



MBR3040CT-AU

SCHOTTKY BARRIER RECTIFIER

Voltage	40 V	Current	30 A
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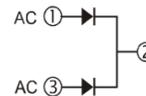
Features

- Low forward voltage drop
- 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
- AEC-Q101 qualified

Mechanical Data

- Case: TO-220AB Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.067 ounces, 1.89 grams

TO-220AB



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	I _{F(AV)}	30	A
	per diode		15	
Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load		I _{FSM}	275	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4V		C _J	730	pF
Typical Thermal Resistance		R _{θJC} ⁽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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.38	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.46	-	
		$I_F = 15\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.70	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.25	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.36	-	
		$I_F = 15\text{ A}, T_J = 125^\circ\text{C}$	-	0.51	-	
Reverse Current	$I_R^{(2)}$	$V_R = 32\text{ V}, T_J = 25^\circ\text{C}$	-	5	-	μA
		$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	-	100	
		$V_R = 40\text{ V}, T_J = 125^\circ\text{C}$	-	6	-	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

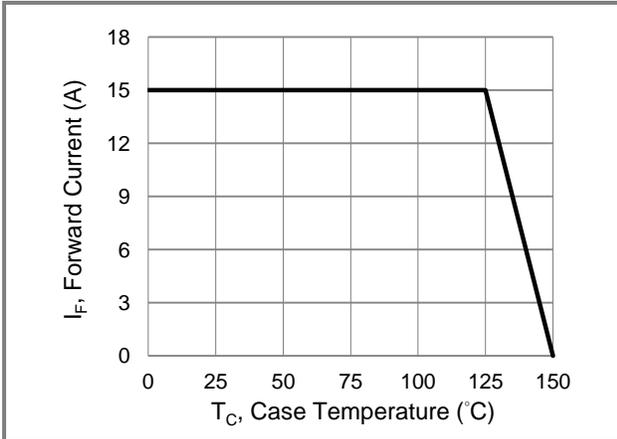


Fig.1 Forward Current Derating Curve

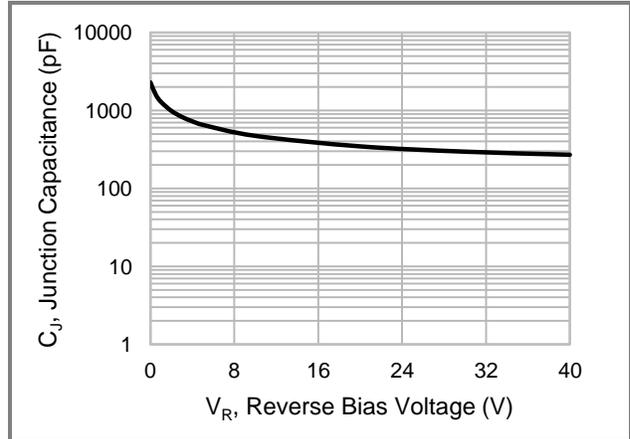


Fig.2 Typical Junction Capacitance

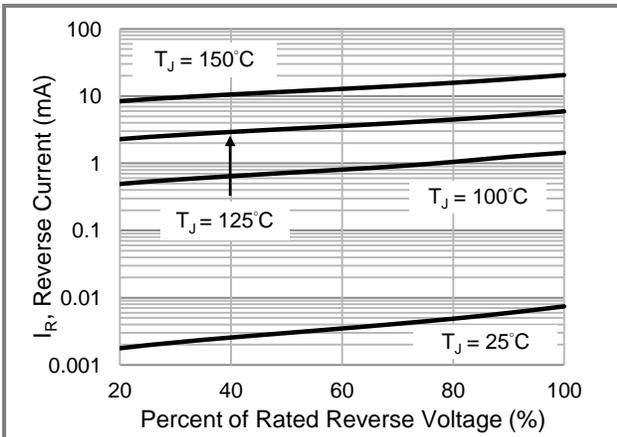


Fig.3 Typical Reverse Characteristics

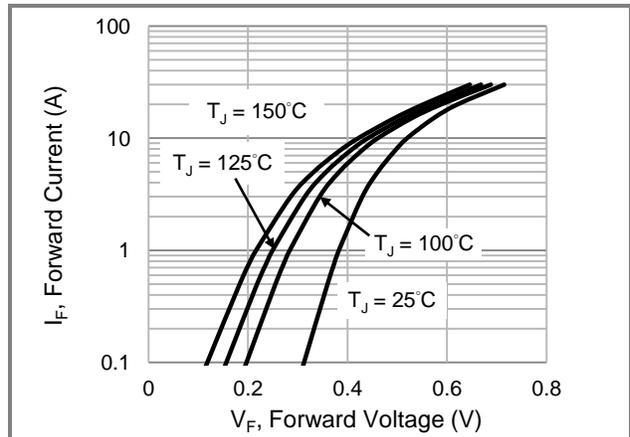


Fig.4 Typical Forward Characteristics

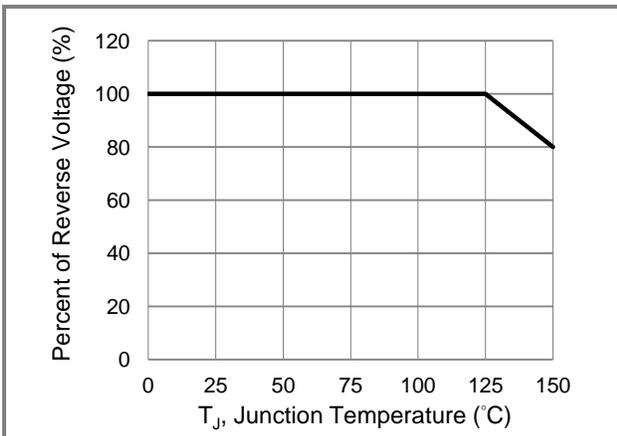


Fig.5 Operating Temperature Derating Curve



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