



# MBRD20100CT

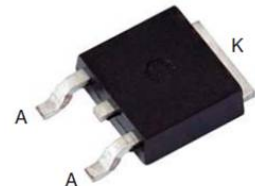
Schottky Barrier Rectifier

Reverse Voltage 100 Volts Forward Current 20 Amperes

## Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection

TO-252 (D-PAK)



Package: TO-252(D-PAK)



## Mechanical Data

- Case: Epoxy, Molded
- Weight: 0.4grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 2500 units per reel

## Maximum Ratings & Electrical Characteristics

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	MBRD20100CT	UNIT
Maximum repetitive peak reverse voltage			$V_{RRM}$	100	V
Working peak reverse voltage			$V_{RWM}$	100	V
Maximum DC blocking voltage			$V_{DC}$	100	V
Maximum average forward rectified current at $T_c=105^{\circ}\text{C}$ total device per diode			$I_F(AV)$	20 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			$I_{FSM}$	150	A
Peak repetitive reverse current per leg at $t_p=2.0\mu\text{s}$ , 1KHz			$I_{RRM}$	1.0	A
Voltage rate of change (rated $V_R$ )			$DV/dt$	10000	V/us
Operating junction temperature range			$T_J$	-55 to+150	$^{\circ}\text{C}$
Storage temperature range			$T_{STG}$	-55 to+150	$^{\circ}\text{C}$
Maximum instantaneous forward voltage per leg	$I_F=10\text{A}$ $I_F=10\text{A}$	$T_C=25^{\circ}\text{C}$ $T_C=125^{\circ}\text{C}$	$V_F$	0.84 0.75	V
Maximum reverse current per leg at working peak Reverse voltage			$I_R$	200 15	$\mu\text{A}$ mA
<b>Thermal Characteristics <math>T_A=25^{\circ}\text{C}</math> unless otherwise noted</b>					
Symbol	Parameter		TYP (TO-252)		Unit
R $\theta$ JC	Thermal Resistance, Junction to Case per Leg		3.5		$^{\circ}\text{C}/\text{W}$
R $\theta$ JA	Thermal Resistance, Junction to Ambient per Leg		62.5		$^{\circ}\text{C}/\text{W}$

**Note:** Pulse test:300us pulse width, duty cycle=2%



# MBRD20100CT

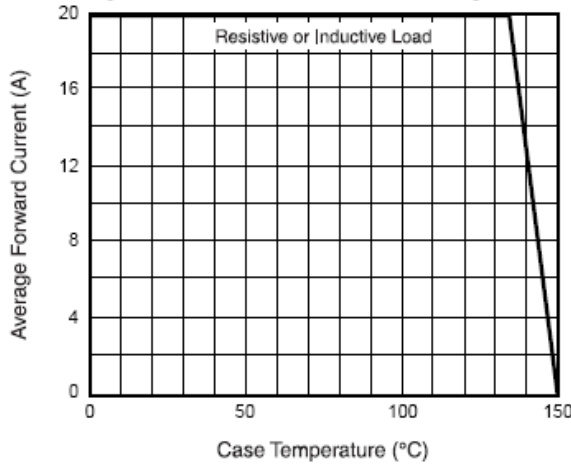
Schottky Barrier Rectifier

Reverse Voltage 100 Volts Forward Current 20 Amperes

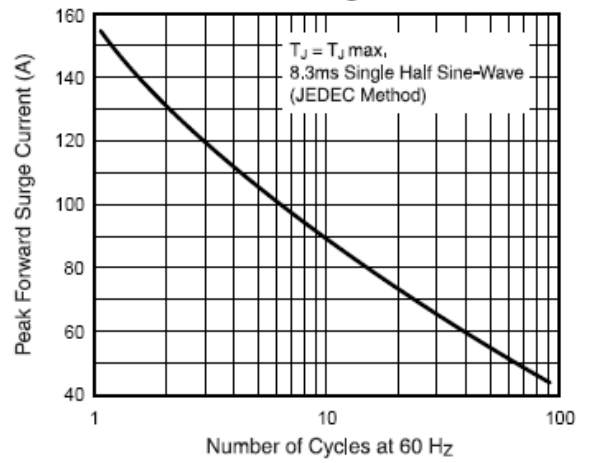
## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

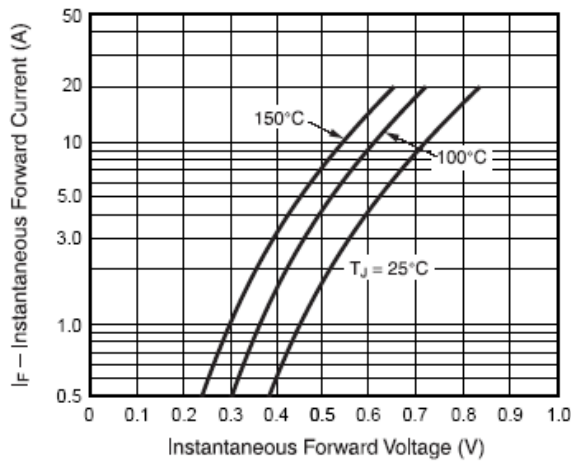
**Fig. 1 - Forward Current Derating Curve**



