

### BOARD DESCRIPTION

An evaluation board is available for the ADL5306, the schematic of which is shown in Figure 1. It can be configured for a wide variety of experiments. The buffer gain is factory-set to unity, providing a slope of 200 mV/dec, and the intercept is set to 1 nA. Table 1 describes the various configuration options.

### ORDERING GUIDE

ADL5306 Products	Package Description
ADL5306-EVAL	Evaluation Board

### ESD CAUTION

ESD (electrostatic discharge) sensitive device. Electrostatic charges as high as 4000 V readily accumulate on the human body and test equipment and can discharge without detection. Although this product features proprietary ESD protection circuitry, permanent damage may occur on devices subjected to high energy electrostatic discharges. Therefore, proper ESD precautions are recommended to avoid performance degradation or loss of functionality.

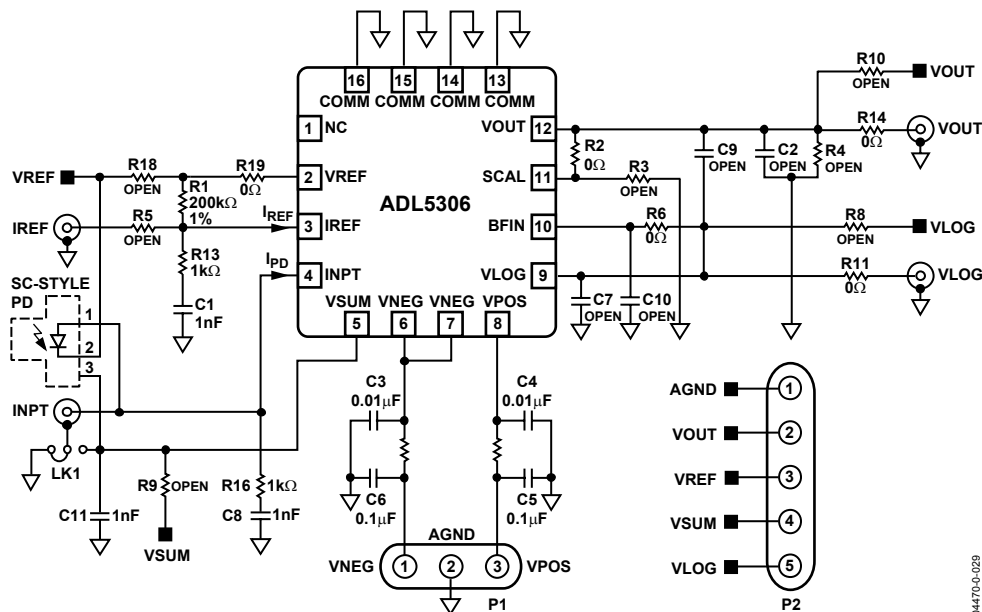


Figure 1. Evaluation Board Schematic

### Rev. 0

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# EVAL-ADL5306EB

Table 1. Evaluation Board Configuration Options

Component	Function	Default Conditions
P1	<b>Supply Interface.</b> Provides access to supply pins VNEG, COMM, and VPOS.	P1 = Installed
P2, R8, R9, R10, R18	<b>Monitor Interface.</b> By adding 0 Ω resistors to R8, R9, R10, and R18, the VREF, VSUM, VOUT, and VLOG pin voltages can be monitored using a high impedance probe.	P2 = Not Installed R8 = R9 = R10 = Open (Size 0603) R18 = Open (Size 0603)
