



MGBR20V50

DIODE

MOS GATED BARRIER RECTIFIER

DESCRIPTION

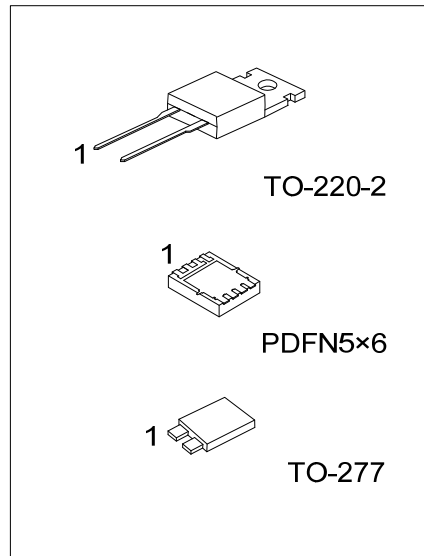
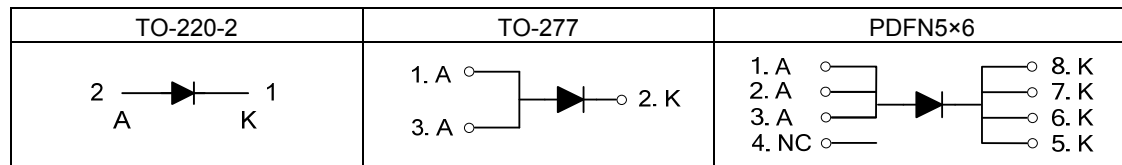
The UTC **MGBR20V50** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed etc.

The UTC **MGBR20V50** suitable for supply applications.

FEATURES

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

SYMBOL



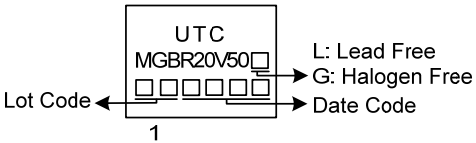
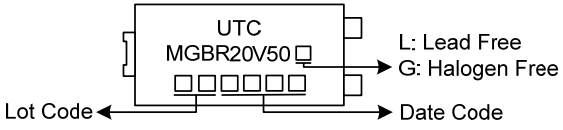
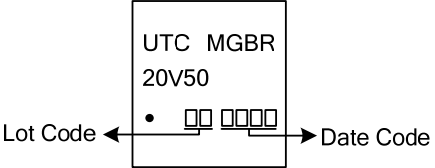
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
MGBR20V50L-TA2-T	MGBR20V50G-TA2-T	TO-220-2	K	A	-	-	-	-	-	-	Tube
MGBR20V50L-T27-R	MGBR20V50G-T27-R	TO-277	A	K	A	-	-	-	-	-	Tape Reel
MGBR20V50L-P5060-R	MGBR20V50G-P5060-R	PDFN5×6	A	A	A	NC	K	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR20V50G-TA2-T</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) T: Tube, R: Tape Reel (2) TA2: TO-220-2, T27: TO-277, P5060: PDFN5×6 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING

PACKAGE	MARKING
TO-220-2	
TO-277	
PDFN5x6	

■ 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 Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	I _O	20	A
Peak Forward Surge Current - 1/2 60hz	I _{FSM}	250	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I _{RRM}	2	A
Maximum Rate of Voltage Change (at Rated V _R)	dv/dt	10000	V/μS
Operating Junction Temperature	T _J	-65 ~ +150	°C
Storage Junction 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-220-2	60	°C/W
	TO-277	73 (Note)	
	PDFN5×6	72	

Note: Mounted on an FR4 PCB, single-sided copper, with 100 cm² copper pad area.

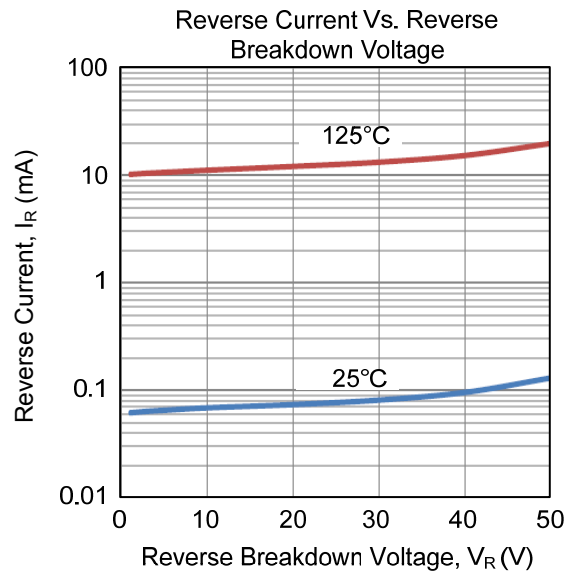
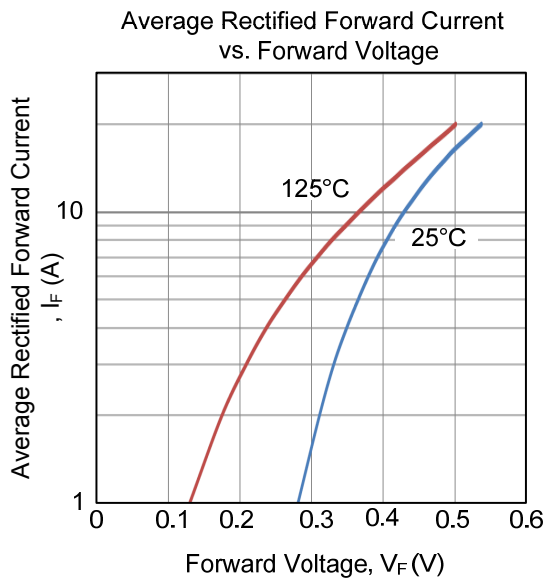
■ ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	I _R =0.50mA	50			V
Forward Voltage	V _F	I _F =1A, T _J =25°C		0.29		V
		I _F =1A, T _J =125°C		0.18		V
		I _F =5A, T _J =25°C		0.40		V
		I _F =5A, T _J =125°C		0.28		V
		I _F =10A, T _J =25°C		0.44		V
		I _F =10A, T _J =125°C		0.36		V
		I _F =20A, T _J =25°C		0.54	0.58	V
		I _F =20A, T _J =125°C		0.51	0.53	V
Reverse Current (Note 1)	I _{RM}	V _R =50V, T _J =25°C		150	500	μA
		V _R =50V, T _J =125°C		20	100	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

■ TYPICAL CHARACTERISTICS



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