

### 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](mailto:high_current_drivers.com@analog.com).

### FUNCTIONAL BLOCK DIAGRAM

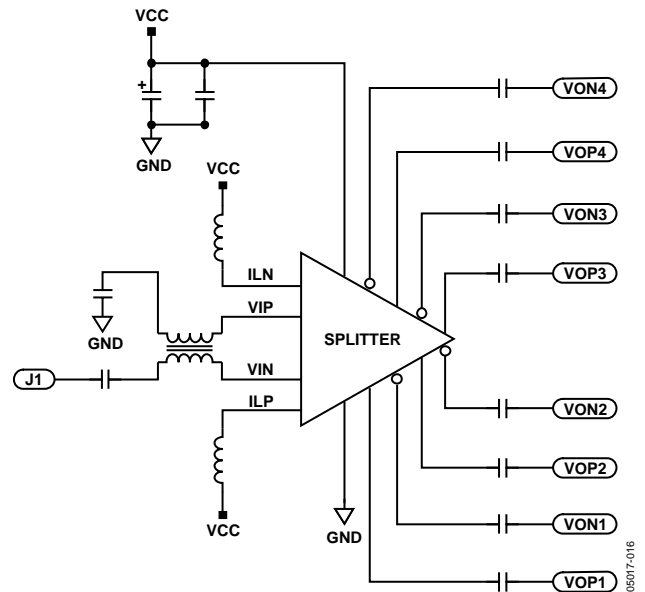


Figure 1.

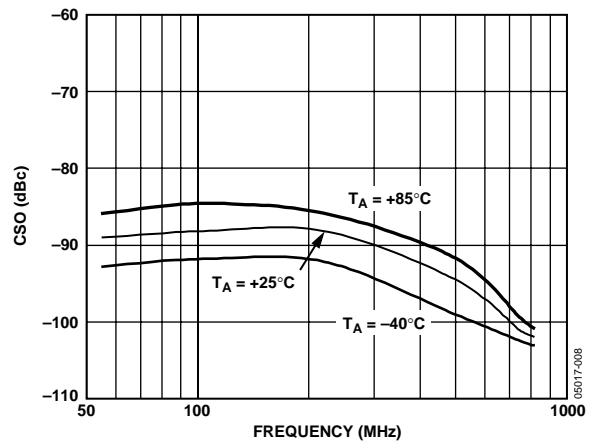


Figure 2. Composite Second-Order vs. Frequency

### Rev. Sp0

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