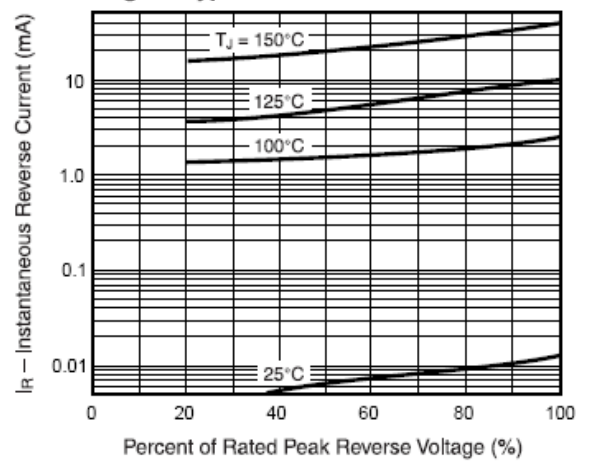
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



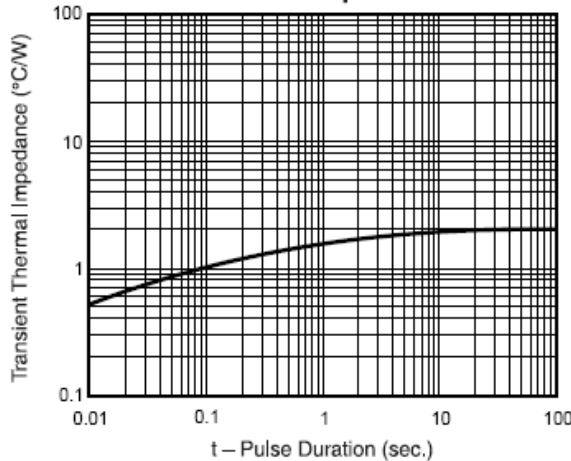
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Transient Thermal Impedance**





# MBRD20100CT

Schottky Barrier Rectifier

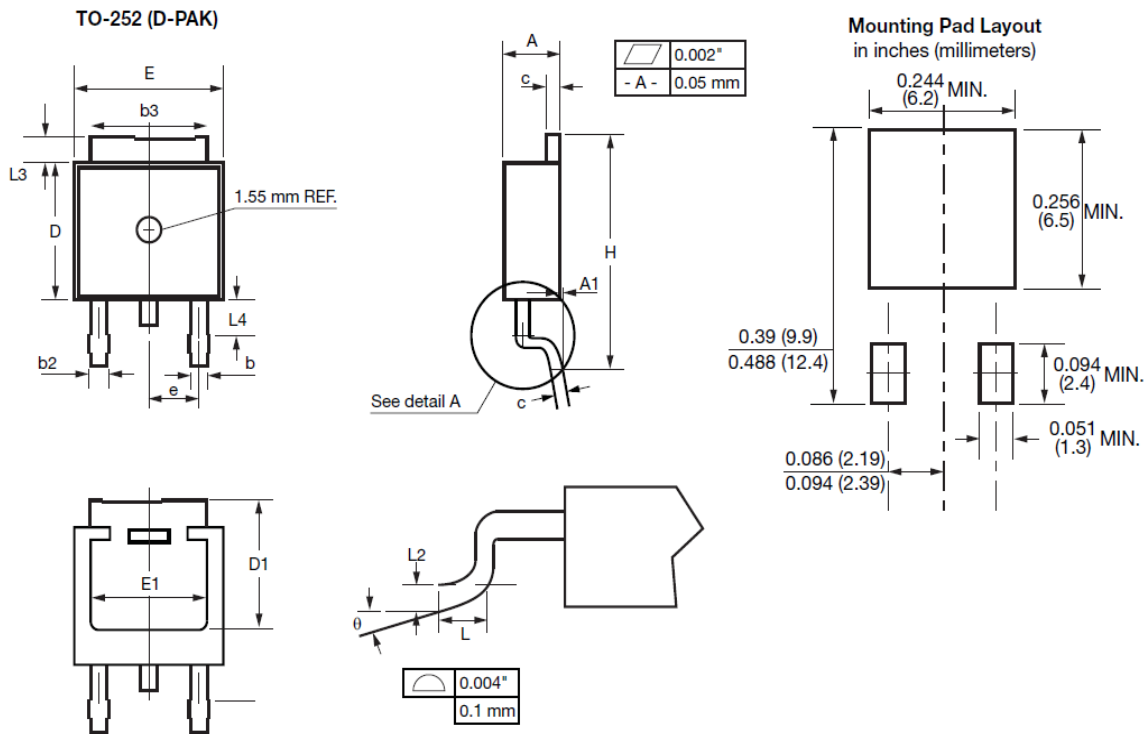
Reverse Voltage 100 Volts Forward Current 20 Amperes

## Package Outline Dimensions

Unit: millimeters

### TO-252(D-PAK)

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



SYMBOL	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	0.086	0.094	2.19	2.38
A1	-	0.005	-	0.13
b	0.025	0.035	0.64	0.89
b2	0.033	0.045	0.84	1.14
b3	0.205	0.215	5.21	5.46
c	0.018	0.024	0.46	0.61
D	0.235	0.250	5.97	6.22
D1	0.205	-	5.21	-
E	0.250	0.265	6.35	6.73
E1	0.190	-	4.83	-
e	0.090 BSC.		2.29 BSC.	
H	0.380	0.410	9.65	10.41
L	0.055	0.070	1.40	1.78
L2	0.020 BSC.		0.51 BSC.	
L3	0.035	0.050	0.89	1.27
L4	0.025	0.039	0.64	1.01
θ	0°	8°	0°	8°

**Note**

- Conforms to JEDEC TO-252 variation AA except dimension "D"



# **MBRD20100CT**

Schottky Barrier Rectifier

Reverse Voltage 100 Volts Forward Current 20 Amperes

---

## **Disclaimers**

These materials are intended as a reference to assist our customers in the selection of the Suzhou Goo-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.  
(<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.