



MGBR40V45C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

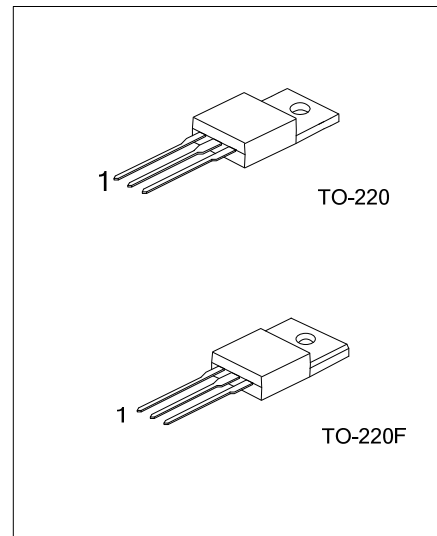
■ DESCRIPTION

The UTC **MGBR40V45C** 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	
MGBR40V45CL-TA3-T	MGBR40V45CG-TA3-T	TO-220	A	K	A	Tube
MGBR40V45CL-TF3-T	MGBR40V45CG-TF3-T	TO-220F	A	K	A	Tube

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

<p>MGBR40V45CL-TA3-T</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

PACKAGE	MARKING
TO-220 TO-220F	<p>Lot Code ← [] → Data Code</p> <p>1</p>

■ ABSOLUTE MAXIMUM RATINGS (PER LEG) ($T_A=25^\circ\text{C}$ 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 Per Device	Per Leg	20	A
	Total	40	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	280	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 (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	2	$^\circ\text{C/W}$

■ 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)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	45			V
Forward Voltage Drop	V_{FM}	$I_F=20\text{A}, T_J=25^\circ\text{C}$			0.55	V
		$I_F=20\text{A}, T_J=125^\circ\text{C}$			0.50	V
Leakage Current (Note 1)	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

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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