



# MBR8H120PC

## Surface Mount Ultra Low I<sub>R</sub> Schottky Barrier Rectifier

**Voltage** 120 V **Current** 8 A

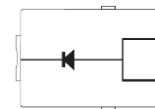
### Features

- Low leakage current
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : TO-277C package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.11 grams

TO-277C



### 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>	120	V
Maximum RMS Voltage	V <sub>RMS</sub>	84	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	120	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	8	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	160	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	134	pF
Typical Thermal Resistance	(Note 1) R <sub>θJA</sub>	65	°C/W
	(Note 2) R <sub>θJC</sub>	17	
	(Note 2) R <sub>θJL</sub>	20	
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
Forward Voltage	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.65	-	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.74	-	
		$I_F = 8\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.87	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.51	-	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.6	-	
		$I_F = 8\text{ A}, T_J = 125^\circ\text{C}$	-	0.7	-	
Reverse Current <sup>(Note 3)</sup>	$I_R$	$V_R = 96\text{ V}, T_J = 25^\circ\text{C}$	-	24	-	nA
		$V_R = 120\text{ V}, T_J = 25^\circ\text{C}$	-	-	1	uA
		$V_R = 120\text{ V}, T_J = 125^\circ\text{C}$	-	-	225	

**NOTES :**

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



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## TYPICAL CHARACTERISTIC CURVES

