



MGBR20L50

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

DESCRIPTION

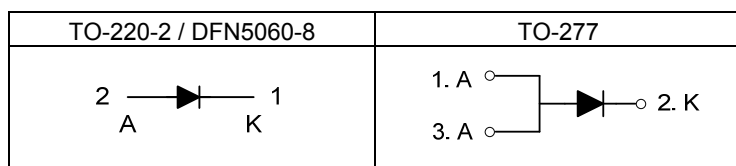
The UTC **MGBR20L50** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed etc.

The UTC **MGBR20L50** suitable for supply applications.

FEATURES

- * Low forward voltage drop
- * High switching speed

SYMBOL

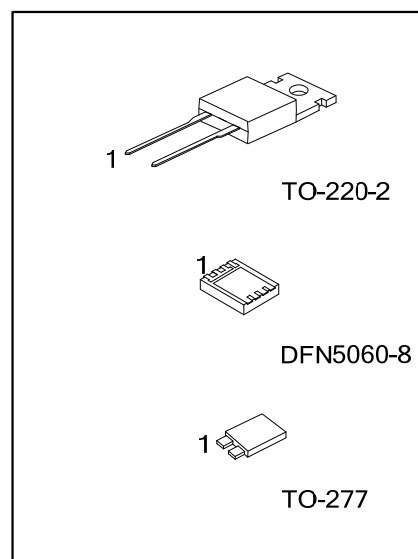


ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
MGBR20L50L-TA2-T	MGBR20L50G-TA2-T	TO-220-2	K	A	-	-	-	-	-	-	Tube
MGBR20L50L-T27-T	MGBR20L50G-T27-T	TO-277	A	K	A	-	-	-	-	-	Tape Reel
MGBR20L50L-K08-5060-R	MGBR20L50G-K08-5060-R	DFN5060-8	A	A	A	NC	K	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

MGBR20L50G-TA2-T	(1)Packing Type	(1) T: Tube, R: Tape Reel
	(2)Package Type	(2) TA2: TO-220-2, T27: TO-277, K08-5060: DFN5060-8
	(3)Green Package	(3) G: Halogen Free and Lead Free



MARKING

PACKAGE	MARKING
TO-220-2	<div><div>UTC MGBR20L50</div><div>Lot Code</div><div>1</div><div>L: Lead Free G: Halogen Free Data Code</div></div>
TO-277	<div><div>UTC MGBR20L50</div><div>Lot Code</div><div>L: Lead Free G: Halogen Free Data Code</div></div>
DFN5060-8	<div><div>UTC MGBR 20L50</div><div>Lot Code</div><div>Date Code</div></div>

■ 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}	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/ μ S
Operating Junction Temperature	T_J	-65~+150	$^{\circ}\text{C}$
Storage Junction 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	TO-220-2	θ_{JA}	60	$^{\circ}\text{C/W}$
	TO-277		73 (Note 3)	
	DFN5060-8		72	

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	50			V
Forward Voltage	V_{FM}	$I_F=20\text{A}$, $T_J=25^{\circ}\text{C}$			0.63	V
		$I_F=20\text{A}$, $T_J=125^{\circ}\text{C}$			0.58	V
Reverse Current (Note 1)	I_{RM}	$V_R=50\text{V}$, $T_J=25^{\circ}\text{C}$			300	μA
		$V_R=50\text{V}$, $T_J=125^{\circ}\text{C}$			100	mA

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

2. Thermal resistance junction to case mounted on heatsink.

3. Mounted on an FR4 PCB, single-sided copper, with 100 cm^2 copper pad area.

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