



MBR8H120PC-AU

Surface Mount Ultra Low I_R Schottky Barrier Rectifier

Voltage 120 V **Current** 8 A

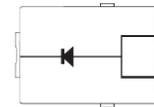
Features

- Low leakage current
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- 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_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	120	V
Maximum RMS Voltage	V _{RMS}	84	V
Maximum DC Blocking Voltage	V _{DC}	120	V
Maximum Average Forward Rectified Current	I _{F(AV)}	8	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	160	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V	C _J	134	pF
Typical Thermal Resistance	(Note 1) R _{θJA}	65	°C/W
	(Note 2) R _{θJC}	17	
	(Note 2) R _{θJL}	20	
Operating Junction Temperature Range	T _J	-55~175	°C
Storage Temperature Range	T _{STG}	-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 ^(Note 3)	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 cm² copper pad area.
3. Short duration pulse test used to minimize self-heating effect.



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TYPICAL CHARACTERISTIC CURVES

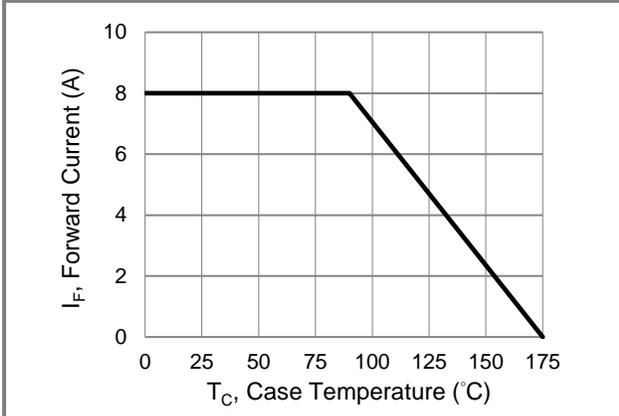


Fig.1 Forward Current Derating Curve

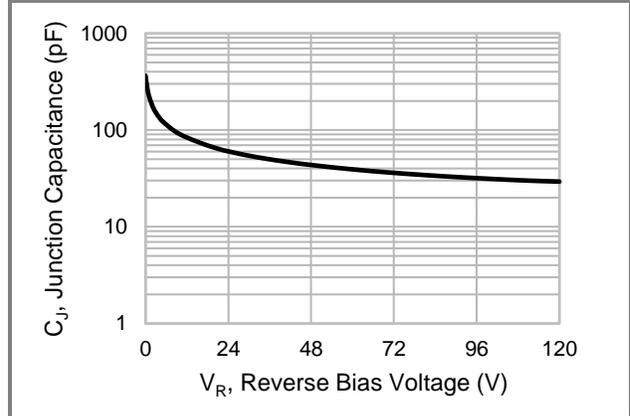


Fig.2 Typical Junction Capacitance

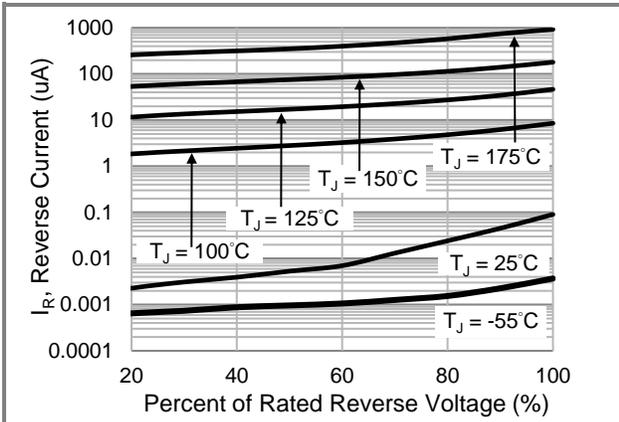


Fig.3 Typical Reverse Characteristics

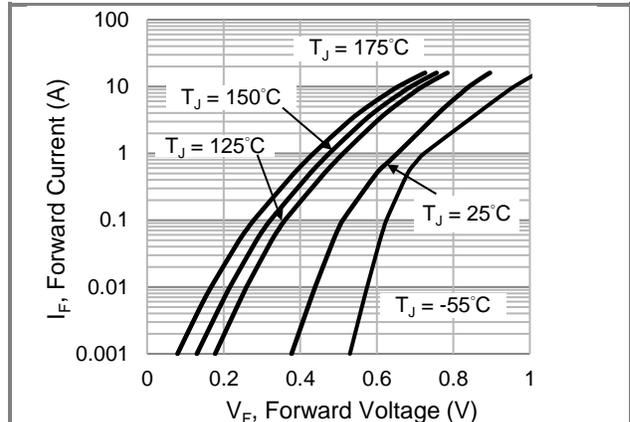


Fig.4. Typical Forward Characteristics

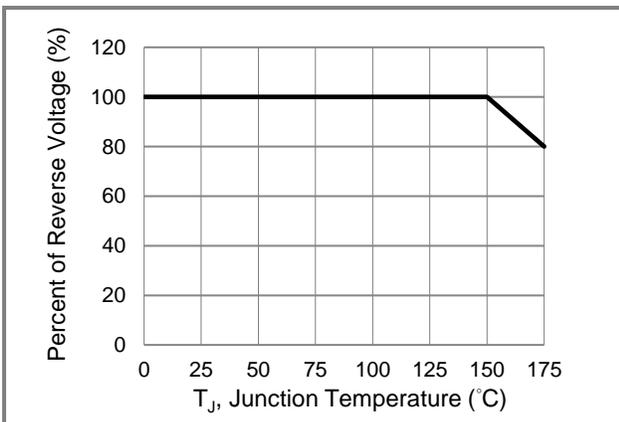


Fig.5 Operating Temperature Derating Curve

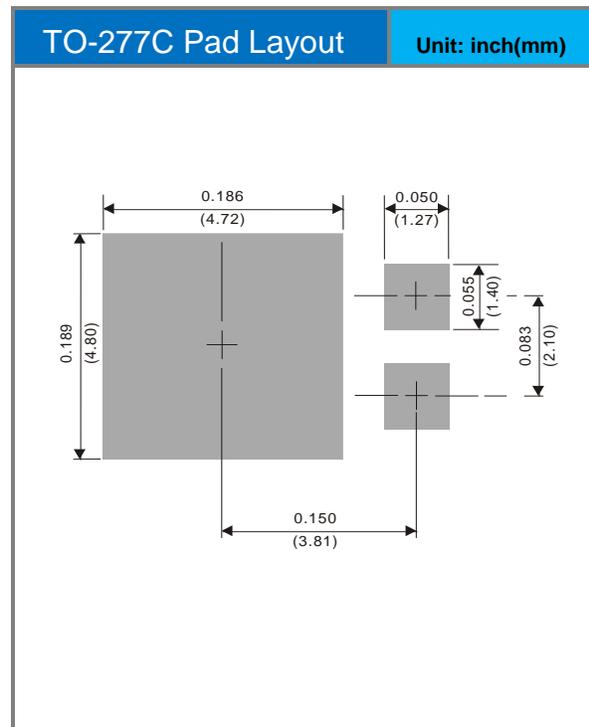
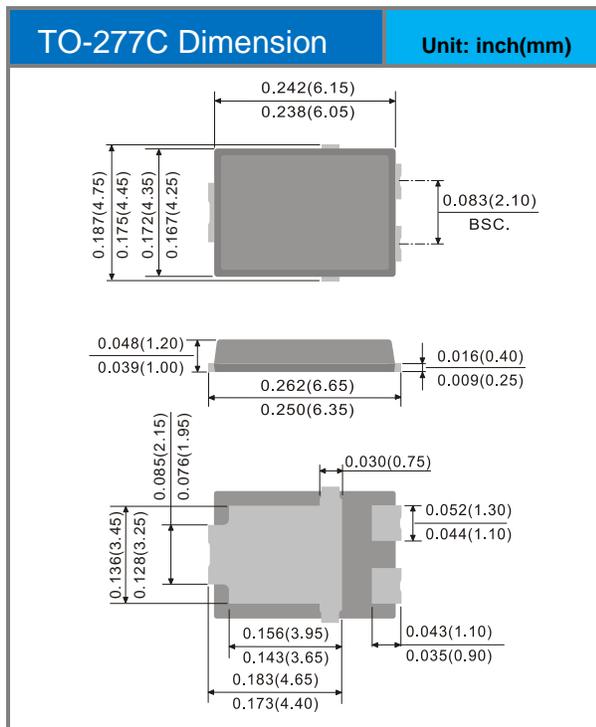


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Part No. Packing Code Version

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

Packaging Information & Mounting Pad Layout





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