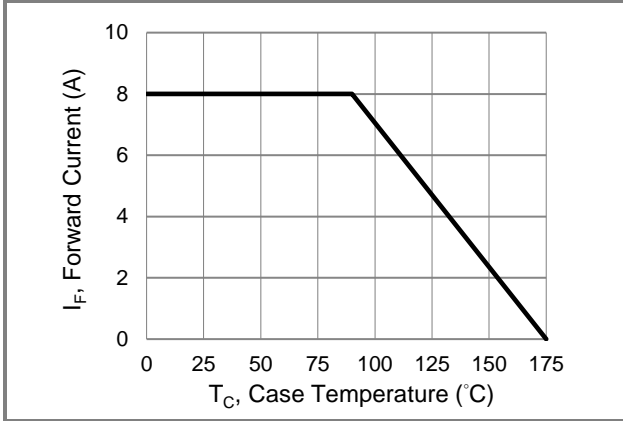


Fig.1 Forward Current Derating Curve

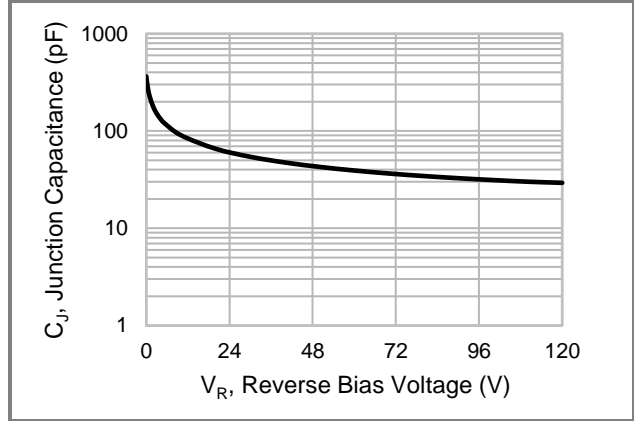


Fig.2 Typical Junction Capacitance

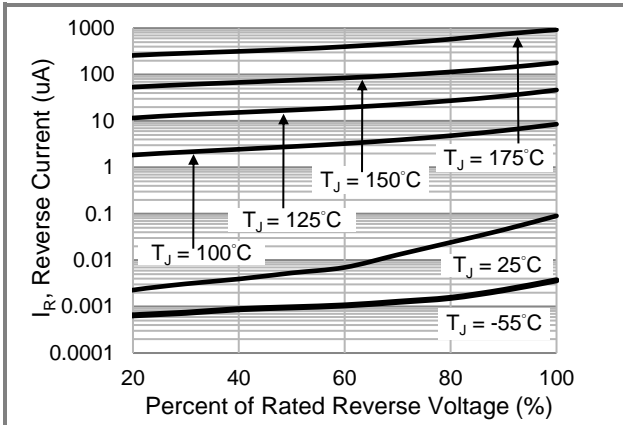


Fig.3 Typical Reverse Characteristics

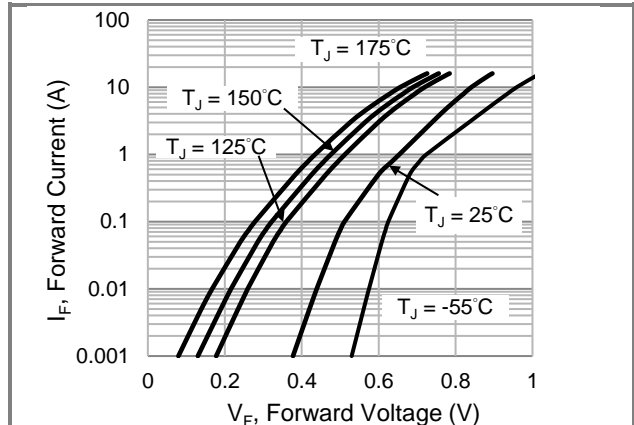


Fig.4. Typical Forward Characteristics

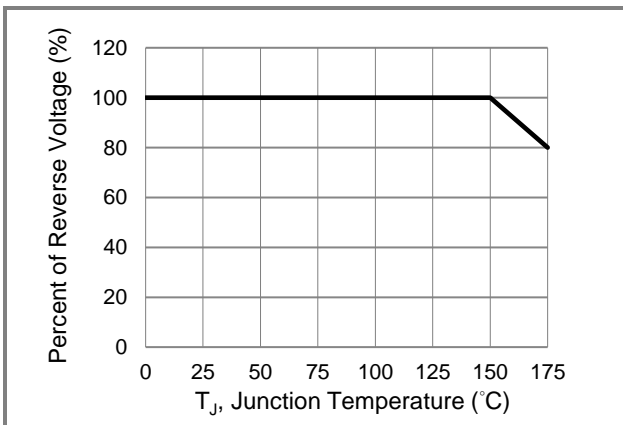


Fig.5 Operating Temperature Derating Curve

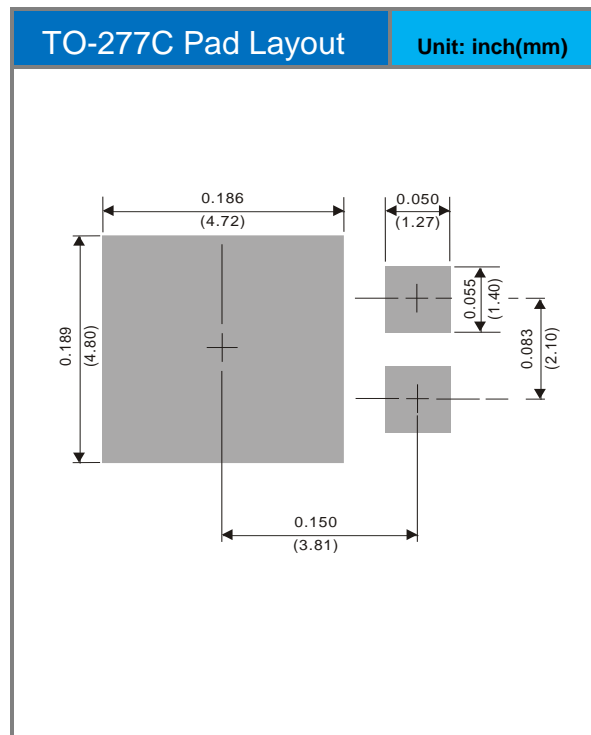
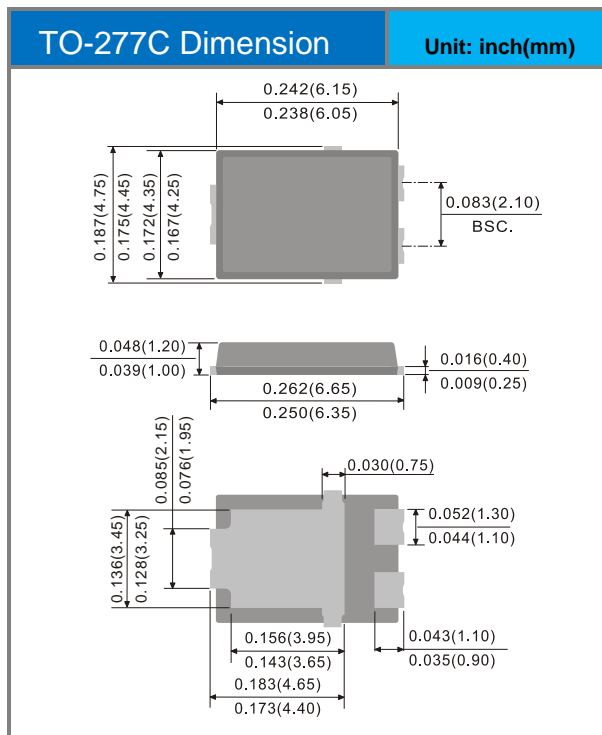


# MBR8H120PC

Part No. Packing Code Version

Part No.	Package Type	Packing Type	Marking	Version
MBR8H120PC	TO-277C	5K / 13" reel	MBR8H120PC	Halogen free RoHS compliant

## Packaging Information & Mounting Pad Layout





## **MBR8H120PC**

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