

**MGBR10U50**

Preliminary

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

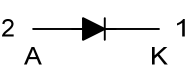
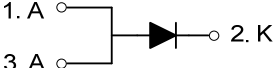
The UTC **MGBR10U50** is a mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **MGBR10U50** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

FEATURES

- * Ultra low forward voltage drop
- * High current capability
- * High surge capability
- * High efficiency

SYMBOL

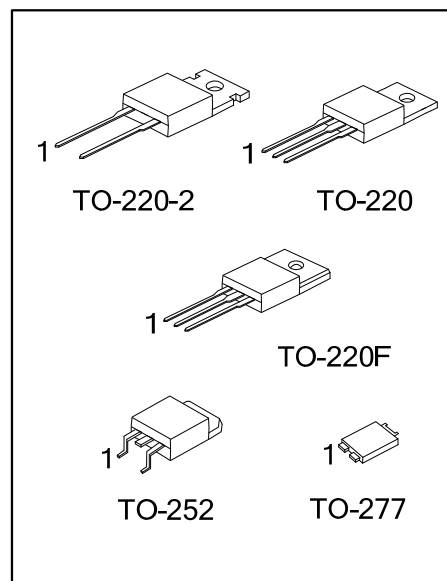
TO-220-2	TO-220 / TO-220F TO-252 / TO-277
	

ORDERING INFORMATION

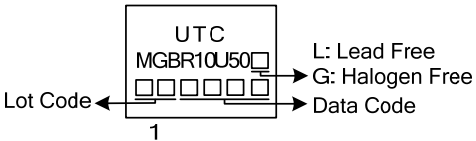
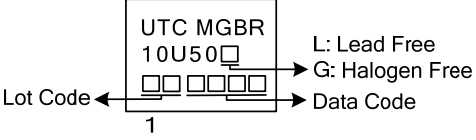
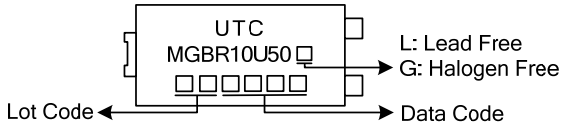
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10U50L-TA2-T	MGBR10U50G-TA2-T	TO-220-2	K	A	-	Tube
MGBR10U50L-TA3-T	MGBR10U50G-TA3-T	TO-220	A	K	A	Tape Reel
MGBR10U50L-TF3-T	MGBR10U50G-TF3-T	TO-220F	A	K	A	Tape Reel
MGBR10U50L-TN3-R	MGBR10U50G-TN3-R	TO-252	A	K	A	Tape Reel
MGBR10U50L-T27-R	MGBR10U50G-T27-R	TO-277	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

MGBR10U50L-TA2-T	(1)Packing Type	(1) T: Tube, R: Tape Reel (2) TA2: TO-220-2, TA3: TO-220, TF3: TO-220F, TN3: TO-252, T27: TO-277 (3) L: Lead Free, G: Halogen Free and Lead Free
	(2)Package Type	
	(3)Green Package	



MARKING

PACKAGE	MARKING
TO-220-2 TO-220 TO-220F	
TO252	
TO-277	

■ 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}	50	V
Working Peak Reverse Voltage	V _{RWM}	50	V
Peak Repetitive Reverse Voltage	V _{RRM}	50	V
Average Rectified Output Current	I _O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	180	A
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 CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220-2/TO-220	2	°C/W
	TO-220F	4	
	TO-252	6	
	TO-277	72 (Note 2)	
	θ _{JC}		
	θ _{JA}		

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V _{(BR)R}	I _R =0.50mA	50			V
Instantaneous Forward Voltage	V _{FM}	I _F =10A, T _C =25°C			0.45	V
		I _F =10A, T _C =125°C			0.40	V
Leakage Current	I _{RM}	V _R =50V, T _C =25°C			500	μA
		V _R =50V, T _C =125°C			40	mA

Notes: 1. Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

2. FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

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