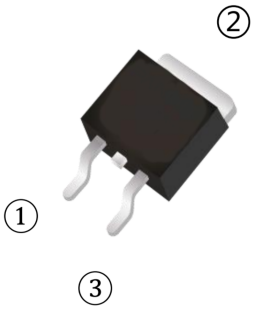
# 四川旭茂微科技有限公司
Sichuan Xu Mao Micro Technology Co.,Ltd

MBR10300DS

**Schottky Diodes**
**Reverse Voltage-300v**
**Forward current-10A**



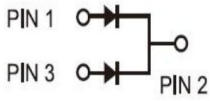

TO-252

## Features

Schottky chip
Ldeal for surface mounted applications
Low forward voltage drop, Low power loss, high efficiency
Plastic Case Material has UL Flammability

## Mechanical Data

Package: TO-252
Terminals:Tin Plated leads, solderable per
Mil-STD-750 Method 2026
Polarity: As marked
Molding compound meets UL 94 V-0 flammability rating,
ROHS-compliant




## Maximum Ratings (Ta=25℃ Unless otherwise)

| Type Number | SYMBOL | MBR10300DS | Umit |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 300 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 210 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 300 | V |
| Maximum Average Forward Rectified Current at TL = 100 ℃ | $IO_{(AV)}$ | 10.0 | A |
| Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated load(JEDEC Method) on rated | IFSM | 120.0 | A |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | 240.0 | A |
| Current squared time @1ms≤t8.3≤ms Tj=25℃， Rating of per diode | $I^2t$ | 49.8 | $A^2S$ |
| Maximum Forward Voltage at 5.0A DC | $V_{FM}$ | 0.95 | V |
| Maximum Reverse Current TA = 25℃ | IR | 0.05 | mA |
| at Rated DC Blocking Voltage TA = 125℃ | | 20 | |
| Typical Thermal Resistance Between junction to board | $R_{QJB}$ | 50 | ℃/W |
| | $R_{QJC}$ | 2.0 | |
| Operating Junction Temperature Range | $T_J$ | —55to+150 | ℃ |
| Storage Temperature Range | $T_{STG}$ | —55to+150 | ℃ |

