

UNISONIC TECHNOLOGIES CO., LTD

MBR1645C Preliminary DIODE

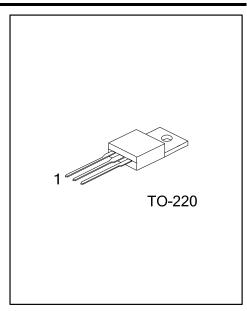
10A SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

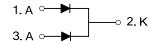
The UTC **MBR1645C** is a Schottky Barrier Rectifier with high efficiency, low power dissipation and high current capacity. It can be applied in high frequency, low voltage inverters, polarity protection and free wheeling applications.

■ FEATURES

- * High surge capability
- * High efficiency, low power dissipation, high current capability, low forward voltage drop
- * Guardring for overvoltage protection



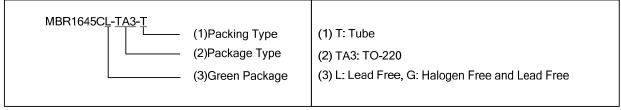
■ SYMBOL



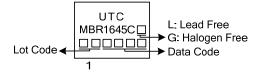
ORDERING INFORMATION

Ordering Number		Dookogo	Pin Assignment			Dooking	
Lead Free	Halogen Free	Package	1	2	3	Packing	
MBR1645CL-TA3-T	MBR1645CG-TA3-T	TO-220	Α	K	Α	Tube	

Note: Pin Assignment: A: Anode K: Cathode



MARKING



<u>www.unisonic.com.tw</u> 1 of 3

■ 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}	45	V	
Working Peak Reverse Voltage		V_{RWM}	45	V	
Peak Repetitive Reverse Voltage		V_{RRM}	45	V	
RMS Reverse Voltage		$V_{R(RMS)}$	31.5	V	
Average Rectified Output Current	Per Leg		8	Α	
(T _C =105°C)	Total	Io	16	Α	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}	125	Α	
Operating Junction Temperature		Τ _J	+150	°C	
Storage Temperature		T _{STG}	-55~+150	°C	

Note: 1. 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 (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT	
Junction to Ambient	θ_{JA}	60	°C/W	
Junction to Case	θ _{JC}	2	°C/W	

■ ELECTRICAL CHARACTERISTICS (Per Leg) (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 =0.5mA	45			V
Famurand Valtage Dran	V _{FM}	I _F =8A, T _J =25°C			0.70	V
Forward Voltage Drop		I _F =8A, T _J =125°C			0.57	V
Lookaga Current (Note 1)	I _{RM}	V _R =45V, T _J =25°C			100	μΑ
Leakage Current (Note 1)		V _R =45V, T _J =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.

^{2.} Thermal resistance junction to case mounted on heatsink.

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.

