

MBR10100CD-AU

Surface Mount Schottky Barrier Rectifier

Voltage

100 V

Current

10 A

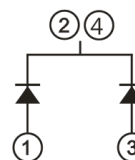
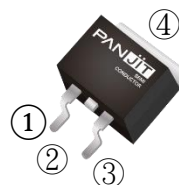
Features

- 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-252AA Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.3217 grams

TO-252AA



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

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	100	V
Maximum RMS Voltage		V _{RMS}	70	V
Maximum DC Blocking Voltage		V _{DC}	100	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}	120	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V _R = 4 V		C _J	135	pF
Typical Thermal Resistance per diode	(Note 1)	R _{θJA}	50	°C/W
	(Note 2)	R _{θJC}	5.3	
	(Note 2)	R _{θJL}	3.9	
Operating Junction Temperature Range		T _J	-55~175	°C
Storage Temperature Range		T _{STG}	-55~175	°C

MBR10100CD-AU

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	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.66	0.68	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.75	0.77	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.78	0.8	V
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.52	0.54	V
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.6	0.62	V
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.65	0.67	V
Reverse Current Per Diode ^(Note 3)	I_R	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	19	200	nA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	0.04	50	uA
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	26	250	

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.
3. Short duration pulse test used to minimize self-heating effect.

MBR10100CD-AU

TYPICAL CHARACTERISTIC CURVES

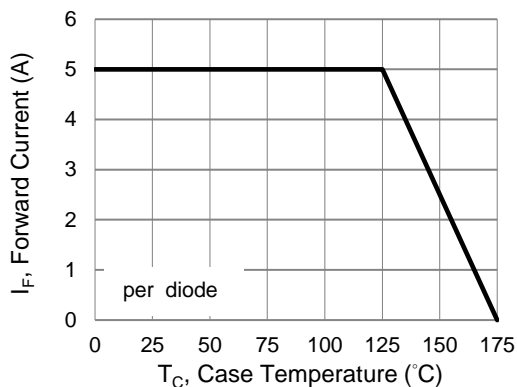


Fig.1 Forward Current Derating Curve

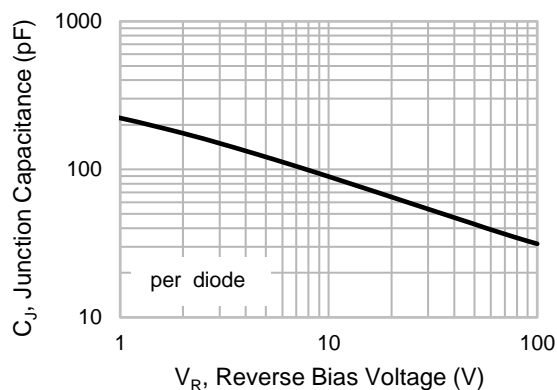


Fig.2 Typical Junction Capacitance

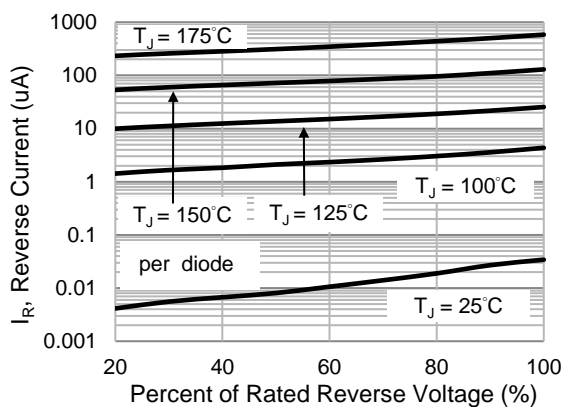


Fig.3 Typical Reverse Characteristics

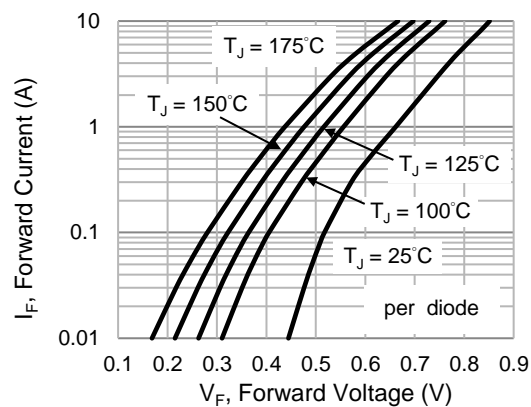


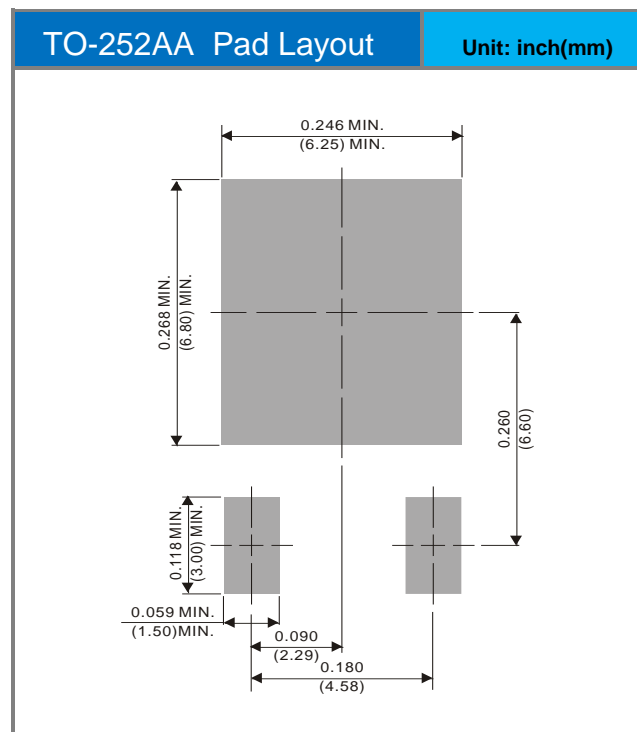
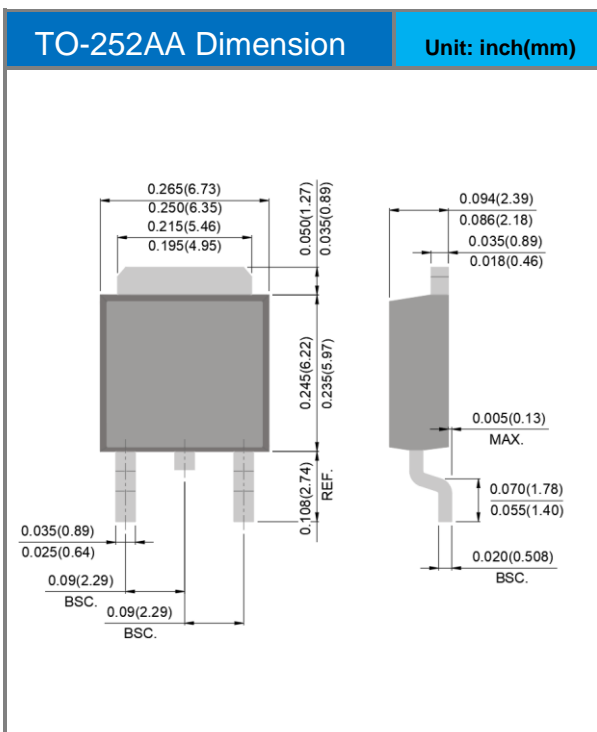
Fig.4 Typical Forward Characteristics

MBR10100CD-AU

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MBR10100CD-AU	TO-252AA	3K pcs / 13" reel	MR10100C

Packaging Information & Mounting Pad Layout



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