



MGBR40L170C

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

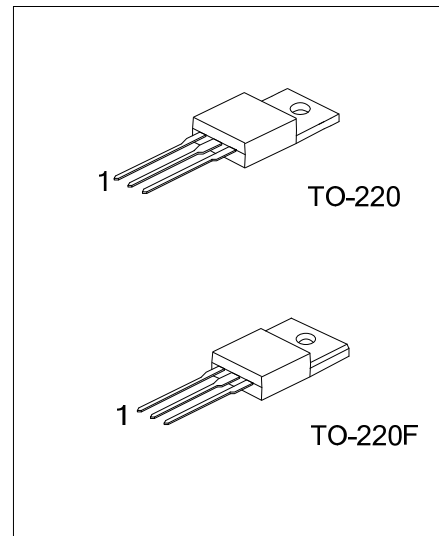
DESCRIPTION

The UTC **MGBR40L170C** 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



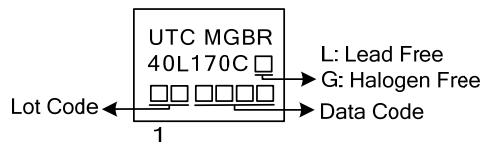
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR40L170CL-TA3-T	MGBR40L170CG-TA3-T	TO-220	A	K	A	Tube
MGBR40L170CL-TF3-T	MGBR40L170CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Common Cathode

<p>MGBR40L170CL-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>
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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}	170	V
Working Peak Reverse Voltage		V_{RWM}	170	V
Repetitive Peak Reverse Voltage		V_{RRM}	170	V
Average Rectified Output Current Per Device	Per Leg	I_o	20	A
	Total		40	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	250	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 (PER LEG)

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

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.5\text{mA}$	170			V
Forward Voltage Drop	V_{FM}	$I_F=20\text{A}, T_J=25^{\circ}\text{C}$			0.90	V
		$I_F=20\text{A}, T_J=125^{\circ}\text{C}$			0.82	V
Leakage Current	I_{RM}	$V_R=170\text{V}, T_J=25^{\circ}\text{C}$			100	μA
		$V_R=170\text{V}, T_J=125^{\circ}\text{C}$			15	mA

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

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