



MGBR10L100

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

DESCRIPTION

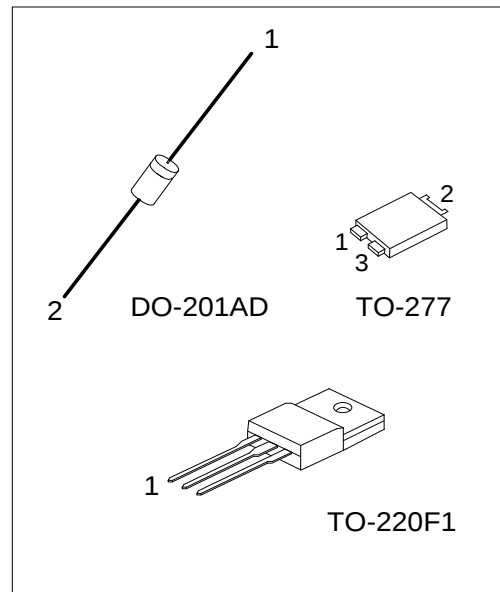
The UTC **MGBR10L100** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

FEATURES

- * Low forward voltage drop
- * High switching speed

SYMBOL

TO-220F1 / TO-277	DO-201AD



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10L100L-TF1-T	MGBR10L100G-TF1-T	TO-220F1	A	K	A	Tube
MGBR10L100L-T27-R	MGBR10L100G-T27-R	TO-277	A	K	A	Tape Reel
MGBR10L100L-Z21D-B	MGBR10L100G-Z21D-B	DO-201AD	K	A	-	Tape Box
MGBR10L100L-Z21D-R	MGBR10L100G-Z21D-R	DO-201AD	K	A	-	Tape Reel
MGBR10L100L-Z21D-K	MGBR10L100G-Z21D-K	DO-201AD	K	A	-	Bulk

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

	(1) T: Tube, R: Tape Reel, B: Tape Box, K: Bulk (2) TF1: TO-220F1, T27: TO-277, Z21D: DO-201AD (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

PACKAGE	MARKING
TO-220F1	UTC MGBR10L100 Lot Code → □□□□□ → Date Code 1 L: Lead Free G: Halogen Free
TO-277	UTC MGBR10L100 Lot Code → □□□□□ → Date Code L: Lead Free G: Halogen Free
DO-201AD	Cathode Band for uni-directional Only MGBR10L100 Lot Code → □□□ → Date Code L: Lead Free G: Halogen Free

■ 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}	100	V
Working Peak Reverse Voltage	V _{RWM}	100	V
Repetitive Peak Reverse Voltage	V _{RRM}	100	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}	150	A
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

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220F1	62.5	°C/W
	TO-277	72	°C/W
	DO-201AD	75	°C/W

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V _{(BR)R}	I _R =0.5mA	100			V
Instantaneous Forward Voltage	V _{FM}	I _F =3A, T _J =25°C		0.58		V
		I _F =3A, T _J =125°C		0.50		V
		I _F =5A, T _J =25°C		0.67		V
		I _F =5A, T _J =125°C		0.55		V
		I _F =10A, T _J =25°C		0.74	0.80	V
		I _F =10A, T _J =125°C		0.61	0.70	V
Leakage Current	I _{RM}	V _R =100V, T _J =25°C			300	μA
		V _R =100V, T _J =125°C			30	mA

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

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