

MAX9278A/MAX9282A Evaluation Kits

Evaluate: MAX9278A/MAX9282A

General Description

The MAX9278A/MAX9282A coax evaluation kits (EV kit) provide a proven design to evaluate the MAX9278A/MAX9282A high-bandwidth gigabit multimedia serial link (GMSL) deserializers with spread spectrum and full-duplex control channel with the use of a standard FAKRA coaxial cable. The EV kit also includes Windows XP®, Windows Vista®, and Windows 7-compatible software that provides a simple graphical-user interface (GUI) for exercising the features of the device. The EV kit comes with a MAX9278AGTJ/V+ or MAX9282AGTJ/V+ installed.

For complete GMSL evaluation, using a standard FAKRA coaxial cable, order the MAX9278A/MAX9282A coax EV kit and a companion serializer board (MAX9275/MAX9279 coax EV kit referenced in this document). For evaluating with STP cable, also order the MAXCOAX2STP-HSD adapter kit and refer to its data sheet. Only one adapter kit is required per link, connecting the serializer and deserializer (SerDes) boards.

Ordering Information appears at end of data sheet.

Items Included in the EV Kit Package

| DESCRIPTION | QTY |
|--|-----|
| MAX9278A coax EV kit or MAX9282A coax EV kit board | 1 |
| USB cable | 1 |

Features

- Accepts GMSL Serial Data through FAKRA Connectors and Provides LVDS and Parallel Outputs
- Windows XP-, Windows Vista-, and Windows 7-Compatible Software
- USB-PC Connection (Cable Included)
- USB Powered
- Proven PCB Layout
- Fully Assembled and Tested

Note: In the following sections, MAX9278A/80A and the term “deserializer” refer to the MAX9278A and MAX9282A ICs and MAX9275/79 and the term “serializer” refer to the MAX9275 and MAX9279 ICs. The term SerDes refers to serializer/deserializer.

Note: This document applies to both coax and STP EV kits. This document covers coax cables, but the information provided applies equally to STP cables.

MAX9278A/MAX9282A EV Kit Files

| FILE | DESCRIPTION |
|---------------------------------|--|
| MAXSerDesEV-D_Vxxxx_Install.EXE | Installs the EV kit files in your computer |
| MAXSerDesEV-D.EXE | Graphical user interface (GUI) application |
| CDM20600.EXE | Installs the USB device driver |
| USB_Driver_Help_200.PDF | USB driver installation help file |

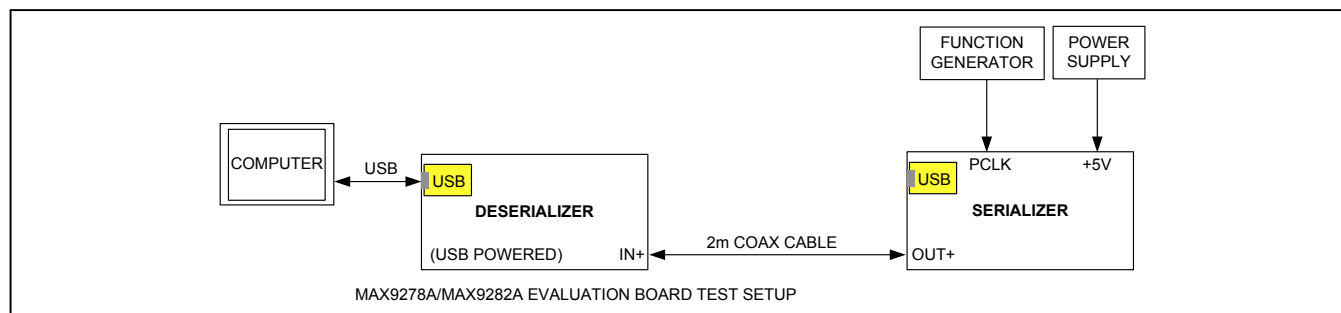


Figure 1. Deserializer Test Setup Block Diagram

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Quick Start

Required Equipment

- MAX9278A/MAX9282A coax EV kit
- MAX9275/MAX9279 coax EV kit
- 2m Rosenberger FAKRA cable assembly (included with the deserializer EV kit)
- Function generator
- User-supplied Windows XP, Windows Vista, or Windows 7 PC with a spare USB port (direct 500mA connection required; do not use a bus-powered hub)
- 5V DC, 500mA power supply

Note: In the following sections, software-related items are identified by bolding. Text in **bold** refers to items directly from the EV kit software. Text in **bold and underlined** refers to items from the Windows operating system.

