

MBR5H150PC

Surface Mount Ultra Low I_R Schottky Barrier Rectifier

Voltage

150 V

Current

5 A

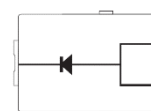
Features

- Low leakage current
- Ideal 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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	150	V
Maximum RMS Voltage		V_{RMS}	105	V
Maximum DC Blocking Voltage		V_{DC}	150	V
Maximum Average Forward Rectified Current		$I_{F(AV)}$	5	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load		I_{FSM}	150	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$		C_J	130	pF
Typical Thermal Resistance	(Note 1)	$R_{\theta JA}$	65	$^\circ\text{C/W}$
	(Note 2)	$R_{\theta JC}$	18	
	(Note 2)	$R_{\theta JL}$	14	
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	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.68	-	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.76	-	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.85	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.54	-	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.63	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.67	-	
Reverse Current	I_R	$V_R = 120\text{ V}, T_J = 25^\circ\text{C}$	-	16	-	nA
		$V_R = 150\text{ V}, T_J = 25^\circ\text{C}$	-	-	0.5	uA
		$V_R = 150\text{ V}, T_J = 125^\circ\text{C}$	-	-	130	

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.

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TYPICAL CHARACTERISTIC CURVES

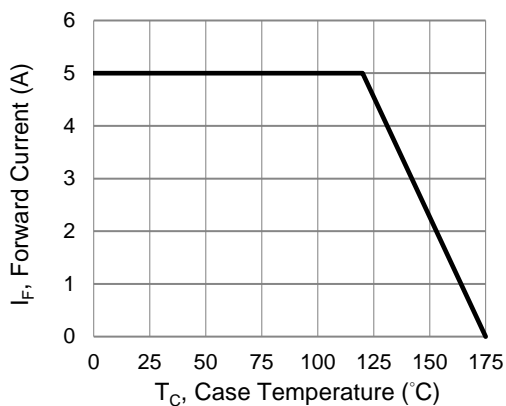


Fig.1 Forward Current Derating Curve

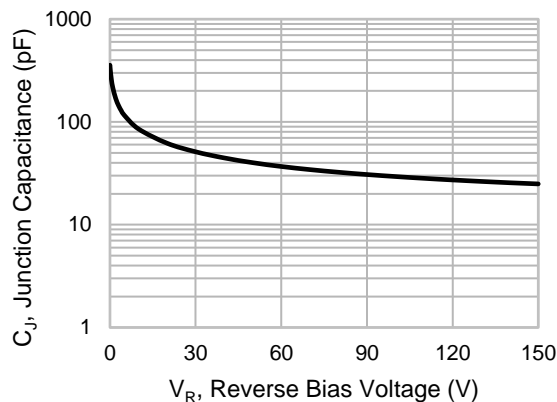


Fig.2 Typical Junction Capacitance

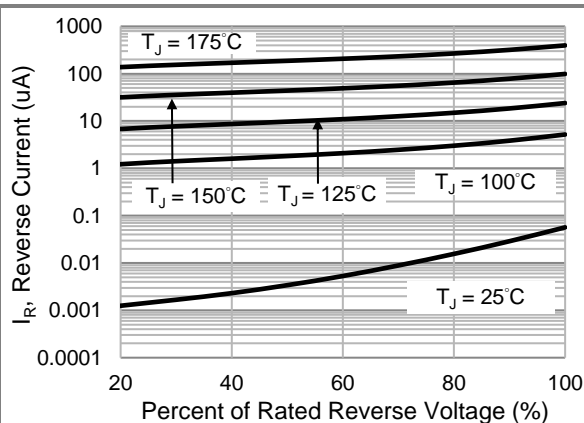


Fig.3 Typical Reverse Characteristics

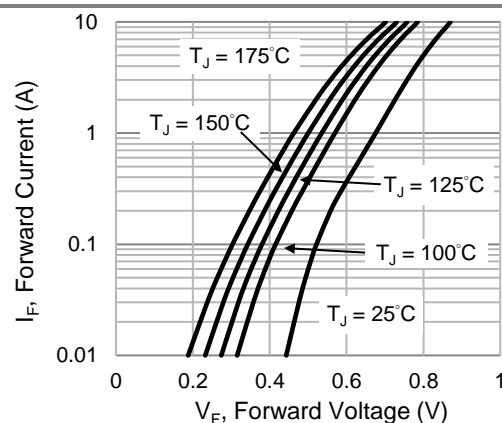


Fig.4 Typical Forward Characteristics

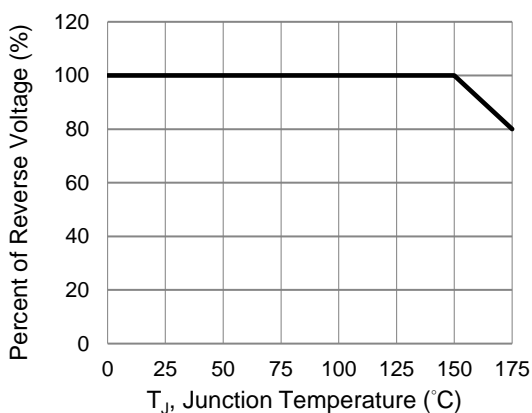


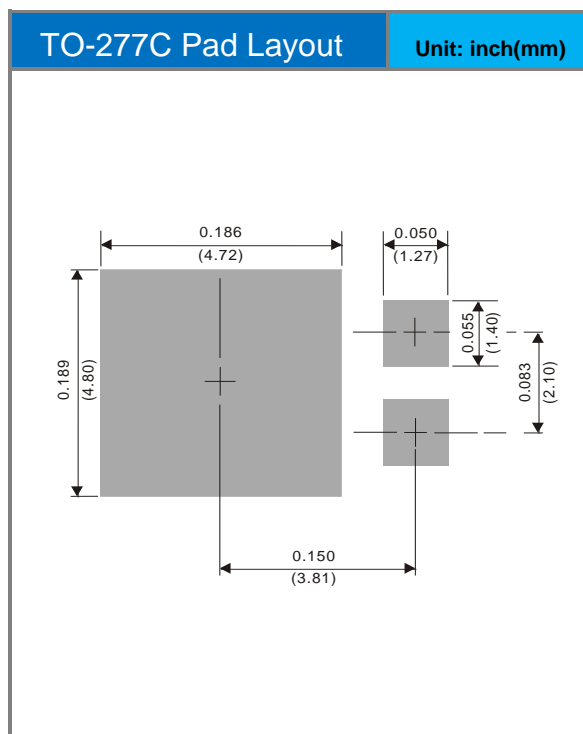
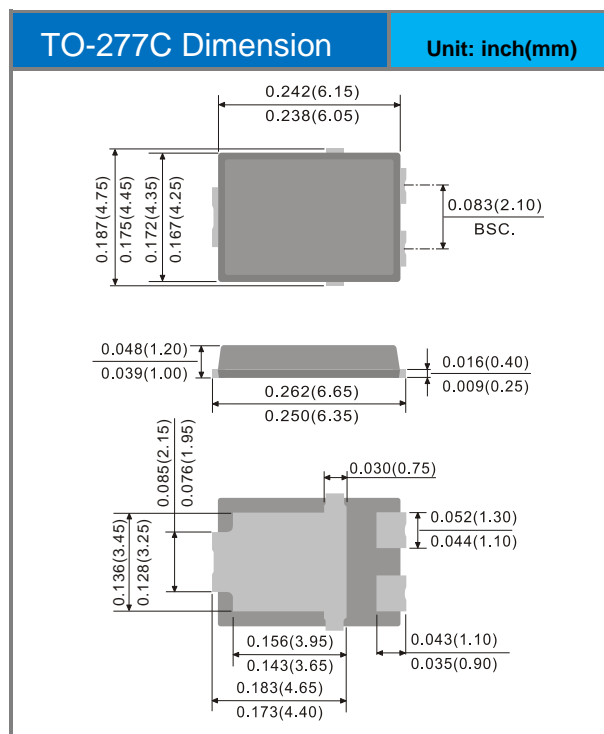
Fig.5 Operating Temperature Derating Curve

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MBR5H150PC	TO-277C	5K pcs / 13" reel	MBR5H150PC

Packaging Information & Mounting Pad Layout





MBR5H150PC

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