



## MGBR30V45C

Preliminary

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

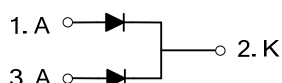
#### DESCRIPTION

The UTC **MGBR30V45C** 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

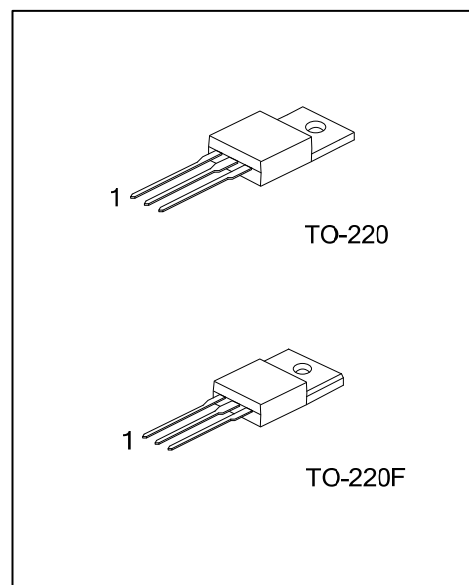
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR30V45CL-TA3-T	MGBR30V45CG-TA3-T	TO-220	A	K	A	Tube
MGBR30V45CL-TF3-R	MGBR30V45CG-TF3-R	TO-220F	A	K	A	Tube

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

<p>MGBR30V45CL-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Free</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>UTC</p> <p>MGBR30V45C</p> <p>Lot Code</p> <p>L: Lead Free</p> <p>G: Halogen Free</p> <p>Data Code</p> <p>1 2 3</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	15 A	
	Total 3	0	A
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 $^{\circ}\text{C}$
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 DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient		$\theta_{JA}$	62.5	$^{\circ}\text{C}/\text{W}$
Junction to Case	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C}/\text{W}$
	TO-220F		3.31	

■ 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	$V_{FM}$	$I_F=15\text{A}$ , $T_J=25^{\circ}\text{C}$			0.55	V
		$I_F=15\text{A}$ , $T_J=125^{\circ}\text{C}$			0.50	V
Leakage Current (Note 1)	$I_{RM}$	$V_R=45\text{V}$ , $T_J=25^{\circ}\text{C}$			500	$\mu\text{A}$
		$V_R=45\text{V}$ , $T_J=125^{\circ}\text{C}$			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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