

**MGBR20U45C**

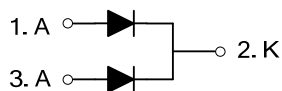
Preliminary

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

The UTC **MGBR20U45C** 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.

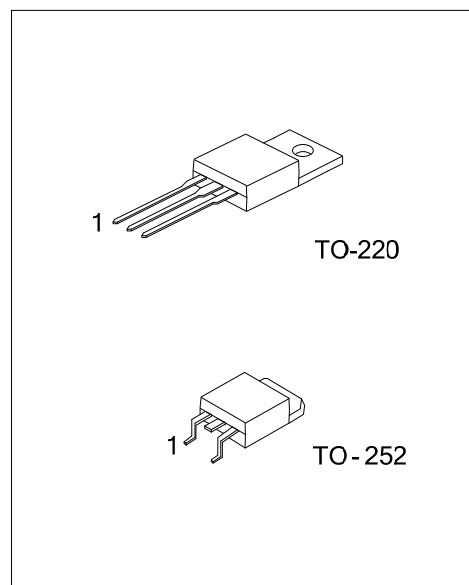
FEATURES

- * Ultra 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	
MGBR20U45CL-TA3-T	MGBR20U4	5CG-TA3-T	TO-220	A	K A		Tube
MGBR20U45CL-TN3-T	MGBR20U4	5CG-TN3-T	TO-252	A	K	A	Tube
MGBR20U45CL-TN3-T	MGBR20U4	5CG-TN3-T	TO-252	A	K	A	Tape Reel

MGBR20U45CL-TA3-T	(1)Packing Type	(1) T: Tube, R: Tape Reel
	(2)Package Type	(2) TA3: TO-220, TN3: TO-252
	(3)Lead Free	(3) L: Lead Free, G: Halogen Free



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	I _O	10 A
	Total 2		0 A
Peak Forward Surge Current - 1/2 60Hz		I _{FSM} 250	A
Peak Repetitive Reverse Surge Current (2μS-1KHz) I		I _{RRM} 2	A
Rate of Voltage Change (at Rated V _R)		dv/dt	10000 V/μS
Operating Junction Temperature		T _J -65~	+150 °C
Storage Temperature		T _{STG} -65~	+150 °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	TO-220	θ _{JA}	62.5	°C/W
	TO-252		110	
Junction to Case	TO-220	θ _{JC}	2	°C/W
	TO-252		2.5	

■ ELECTRICAL CHARACTERISTICS-(PER LEG) (T_A=25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	I _R =0.45mA 45				V
Instantaneous Forward Voltage	V _{FM}	I _F =10A, T _J =25°C			0.43	V
		I _F =10A, T _J =125°C			0.40	V
Instantaneous Reverse Current (Note 1)	I _{RM}	V _R =45V, T _J =25°C			500	μA
		V _R =45V, T _J =125°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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