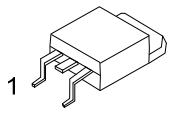
MOS GATED BARRIER RECTIFIER



TO-252

PDFN5×6

SMA

(JEDEC DO-214AC)

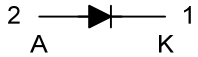
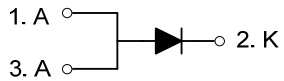
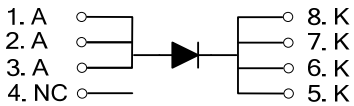
■ DESCRIPTION

The UTC **MGBR5L100** is a surface mount mos gated barrier rectifier,it uses UTC's advanced technology to provide customers withlow forward voltage drop and high switching speed, etc.

■ FEATURES

* Low forward voltage drop
* High switching speed

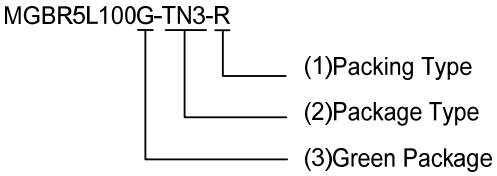
■ SYMBOL

SMA	TO-252	PDFN5×6
		

■ 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-P5060-R	MGBR5L100G-P5060-R	PDFN5×6	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 NC: No Comment



(1) R: Tape Reel

(2) TN3: TO-252, P5060: PDFN5×6, SMA: SMA

(3) G: Halogen Free and Lead Free, L: Lead Free

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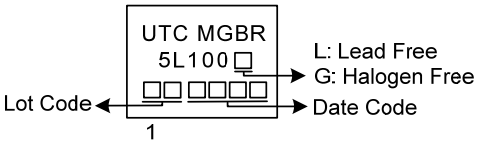
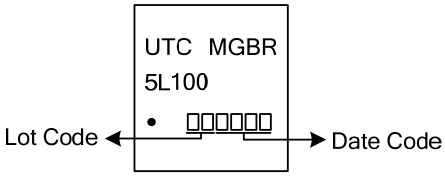
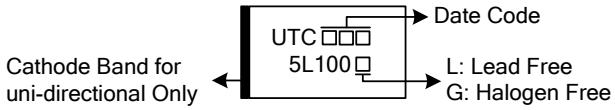
■ MARKING

Package	MARKING
TO-252	
PDFN5×6	
SMA	

■ 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
RMS Reverse Voltage		$V_{R(RMS)}$	70	V
Average Rectified Output Current	T_C=80°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 ~ +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 DATA (Note 3)

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-252	θ_{JA}	32	°C/W
	PDFN5×6		72	
	SMA		75	
Junction to Case	TO-252	θ_{JC}	2.5	°C/W
	PDFN5×6		2.4	
	SMA		35	

■ 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	100			V
Forward Voltage Drop	V_{FM}	I_F=5A, T_J=25°C			0.80	V
		I_F=5A, T_J=125°C			0.75	V
Leakage Current (Note 1)	I_{RM}	V_R=100V, T_J=25°C			250	μA
		V_R=100V, T_J=125°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.

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