



# MBR20H150YD

## ULTRA LOW IR SCHOTTKY BARRIER RECTIFIERS

**Voltage**

**150 V**

**Current**

**20 A**

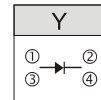
### Features

- Ideal for automated placement
- Ultra low leakage current, low power loss
- High efficiency operation
- Low thermal resistance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case: TO-252AA package
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Weight: 0.0104 ounces, 0.297 grams.

TO-252AA



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	150	V
Maximum RMS Voltage	V <sub>RMS</sub>	105	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	150	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	20	A
Peak Forward Surge Current: 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	275	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	350	pF
Typical Thermal Resistance	R <sub>θJC</sub> <sup>(1)</sup>	6	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~175	°C
Storage Temperature Range	T <sub>STG</sub>	-55~175	°C



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Instantaneous forward voltage	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.59	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.72	-	
		$I_F = 20\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.9	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.45	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.58	-	
Reverse current	$I_R^{(2)}$	$V_R = 120\text{ V}, T_J = 25^\circ\text{C}$	-	0.04	-	uA
		$V_R = 150\text{ V}, T_J = 25^\circ\text{C}$	-	-	0.8	
		$V_R = 150\text{ V}, T_J = 125^\circ\text{C}$	-	0.1	1	mA

**NOTES:**

1. Mounted on a FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> copper pad area
2. Short duration pulse test used to minimize self-heating effect



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## TYPICAL CHARACTERISTIC CURVES

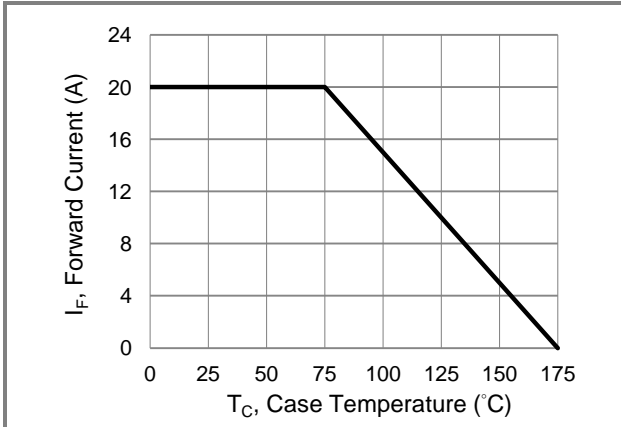


Fig.1 Forward Current Derating Curve

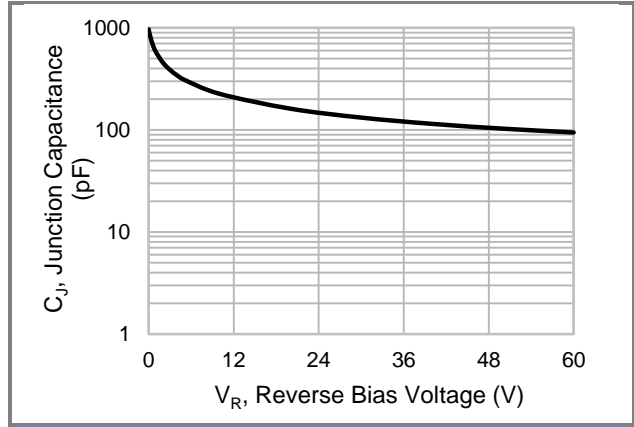


Fig.2 Typical Junction Capacitance

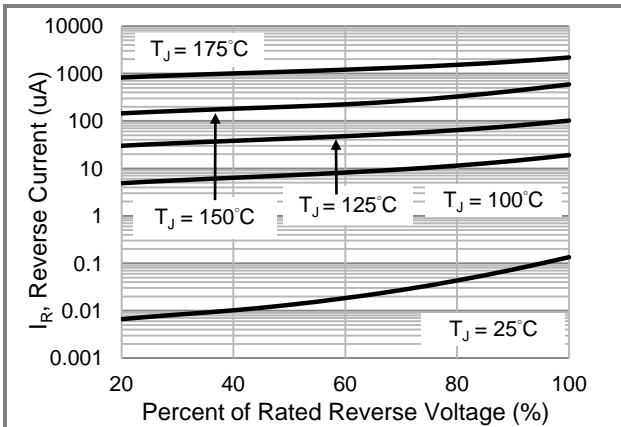


Fig.3 Typical Reverse Characteristics

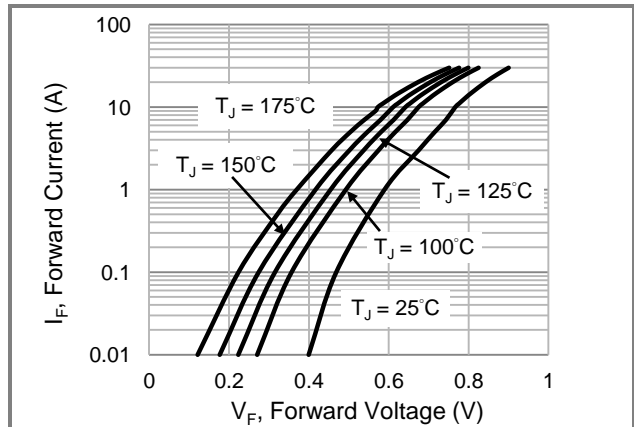


Fig.4 Typical Forward Characteristics

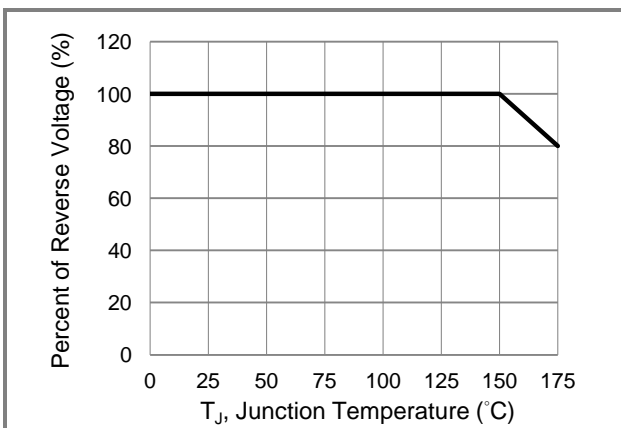


Fig.5 Operating Temperature Derating Curve





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