



MGBR5S45

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

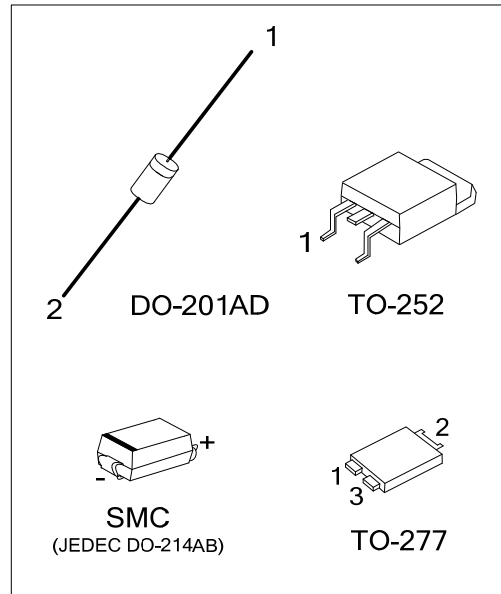
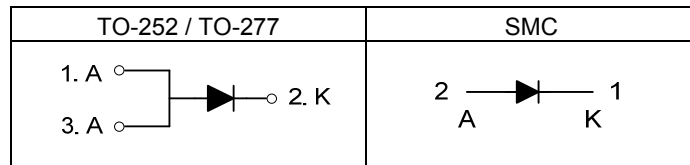
■ DESCRIPTION

The UTC **MGBR5S45** 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

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

■ SYMBOL




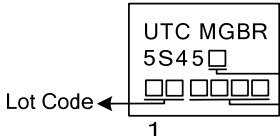
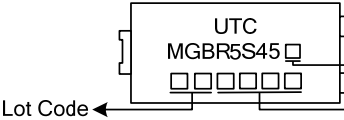
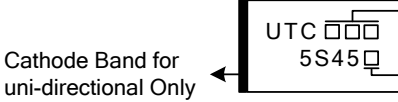
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR5S45L-Z21D-B	MGBR5S45G-Z21D-B	DO-201AD	K	A	-	Tape Box
MGBR5S45L-TN3-R	MGBR5S45G-TN3-R	TO-252	A	K	A	Tape Reel
MGBR5S45L-T27-R	MGBR5S45G-T27-R	TO-277	A	K	A	Tape Reel
MGBR5S45L-SMC-R	MGBR5S45G-SMC-R	SMC	K	A	-	Tape Reel

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

<p>MGBR5S45L-Z21D-B</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) B: Tape Box, R: Tape Reel (2) Z21D: DO-201AD, T27: TO-277, TN3: TO-252 SMC: SMC (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING

PACKAGE	MARKING
DO-201AD	 <p> Cathode Band for uni-directional Only MGBR5S45 L: Lead Free G: Halogen Free Date Code </p>
TO-252	 <p> UTC MGBR 5S45 Lot Code L: Lead Free G: Halogen Free Data Code 1 </p>
TO-277	 <p> UTC MGBR5S45 Lot Code L: Lead Free G: Halogen Free Data Code </p>
SMC	 <p> UTC 5S45 Cathode Band for uni-directional Only Date Code L: Lead Free G: Halogen Free </p>

■ 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}	45	V
Working Peak Reverse Voltage	V_{RWM}	45	V
Peak Repetitive Reverse Voltage	V_{RRM}	45	V
Average Rectified Output Current $T_C=140^\circ\text{C}$	I_O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	120	A
Operating Junction Temperature	T_J	-65 ~ +150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 ~ +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 CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	DO-201AD/SMC	75
		TO-252	110
		TO-277	73
Junction to Case	θ_{JC}	DO-201AD	15
		TO-277	13
		TO-252	2.5
		SMC	35

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.5\text{mA}$	45			V
Instantaneous Forward Voltage	V_{FM}	$I_F=5\text{A}, T_J=25^\circ\text{C}$			0.48	V
		$I_F=5\text{A}, T_J=125^\circ\text{C}$			0.44	V
Leakage Current	I_{RM}	$V_R=45\text{V}, T_J=25^\circ\text{C}$			500	μA
		$V_R=45\text{V}, T_J=125^\circ\text{C}$			100	mA

Note: Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

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