

# ACSP-2506

## Biased Coaxial Schottky Detector

### Features:

- Contains hermetically sealed modules, internal RF matching, DC return, and RF bypass capacitor.
- The video port is protected from static or transient charges.
- Input impedance matching.
- Models may be chosen for broadband RF performance or for optimized narrow bands



### Specifications:

| Parameter                    | Specification | Units |
|------------------------------|---------------|-------|
| Frequency Range (min)        | 2 – 18        | GHz   |
| Sensitivity (min)            | 1800          | mV/mW |
| Flatness vs. Frequency (max) | 1.5           | ±dB   |
| Typical TSS                  | -51           | dBm   |
| Nominal Video Capacitance    | 12            | pF    |

### Notes:

Maximum input power: +20 dBm

Sensitivity is measured into an open circuit load (>10k ohm).

VSWR is measured at or below -20 dBm input power level.

Standard bias is 100 uA.

### Environmental Specifications:

Designed to meet:

MIL-E-5400, MIL-STD-202, MIL-E-16400

Operating Temp: -55°C to +125°C

Storage Temp: -65°C to +150°C

Humidity: MIL-STD-202F, M103, Cond B

Shock: MIL-STD-202F, M213, Cond B

Altitude: MIL-STD-202F, M105, Cond B

Vibration: MIL-STD-202F, M204, Cond B

Thermal Shock: MIL-STD-202F, M107, Cond A

Temperature Cycle: MIL-STD-202F, M105C, Cond D

### SCREENING:

Internal Visual per MIL-STD-883, Method 2017

Temperature Cycle: -65°C to +100°C, 10 cycles

### OPTIONAL HIGH-REL SCREENING (Ref MIL-PRF-38534):

Stabilization Bake per MIL-STD-883, Method 1008

Temperature Cycle per MIL-STD-883, Method 1010

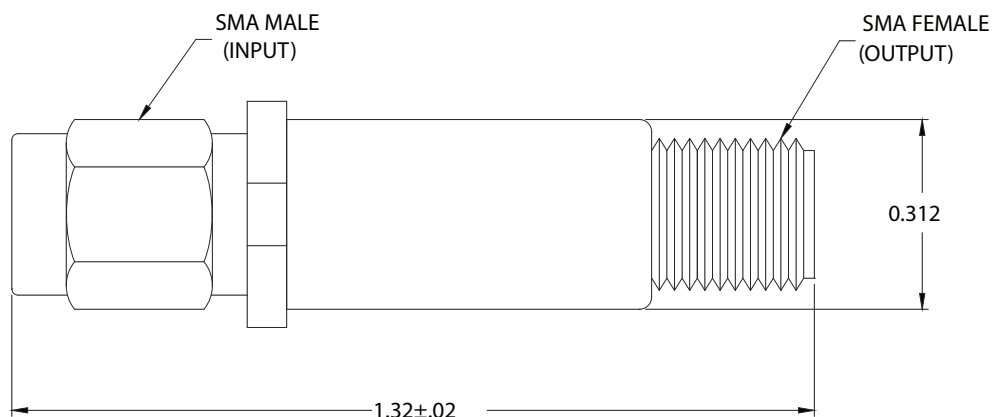
Constant Acceleration per MIL-STD-883,  
Method 2001

Burn-in per MIL-STD-883, Method 1015

Leak Test per MIL-STD-883, Method 1014

External Visual per MIL-STD-883, Method 2009

## Outline Drawing:



STANDARD CASE STYLE C3  
(Optional Case Styles – C8, C15)

## Part Number Ordering Information:

- Add desired polarity suffix: "N" for Negative, "P" for Positive (Ex: ACSP-2506N)
- Add "Z" for zero biased schottky option (Ex: ACSP-2506NZ)
- Add desired case style suffix: "C3" (Ex: ACSP-2506NZC3)
- Add "R" suffix: Reverse Connector Configuration (Ex: ACSP-2506NZC3R)  
(SMA Female Input/SMA Male Output)
- Add "-RC" suffix: RoHS-compliant (Ex: ACSP-2506NZC3R-RC)

## Notes (Continued):

- Video capacitance is used for RF bypass. This value can be changed if required for video response time. Contact the factory for more information.
- This part number is also available with a zero bias schottky diode.
- Due to higher impedance, the zero bias schottky will exhibit less sensitive TSS (typically a 3dB reduction)
- The temperature performance of the zero bias schottky is poor when operating at low input power levels.

### Aeroflex Signal & Control Solutions

Aeroflex Microelectronic Solutions  
40 Industrial Way East  
Eatontown, NJ 07724 [USA]  
Fax: (732) 460-0214

#### Sales

Phone: (732) 460-0212  
ASCS-sales@aeroflex.com

[www.aeroflex.com/Microwave](http://www.aeroflex.com/Microwave) [www.aeroflex.com/ASCS](http://www.aeroflex.com/ASCS)

Aeroflex Signal & Control Solutions reserves the right to make changes to any products and services herein at any time without notice. Consult Aeroflex or an authorized sales representative to verify that the information in this data sheet is current before using this product. Aeroflex does not assume any responsibility or liability arising out of the application or use of any product or service described herein, except as expressly agreed to in writing by Aeroflex; nor does the purchase, lease, or use of a product or service from Aeroflex convey a license under any patent rights, copyrights, trademark rights, or any other of the intellectual rights of Aeroflex or of third parties.

Copyright 2013 Aeroflex Signal & Control Solutions. All rights reserved.

ISO 9001:2008 certified



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.