**Document No. : 18-048515-01-b-1**

**Title : EV-LTC6655-REFZ Customer Evaluation Board Test Procedure**

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| REVISION HISTORY | | | | |
| **Revision** | **ECR #** | **Description of Change** | **Date** | **Author** |
| A | ECR-078860 | Initial Release | April 20, 2018 | Rainier Rosario |
| B | ECR-086181 | Eval Board Name Change | March 2019 | Estibaliz Sanz |

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| --- | --- |
| **Required Approvers** | |
| **Approver Roles** | **Approver Names** |
| Apps Engineer | Rainier Rosario |
| Apps Engineer | Estibaliz Sanz |
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## Equipment List

* Computer or laptop
* Mini-USB to USB Cable
* SDP Evaluation Board (SDP-B Required)
* EVAL-AD5791SDZ Evaluation board
* EV-LTC6655-REFZ Reference Board
* +15V , -15V, +5V DC Power supply
* Digital Multimeter

## SDP Setup

1. Download SDP EEPROM Programmer and install.  
   <ftp://ftp.analog.com/pub/PSA_Support/SDP/Release/SDPEEPROMProgrammer.zip>
2. Connect the EV-LTC6655-REFZ Reference Board (J1, J4, J9) to the EVAL-AD5791SDZ Evaluation board (J1, J4, J9), and connect the SDP-B Evaluation Board (CON A) to the EVAL-AD5791SDZ Evaluation board (J14) as shown in Figure 1.
3. Connect mini USB cable to SDP-B Evaluation Board (J1) and to USB port on the test PC.

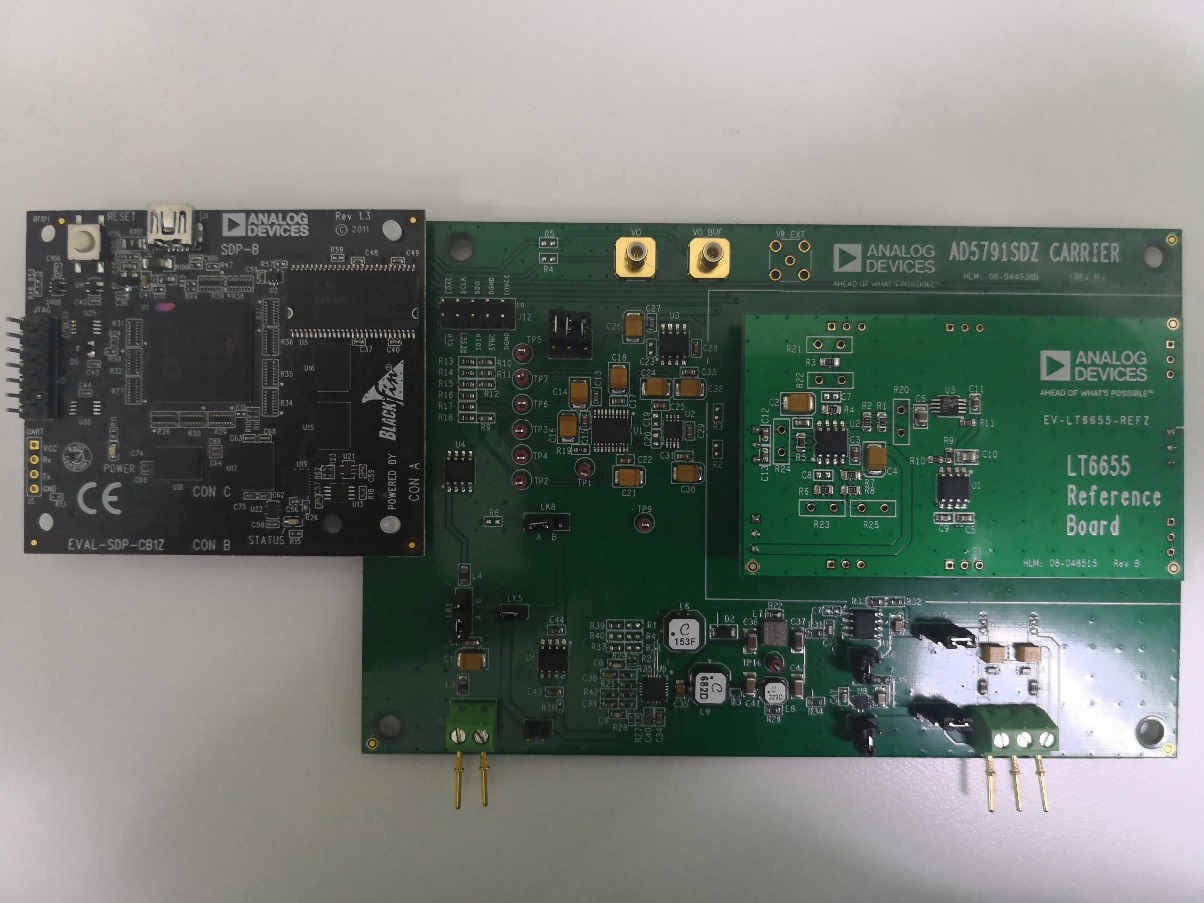


Figure 1: EV-LTC6655-REFZ Hardware Setup

## Program EEPROM ID

1. Run SDP EEPROM PROGRAMMER
2. Program as seen below in Figure 2.
   1. Connector = Connector A
   2. Load Existing
   3. EEPROM Address = 0x51
   4. Browse: Select file provided “AD5791\_EEPROM.dat”
   5. Click on the “Write File to EEPROM” button.

