

# ANTREX Electronics

Electronic Components Sourcing Information

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## Product Reference Information

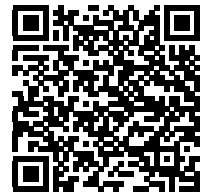
**Part Number:** B260S1FX-7  
**Manufacturer:** Diodes Incorporated  
**Package:** SOD-123F  
**Availability:** Please confirm with sales

### Product Page:

<https://antrexco.com/product/details/diodes-incorporated/b260s1fx-7-134058.html>

### Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

## Contact Information

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## Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

### Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

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## 2A TRENCH SCHOTTKY BARRIER RECTIFIER

### Product Summary (@ T<sub>A</sub> = +25°C)

| V <sub>RRM</sub> (V) | I <sub>O</sub> (A) | V <sub>F</sub> Max (V) | I <sub>R</sub> Max (μA) |
|----------------------|--------------------|------------------------|-------------------------|
| 60                   | 2                  | 0.60                   | 200                     |

### Description and Applications

For use in low-voltage, high-frequency inverters, freewheeling, DC-DC converters and polarity applications.

- SMPS
- DC-DC converters
- AC-DC adaptors
- Freewheeling diodes
- Reverse polarity protections
- Blocking diodes

### Features and Benefits

- Low-Leakage Current
- Soft, Fast Switching Capability
- +150°C Operating Junction Temperature
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.  
<https://www.diodes.com/quality/product-definitions/>

### Mechanical Data

- Package: SOD123F
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 
- Polarity: Cathode Band
- Weight: 0.015 grams (Approximate)

SOD123F



Top View



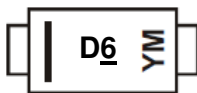
Schematic View

### Ordering Information (Note 4)

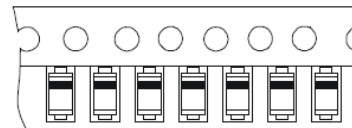
| Part Number | Package | Packing |             |
|-------------|---------|---------|-------------|
|             |         | Qty.    | Carrier     |
| B260S1FX-7  | SOD123F | 3000    | Tape & Reel |

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
  2. See <https://www.diodes.com/quality/lead-free/> 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 <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

### Marking Information



D6 = Product Type Marking Code  
YM = Date Code Marking  
Y = Year (ex: K = 2023)  
M = Month (ex: N = November)



#### Date Code Key

| Year  | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| Code  | K    | L    | M    | N    | P    | R    | S    | T    | U    | V    | W    | X    |
| Month | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
| Code  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | O    | N    | D    |

## Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

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

| Characteristic                                   | Symbol           | Value | Unit |
|--------------------------------------------------|------------------|-------|------|
| Peak Repetitive Reverse Voltage                  | V <sub>RRM</sub> | 60    | V    |
| Working Peak Reverse Voltage                     | V <sub>RWM</sub> |       |      |
| DC Blocking Voltage                              | V <sub>RM</sub>  |       |      |
| Average Rectified Output Current                 | I <sub>O</sub>   | 2     | A    |
| Non-Repetitive Peak Forward Surge Current 1ms    | I <sub>FSM</sub> | 35    | A    |
| Single Half Sine-Wave Superimposed on Rated Load |                  |       |      |

## Thermal Characteristics

| Characteristic                                          | Symbol                            | Value       | Unit |
|---------------------------------------------------------|-----------------------------------|-------------|------|
| Typical Thermal Resistance Junction to Ambient (Note 5) | R <sub>θJA</sub>                  | 115         | °C/W |
| Typical Thermal Resistance Junction to Case (Note 5)    | R <sub>θJC</sub>                  | 40          | °C/W |
| Operating and Storage Temperature Range                 | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 | °C   |

Note: 5. Device mounted on FR-4 substrate, 0.4" × 0.5", 2oz, single-sided, PC boards with 0.2" × 0.25" copper pad. The heat generated must be less than the thermal conductivity from junction to case:  $dP_D/dT_J < 1/R_{\theta JC}$  or junction to ambient:  $dP_D/dT_J < 1/R_{\theta JA}$ .

## Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic                | Symbol         | Typ         | Max          | Unit     | Test Condition                                                                                |
|-------------------------------|----------------|-------------|--------------|----------|-----------------------------------------------------------------------------------------------|
| Forward Voltage Drop (Note 6) | V <sub>F</sub> | 0.45<br>0.4 | 0.60<br>0.56 | V        | I <sub>F</sub> = 2A, T <sub>J</sub> = +25°C<br>I <sub>F</sub> = 2A, T <sub>J</sub> = +125°C   |
| Leakage Current (Note 6)      | I <sub>R</sub> | —<br>—      | 200<br>20    | μA<br>mA | V <sub>R</sub> = 60V, T <sub>J</sub> = +25°C<br>V <sub>R</sub> = 60V, T <sub>J</sub> = +100°C |

Note: 6. Short duration pulse test used to minimize self-heating effect.

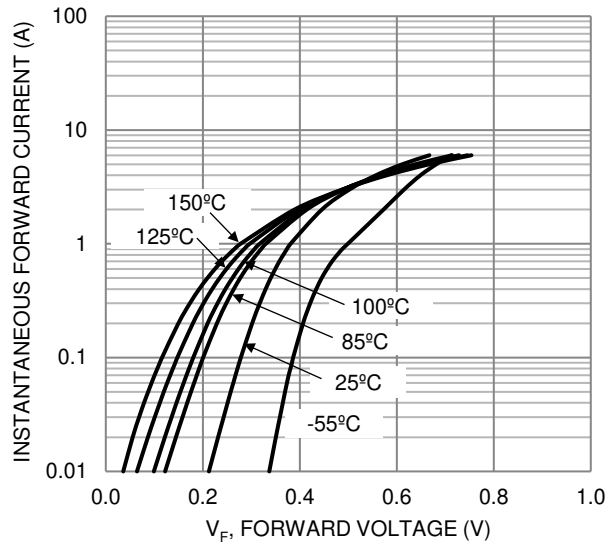


Figure 1. Typical Forward Characteristics

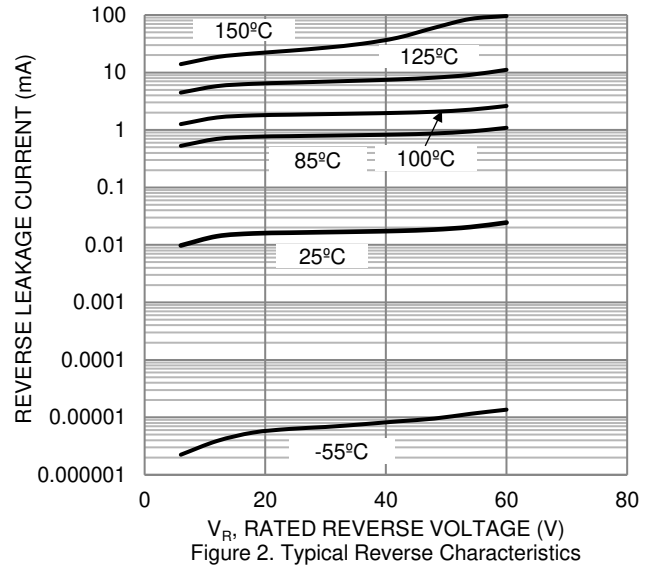


Figure 2. Typical Reverse Characteristics

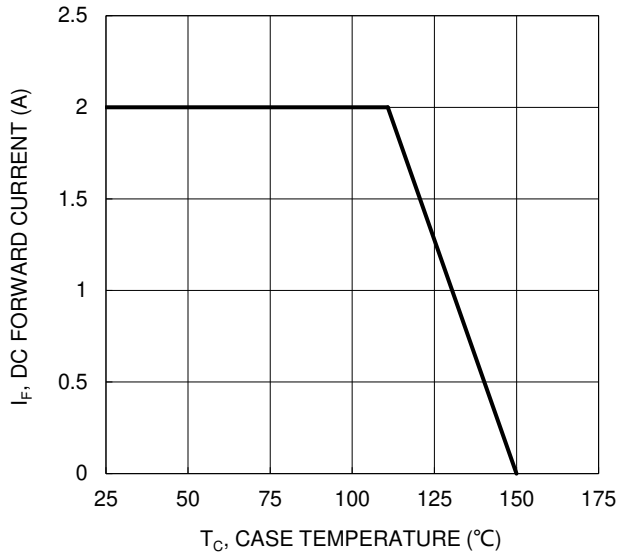


Figure 3. DC Forward Current Derating

