

MBR20H150YD

ULTRA LOW IR SCHOTTKY BARRIER RECTIFIERS

Voltage

150 V

Current

20 A

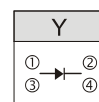
Features

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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	150	V
Maximum RMS Voltage	V_{RMS}	105	V
Maximum DC Blocking Voltage	V_{DC}	150	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	20	A
Peak Forward Surge Current: 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	275	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	C_J	350	pF
Typical Thermal Resistance	$R_{\theta JC}^{(1)}$	6	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55~175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~175	$^\circ\text{C}$



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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^2 copper pad area
2. Short duration pulse test used to minimize self-heating effect

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TYPICAL CHARACTERISTIC CURVES

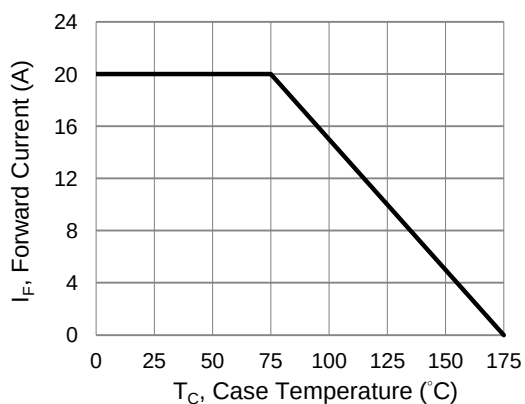


Fig.1 Forward Current Derating Curve

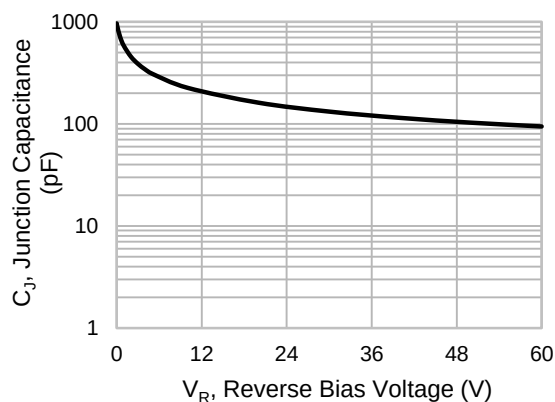


Fig.2 Typical Junction Capacitance

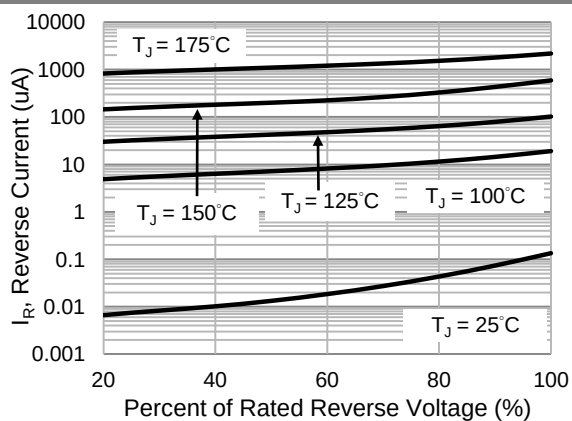


Fig.3 Typical Reverse Characteristics

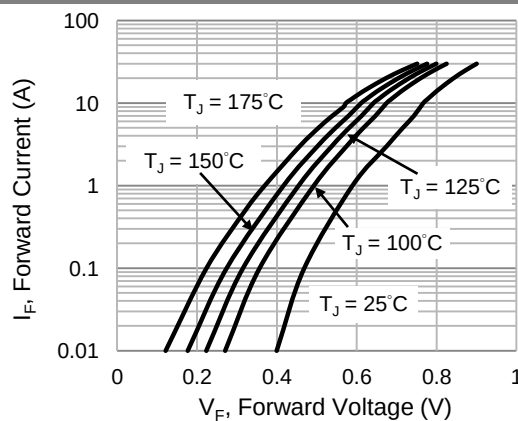


Fig.4 Typical Forward Characteristics

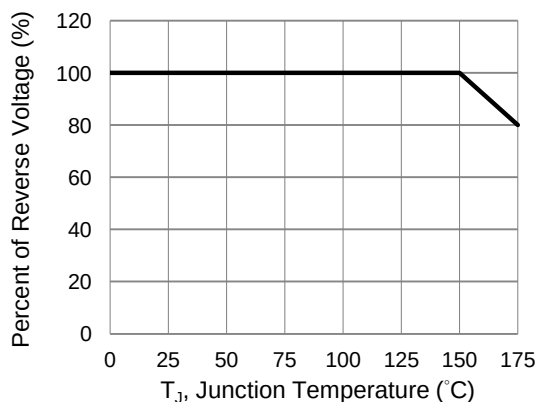
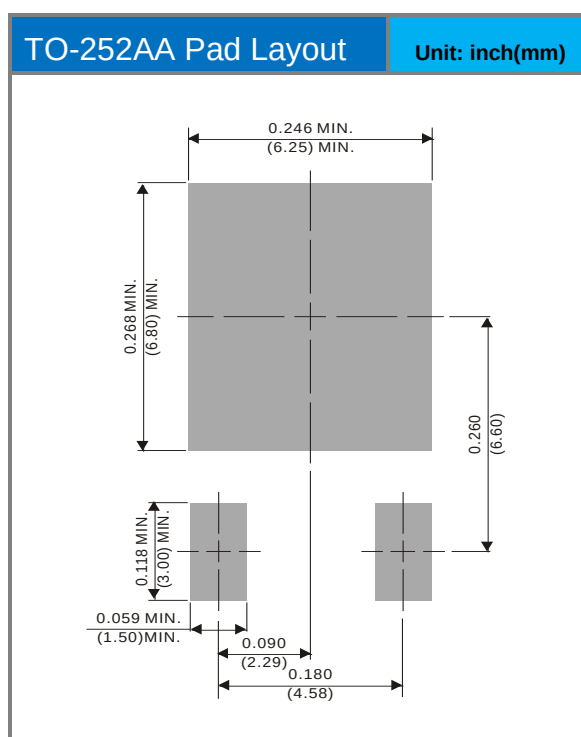
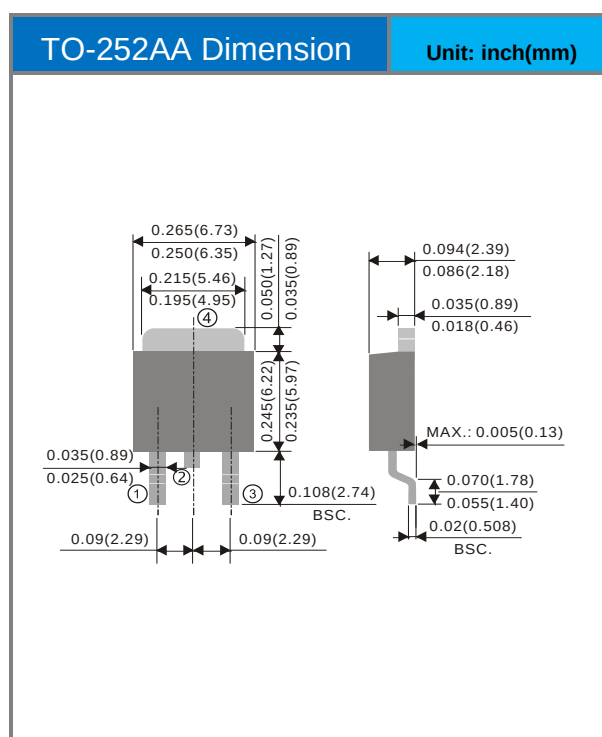


Fig.5 Operating Temperature Derating Curve

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
MBR20H150YD_L2_00001	TO-252AA	3K / 13" reel	20H150YD	Halogen free

Packaging Information & Mounting Pad Layout





MBR20H150YD

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