

# ANTREX Electronics

Electronic Components Sourcing Information

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## Product Reference Information

**Part Number:** BA783-HG3-08

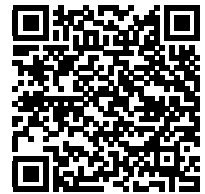
**Manufacturer:** Vishay General Semiconductor - Diodes Division

**Package:** SOD-123

**Availability:** Please confirm with sales

**Product Page:**

<https://antrexco.com/product/details/vishay-general-semiconductor-diodes-division/ba783-hg3-08.html>



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## Contact Information

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## Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

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**Note:**

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

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## Band Switching Diodes



### MECHANICAL DATA

**Case:** SOD-123

**Weight:** approx. 9.4 mg

**Packaging codes/options:**

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

### FEATURES

- Silicon epitaxial planar diode switches
- AEC-Q101 qualified
- Base P/N-G3 - green, commercial grade
- Base P/N-HG3 - green, AEC-Q101 qualified
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### DESCRIPTION

For electric bandswitching in radio and TV tuners in the frequency range of (50 to 1000) MHz. The dynamic forward resistance is constant and very small over a wide range of frequency and forward current. The reverse capacitance is also small and largely independent of the reverse voltage.

### PARTS TABLE

| PART    | ORDERING CODE                | TYPE MARKING | REMARKS       |
|---------|------------------------------|--------------|---------------|
| BA782-G | BA782-G3-08 or BA782-G3-18   | R4           | Tape and reel |
|         | BA782-HG3-08 or BA782-HG3-18 |              |               |
| BA783-G | BA783-G3-08 or BA783-G3-18   | R5           | Tape and reel |
|         | BA783-HG3-08 or BA783-HG3-18 |              |               |

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER                  | TEST CONDITIONS | SYMBOL | VALUE | UNIT |
|----------------------------|-----------------|--------|-------|------|
| Reverse voltage            |                 | $V_R$  | 35    | V    |
| Forward continuous current |                 | $I_F$  | 100   | mA   |

### THERMAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER                   | TEST CONDITION | SYMBOL    | VALUE         | UNIT               |
|-----------------------------|----------------|-----------|---------------|--------------------|
| Junction temperature        |                | $T_J$     | 125           | $^{\circ}\text{C}$ |
| Storage temperature range   |                | $T_{stg}$ | - 55 to + 150 | $^{\circ}\text{C}$ |
| Operating temperature range |                | $T_{op}$  | - 55 to + 125 | $^{\circ}\text{C}$ |

### ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER                     | TEST CONDITION                                           | PART    | SYMBOL   | MIN. | TYP. | MAX. | UNIT     |
|-------------------------------|----------------------------------------------------------|---------|----------|------|------|------|----------|
| Forward voltage               | $I_F = 100\text{ mA}$                                    |         | $V_F$    |      |      | 1000 | mV       |
| Reverse current               | $V_R = 20\text{ V}$                                      |         | $I_R$    |      |      | 50   | nA       |
| Diode capacitance             | $f = 1\text{ MHz}, V_R = 1\text{ V}$                     |         | $C_{D1}$ |      |      | 1.5  | pF       |
|                               |                                                          | BA782-G | $C_{D2}$ |      |      | 1.25 | pF       |
|                               | $f = 1\text{ MHz}, V_R = 3\text{ V}$                     | BA783-G | $C_{D2}$ |      |      | 1.2  | pF       |
|                               |                                                          |         |          |      |      |      |          |
| Dynamic forward resistance    | $f = (50\text{ to }1000)\text{ MHz}, I_F = 3\text{ mA}$  | BA782-G | $r_{f1}$ |      |      | 0.7  | $\Omega$ |
|                               |                                                          | BA783-G | $r_{f1}$ |      |      | 1.2  | $\Omega$ |
|                               | $f = (50\text{ to }1000)\text{ MHz}, I_F = 10\text{ mA}$ | BA782-G | $r_{f2}$ |      |      | 0.5  | $\Omega$ |
|                               |                                                          | BA783-G | $r_{f2}$ |      |      | 0.9  | $\Omega$ |
| Series inductance across case |                                                          |         | $L_S$    |      | 2.5  |      | nH       |

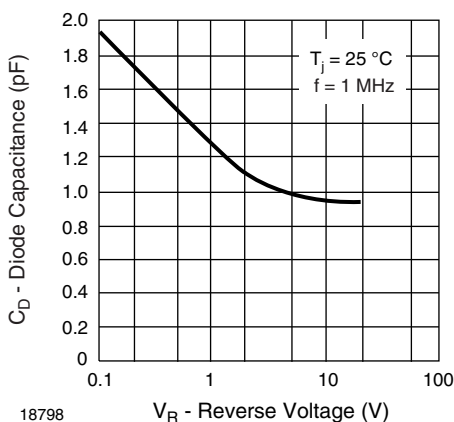
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Diode Capacitance

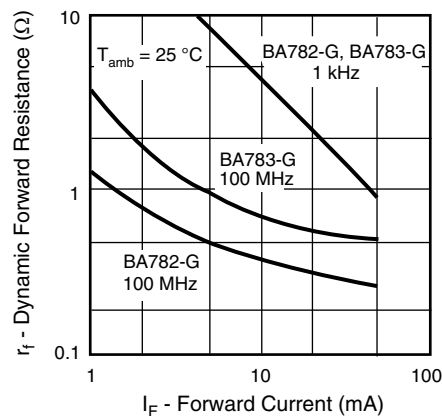
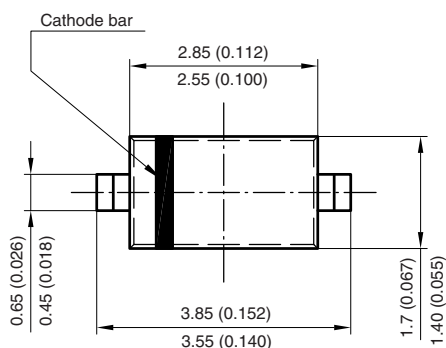
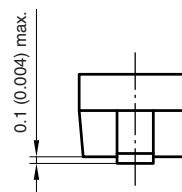
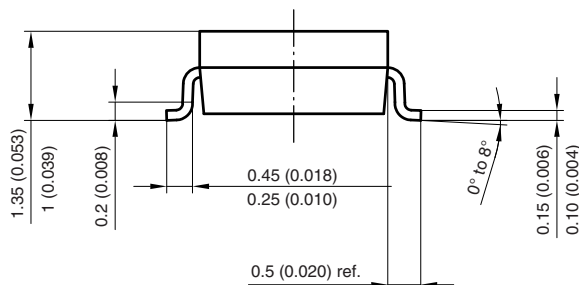
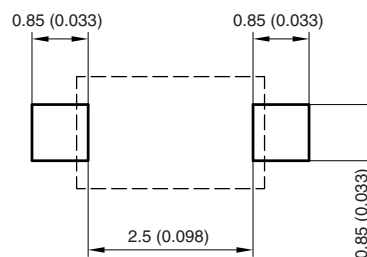


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-123**


Mounting Pad Layout



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17432



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