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REVISION HISTORY

10/2017—Revision 0: Initial Version

QUICK START OPERATION

OVERVIEW

This section outlines the basic configuration of the [ADA4625-1](#) evaluation board to test basic functionality of the device. For first time users, quick start operation is the best option to begin using the evaluation board immediately.

The input signal is applied to the edge mounted SMA type radio frequency (RF) connectors (INN and INP). The output signal is accessible via the edge mounted SMA connector (VO).

ADDITIONAL EQUIPMENT NEEDED

- A signal generator
- A dual output dc power supply
- An oscilloscope with a bandwidth of at least 20 MHz
- Two SMA male to Bayonet Neill-Concelman (BNC) male cables
- Three banana plug to banana plug cables
- Optional 3 inch test hook jumper and SMA short

POWER SUPPLY CONFIGURATION

The banana jacks, designated by +VS, -VS, and GND, power the evaluation board. Connect the dc power with correct polarity and voltage. Reverse polarity or overvoltage can permanently damage the evaluation board. Permissible supply voltages range from 5 V to 36 V. Higher voltages may damage the amplifier. Decoupling capacitors of 10 μ F and 0.1 μ F come preinstalled on the board for ready operation.

INITIAL CONFIGURATION

To start the initial evaluation board configuration, use the following procedure:

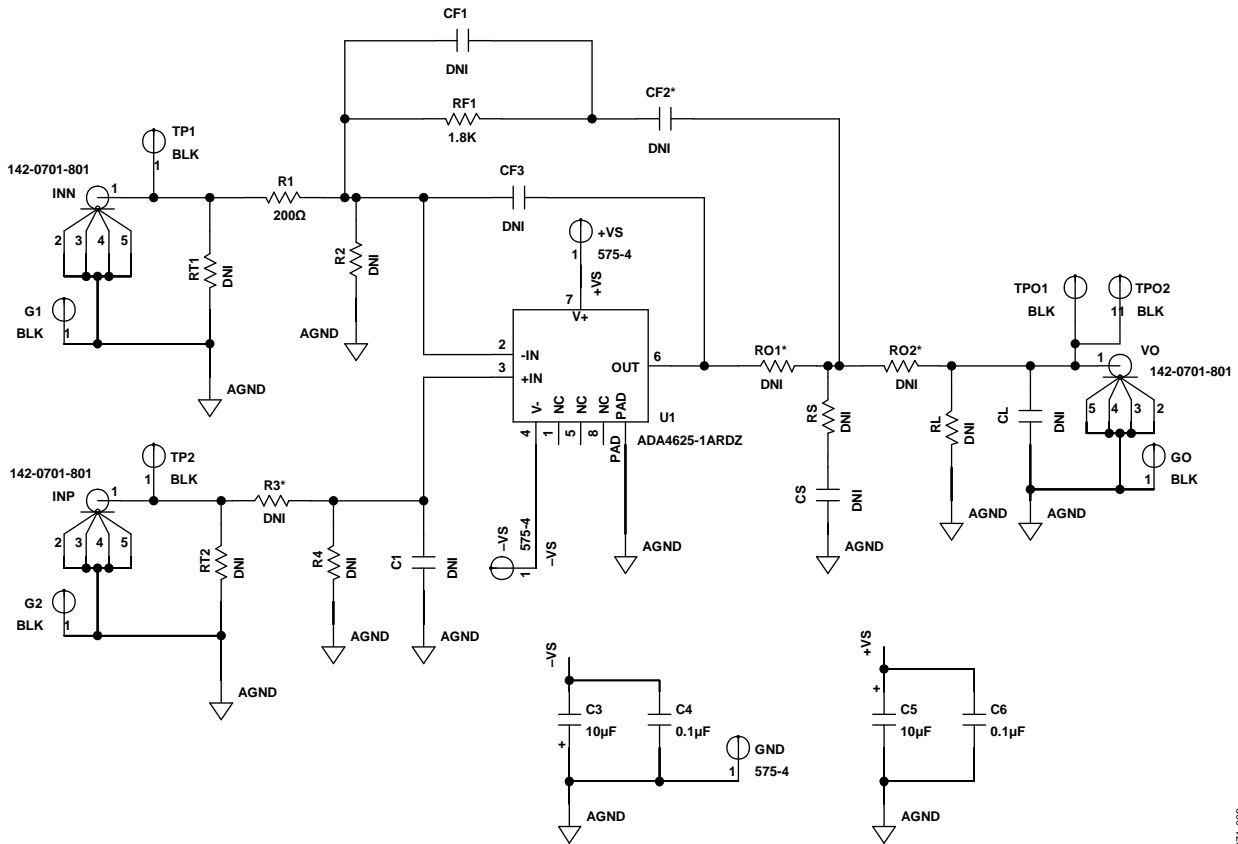
1. Ensure that the power supply is off. Using the banana to banana cables, connect the positive supply, negative supply, and ground to the banana jacks +VS, -VS, and GND, respectively.
2. Connect the signal source to INP or Test Point TP2 and connect INN to ground.
3. Connect the output SMA connector (VO) to the oscilloscope using an SMA to BNC cable. Set the oscilloscope to 1 M Ω input impedance.

