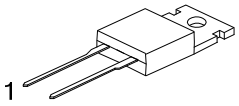
MGBR20L50

Preliminary ***DIODE***

MOS GATED BARRIER RECTIFIER



TO-220-2

DFN-8(5x6)

TO-277

■ DESCRIPTION

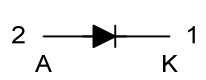
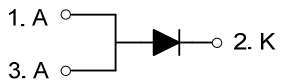
The UTC **MGBR20L50** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed etc.

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

■ FEATURES

* Low forward voltage drop
* High switching speed

■ SYMBOL

TO-220-2 / DFN-8(5×6)	TO-277
	

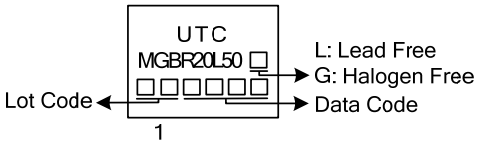
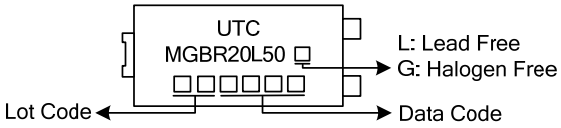
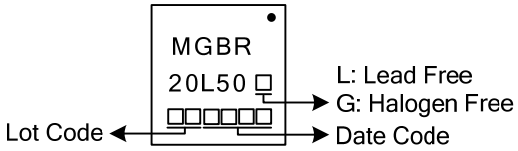
■ ORDERING INFORMATION

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	DFN-8(5×6)	A	A	A	NC	K	K	K	K	Tape Reel

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

MGBR20L50L-TA2-T (1)Packing Type (2)Package Type (3)Lead Free	(1) T: Tube, R: Tape Reel (2) TA2: TO-220-2, K08-5060: DFN-8(5×6) (3) L: Lead Free, G: Halogen Free

■ MARKING INFORMATION

PACKAGE	MARKING
TO-220-2	
TO-277	
DFN-8(5×6)	

■ 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	θ_{JA}	60	°C/W
	TO-277		73 (Note 3)	
	DFN-8(5×6)		72	

■ 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_{FM}	I_F=20A, T_J=25°C			0.63	V
		I_F=20A, T_J=125°C			0.58	V
Reverse Current (Note 1)	I_{RM}	V_R=50V, T_J=25°C			300	μA
		V_R=50V, 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.
3. Mounted on an FR4 PCB, single-sided copper, with 100 cm^2 copper pad area.