



MGBR10U300

DIODE

MOS GATED BARRIER RECTIFIER

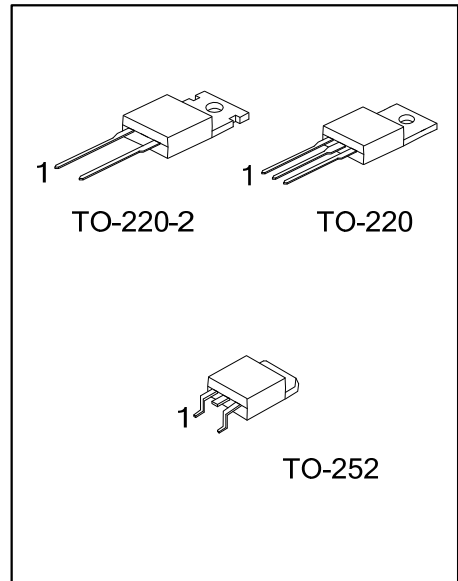
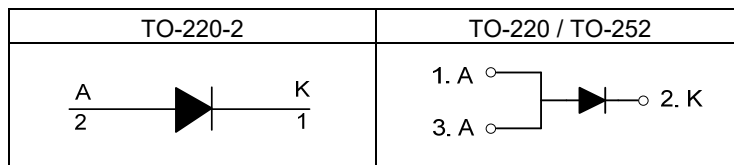
DESCRIPTION

The UTC **MGBR10U300** 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

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

SYMBOL



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10U300L-TA2-T	MGBR10U300G-TA3-T	TO-220-2	K	A	NC	Tube
MGBR10U300L-TA3-T	MGBR10U300G-TA3-T	TO-220	A	K	A	Tube
MGBR10U300L-TN3-R	MGBR10U300G-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>MGBR10U300G-TA2-T</p> <ul style="list-style-type: none">(1) Packing Type(2) Package Type(3) Green Package	<ul style="list-style-type: none">(1) T: Tube, R: Tape Reel(2) TA2: TO-220-2, TA3: TO-220, TN3: TO-252(3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

TO-220-2 / TO-220	TO-252

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	T _C =140°C	I _O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}	160	A
Power Dissipation (T _C =25°C)	TO-220	P _D	62.5	W
	TO-220-2			
	TO-252		20	W
Operating Junction Temperature		T _J	-65 ~ +150	°C
Storage Temperature		T _{STG}	-65 ~ +150	°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	TO-220	θ _{JA}	62.5	°C/W
	TO-220-2			
	TO-252		110	
Junction to Case	TO-220	θ _{JC}	2	°C/W
	TO-220-2			
	TO-252		6	

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified.)

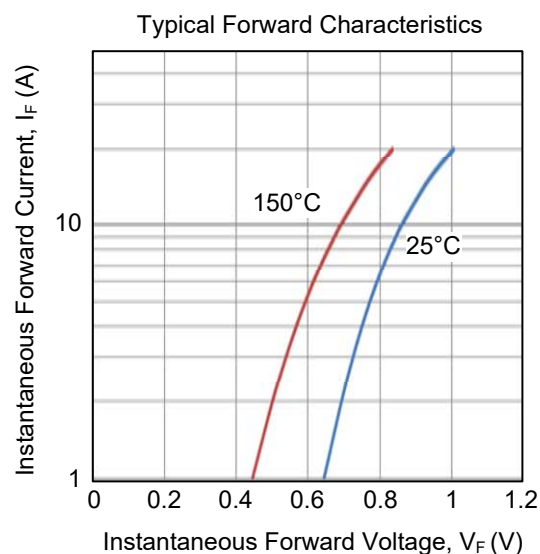
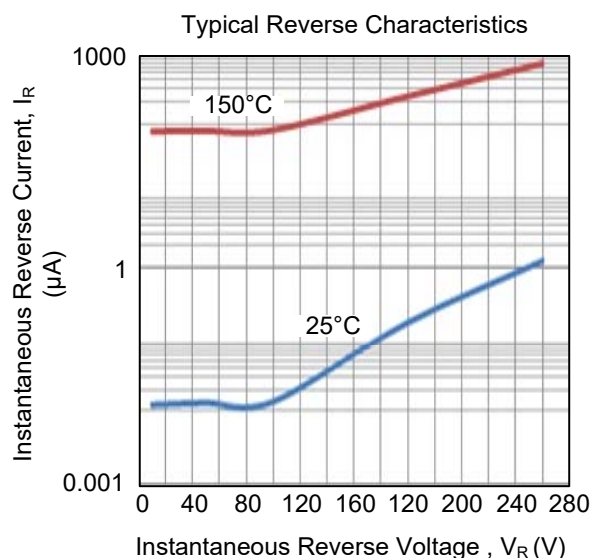
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	I _R =0.5mA	300			V
Forward Voltage Drop	V _{FM}	I _F =10A, T _J =25°C			0.85	V
		I _F =10A, T _J =125°C			0.75	V
Leakage Current (Note 1)	I _{RM}	V _R =300V, T _J =25°C			100	μA
		V _R =300V, T _J =125°C			10	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 100 cm² copper pad area.

■ TYPICAL CHARACTERISTICS



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