



MGBR40V300C

DIODE

DUAL MOS GATED BARRIER RECTIFIER

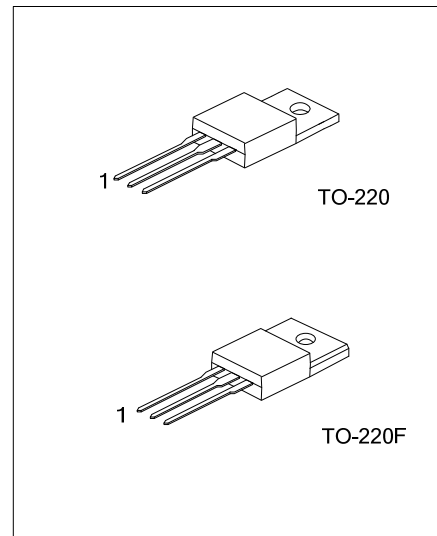
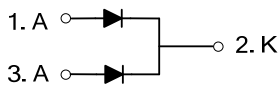
■ DESCRIPTION

The UTC **MGBR40V300C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

■ FEATURES

- * Very low forward voltage drop
- * High switching speed

■ SYMBOL



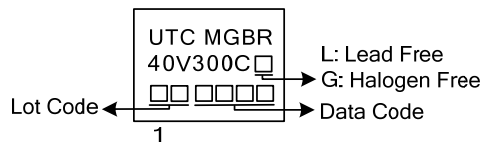
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR40V300CL-TA3-T	MGBR40V300CG-TA3-T	TO-220	A	K	A	Tube
MGBR40V300CL-TF3-T	MGBR40V300CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR40V300CL-TA3-T</p>	<p>(1) Packing Type (1) T: Tube</p> <p>(2) Package Type (2) TA3: TO-220, TF3: TO-220F</p> <p>(3) Green Package (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (PER LEG) ($T_A=25^\circ\text{C}$ 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}	300	V
Working Peak Reverse Voltage	V_{RWM}	300	V
Peak Repetitive Reverse Voltage	V_{RRM}	300	V
Average Rectified Output Current Per Device	Per Leg	20	A
	Total	40	A
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 (PER LEG)

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

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	300			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_J=25^\circ\text{C}$		0.75		V
		$I_F=5\text{A}, T_J=125^\circ\text{C}$		0.60		V
		$I_F=10\text{A}, T_J=25^\circ\text{C}$		0.80		V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$		0.66		V
		$I_F=20\text{A}, T_J=25^\circ\text{C}$		0.88	0.99	V
		$I_F=20\text{A}, T_J=125^\circ\text{C}$		0.75	0.88	V
Leakage Current (Note 1)	I_{RM}	$V_R=300\text{V}, T_J=25^\circ\text{C}$			100	μA
		$V_R=300\text{V}, T_J=125^\circ\text{C}$			10	mA

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

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