Procedure

The EV kit is fully assembled and tested. Follow the steps below to verify board operation:

- 1) Download and install the latest version of the EV kit software from www.maximintegrated.com:
 - Search for **MAX9278**. Then select **MAX9278 | Design Resources | Software | GMSL SerDes Evaluation Kit Software-Dallas uC | MAXSerDesEV-D_Vxxxx_Install.zip**.
 - Connect the USB cable from the PC to the deserializer board. A Windows message appears when connecting the EV kit board to the PC for the first time. Each version of Windows has a slightly different message. If you see a Windows message stating **ready to use**, proceed to the next step; otherwise, open the USB driver installation help file PDF to verify that the USB driver was installed successfully.
- 2) Verify that jumpers on the deserializer board are in their default positions, as shown in [Figure 12](#).
- 3) Verify that jumpers on the serializer board are in their default positions, as shown in [Figure 13](#).
- 4) Complete system setup, as shown in [Figure 1](#).
 - Connect FAKRA cable from OUT+ terminal on serializer board to IN+ terminal on deserializer board.
 - Connect function generator output to MAX9275/MAX9279 EV kit header H1_PCLK_IN.
 - Connect power supply to +5VIN/GND terminals on serializer board.
- 5) Turn on power supply and function generator.
- 6) Verify that LED_PWR on the EV kit turns on, indicating that deserializer board is powered.
- 7) Verify that LED_PWR on the MAX9275/MAX9279 EV kit turns on, indicating that serializer board is powered.
 - Verify that LED10 (LOCK) on the deserializer board turns on, indicating that the link has been successfully established. If LED_LOCK is off or LED_ERROR is on, go to the [Troubleshooting](#) section at the end of this document and fix the problem before continuing.
- 8) Start the EV kit software from **Start | Programs | Maxim Integrated | MAXSerDesEV-D | MAXSerDesEV-D**.
- 9) The **Configuration Settings** window opens ([Figure 2](#)) and the GUI automatically searches for any active listener in both I²C and UART mode and identifies the valid GMSL products. Once any valid device is identified, the corresponding configuration jumpers are displayed to help users configure the SerDes.
- 10) If an operating evaluation board with a Dallas microcontroller is not found, a window opens warning as such (see [Figure 3](#)). Press **OK** to continue and start the GUI anyway, or press **Cancel** to terminate the application. See the [Troubleshooting](#) section at the end of this document to fix the problem before continuing. When an operating Dallas microcontroller is found, the GUI searches for active listeners with known **Device ID** code. If found, the GUI identifies the device under test (DUT) and displays the corresponding list of jumpers on the EV board that must be set for the board to operate as desired.
- 11) Jumper settings in the **Configuration Settings** window are for user reference as a guide to properly configure the evaluation board. Jumper selection on the GUI does not affect the board's operation.
- 12) While the **Configuration Settings** window is open, the **Identify Devices** button can be pressed to search for devices connected. If the devices cannot be identified, the most likely cause is an improper jumper setting. See the [Troubleshooting](#) section at the end of this document to fix the problem before continuing.
- 13) Press the **Connect** button to move on to the **Evaluation Kit** window ([Figure 4](#)).
- 14) Press the **Read All** button to read all registers on the SerDes.

Detailed Description of Software

To start the EV kit GUI, select **Start | Programs | Maxim Integrated | MAXSerDesEV-D | MAXSerDesEVGUI-D**.

Configuration Settings Window

The **Configuration Settings** window (Figure 2) is the first window that opens after program launch. It allows the user to specify evaluation board setup and mode of operation.

Controller Group Box

In the **Controller** group box, select **Coax** or **STP** from the **LinkType** drop-down list, **I2C** or **UART** from the **Bus** drop-down list, and whether the **Serializer** or **Deserializer** should connect to the USB controller. Upon changing any of these parameters, any conflicting jumper settings are highlighted, guiding the user to check and make the corresponding changes to the evaluation boards. Only **LinkType** and **Device Address** selections on the **Configuration Settings** window affect the EV kit operation. Other items, including jumper selection, are for user reference only.