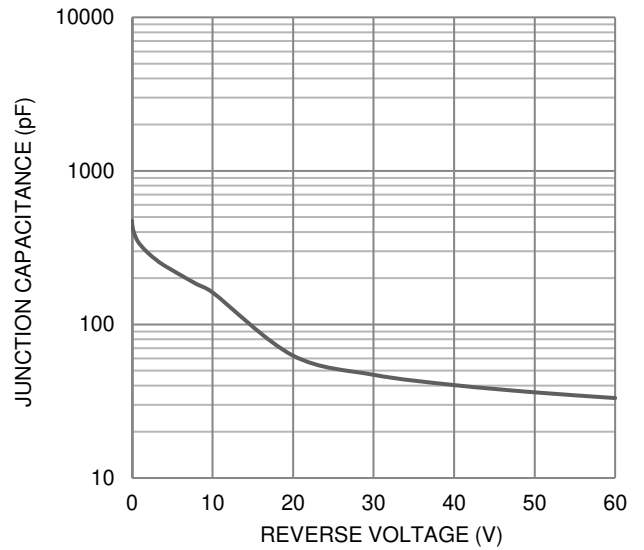
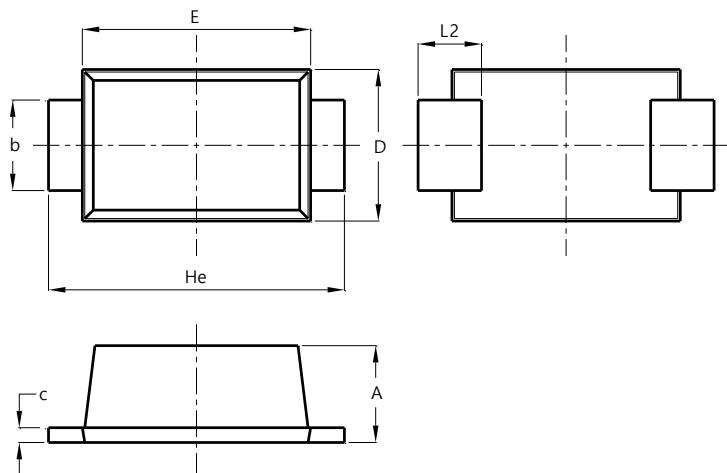


Figure 4. Total Capacitance vs. Reverse Voltage

## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD123F**

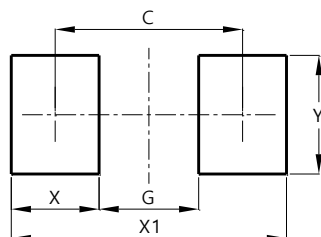


| SOD123F              |      |      |      |
|----------------------|------|------|------|
| Dim                  | Min  | Max  | Typ  |
| A                    | 0.81 | 1.15 | —    |
| b                    | 0.80 | 1.05 | —    |
| c                    | 0.05 | 0.30 | —    |
| D                    | 1.70 | 1.90 | 1.80 |
| E                    | 2.60 | 2.80 | 2.70 |
| He                   | 3.30 | 3.70 | 3.50 |
| L2                   | 0.35 | 0.85 | —    |
| All Dimensions in mm |      |      |      |

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**SOD123F**



| Dimensions | Value (in mm) |
|------------|---------------|
| C          | 2.86          |
| G          | 1.52          |
| X          | 1.34          |
| X1         | 4.20          |
| Y          | 1.80          |

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