



MGBR5L300

DIODE

MOS GATED BARRIER RECTIFIER

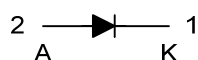
DESCRIPTION

The UTC **MGBR5L300** 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



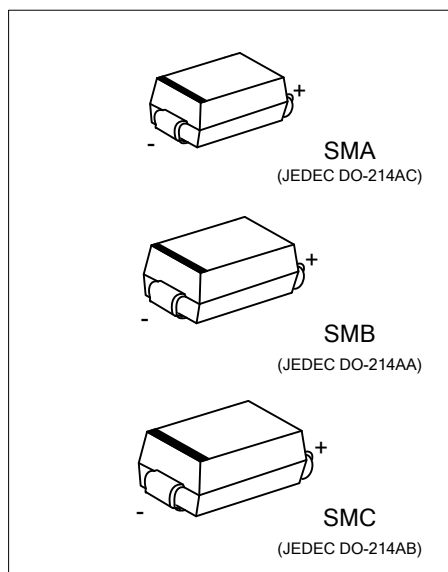
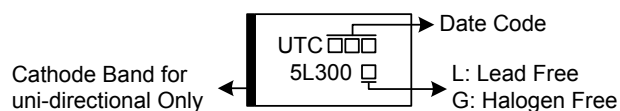
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MGBR5L300L-SMA-R	MGBR5L300G-SMA-R	SMA	K	A	Tape Reel
MGBR5L300L-SMB-R	MGBR5L300G-SMB-R	SMB	K	A	Tape Reel
MGBR5L300L-SMC-R	MGBR5L300G-SMC-R	SMC	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR5L300G-SMA-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) SMA: SMA, SMB: SMB, SMC: SMC (3) G: Halogen Free and Lead Free, L: Lead Free</p>
--	--

MARKING



■ 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 Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	I _O	5	A
Peak Forward Surge Current - 1/2 60hz	I _{FSM}	60	A
Operating Junction Temperature	T _J	-65 ~ +150	°C
Storage Junction 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 DATA (Note)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	SMA	38	°C/W
	SMB	24	°C/W
	SMC	13	°C/W

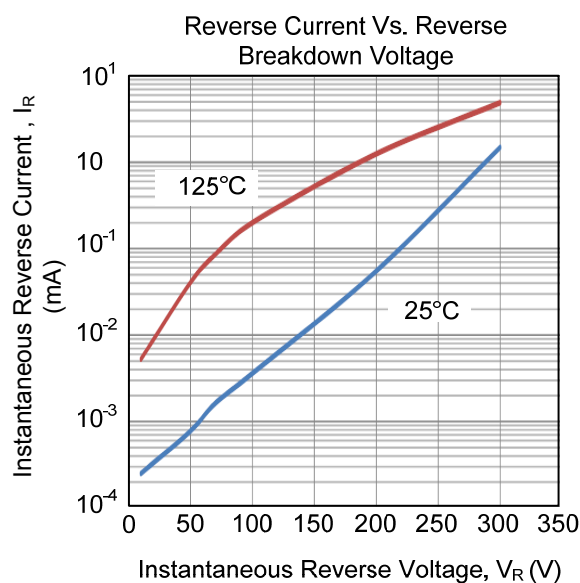
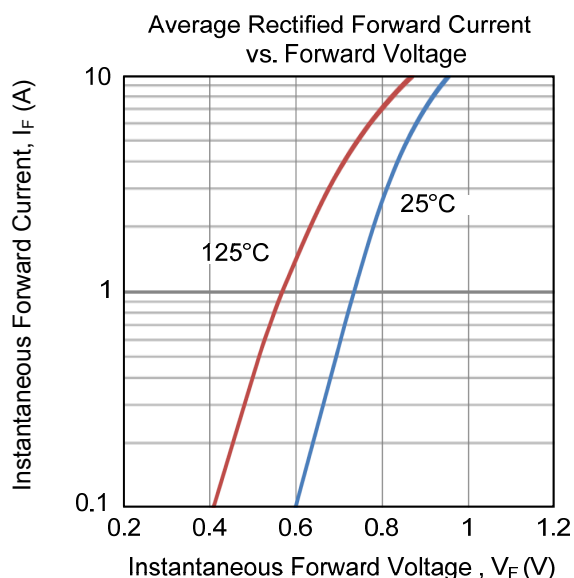
Note: Mounted on an FR4 PCB, single-sided copper, with 100 cm² copper pad area.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V _{(BR)R}	I _R =0.50mA	300			V
Forward Voltage	V _F	I _F =5A, T _J =25°C			0.92	V
		I _F =5A, T _J =125°C			0.9	V
Leakage Current	I _{RM}	V _R =300V, T _J =25°C			20	μA
		V _R =300V, T _J =125°C			10	mA

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

■ TYPICAL CHARACTERISTICS



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. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.