

UNISONIC TECHNOLOGIES CO., LTD

MGBR15V40 Preliminary DIODE

MOS GATED BARRIER RECTIFIER

■ DESCRIPTION

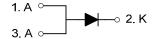
The UTC MGBR15V40 is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **MGBR15V40** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

- * Very low forward voltage drop
- * High current capability
- * High surge capability
- * High efficiency

■ SYMBOL

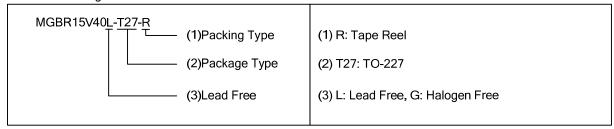


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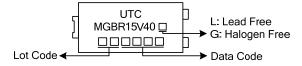
■ ORDERING INFORMATION

Ordering Number		Doolsons	Pin Assignment			Dealing	
Lead Free	Halogen Free	Package	1	2	3	Packing	
MGBR15V40L-T27-R	MGBR15V40G-T27-R	TO-277	Α	K	Α	Tape Reel	

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



■ MARKING



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■ **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 (Note 1)	V_{RM}	40	V	
Working Peak Reverse Voltage	V_{RWM}	40	V	
Peak Repetitive Reverse Voltage		V_{RRM}	40	V
RMS Reverse Voltage		$V_{R(RMS)}$	28	V
Average Rectified Output Current	T _C =125°C	Ιο	15	Α
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}	200	Α
Operating Junction Temperature		T_J	-65~+150	°C
Storage 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 CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT	
Junction to Ambient	θ_{JA}	73	°C/W	
Junction to Case	θ_{JC}	13	°C/W	

■ **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	40			V
Forward Voltage Drop	I V _{EM}	I _F =15A, T _C =25°C			0.53	V
		I _F =15A, T _C =125°C			0.48	V
Peak Reverse Current at Rated DC		V _R =40V, T _C =25°C			500	μA
Blocking Voltage (Note 1)	I _{RM}	V _R =40V, T _C =125°C			50	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 100cm² copper pad area.

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