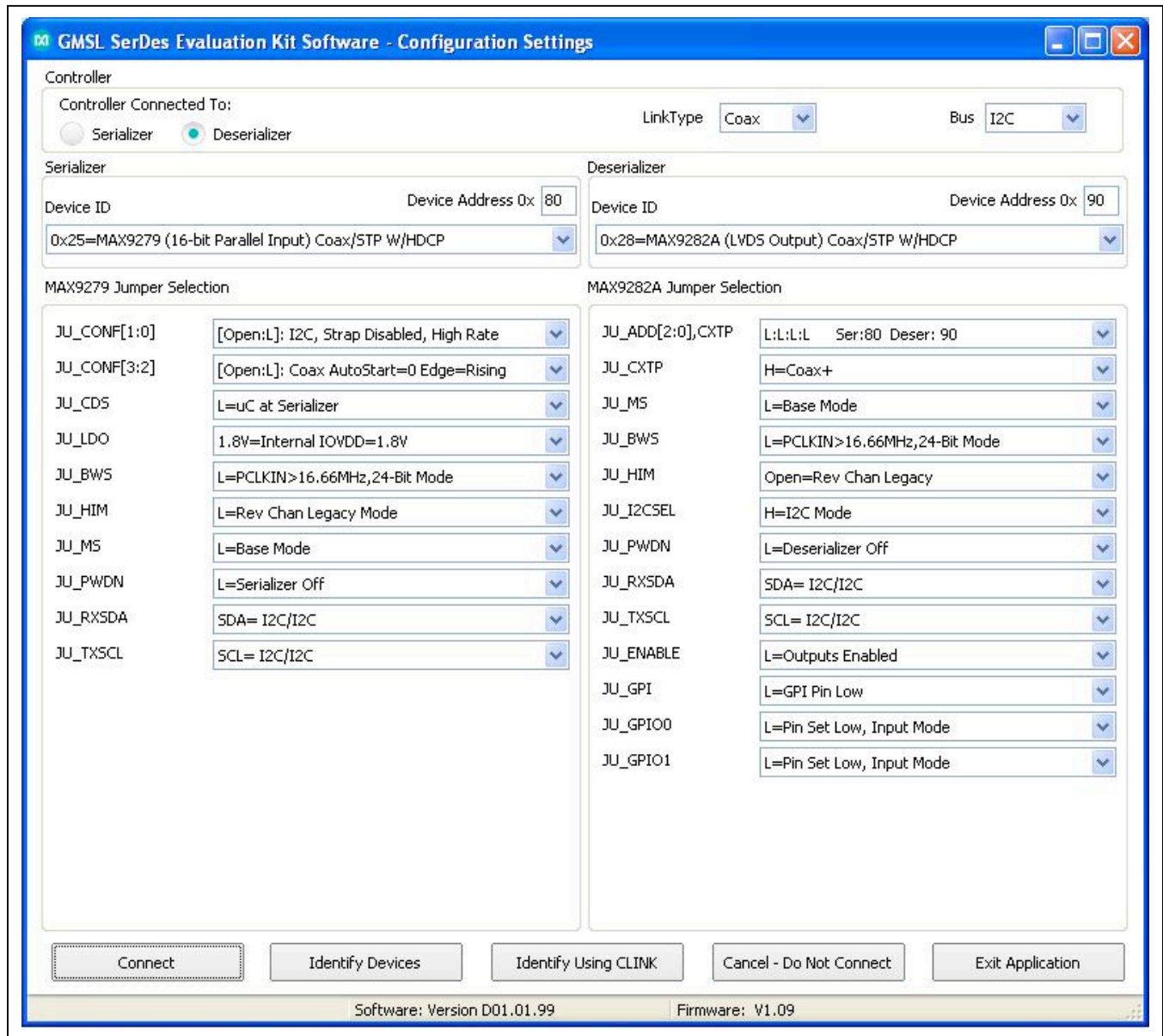


Figure 2. MAXSerDesEV-D Evaluation Kit Software (Configuration Settings Window)

