

MBR1060DC-AU

Surface Mount Schottky Barrier Rectifier

Voltage

60 V

Current

10 A

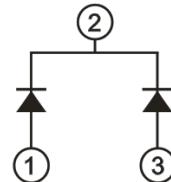
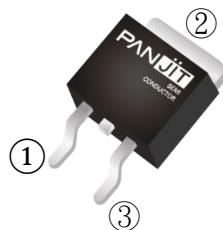
Features

- 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-263 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 1.38 grams

TO-263



Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	60	V
Maximum RMS Voltage		V_{RMS}	42	V
Maximum DC Blocking Voltage		V_{DC}	60	V
Maximum Average Forward Current	per device per diode	$I_{F(AV)}$	10 5	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode		I_{FSM}	150	A
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$		C_J	186	pF
Typical Thermal Resistance	(Note 1) (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	52 6.5 4	°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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage Per Diode	V_F	$I_F = 1 \text{ A}, T_J = 25^\circ\text{C}$	-	0.46	-	V
		$I_F = 3 \text{ A}, T_J = 25^\circ\text{C}$	-	0.57	-	
		$I_F = 5 \text{ A}, T_J = 25^\circ\text{C}$	-	-	0.75	
		$I_F = 1 \text{ A}, T_J = 125^\circ\text{C}$	-	0.36	-	
		$I_F = 3 \text{ A}, T_J = 125^\circ\text{C}$	-	0.51	-	
		$I_F = 5 \text{ A}, T_J = 125^\circ\text{C}$	-	0.57	-	
Reverse Current Per Diode	I_R	$V_R = 48 \text{ V}, T_J = 25^\circ\text{C}$	-	1	-	μA
		$V_R = 60 \text{ V}, T_J = 25^\circ\text{C}$	-	-	50	
		$V_R = 60 \text{ V}, T_J = 125^\circ\text{C}$	-	2	-	

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.

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TYPICAL CHARACTERISTIC CURVES

