



**MGBR2U40**

Preliminary

**DIODE**

**MOS GATED BARRIER RECTIFIER**

■ DESCRIPTION

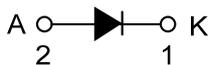
The UTC **MGBR2U40** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed etc.

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

■ FEATURES

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

■ SYMBOL



■ ORDERING INFORMATION

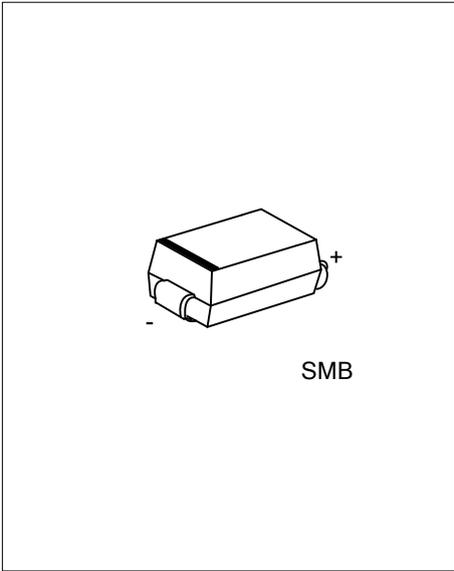
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MGBR2U40L-SMB-R	MGBR2U40G-SMB-R	SMB	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR2U40L-SMB-R</p> <ul style="list-style-type: none"> <li>(1)Packing Type</li> <li>(2)Package Type</li> <li>(3)Lead Free</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) SMB: SMB</li> <li>(3) L: Lead Free, G:Halogen Free</li> </ul>
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■ MARKING INFORMATION

PACKAGE	MARKING
SMB	<p>Cathode Band for uni-directional Only</p> <p>UTC □□□□ MGBR2U40□</p> <p>→ Date Code → L: Lead Free → G: Halogen Free</p>



■ 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/ $\mu$ 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	$\theta_{JA}$	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	$\mu\text{A}$
		$V_R=40\text{V}, T_J=125^{\circ}\text{C}$			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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