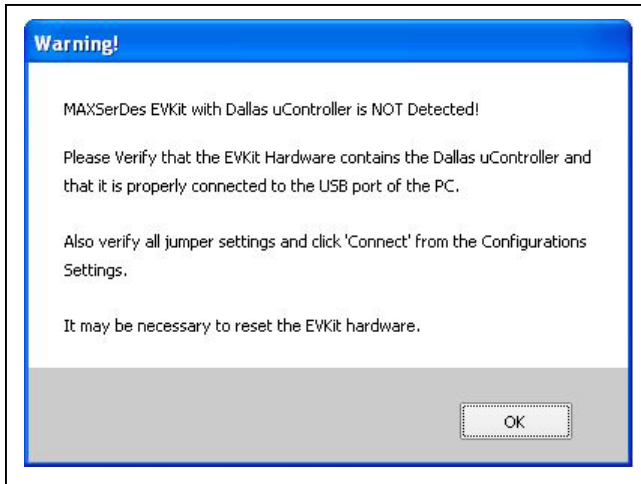


Figure 3. MAXSerDesEV-D Evaluation Kit Software (Warning!) No uC Found

Serializer and Deserializer Jumper Selection Blocks

The **Serializer Jumper Selection** and **Deserializer Jumper Selection** blocks list jumpers for the selected **Device IDs** and display the correct shunt positions based on the conditions selected in the **Controller** group box.

Identify Devices Button

The **Identify Devices** button causes the GUI to scan the system and hunt for slave addresses selectable by the SerDes input address pins. Upon successful communication, the identified **Device ID** and the corresponding jumper lists are displayed on the SerDes block. It is also possible to select a device from the list in the **Device ID** drop-down list and manually change the slave address in the **Device Address** edit box. It is a good practice to utilize the **Identify Devices** function and verify communication with the DUTs before attempting to **Connect**.

[Figure 12](#) and [Figure 13](#) show jumper settings on the SerDes PCBs for coax cable and I²C communication with the USB controller connected to the deserializer board. Refer the respective deserializer IC data sheet for detailed configuration information. See [Table 1](#) for PCB jumper descriptions.

Connect Button

The **Connect** button opens up the **Evaluation Kit** window. The GUI reads the SerDes registers and updates the register maps for both. Successful register map updates are indicated by green LED indicators. In case of a communication problem, the LED indicators turn red.

Cancel - Do not Connect Button

The **Cancel - Do not Connect** button opens the **Evaluation Kit** window without attempting to connect to the on-board microcontroller. Although there is no communication with the microcontroller, all functions and tabs corresponding to the selected **Device IDs** become active once there.

Evaluation Kit Window

The **Evaluation Kit** window shown in [Figure 4](#) provides access to all internal functions of the DUTs by means of reading and writing registers through different tabs to allow the user to evaluate various functions of the SerDes.

The **Read All** button updates the SerDes' device maps by reading the internal registers of the DUTs.

The **Serializer** group box provides pushbuttons to update the serializer register map from the DUT using the **Read all MAX9279** button. The **Load** button reads and updates registers from a previously saved file. The **Save** button saves the current register contents into a new file for future reference.

The **Deserializer** group box provides pushbuttons to update the deserializer's register map from the DUT using the **Read All MAX9282A** button. The **Load** button reads and updates registers from a previously saved file. The **Save** button saves the current register contents into a new file for future reference.

The **Open Configuration** button opens the **Configuration Settings** window for any configuration change. Use the **Open Configuration** and **Connect** buttons to go back and forth between the **Configuration Settings** window and the **Evaluation Kit** window.

The **Wake Up** button applies the register write sequence described in the IC data sheets to wake the DUTs from sleep mode.

MAX9279 Tab

The **MAX9279** tab (Figure 4) lists the serializer's bitmaps. The **Read** and **Write** buttons in each register group box allow read/write access for each bit or group of bits that specify a function or condition, as defined in the serializer

IC data sheet. The color of the small LED indicator next to the **Read/Write** buttons indicates the communication status. Green indicates successful communication and red indicates failed communication.