R2, R3, R4, R6, R11, R14, C2, C7, C9, C10	<b>Buffer Amplifier/Output Interface.</b> The logarithmic slope of the ADL5306 can be altered using the buffer's gain-setting resistors, R2 and R3. R4, R6, R11, R14, C2, C7, C9, and C10 are provided for a variety of filtering applications.	R2 = R6 = 0 Ω (Size 0603) R3 = R4 = Open (Size 0603) R11 = R14 = 0 Ω (Size 0603) C2 = C7 = Open (Size 0603) C9 = C10 = Open (Size 0603) VLOG = VOUT = Installed
R1, R19	<b>Intercept Adjustment.</b> The voltage dropped across resistor R1 determines the intercept reference current, nominally set to 10 μA using a 200 kΩ 1% resistor.	R1 = 200 kΩ (Size 0603) R19 = 0 Ω (Size 0603)
R12, R15, C3, C4, C5, C6	<b>Supply Decoupling</b>	C3 = C4 = 0.01 μF (Size 0603) C5 = C6 = 0.1 μF (Size 0603) R12 = R15 = 0 Ω (Size 0603)
C11	<b>Filtering VSUM</b>	C11 = 1 nF (Size 0603)
R13, R16, C1, C8	<b>Input Compensation.</b> Provides essential HF compensation at the input pins, INPT and IREF.	R13 = R16 = 1 kΩ (Size 0603) C1 = C8 = 1 nF (Size 0603)
IREF, INPT, PD, LK1, R5	<b>Input Interface.</b> The test board is configured to accept a current through the SMA connector labeled INPT. An SC style packaged photodiode can be used in place of the INPT SMA for optical interfacing. By removing R1 and adding a 0 Ω short for R5, a second current can be applied to the IREF input (also SMA) for evaluating the ADL5306 in log-ratio applications.	IREF = INPT = Installed PD = Not Installed LK1 = Installed R5 = Open (Size 0603)
J1	<b>SC Style Photodiode</b>	J1 = Open

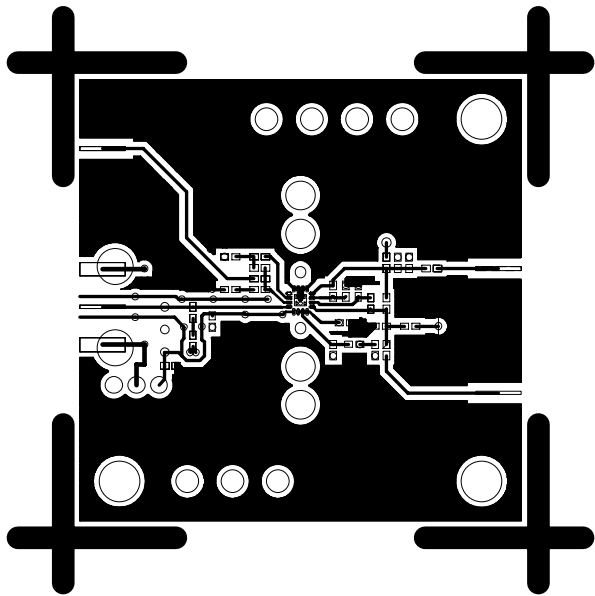


Figure 2. Component Side Layout

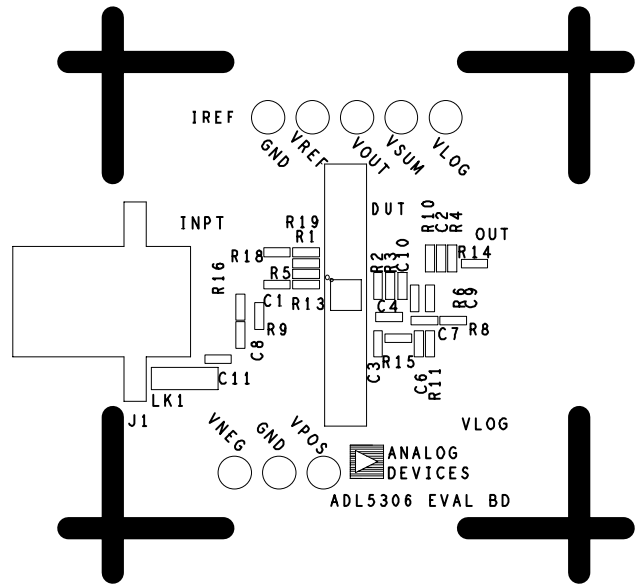


Figure 3. Component Side Silkscreen