POWER-UP PROCEDURE

After completing the initial configuration, use the following procedure to power up the board:

1. Set the V+ supply to 15 V and V- supply to -15 V.
2. Turn on the power supply. The typical supply current of the [ADA4625-1](#) is 4.0 mA. Current drawn from the power supply must not exceed 5 mA.
3. Configure the signal source to output a 1 kHz sine wave of 1 V p-p.
4. Enable the signal source. The oscilloscope must be able to measure a 10 V p-p sine wave at the output of the [ADA4625-1](#).

EVALUATION BOARD SCHEMATIC AND ARTWORK



NOTE: * THESE COMPONENTS ARE BY DEFAULT SHORTED WITH 0Ω RESISTOR.

Figure 3. Evaluation Board Schematic

16271-003

EVALUATION BOARD LAYOUT

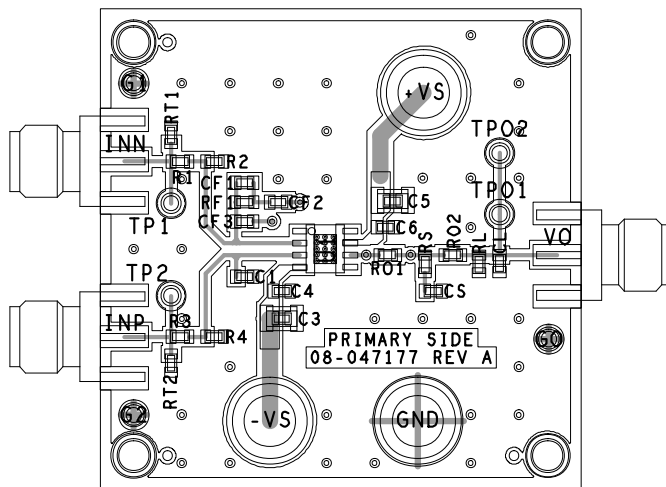


Figure 4. Component Side Layout

16271-004

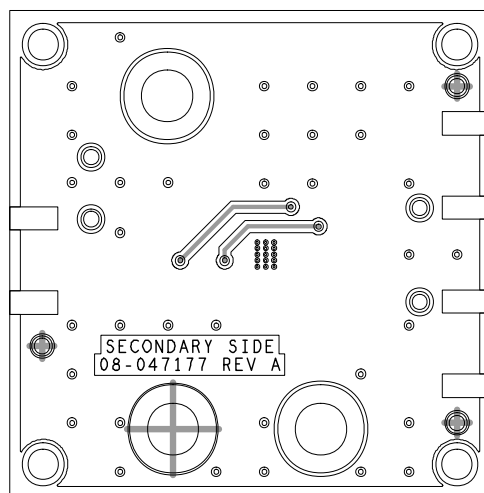


Figure 5. Circuit Side Layout

16271-005

ORDERING INFORMATION

BILL OF MATERIALS

Table 1.

Qty	Reference Designator	Description	Supplier	Part Number
1	U1	8-lead SOIC_N_EP	Analog Devices, Inc.	ADA4625-1ARDZ
2	C3, C5	Ceramic capacitors, X7R, 0603, 0.1 μ F, 100 V	Murata Manufacturing Co.	GRM188R72A104
2	C4, C6	Ceramic capacitors, X5R, 1206, 10 μ F, 50 V	Murata Manufacturing Co.	GRM31CR61H106
1	R1	200 Ω resistor	Panasonic	ERA-6AEB201V
1	RF	1.82 k Ω resistor	Panasonic	ERA-6YEB182V
6	C1, CF1, CF2, CF3, CS, CL	User defined capacitors; CF2 is shorted with a 0 Ω resistor		
9	RT1, RT2, R2, R3, R4, RO1, RO2, RS, RL	User defined resistors; R3, RO1, and RO2 are shorted with 0 Ω resistors		
3	INN, INP, VO	Coax SMA end launch	Cinch Connectivity Solutions	142-0701-801
7	G1, G2, GO, TP1, TP2, TPO1, TPO2	Conn-PCB, test points	Components Corporation	TP-104-01-00
3	+VS, -VS, GND	Connectors, banana jack	Keystone Electronics	575-4



ESD Caution

ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

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