



MGBR10S300

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

■ DESCRIPTION

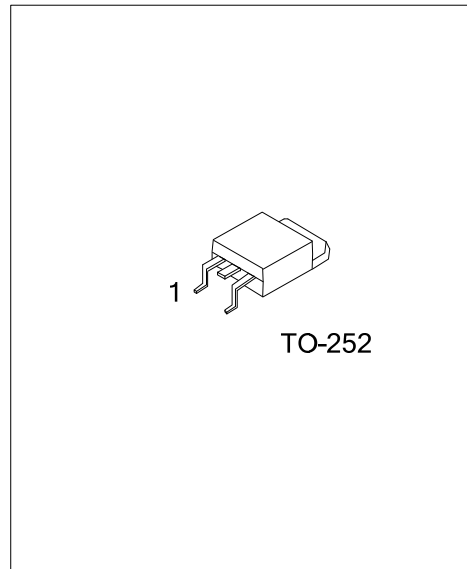
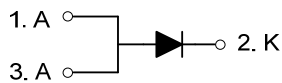
The UTC **MGBR10S300** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **MGBR10S300** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

- * Super low forward voltage drop
- * High current capability
- * High surge capability
- * High efficiency

■ SYMBOL



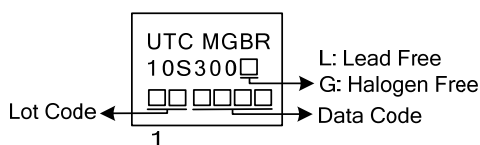
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10S300L-TN3-R	MGBR10S300G-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR10S300L-TN3-R</p>	<p>(1) R: Tape Reel</p> <p>(2) TN3: TO-252</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 (Note 1)	V_{RM}	300	V
Working Peak Reverse Voltage	V_{RWM}	300	V
Peak Repetitive Reverse Voltage	V_{RRM}	300	V
Average Rectified Output Current	I_o	10	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	θ_{JC}	6	$^\circ\text{C/W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	300			V
Forward Voltage Drop	V_{FM}	$I_F=10\text{A}, T_C=25^\circ\text{C}$			0.90	V
		$I_F=10\text{A}, T_C=125^\circ\text{C}$			0.85	V
Leakage Current	I_{RM}	$V_R=300\text{V}, T_C=25^\circ\text{C}$			100	μA
		$V_R=300\text{V}, T_C=125^\circ\text{C}$			10	mA

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

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