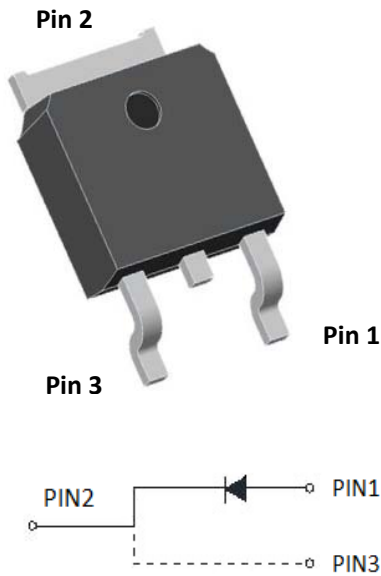


# MBR5200D

## Schottky Diodes



### Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** TO-252  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR5200D
Device marking code			MBR5200D
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	200
Average Rectified Output Current @60Hz sine wave, R-load, Ta=25°C	$I_o$	A	5
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25°C	$I_{FSM}$	A	120
Current Squared Time @1ms≤t≤8.3ms Tj=25°C,	$I^2t$	A <sup>2</sup> s	60
Storage Temperature	$T_{stg}$	°C	-55 ~ +175
Junction Temperature	$T_j$	°C	-55 ~ +175

### ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR5200D
Maximum instantaneous forward voltage drop per diode	$V_{FM}$	V	$I_{FM}=5.0A$	0.9
Maximum DC reverse current at rated DC blocking voltage per diode	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$ Ta=25°C	0.1
	$I_{RRM2}$		$V_{RM}=V_{RRM}$ Ta=125°C	20

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



# MBR5200D

## ■ Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified )

PARAMETER		SYMBOL	UNIT	MBR5200D
Thermal Resistance	Between junction and case	$R_{\theta\text{-j-c}}$	$^\circ\text{C/W}$	5.0

