L80G-TA3-T	TO-220	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR30L80L-TA3-T</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220</p> <p>(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)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	$V_{RM}$	80	V
Working Peak Reverse Voltage	$V_{RWM}$	80	V
Repetitive Peak Reverse Voltage	$V_{RRM}$	80	V
RMS Reverse Voltage	$V_{R(RMS)}$	56	V
Average Rectified Output Current	$I_O$	30	A
$T_C=140^{\circ}\text{C}$			
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	200	A
Operating Junction Temperature	$T_J$	-65~+150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-65~+150	$^{\circ}\text{C}$

Note: 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.

■ THERMAL CHARACTERISTICS (Note 3)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	65	$^{\circ}\text{C}/\text{W}$
Junction to Case	$\theta_{JC}$	1.4	$^{\circ}\text{C}/\text{W}$

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.5\text{mA}$	80			V
Forward Voltage Drop	$V_{FM}$	$I_F=30\text{A}, T_J=25^{\circ}\text{C}$			0.95	V
		$I_F=30\text{A}, T_J=125^{\circ}\text{C}$			0.85	V
Leakage Current (Note 1)	$I_{RM}$	$V_R=80\text{V}, T_J=25^{\circ}\text{C}$			500	$\mu\text{A}$
		$V_R=80\text{V}, T_J=125^{\circ}\text{C}$			45	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

3. Mounted on an FR4 PCB, single-sided copper, with 80 cm<sup>2</sup> copper pad area.

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