



MGBR2U40

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

DESCRIPTION

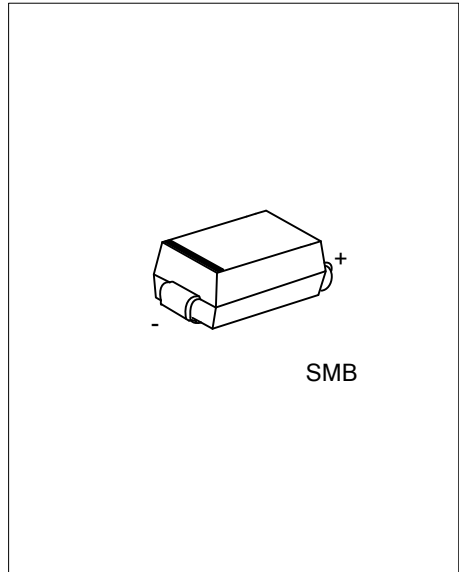
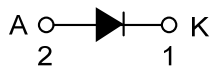
The UTC **MGBR2U40** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed etc.

The UTC **MGBR2U40** suitable for supply applications.

FEATURES

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

SYMBOL



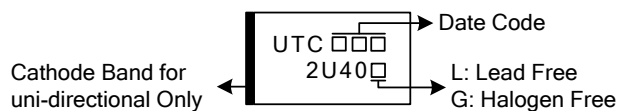
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MGBR2U40L-SMB-R	MGBR2U40G-SMB-R	SMB	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR2U40L-SMB-R</p>	<p>(1) R: Tape Reel (2) SMB: SMB (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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MARKING



■ 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}	40	V
Working Peak Reverse Voltage	V_{RWM}	40	V
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	I_O	2	A
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	50	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	θ_{JA}	90	$^{\circ}\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.5\text{mA}$	40			V
Forward Voltage	V_{FM}	$I_F=2\text{A}, T_J=25^{\circ}\text{C}$			0.43	V
		$I_F=2\text{A}, T_J=125^{\circ}\text{C}$			0.39	V
Reverse Current (Note 1)	I_{RM}	$V_R=40\text{V}, T_J=25^{\circ}\text{C}$			500	μA
		$V_R=40\text{V}, T_J=125^{\circ}\text{C}$			50	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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