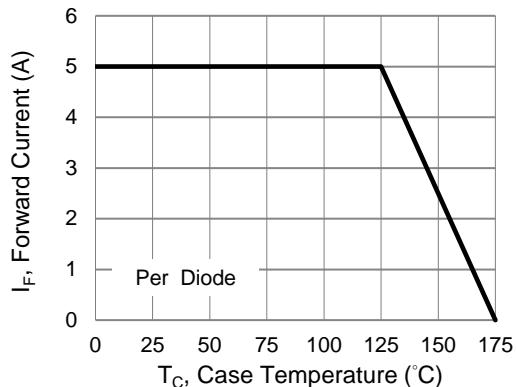


Fig.1 Forward Current Derating Curve

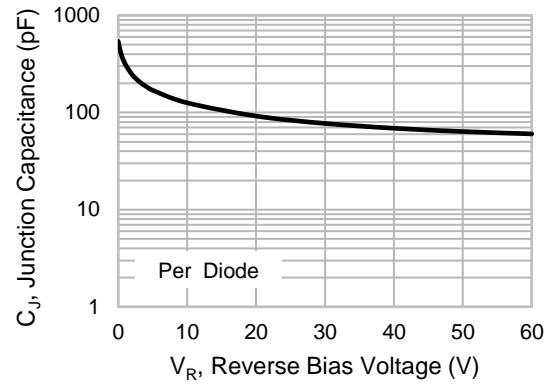


Fig.2 Typical Junction Capacitance

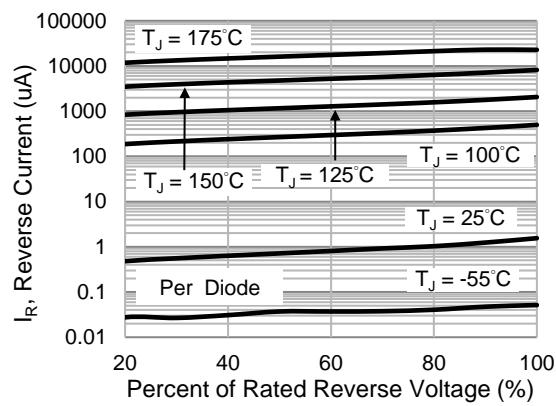


Fig.3 Typical Reverse Characteristics

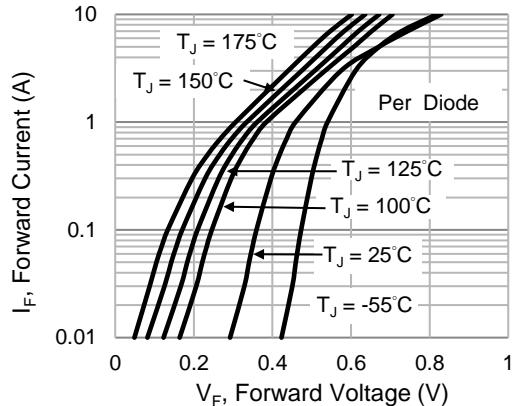


Fig.4 Typical Forward Characteristics

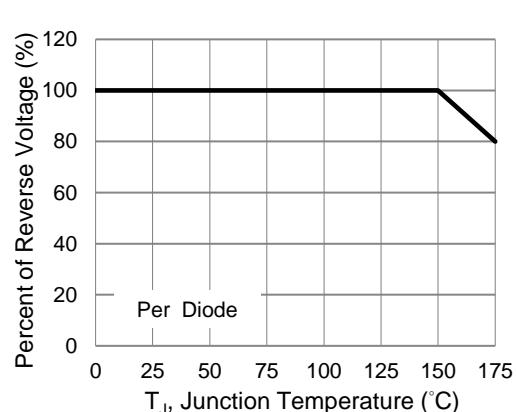


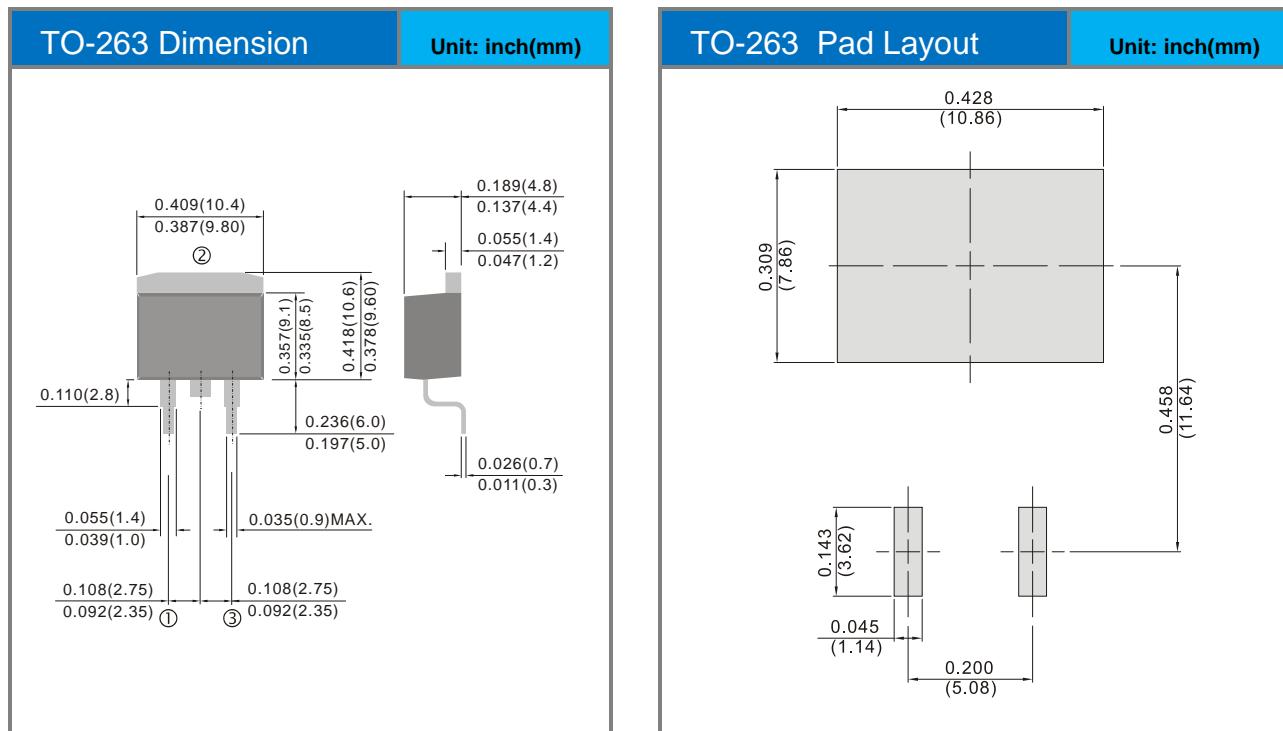
Fig.5 Operating Temperature Derating Curve

MBR1060DC-AU

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MBR1060DC-AU	TO-263	800 pcs / 13" reel	MBR1060DC

Packaging Information & Mounting Pad Layout



MBR1060DC-AU

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