## ■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR5200D	Approximate 0.31	2500	2500	25000	Reel

## ■ Characteristics (Typical)

FIG1:  $I_o - T_c$  Curve

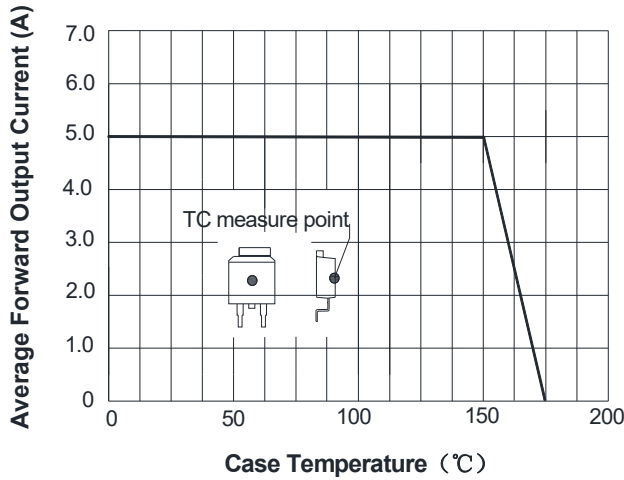


FIG2: Surge Forward Current Capability

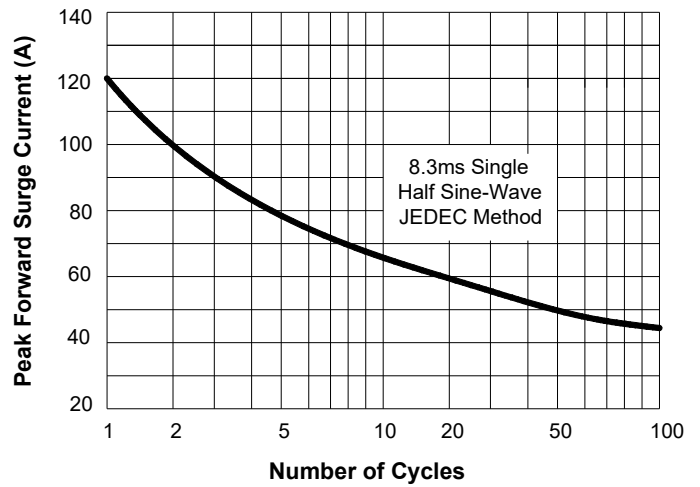


FIG3: Forward Voltage

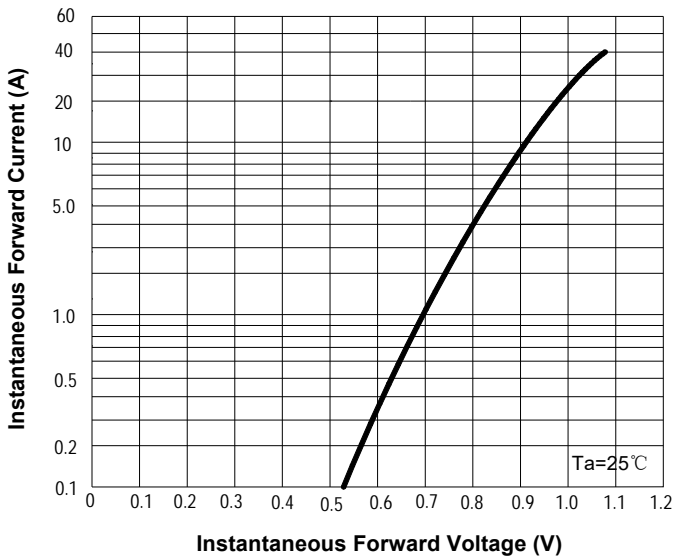
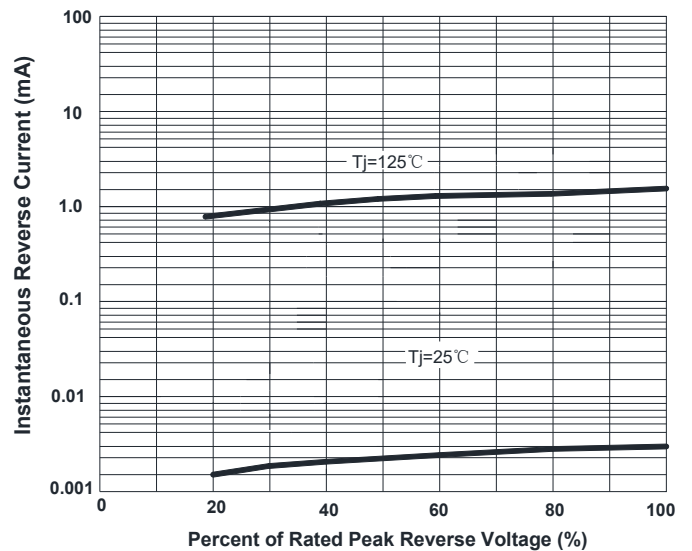


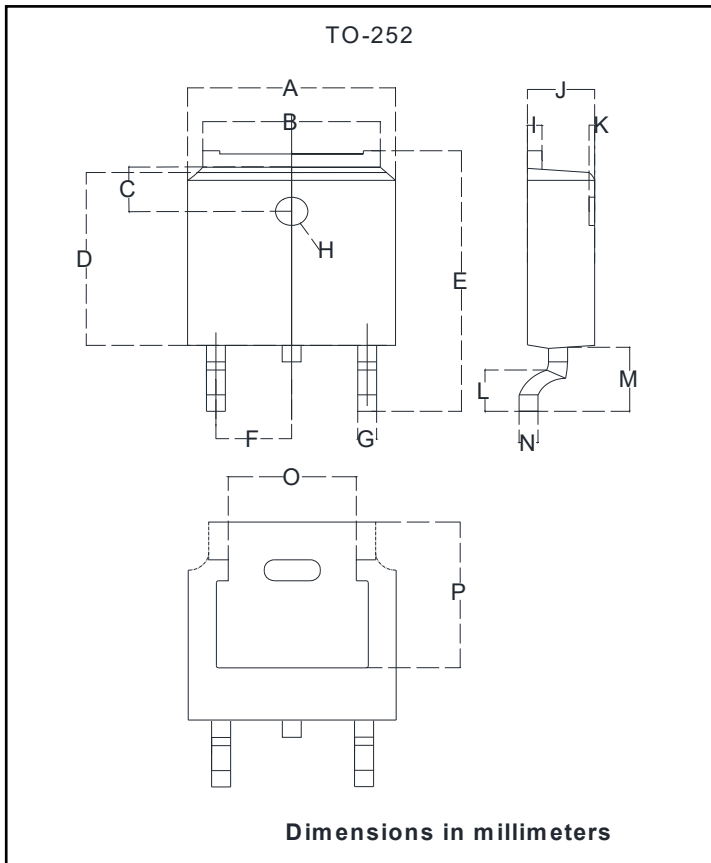
FIG4: Instantaneous Reverse Characteristics





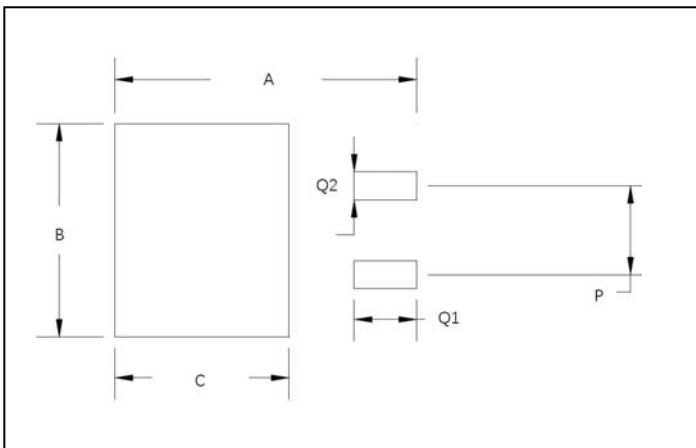
# MBR5200D

## ■ Outline Dimensions



TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ 1.050	Φ 1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
O	4.20	4.95
P	5.15	5.45

## ■ Suggested Pad Layout



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52



## MBR5200D

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