



MGBR20L45C

DIODE

DUAL MOS GATED BARRIER RECTIFIERS

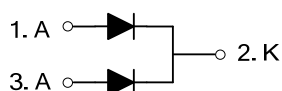
DESCRIPTION

The UTC **MGBR20L45C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with high current capability, low forward voltage and high switching speed, etc.

FEATURES

- * Low forward voltage
- * High switching speed
- * High current capability

SYMBOL



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L45CL-TA3-T	MGBR20L45CG-TA3-T	TO-220	A	K	A	Tube
MGBR20L45CL-TF3-T	MGBR20L45CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20L45CL-TN3-R	MGBR20L45CG-TN3-R	TO-252	A	K	A	Tape Reel
MGBR20L45CL-TQ2-T	MGBR20L45CG-TQ2-T	TO-263	A	K	A	Tube
MGBR20L45CL-TQ2-R	MGBR20L45CG-TQ2-R	TO-263	A	K	A	Tape Reel

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

MGBR20L45CL-TA3-T (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TF3: TO-220F, TN3: TO-252 TQ2: TO-263 (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING

TO-220 / TO-220F	TO-252 / TO-263

■ 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
Average Rectified Forward Current (Rated VR-20KHz Square Wave) – 50% duty cycle	Per Leg	10	A
	Total	20	A
Peak Forward Surge Current - 1/2 60Hz	I_{FSM}	120	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)

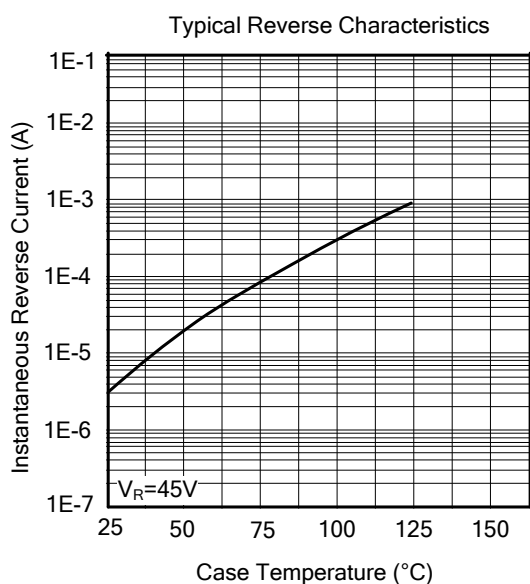
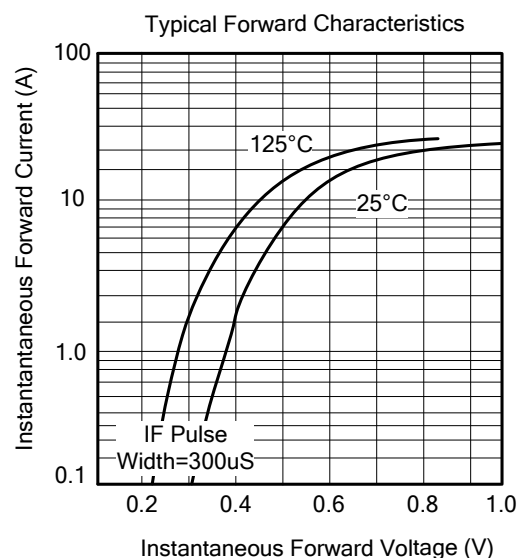
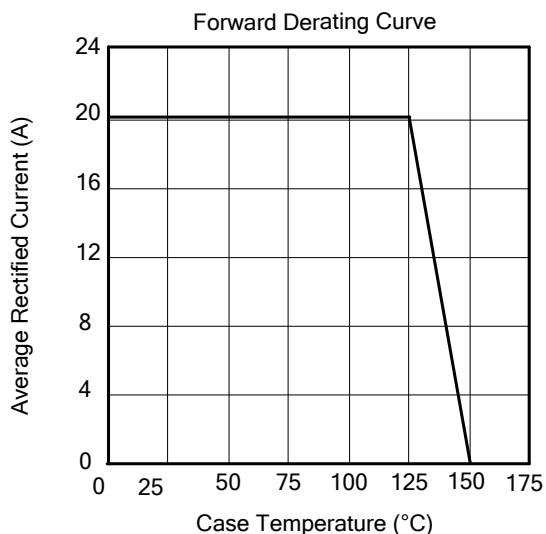
PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	2	$^{\circ}\text{C/W}$
	TO-220F	4	$^{\circ}\text{C/W}$
	TO-252	6	$^{\circ}\text{C/W}$
	TO-263	3	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A=25^{\circ}\text{C}$ unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	45			V
Instantaneous Forward Voltage	V_{FM}	$I_F=10\text{A}, T_J=25^{\circ}\text{C}$			0.58	V
		$I_F=10\text{A}, T_J=125^{\circ}\text{C}$			0.53	V
Leakage Current	I_{RM}	$V_R=45\text{V}, T_J=25^{\circ}\text{C}$			300	μA
		$V_R=45\text{V}, T_J=125^{\circ}\text{C}$			80	mA

Note: Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

■ TYPICAL CHARACTERISTICS



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