



# **5A,100V Schottky Barrier Rectifier**

#### **Features**

- Low forward voltage, low power loss
- Guarding for over voltage protection
- Low leakage current
- High surge current
- Plastic package has underwriters Laboratory
   Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



## **Applications**

- SMPS
- Adapter
- Server Power

# Anode Anode cathode Anode Anode

### **Mechanical Data**

- Case: Epoxy, Molded
- Weight: 1.9grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 3000 units per plastic tube

Maximum Ratings & Electrical Characteristics(TA=25°C unless otherwise noted)				
Parameter	Symbol	AMBRP5100	Unit	
Maximum repetitive peak reverse voltage	VRRM	100	V	
Maximum RMS voltage	VRMS	70	V	
Maximum DC blocking voltage	VDC	100	V	
Maximum average forward	lF(AV)	5	Α	
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load	IFSM	120	Α	
Operating junction temperature range	TJ	-55 to +150	°C	
Storage temperature range	Тѕтс	-55 to +150	°C	



Electrical Specifications (TA=25°C unless otherwise noted)						
Parameter Symbol		Test Conditions	Тур	Max	Unit	
Forward Drop Voltage (Note1)	VF	IF=5A, TJ =25℃	0.70	0.76	V	
		IF=5A, TJ =125°C	-	0.68		
Deverse legicage current @V/D (Note2)	IR	TJ =25℃	-	20	uA	
Reverse leakage current @VR (Note2)		TJ =100℃	-	5	mA	

Thermal-Mechanical Specifications (TA=25°C unless otherwise noted)				
Parameter	Symbol	Тур	Unit	
Thermal Resistance, Junction to Case	Rejc	3	°C /W	
Thermal Resistance, Junction to Ambient	Reja	50	°C /W	

#### Note:

- 1. Pulse test with PW=0.3ms, duty cycle=2%
- 2. Pulse test with PW=30ms



#### **Ratings and Characteristics Curves**

(TA = 25°C unless otherwise noted)

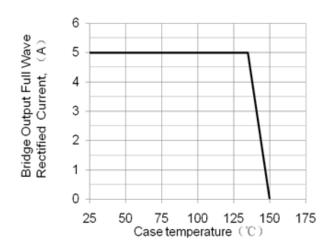


Fig.1 - Forward Current Derating Curve

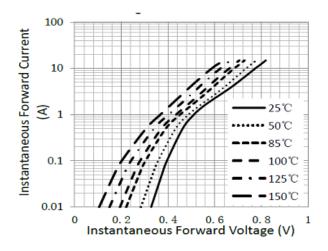


Fig.3 – Typical Forward Voltage Characteristics

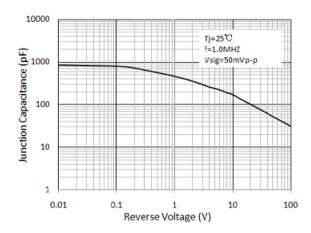


Fig.5 - Typical Junction Capacitance

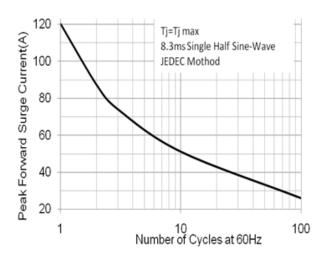


Fig.2 - Maximum Non-Repetitive Surge Current

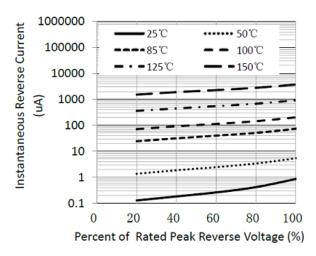
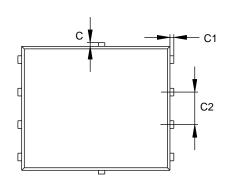
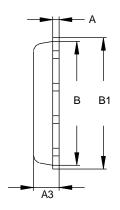


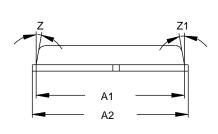
Fig.4 – Typical Reverse Current Characteristics

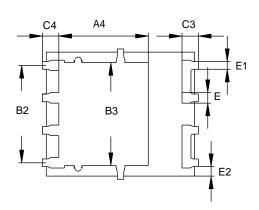
# Package Outline Dimensions (Unit: millimeters)

# PDFN56



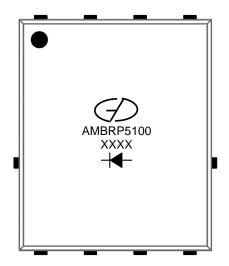






PDFN56							
	Min.	Nom.	Max.		Min.	Nom.	Max.
Α	0.15	0.25	0.35	C1	0.05	0.15	0.25
A1	5.6	5.8	6.0	C2	1.17	1.27	1.37
A2	5.9	6.1	6.3	C3	0.53	0.63	0.73
A3	0.9	1	1.1	C4		0.63	
A4		3.5		Е	0.31	0.41	0.51
В	4.7	4.9	5.1	E1	0.2	0.3	0.4
B1	5	5.2	5.4	E2	0.25	0.35	0.45
B2	3.71	3.81	3.91	Z	8°	10°	12°
В3		4		Z1	8°	10°	12°
С	0.05	0.15	0.25				

# **Marking Outline**



Logo Mark:

2. Part Name: AMBRP5100

3. Data Code: XXXX

4. Polarity : —

# **Revision History**

Document Version	Date of release	Description of changes
Rev.A	2013.12.10	Released Datasheet
Rev.B	2021.01.12	Modify document format





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