





2.0A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER

Product Summary (@ TA = +25°C)

V _{RRM} (V)	I _O (A)	V _F (MAX) (V)	I _{R(MAX)} (mA)
100	2	0.79	0.5

Description and Applications

The B2100A is a single rectifier packaged in the low profile SMA package. Providing low VF and excellent high temperature stability this device is ideal for use in general rectification applications such as:

- Boost Diode
- Blocking Diode

Features and Benefits

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- Surge Overload Rating to 50A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- High Temperature Soldering: 260°C/10 Second at Terminal
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

Mechanical Data

- Case: SMA
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Matte Tin annealed over Copper leadframe.
 Solderable per MIL-STD-202, Method 208 (3)
- · Polarity: Cathode Band or Cathode Notch
- Weight: 0.064 grams (approximate)



Top View



Bottom View

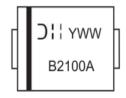
Ordering Information (Note 4)

Part Number	Case	Packaging
B2100A-13-F	SMA	5000/Tape & Reel

Notes:

- 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
- 2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
- 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 4. For packaging details, go to our website at http://www.diodes.com/products/packages.html.

Marking Information



B2100A = Product Type Marking Code

Oli = Manufacturers' code marking

YWW = Date Code Marking

Y = Last digit of year (ex: 13 for 2013)

WW = Week code (01 to 53)



Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _{RM}	100	٧
Average Rectified Output Current (See Figure 1)	Io	2.0	Α
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	50	А

Thermal Characteristics

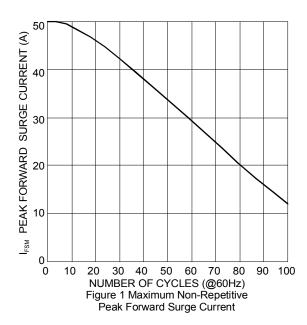
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Terminal (Note 5)	R _{θJT}	25	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +125	°C

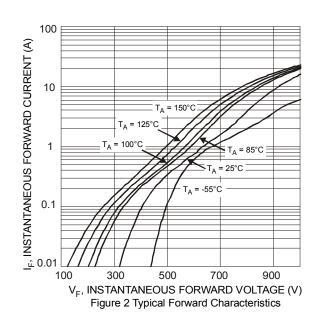
Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Dren	V _F	_	1	0.79	٧	I _F = 2.0A, T _A = +25°C
Forward Voltage Drop			_	0.69	V	I _F = 2.0A, T _A = +100°C
Peak Reverse Current at Rated DC Blocking Voltage	I _{RM}		_	0.5	mA	V _R =100V, T _A = +25°C
reak Reverse Current at Rated DC Blocking Voltage			_	15	mA	V _R = 100V, T _A = +100°C
Typical Total Capacitance (Note 6)	C _T		75	_	pF	V _R =4V, f = 1MHz

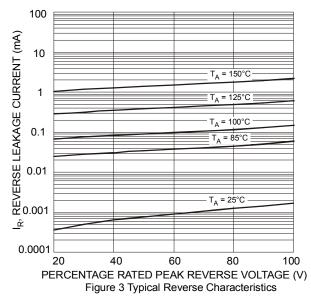
Notes:

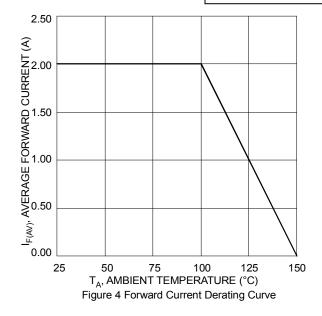
- 5. Valid provided that terminals are kept at ambient temperature.
- 6. Short duration pulse test used to minimize self-heating effect.

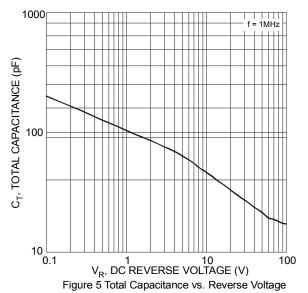






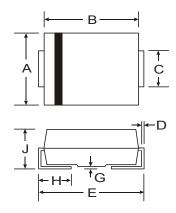






Package Outline Dimensions

Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.

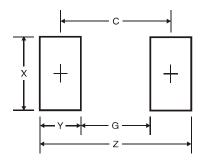


SMA			
Dim	Min	Max	
Α	2.29	2.92	
В	4.00	4.60	
С	1.27	1.63	
D	0.15	0.31	
Е	4.80	5.59	
G	0.05	0.20	
Н	0.76	1.52	
7	2.01	2.30	
All Dimensions in mm			



Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
Z	6.5
G	1.5
Х	1.7
Υ	2.5
С	4.0

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