

**MGBR10V45C**

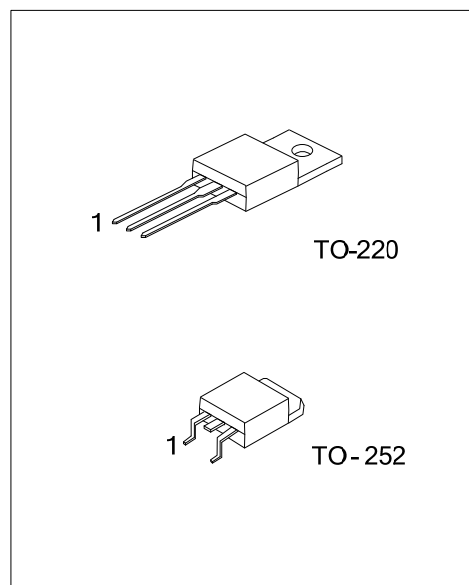
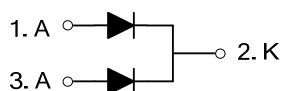
Preliminary

DIODE**DUAL MOS GATED BARRIER
RECTIFIER****DESCRIPTION**

The UTC **MGBR10V45C** 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	
MGBR10V45CL-TA3-T	MGBR10V45CG-TA3-T	TO-220	A	K	A	Tube
MGBR10V45CL-TN3-R	MGBR10V45CG-TN3-R	TO-252	A	K	A	Tape Reel

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

MGBR10V45CL-TA3-T (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TN3: TO-252 (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING

TO-220	TO-252
UTC MGBR10V45C L: Lead Free G: Halogen Free Data Code 1	UTC MGBR 10V45C L: Lead Free G: Halogen Free Data Code 1

■ **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
RMS Reverse Voltage		$V_{R(RMS)}$	32	V
Average Rectified Output Current ($T_C=140^{\circ}\text{C}$)	Per Leg	I_O	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	90	A
Repetitive Peak Avalanche Power (1 μs , 25°C)		P_{ARM}	5000	W
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	TO-220	θ_{JA}	62.5	$^{\circ}\text{C/W}$
	TO-252		110	
Junction to Case	TO-220	θ_{JC}	2	$^{\circ}\text{C/W}$
	TO-252		2.5	

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.45\text{mA}$	45			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}$, $T_J=25^{\circ}\text{C}$			0.50	V
		$I_F=5\text{A}$, $T_J=125^{\circ}\text{C}$			0.45	V
Leakage Current (Note 1)	I_{RM}	$V_R=45\text{V}$, $T_J=25^{\circ}\text{C}$		50	500	μA
		$V_R=45\text{V}$, $T_J=125^{\circ}\text{C}$		12	40	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

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