

# UNISONIC TECHNOLOGIES CO., LTD

MBR20100 Preliminary DIODE

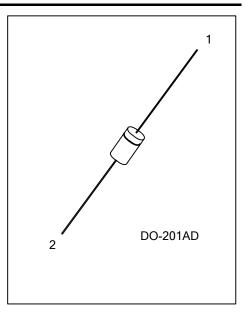
# SCHOTTKY BARRIER RECTIFIER

# **■** FEATURES

- \* 20 Amps Total (10 Amps Per Diode Leg)
- \* Guard Ring for Transient Protection
- \* Low Forward Voltage Drop
- \* High Surge Capability
- \* Low Power Loss/High Efficiency

#### ■ SYMBOL

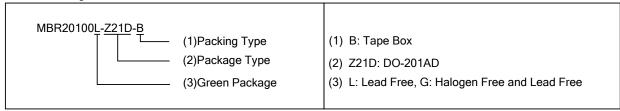




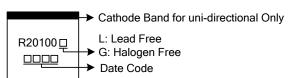
#### **■ ORDERING INFORMATION**

Ordering Number		Dookogo	Pin Assignment		Dooking	
Lead Free	Halogen Free	- Package	1	2	Packing	
MBR20100L-Z21D-B	MBR20100G-Z21D-B	DO-201AD	K	Α	Tape Box	

Note: Pin Assignment: A: Anode K: Cathode



#### ■ MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Maximum DC Blocking Voltage	$V_R$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	V
Maximum PMS Reverse Voltage	$V_{R(RMS)}$	90	V
Average Forward Rectified Output Current	Io	20	Α
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	I <sub>FSM</sub>	150	Α
Junction Capacitance (Note 4)	CJ	1000	pF
Operating Temperature	TJ	-55 ~ +150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ <b>+</b> 150	°C

## ■ THERMAL RESISTANCES CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	20	°C/W

#### **■ ELECTRICAL CHARACTERISTICS**

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	1/	I <sub>F</sub> =20A, T <sub>C</sub> =25°C			0.84	V
(Note 3)	$V_{F}$	I <sub>F</sub> =20A, T <sub>C</sub> =125°C			0.74	V
Instantaneous Reverse Current (Note 3)	l lp	Rated DC Voltage, T <sub>C</sub> =25°C			0.1	mA
		Rated DC Voltage, T <sub>C</sub> =125°C			30	mA

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 = 300µs, Duty Cycle ≤ 2.0%.
- 4. Applied  $V_R = 4.0V$  and f = 1.0MHz.

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