FIG.1MAXIMUM AVERAGE FORWARD CURRENT DERATING

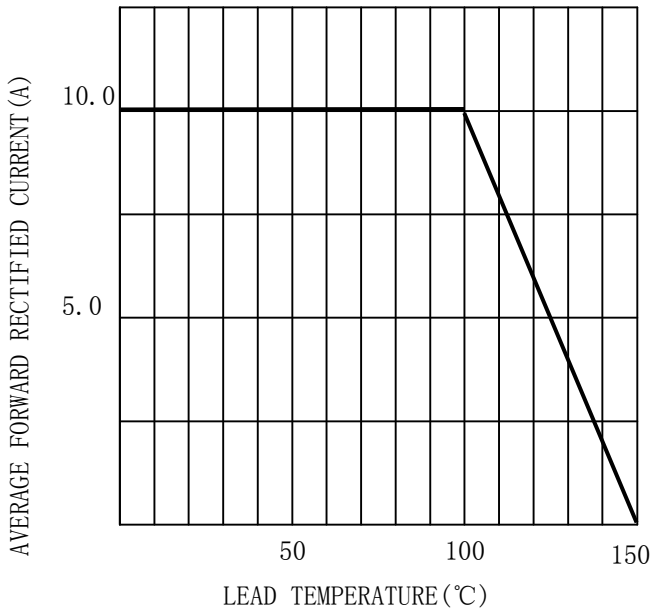



FIG.2TYPICAL FORWARD CHARACTERISTICS

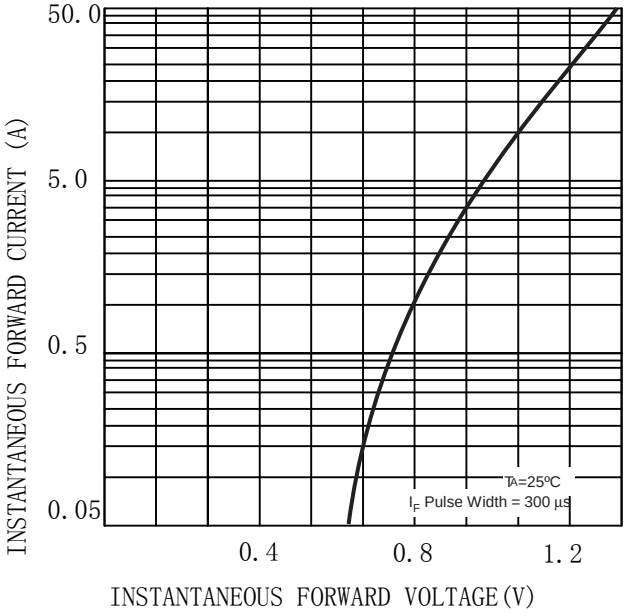



FIG.3MAXIMUM NON-REPEITIVE SURGE CURRENT

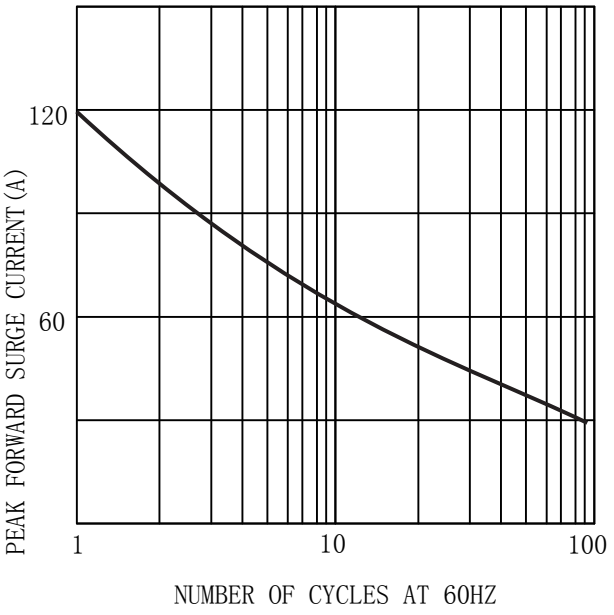
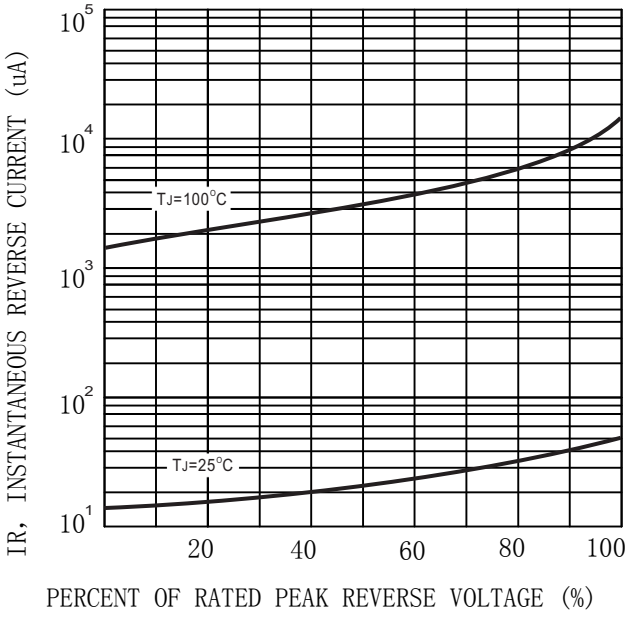
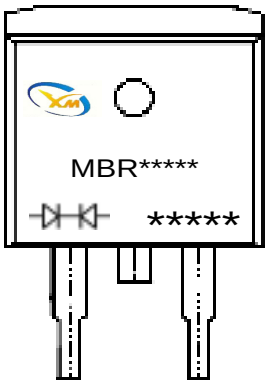



FIG. 4 TYPICAL REVERSE CHARACTERISTICS(per element)



## MARKING INFORMATION

TO-252/DS




= Polar line

= Logo

***** = Date Code Marking

MBR***** = Marking Code

Date Code Marking

A 001

Year/month code

Order serial number

Example: January 2023 order number is 001, period A001

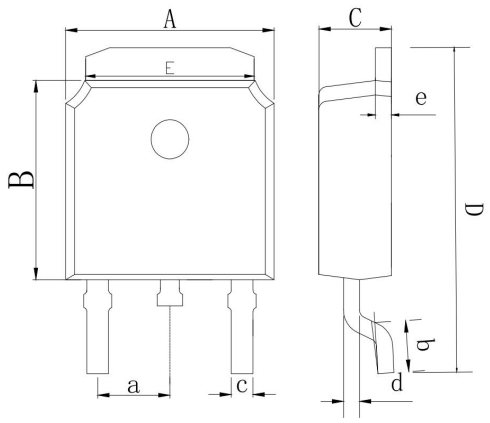
January 2025 Order number is 001, period Ȧ001

| Period code year distinction | | | | | |
|---|---|---|---|---|---|
| 2023/2024 | 2025/2026 | 2027/2028 | 2029/2030 | 2031/2032 | remark |
| no | first | second | tertius | fourth | Dot above corresponding character |

| eriod code month code mapping table | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Single year (Example 2023) | A | B | C | D | E | F | G | H | I | J | K | L |
| Biennial (example 2024) | M | N | O | P | Q | R | S | T | U | V | W | X |

Package Outline Dimensions millimeters

TO-252DS




| DIM | INCHES | | MM | | NOTE |
|---|---|---|---|---|---|
| | min | max | min | max | |
| A | 0.25 | 0.27 | 6.3 | 6.9 | |
| B | 0.23 | 0.25 | 5.8 | 6.4 | |
| C | 0.08 | 0.10 | 2.1 | 2.5 | |
| D | 0.35 | 0.43 | 9.0 | 11.0 | |
| E | 0.21 | 0.22 | 5.3 | 5.5 | |
| a | 0.08 | 0.10 | 2.1 | 2.5 | |
| b | 0.06 | 0.06 | 1.4 | 1.6 | |
| c | 0.02 | 0.03 | 0.6 | 0.8 | |
| d | 0.02 | 0.02 | 0.4 | 0.6 | |
| e | 0.02 | 0.02 | 0.4 | 0.6 | |

## Important Statements and disclaimers.

Do not copy or modify file information without permission.

Xumao Micro reserves the right to modify this document and its products.

Specifications are available without prior notice. Customer shall 。 obtain and confirm the latest product information and specifications prior to final design, purchase or use.

Xumao Micro does not assume any implied warranties, including warranties of fitness for special purposes, non-infringement and merchantability.

The products shown here are not designed and licensed for demanding equipment at a level of reliability or for human life and any life-saving related applications or life-sustaining, such as medical devices, transportation equipment, aerospace machinery, and so on. Customers who use or sell these products for such applications do so at their own risk.

As Xumao Micro uses batch number as tracking benchmark, please provide batch number for tracking in case of exception.