

# **Active RF Splitter**

# ADA4302-4

#### **FEATURES**

Single 5 V supply
54 MHz to 865 MHz CATV operating range
4.6 dB of gain per output channel
4.4 dB noise figure
25 dB isolation between output channels
-16 dB input return loss
CSO of -89 dBc (135 channels, 15 dBmV per tone)
CTB of -81 dBc (135 channels, 15 dBmV per tone)
1.3 GHz, -3 dB bandwidth

## **APPLICATIONS**

Cable set-top boxes Home gateways CATV distribution systems Cable splitter modules

### **GENERAL DESCRIPTION**

The ADA4302-4 is used as an active element in applications where a lossless signal split is required. Typical applications include multituner cable set-top boxes, cable splitter modules, multituner televisions, and home gateways where traditional solutions have consisted of discrete passive splitters followed by separate fixed gain amplifiers. The ADA4302-4 is a low cost alternative solution that simplifies designs and improves system performance by integrating a signal splitter element and gain element into a single IC solution.

The ADA4302-4 features four differential outputs. The differential architecture allows systems designed with the ADA4302-4 to maintain excellent linearity throughout the CATV band. The ADA4302-4 can also be configured for applications that require fewer than four outputs. Outputs may be configured independently from one another.

For more information about the ADA4302-4, contact Analog Devices, Inc. via email at high\_current\_drivers.com@analog.com.

#### **FUNCTIONAL BLOCK DIAGRAM**

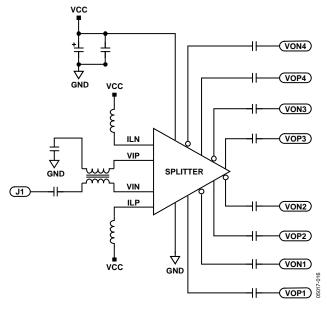


Figure 1.

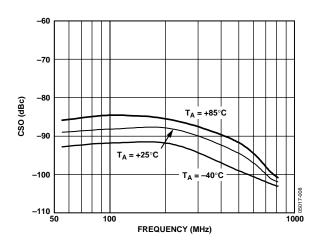


Figure 2. Composite Second-Order vs. Frequency

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