# **UTC** UNISONIC TECHNOLOGIES CO., LTD

### MBR20200C

# SCHOTTKY BARRIER RECTIFIERS

#### DESCRIPTION

The UTC **MBR20200C** is a Schottky Barrier Rectifier with high efficiency, low power dissipation and high current capacity. It can be applied in low voltage, high frequency inverters, polarity protection and free wheeling applications.

#### FEATURES

\* High surge capability

\* High efficiency, low power dissipation, high current capability, low forward voltage drop

#### SYMBOL



#### ORDERING INFORMATION



#### MARKING





#### ■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT	
Recurrent Peak Reverse Voltage		V <sub>RRM</sub>	200	V	
RMS Voltage		V <sub>R(RMS)</sub>	140	V	
DC Blocking Voltage		V <sub>R</sub>	200	V	
Average Forward Rectified Output Current	Per Leg		10	A	
(T <sub>C</sub> =105°C)	Total	IO	20		
DC Reverse Current (T <sub>C</sub> =25°C)		I <sub>R</sub>	1.0	mA	
Peak Repetitive Forward Current		I <sub>FRM</sub>	20	٨	
(Rated V <sub>R</sub> , Square Wave, 20 kHz) (T <sub>C</sub> =135°C)			20	A	
Non-Repetitive Peak Forward Surge Current		I <sub>FSM</sub>	150	٨	
8.3ms Single Half-Sine-Wave			150	A	
Peak Repetitive Reverse Surge Current (Note 3)		I <sub>RRM</sub>	1.0	А	
Voltage Rate of Change (Rated V <sub>R</sub> )		dv/dt	10000	V/µs	
Junction Capacitance (Note 4)		CJ	320	pF	
Operating Junction Temperature		TJ	+150	°C	
Storage Temperature		T <sub>STG</sub>	-55 ~ +150	°C	

#### ■ THERMAL CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	0 0F/TO-220F1 2 θ <sub>JC</sub>	2	°C/W
	TO-220F/TO-220F1		4	°C/W
	TO-252		6	°C/W
	TO-263	3	°C/W	
	TO-3P		1.5	°C/W

#### ELECTRICAL CHARACTERISTICS (Note 3)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Instantaneous Forward Voltage Drop	V <sub>F</sub>	I <sub>F</sub> =10A, T <sub>C</sub> =25°C			0.99		
		I <sub>F</sub> =10A, T <sub>C</sub> =125°C			0.87	V	
		I <sub>F</sub> =20A, T <sub>C</sub> =25°C			1.23		
		I <sub>F</sub> =20A, T <sub>C</sub> =125°C			1.10		
Instantaneous Reverse Current	I <sub>R</sub>	Rated DC Voltage, T <sub>C</sub> =25°C			1.0	mA	
		Rated DC Voltage, T <sub>C</sub> =125°C			50	ША	

Notes: 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.

2. 2.0 $\mu$ s Pulse Width, f = 1.0KHz.

3. Pulse Test: Pulse Width= $300\mu$ s, Duty Cycle  $\leq$  2.0%.

4. Applied  $V_R$  = 4.0V and f = 1.0MHz.



# MBR20200C

#### TYPICAL CHARACTERISTICS



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.



## **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Schottky Diodes & Rectifiers category:

Click to view products by Unisonic manufacturer:

Other Similar products are found below :

MA4E2039 MA4E2508M-1112 MBR10100CT-BP MBR1545CT MMBD301M3T5G GS1JE-TP RB160M-50TR BAS 3010S-02LRH E6327 BAT 54-02LRH E6327 NSR05F40QNXT5G NSVR05F40NXT5G NTE555 JANS1N6640 SB07-03C-TB-H SB1003M3-TL-W SBAT54CWT1G SBM30-03-TR-E SK310-T SK33A-TP SK34B-TP SS3003CH-TL-E PDS3100Q-7 GA01SHT18 CRS10I30A(TE85L,QM MA4E2501L-1290 MBRB30H30CT-1G BAS 70-02L E6327 DMJ3940-000 SB007-03C-TB-E SB10015M-TL-E SB1003M3-TL-E SK32A-TP SK33B-TP SK35A-TP SK38B-LTP SK38B-TP NTE505 NTSB30U100CT-1G VS-6CWQ10FNHM3 CRG04(T5L,TEMQ) ACDBA1100LR-HF ACDBA1200-HF ACDBA140-HF ACDBA2100-HF ACDBA240-HF ACDBA3100-HF CDBQC0530L-HF BAT54-13-F ACDBA340-HF ACDBA260LR-HF