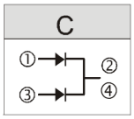
MBR2040DC-AU

SCHOTTKY BARRIER RECTIFIER

Voltage	40 V	Current	20 A

TO-263



Features

- Ultra low forward voltage drop, low power loss
- High efficiency operation
- 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-263 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.049 ounces, 1.38 grams

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	40	V
Maximum Rms Voltage		V_{RMS}	28	V
Maximum Dc Blocking Voltage		V_{DC}	40	V
Maximum Average Forward Current	per device per diode	$I_{F(AV)}$	20 10	A
Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load		I_{FSM}	200	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V_R = 4 V		C_J	510	pF
Typical Thermal Resistance		$R_{\theta JC}$ (1)	2	°C/W
Operating Junction Temperature Range		T_J	-55~150	°C
Storage Temperature Range		T_{STG}	-55~150	°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	-	0.40	-	V
		I_F = 3 A, T_J = 25 °C	-	0.45	-	
		I_F = 10 A, T_J = 25 °C	-	-	0.70	
		I_F = 1 A, T_J = 125 °C	-	0.27	-	
		I_F = 3 A, T_J = 125 °C	-	0.34	-	
		I_F = 10 A, T_J = 125 °C	-	0.49	-	
Reverse Current	I_R (2)	V_R = 32 V, T_J = 25 °C	-	3	-	uA
		V_R = 40 V, T_J = 25 °C	-	-	50	
		V_R = 40V,T_J= 125 °C	-	4	-	mA

NOTES:

1. Mounted on infinite heatsink.
2. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

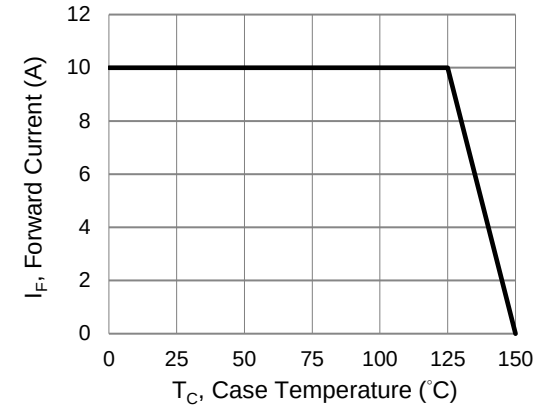


Fig.1 Forward Current Derating Curve

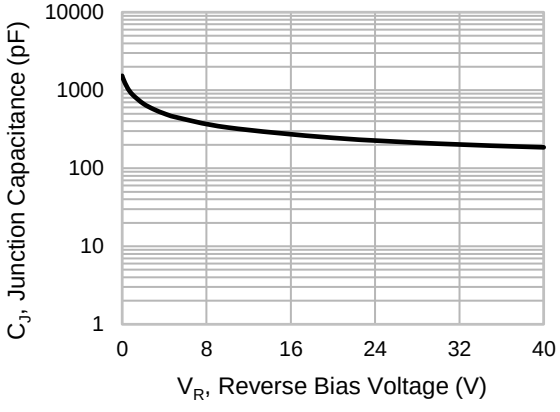


Fig.2 Typical Junction Capacitance

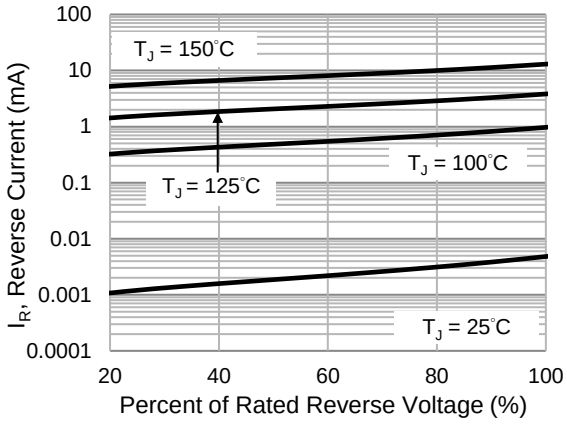


Fig.3 Typical Reverse Characteristics

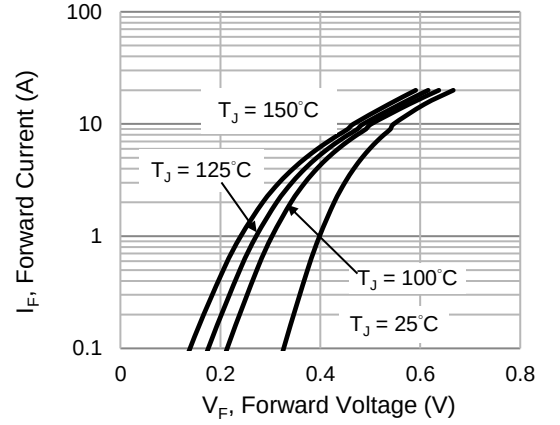


Fig.4 Typical Forward Characteristics

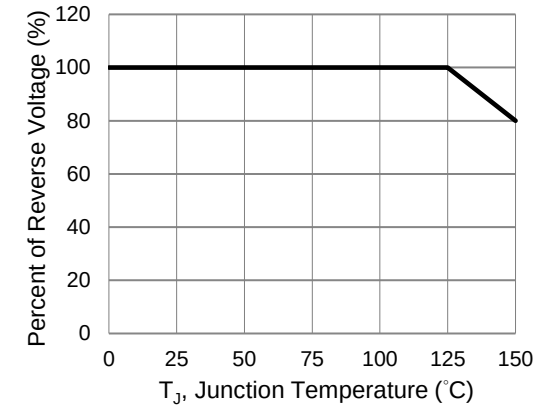


Fig.5 Operating Temperature Derating Curve

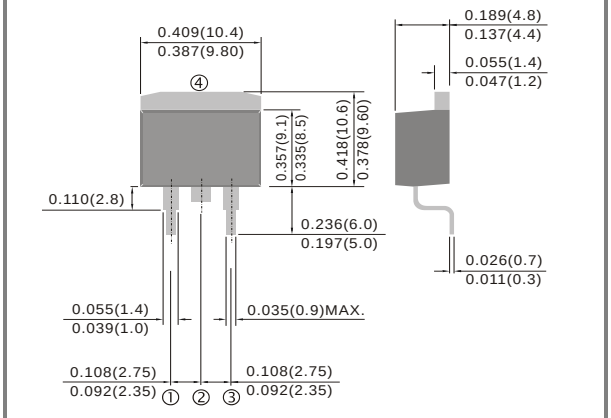
MBR2040DC-AU

Product and Packing Information

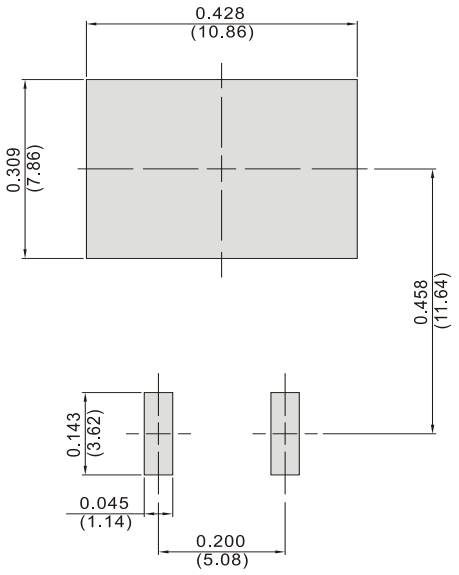
Part No.	Package Type	Packing Type	Marking
MBR2040DC-AU	TO-263	800 pcs / 13” reel	MBR2040DC

Packaging Information & Mounting Pad Layout

TO-263 Dimension — Unit: inch(mm)



TO-263 Pad Layout — Unit: inch(mm)



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