



MGBR30S45C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

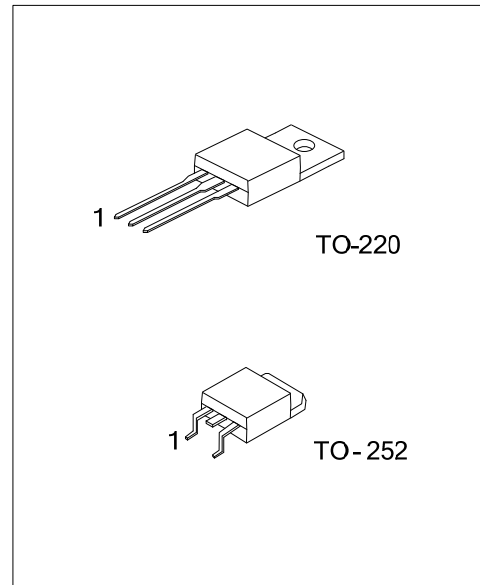
■ DESCRIPTION

The UTC **MGBR30S45C** 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

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

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR30S45CL-TA3-T	MGBR30S45CG-TA3-T	TO-220	A	K	A	Tube
MGBR30S45CL-TN3-R	MGBR30S45CG-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>MGBR30S45CL-TA3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) TA3: TO-220, TN3: TO-252 (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) ($T_A=25^\circ\text{C}$ 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	I_o	Per Leg	15
		Total	30
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	250	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 Ambient	θ_{JA}	TO-220	62.5
		TO-252	110
Junction to Case	θ_{JC}	TO-220	2
		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)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	45			V
Forward Voltage Drop	V_{FM}	$I_F=15\text{A}, T_J=25^\circ\text{C}$			0.50	V
		$I_F=15\text{A}, T_J=125^\circ\text{C}$			0.45	V
Leakage Current (Note 1)	I_{RM}	$V_R=45\text{V}, T_J=25^\circ\text{C}$			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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