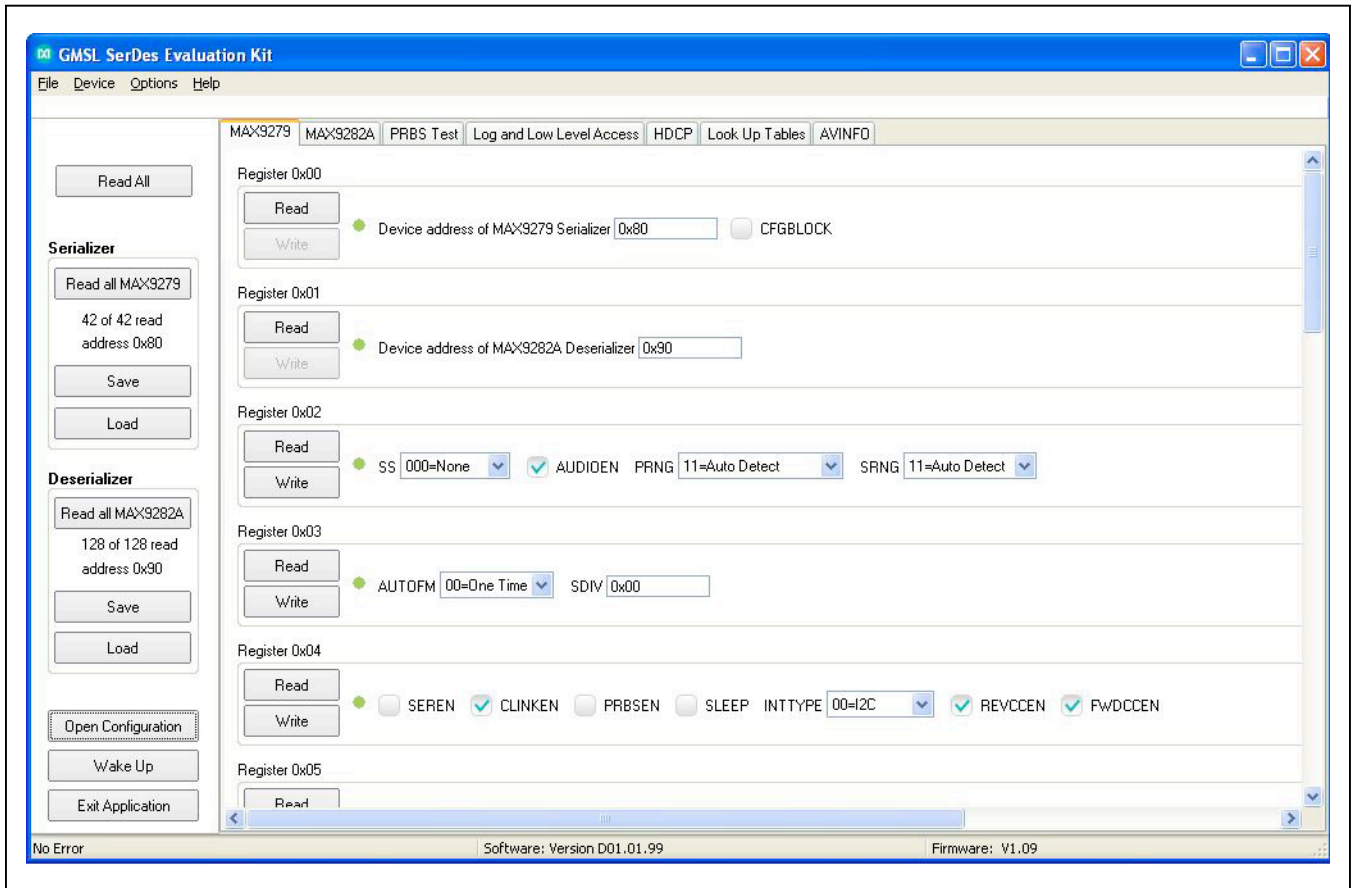


Figure 4. MAXSerDesEV-D Evaluation Kit Software (MAX9279 Tab)

MAX9282A Tab

The **MAX9282A** tab (Figure 5) lists the deserializer's registers and bitmaps. The **Read** and **Write** buttons in each register group box allow read/write access for each bit or group of bits that specify a function or

condition, as defined in the deserializer IC data sheet. The color of the small LED indicator next to the **Read/Write** buttons indicates the communication status. Green indicates successful communication and red indicates failed communication.