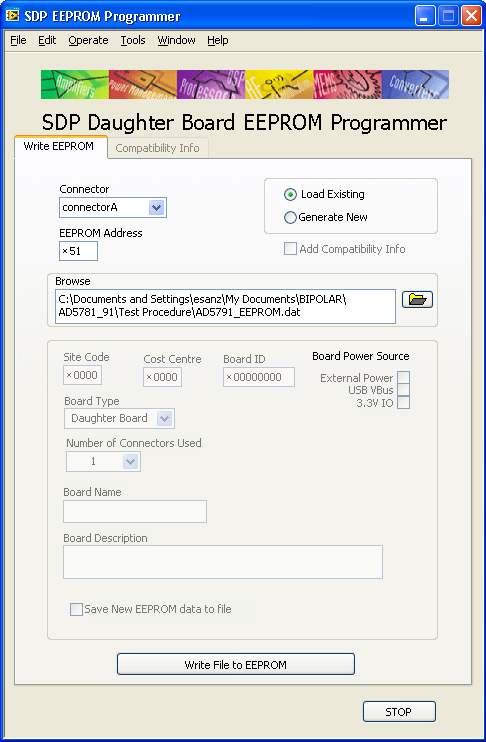


Figure 2: EVAL-AD5791SDZ EEPROM Programmer Setup

## EV-LTC6655-REFZ Test Software Setup and Test

1. Install the test software from CD available for the EVAL-AD5791SDZ Evaluation Kit. Run the “setup.exe” file.
2. RESET the SDP-B board using the RESET button on this board.
3. Launch software from Start – Programs – Analog Devices – AD5791.

09290-003

Figure 3: EVAL-AD5791SDZ EVB Main Window

09290-004

Figure 4: EVAL-AD5791SDZ EVB Program Voltage Tab Window

## EV-LTC6655-REFZ Test Hardware Setup, Test Software Setup and Test

1. Set the link options on the EVAL-AD5791SDZ evaluation board for the required operating setup before using the board as in Table 1.

|  |  |
| --- | --- |
| **Link Number** | **Default Configuration** |
| LK1 | A |
| LK2 | Removed |
| LK3 | Removed |
| LK4 | Removed |
| LK5 | Inserted |
| LK6 | Removed |
| LK7 | Removed |
| LK8 | B |
| LK9 | A |
| LK10 | A |
| LK11 | Removed |

Table 2: Link Option Setup

1. Connect +3.3V and GND to connector J11 on the EVAL-AD5791SDZ board.
2. Connect +15V, -15V and GND to connector J13 on the EVAL-AD5791SDZ board.
3. Measure the voltages at the following points on the EV-LTC6655-REFZ and make sure they are as below. Refer to Figure 5 for the test points details.
   1. VREFP = +10V
   2. VREFN = -10V
   3. VDD = -15V
   4. VSS = +15V

If this is not correct, check all link connections with Table 1 and confirm Single and Dual supply connections are connected properly.

1. Launch software from Start – Programs – Analog Devices – AD5791.
2. Click Program Voltage Tab, see Figure 5.
3. Type +5V into Program Voltage input and hit enter on keyboard.
4. Measure +5V on digital multimeter at VO SMB connector on the EVAL-AD5791SDZ board.
5. After the board is tested, exit the program.

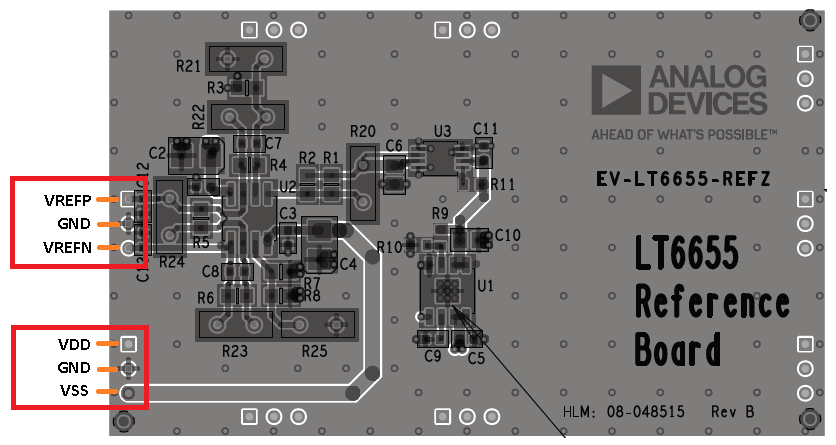


Figure 5: EVAL-LTC6655-REFZ Test Points Description