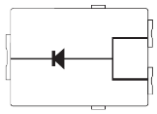
MBR8H120PC-AU

Surface Mount Ultra Low I_R Schottky Barrier Rectifier

Voltage 120 V **Current** 8 A

TO-277C



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

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) (Note 2) (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	65 17 20	°C/W
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 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 1 A, T_J = 25 °C	-	0.65	-	V
		I_F = 3 A, T_J = 25 °C	-	0.74	-	
		I_F = 8 A, T_J = 25 °C	-	-	0.87	
		I_F = 1 A, T_J = 125 °C	-	0.51	-	
		I_F = 3 A, T_J = 125 °C	-	0.6	-	
		I_F = 8 A, T_J = 125 °C	-	0.7	-	
Reverse Current(Note 3)	I_R	V_R = 96 V, T_J = 25 °C	-	24	-	nA
		V_R = 120 V, T_J = 25 °C	-	-	1	uA
		V_R = 120 V, T_J = 125 °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^2 copper pad area.
3. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

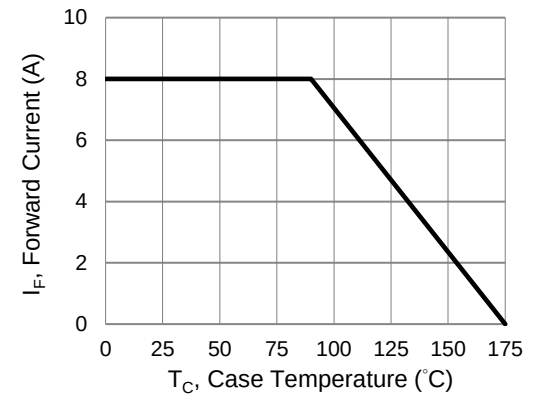

Fig.1 Forward Current Derating Curve

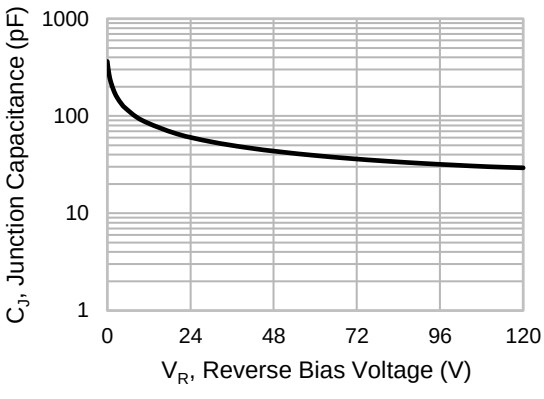

Fig.2 Typical Junction Capacitance

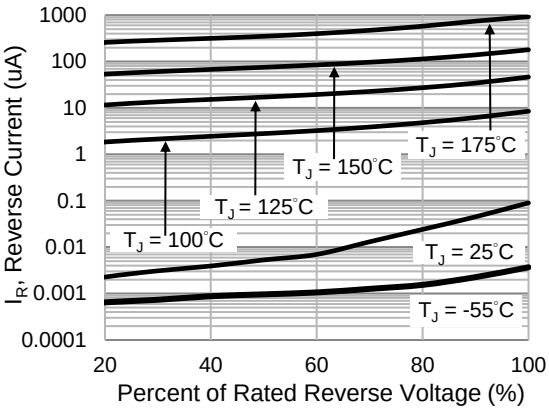

Fig.3 Typical Reverse Characteristics

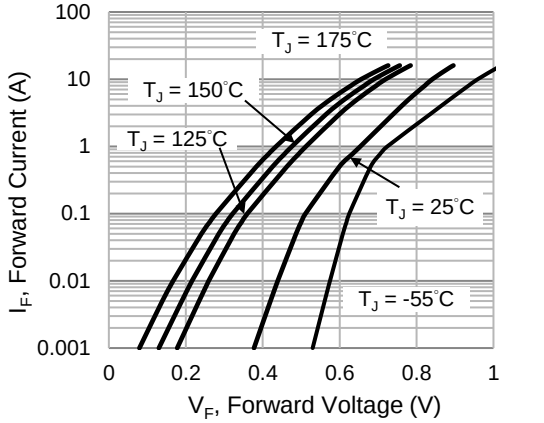

Fig.4. Typical Forward Characteristics

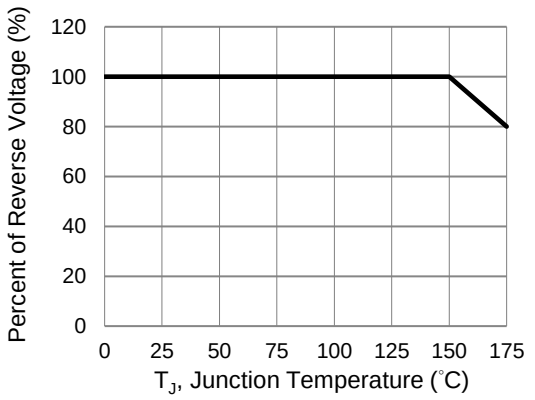

Fig.5 Operating Temperature Derating Curve

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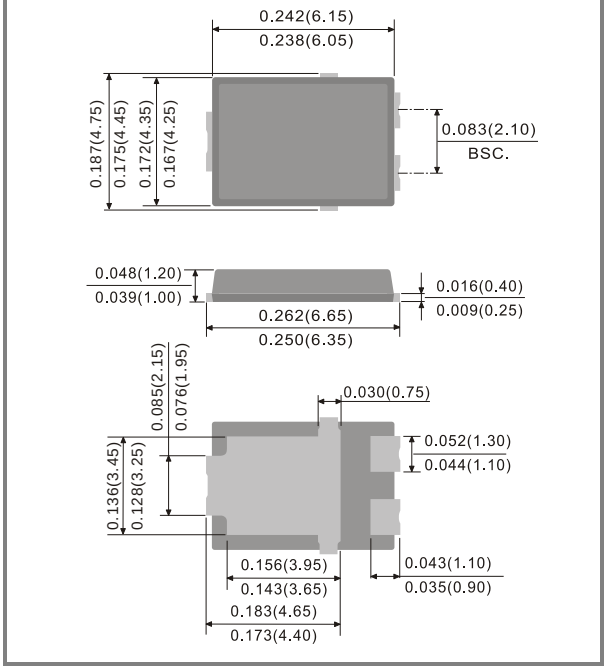
Part No. Packing Code Version

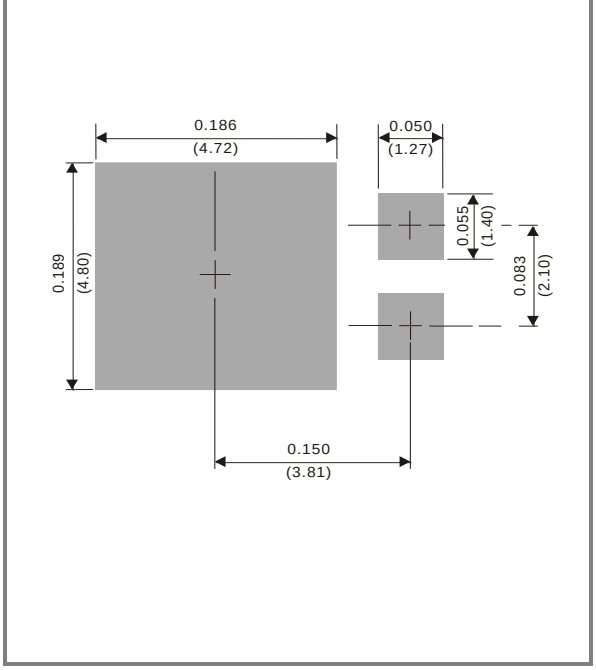
Part No.	Package Type	Packing Type	Marking	Version
MBR8H120PC-AU	TO-277C	5K / 13” reel	MBR8H120PC	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout

TO-277C Dimension — Unit: inch(mm)



TO-277C Pad Layout — Unit: inch(mm)



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