



MGBR5U45

DIODE

MOS GATED BARRIER RECTIFIER

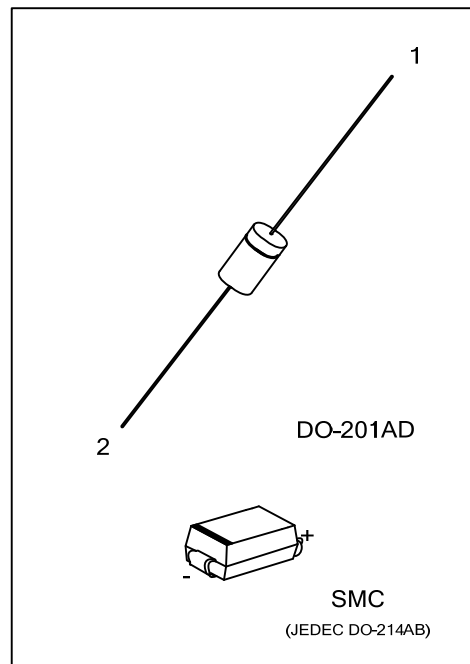
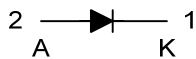
DESCRIPTION

The UTC **MGBR5U45** 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

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

SYMBOL



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MGBR5U45L-Z21D-R	MGBR5U45G-Z21D-R	DO-201AD	K	A	Tape Box
MGBR5U45L-SMC-R	MGBR5U45G-SMC-R	SMC	K	A	Tape Reel

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

<p>MGBR5U45L-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, SMC: SMC (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING

DO-201AD	SMC
<p>Cathode Band for uni-directional Only</p> <p>MGBR5U45□</p> <p>□□□□</p> <ul style="list-style-type: none"> L: Lead Free G: Halogen Free Date Code 	<p>UTC □□□□</p> <p>5U45□</p> <p>□□□□</p> <ul style="list-style-type: none"> Date Code L: Lead Free G: Halogen Free <p>Cathode Band for uni-directional Only</p>

■ 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}	45	V
Working Peak Reverse Voltage	V _{RWM}	45	V
Repetitive Peak Reverse Voltage	V _{RRM}	45	V
RMS Reverse Voltage	V _{R(RMS)}	35	V
Average Rectified Output Current	I _O	5	A
T _C =140°C			
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	200	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 RESISTANCES CHARACTERISTICS

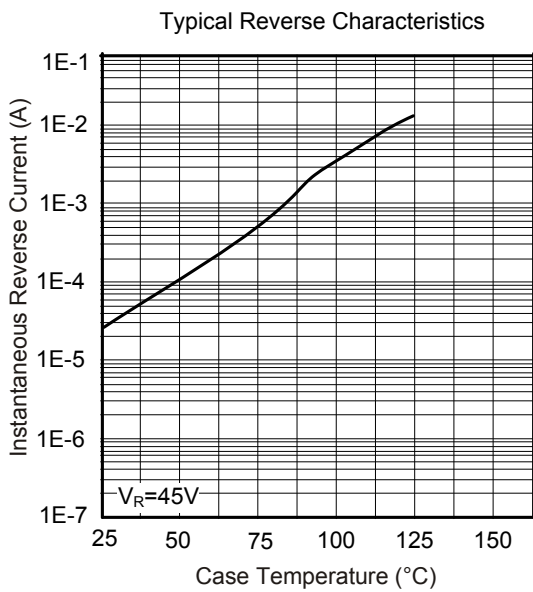
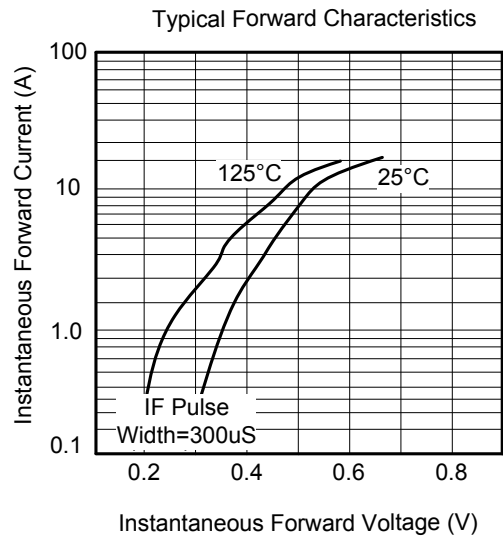
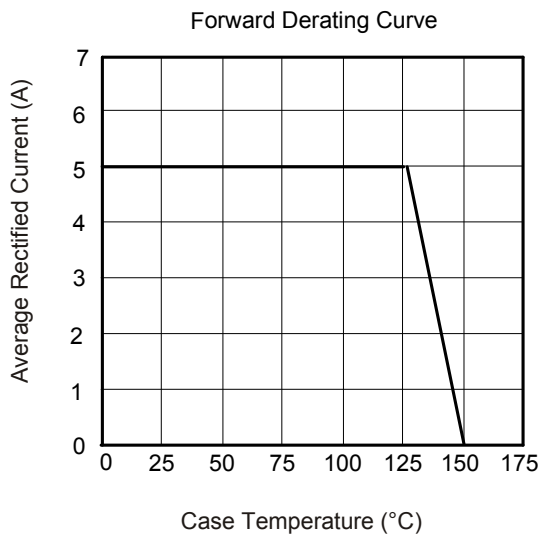
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ _{JA}	75	°C/W
Junction to Case	DO-201AD	15	°C/W
	SMC	35	°C/W

■ 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	45			V
Instantaneous Forward Voltage	V _{FM}	I _F =5A, T _J =25°C			0.43	V
		I _F =5A, T _J =125°C			0.40	V
Leakage Current (Note 1)	I _{RM}	V _R =45V, T _J =25°C			500	μA
		V _R =45V, T _J =125°C			100	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.
2. Thermal resistance junction to case mounted on heatsink.

TYPICAL CHARACTERISTICS



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