

**MGBR20S50**

Preliminary

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

The UTC **MGBR20S50** 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 **MGBR20S50** suitable for supply applications.

■ FEATURES

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

■ SYMBOL

A  K

■ ORDERING INFORMATION

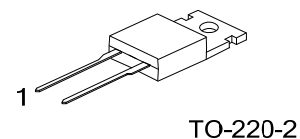
Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
MGBR20S50L-TA2-T	MGBR20S50G-TA2-T	TO-220-2	K	A	-	-	-	-	-	-	Tube
-	MGBR20S50G-K08-5060-R	DFN-8(5×6)	A	A	A	NC	K	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

MGBR20S50L-TA2-T (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube, R: Tape Reel (2) TA2: TO-220-2, K08-5060: DFN-8(5×6) (3) L: Lead Free, G: Halogen Free and Lead Free
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■ MARKING

TO-220-2	DFN-8(5×6)
UTC MGBR20S50 Lot Code 1 L: Lead Free G: Halogen Free Data Code	UTC MGBR 20S50 Lot Code Date Code



TO-220-2



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}	300	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
	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			0.53	V
		I _F =20A, T _J =125°C			0.48	V
Reverse Current (Note 1)	I _{RM}	V _R =50V, T _J =25°C			500	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.

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