

MBR15H120PC-AU

Surface Mount Ultra Low I_R Schottky Barrier Rectifier

Voltage

120 V

Current

15 A

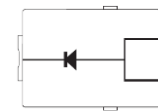
Features

- Low leakage current
- Ideal for automated placemen
- 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 ($T_A = 25^\circ\text{C}$ 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	$I_{F(AV)}$	15	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	210	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	C_J	300	pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	65	$^\circ\text{C/W}$
(Note 2)	$R_{\theta JL}$	10	
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
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	-	
		$I_F = 15\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.87	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.46	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.59	-	
		$I_F = 15\text{ A}, T_J = 125^\circ\text{C}$	-	0.71	-	
Reverse Current	I_R	$V_R = 96\text{ V}, T_J = 25^\circ\text{C}$	-	59	-	nA
		$V_R = 120\text{ V}, T_J = 25^\circ\text{C}$	-	-	1	uA
		$V_R = 120\text{ V}, T_J = 125^\circ\text{C}$	-	-	330	

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR-4 PCB, single-sided copper, with 100cm² copper pad area.

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TYPICAL CHARACTERISTIC CURVES

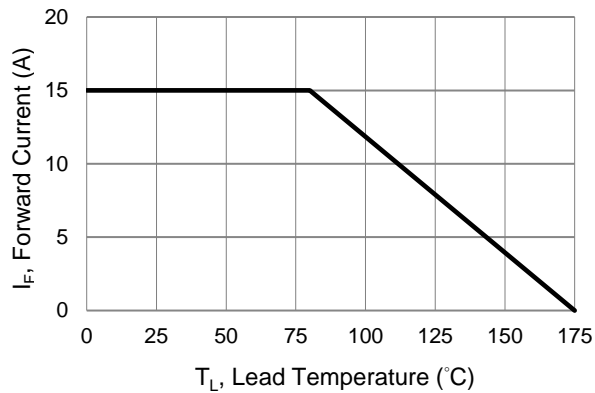


Fig.1 Forward Current Derating Curve

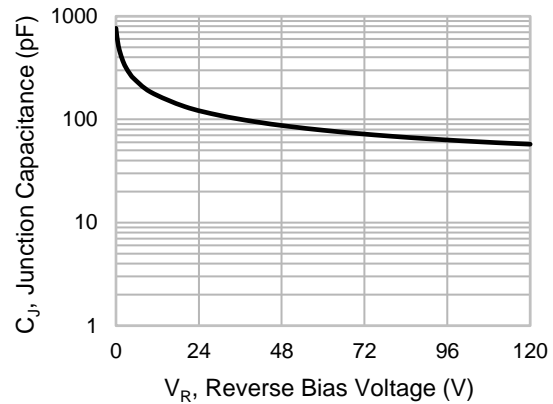


Fig.2 Typical Junction Capacitance

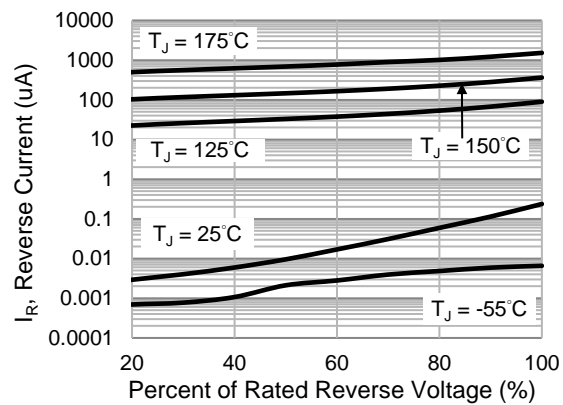


Fig.3 Typical Reverse Characteristics

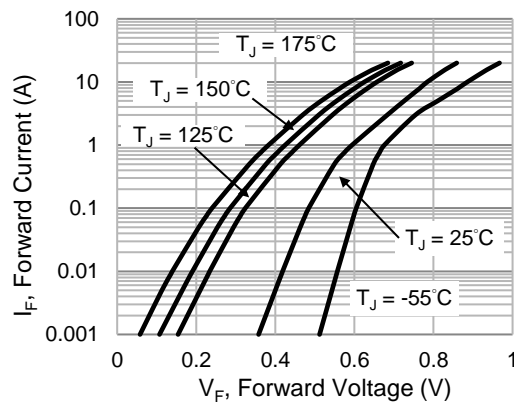


Fig.4 Typical Forward Characteristics

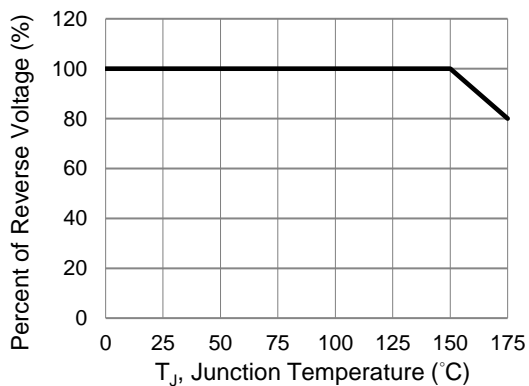


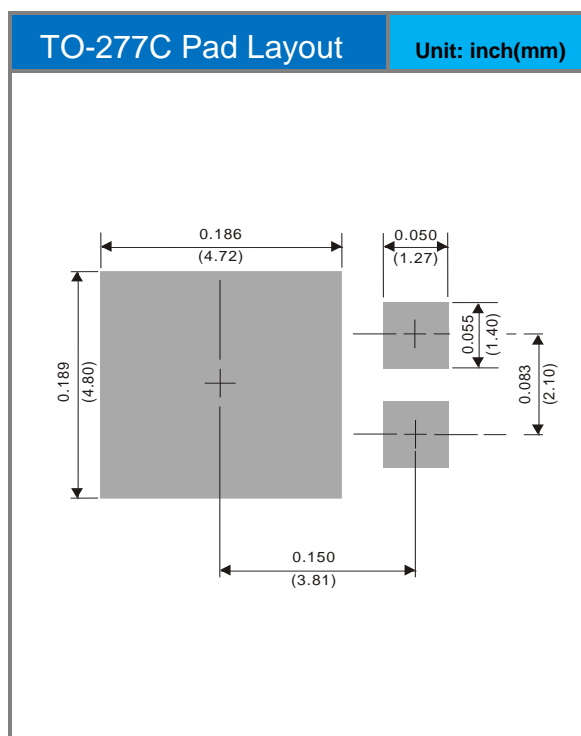
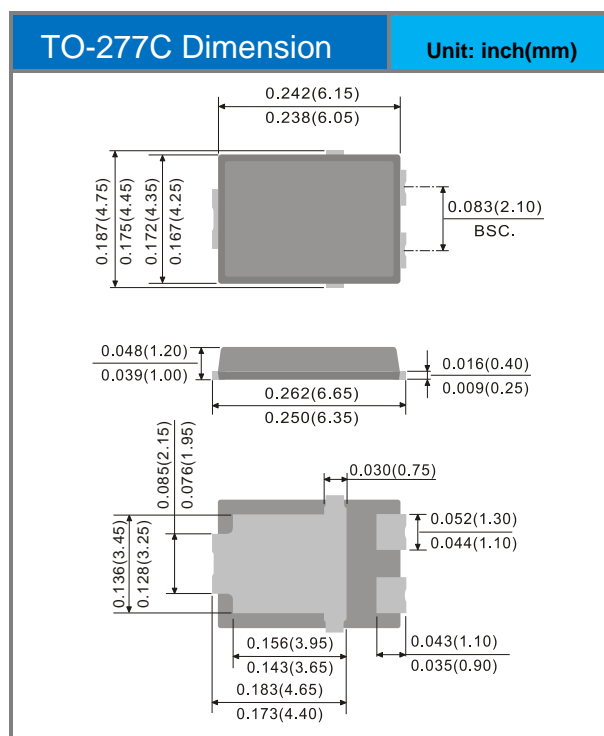
Fig.5 Operating Temperature Derating Curve

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MBR15H120PC-AU	TO-277C	5K pcs / 13" reel	MBR15H120PC

Packaging Information & Mounting Pad Layout





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