



**MGBR6V45C**

Preliminary

**DIODE**

**DUAL MOS GATED BARRIER RECTIFIER**

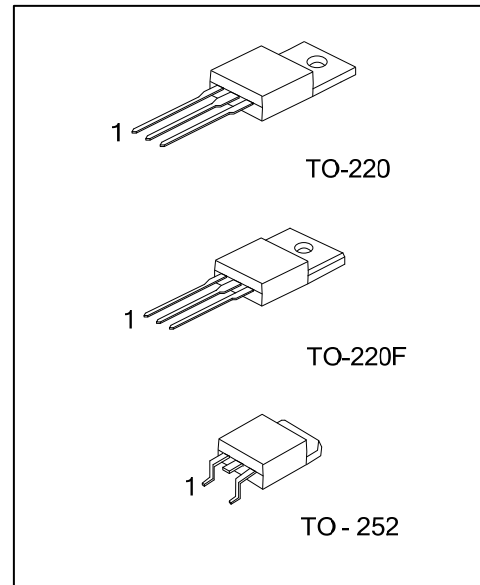
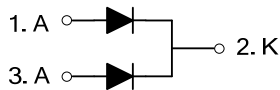
■ DESCRIPTION

The UTC **MGBR6V45C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

■ FEATURES

- \* Very low forward voltage drop
- \* High switching speed

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR6V45CL-TA3-T	MGBR6V45CG-TA3-T	TO-220	A	K	A	Tube
MGBR6V45CL-TF3-T	MGBR6V45CG-TF3-T	TO-220F	A	K	A	Tube
MGBR6V45CL-TN3-R	MGBR6V45CG-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>MGBR6V45CL-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TF3: TO-220F, TN3: TO-252</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING

TO-220 / TO-220F	TO-252

■ ABSOLUTE MAXIMUM RATINGS (PER LEG) (T<sub>A</sub>=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 <sub>RM</sub>	45	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	45	V
Peak Repetitive Reverse Voltage		V <sub>RRM</sub>	45	V
Average Rectified Forward Current (Rated VR-20KHz Square Wave) – 50% duty cycle	Per Leg	I <sub>o</sub>	3	A
	Total		6	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I <sub>FSM</sub>	80	A
Peak Repetitive Reverse Surge Current (2μS-1kHz)		I <sub>RRM</sub>	2	A
Operating Junction Temperature		T <sub>J</sub>	-65 ~ +150	°C
Storage Temperature		T <sub>STG</sub>	-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 CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-220/TO-220F	θ <sub>JA</sub>	62.5	°C/W
	TO-252		110	
Junction to Case	TO-220	θ <sub>JC</sub>	2	°C/W
	TO-220F		3.31	
	TO-252		2.5	

■ ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =0.60mA	45			V
Forward Voltage Drop	V <sub>FM</sub>	I <sub>F</sub> =3A, T <sub>J</sub> =25°C			0.62	V
		I <sub>F</sub> =3A, T <sub>J</sub> =125°C			0.57	V
Leakage Current	I <sub>RM</sub>	V <sub>R</sub> =45V, T <sub>J</sub> =25°C			100	μA
		V <sub>R</sub> =45V, T <sub>J</sub> =125°C			15	mA

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

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