



MGBR5L100

Preliminary

DIODE

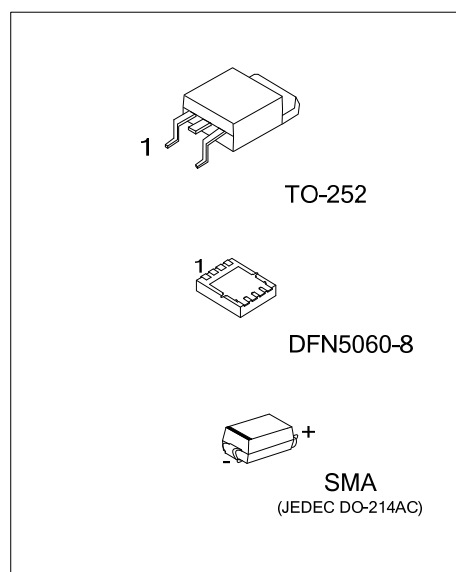
MOS GATED BARRIER RECTIFIER

DESCRIPTION

The UTC **MGBR5L100** 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

SMA	TO-252	DFN5060-8

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
MGBR5L100L-TN3-R	MGBR5L100G-TN3-R	TO-252	A	K	A	-	-	-	-	-	Tape Reel
MGBR5L100L-K08-5060-R	MGBR5L100G-K08-5060-R	DFN5060-8	A	A	A	NC	K	K	K	K	Tape Reel
MGBR5L100L-SMA-R	MGBR5L100G-SMA-R	SMA	K	A	-	-	-	-	-	-	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

MGBR5L100G-TN3-R	(1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) TN3: TO-252, K08-5060: DFN5060-8, SMA: SMA (3) G: Halogen Free and Lead Free, L: Lead Free
------------------	---	---

MARKING

Package	MARKING
TO-252	<div><div>UTC MGBR 5L100</div><div>Lot Code</div><div>1</div><div>Data Code</div><div>L: Lead Free G: Halogen Free</div></div>
DFN5060-8	<div><div>UTC MGBR 5L100</div><div>Lot Code</div><div>Date Code</div></div>
SMA	<div><div>Cathode Band for uni-directional Only</div><div>UTC 5L100</div><div>Date Code</div><div>L: Lead Free G: Halogen Free</div></div>

■ 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}	100	V
Working Peak Reverse Voltage	V_{RWM}	100	V
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectified Output Current $T_C=80^{\circ}\text{C}$	I_O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	100	A
Operating Junction Temperature	T_J	$-65 \sim +150$	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	$-65 \sim +150$	$^{\circ}\text{C}$

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 DATA (Note 3)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-252	32	$^{\circ}\text{C/W}$
	DFN5060-8	72	
	SMA	75	
Junction to Case	TO-252	2.5	$^{\circ}\text{C/W}$
	DFN5060-8	2.4	
	SMA	35	

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.5\text{mA}$	100			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_J=25^{\circ}\text{C}$			0.80	V
		$I_F=5\text{A}, T_J=125^{\circ}\text{C}$			0.75	V
Leakage Current (Note 1)	I_{RM}	$V_R=100\text{V}, T_J=25^{\circ}\text{C}$			250	μA
		$V_R=100\text{V}, T_J=125^{\circ}\text{C}$			25	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 cm^2 copper pad area.

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.