



### Surface Mount Ultra Low IR Schottky Barrier Rectifier

Voltage

120 V

Current

15 A

### **Features**

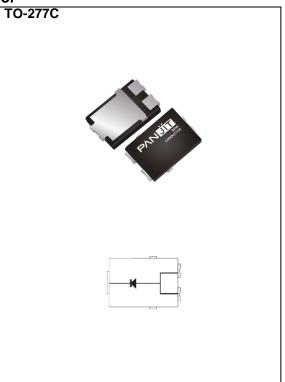
- Low leakage current
- Ideal for automated placemen
- Low power loss, high efficiency
- · High surge current capability
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### **Mechanical Data**

• Case: TO-277C package

• Terminals : Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.11 grams



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	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>	15	Α
Peak Forward Surge Current : 8.3 ms single half sine- wave superimposed on rated load	I <sub>FSM</sub>	210	А
Typical Junction Capacitance  Measured at 1 MHz And Applied $V_R = 4 \text{ V}$	CJ	300	pF
Typical Thermal Resistance (Note 1) (Note 2)	R <sub>0JA</sub> R <sub>0JL</sub>	65 10	°C/W
Operating Junction Temperature Range	TJ	-55~175	°C
Storage Temperature Range	T <sub>STG</sub>	-55~175	°C





## **Electrical Characteristics** (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS	
Forward Voltage	VF	I <sub>F</sub> = 1 A, T <sub>J</sub> = 25 °C	-	0.59	-	· V	
		I <sub>F</sub> = 5 A, T <sub>J</sub> = 25 °C	-	0.72	1		
		I <sub>F</sub> = 15 A, T <sub>J</sub> = 25 °C	-	-	0.87		
		I <sub>F</sub> = 1 A, T <sub>J</sub> = 125 °C	-	0.46	-		
		I <sub>F</sub> = 5 A, T <sub>J</sub> = 125 °C	-	0.59	-		
		I <sub>F</sub> = 15 A, T <sub>J</sub> = 125 °C	-	0.71	1		
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 96 V, T <sub>J</sub> = 25 °C	-	59	-	nA	
		V <sub>R</sub> = 120 V, T <sub>J</sub> = 25 °C	-	-	1		
		V <sub>R</sub> = 120 V, T <sub>J</sub> = 125 °C	-	-	330	uA	

#### NOTES:

- 1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
- 2. Mounted on a FR-4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.





#### **TYPICAL CHARACTERISTIC CURVES**

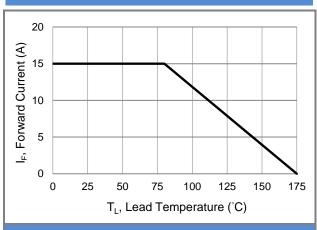
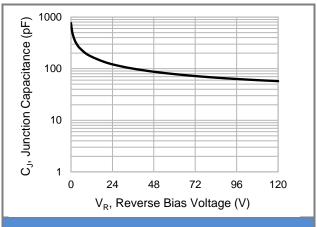


Fig.1 Forward Current Derating Curve



**Fig.2 Typical Junction Capacitance** 

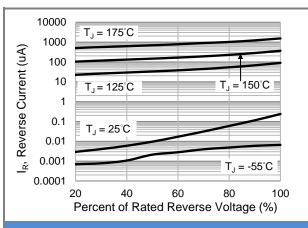


Fig.3 Typical Reverse Characteristics

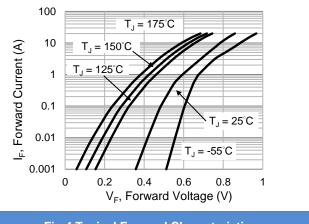


Fig.4 Typical Forward Characteristics

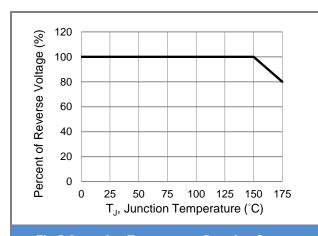


Fig.5 Operating Temperature Derating Curve

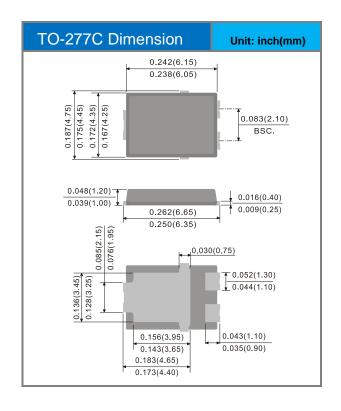


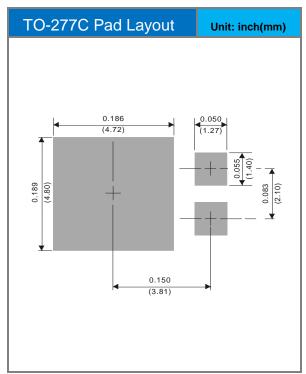


## **Product and Packing Information**

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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