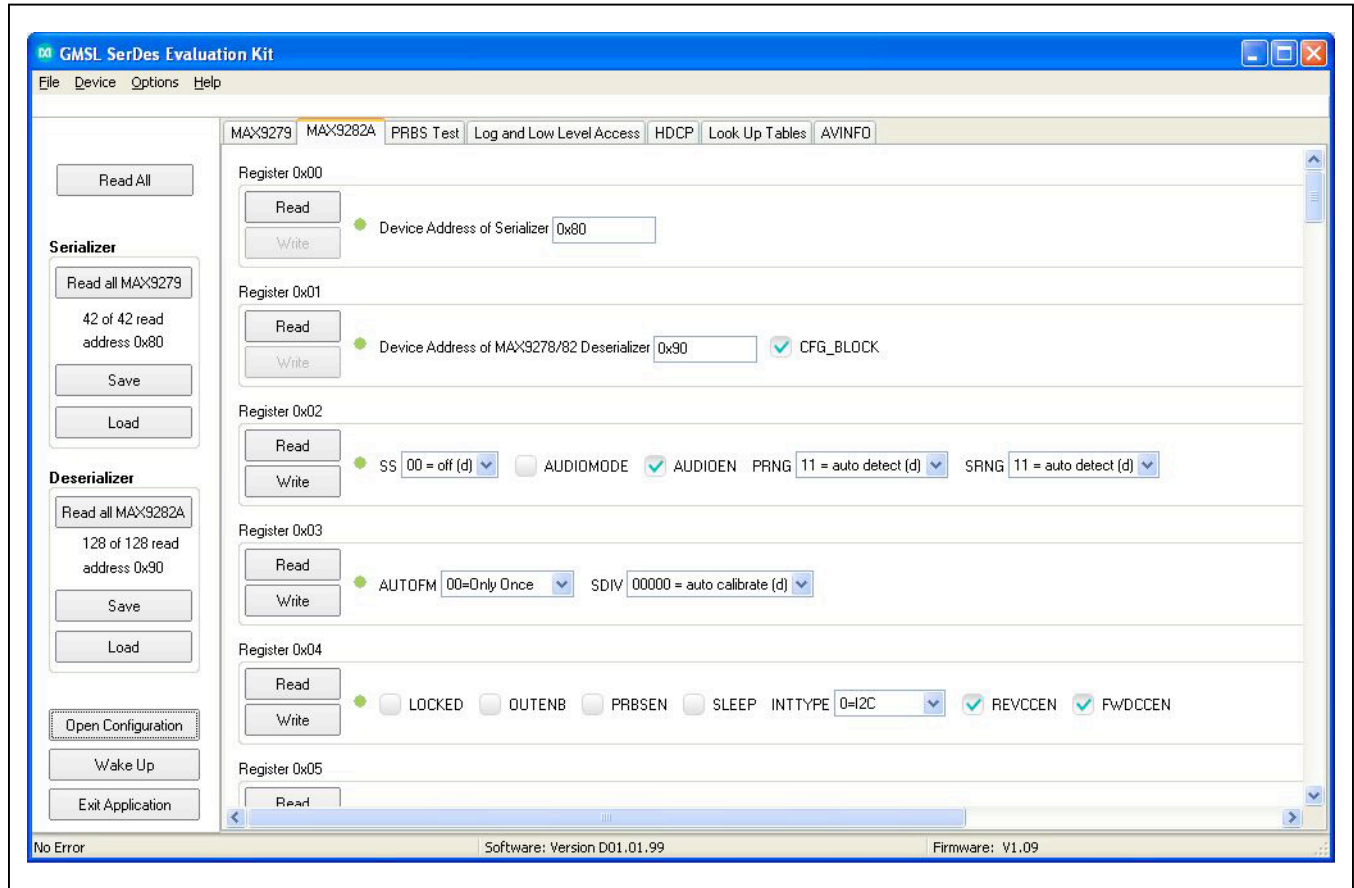


Figure 5. MAXSerDesEV-D Evaluation Kit Software (MAX9282A Tab)

PRBS Test Tab

The **PRBS Test** tab (Figure 6) facilitates pseudorandom-bit sequence (PRBS) testing. Upon pressing the **Start** button, the SerDes registers are programmed (per a defined sequence in the IC data sheets) to perform a PRBS error-rate test. Enter the test duration (maximum

32,767s = 9.1hrs) in the **Duration** edit box and press **Start** to begin the test. At the end of the specified elapse time, the number of bit errors are read from the **PRBSERR** register and displayed in the **PRBS Error Counter** box.

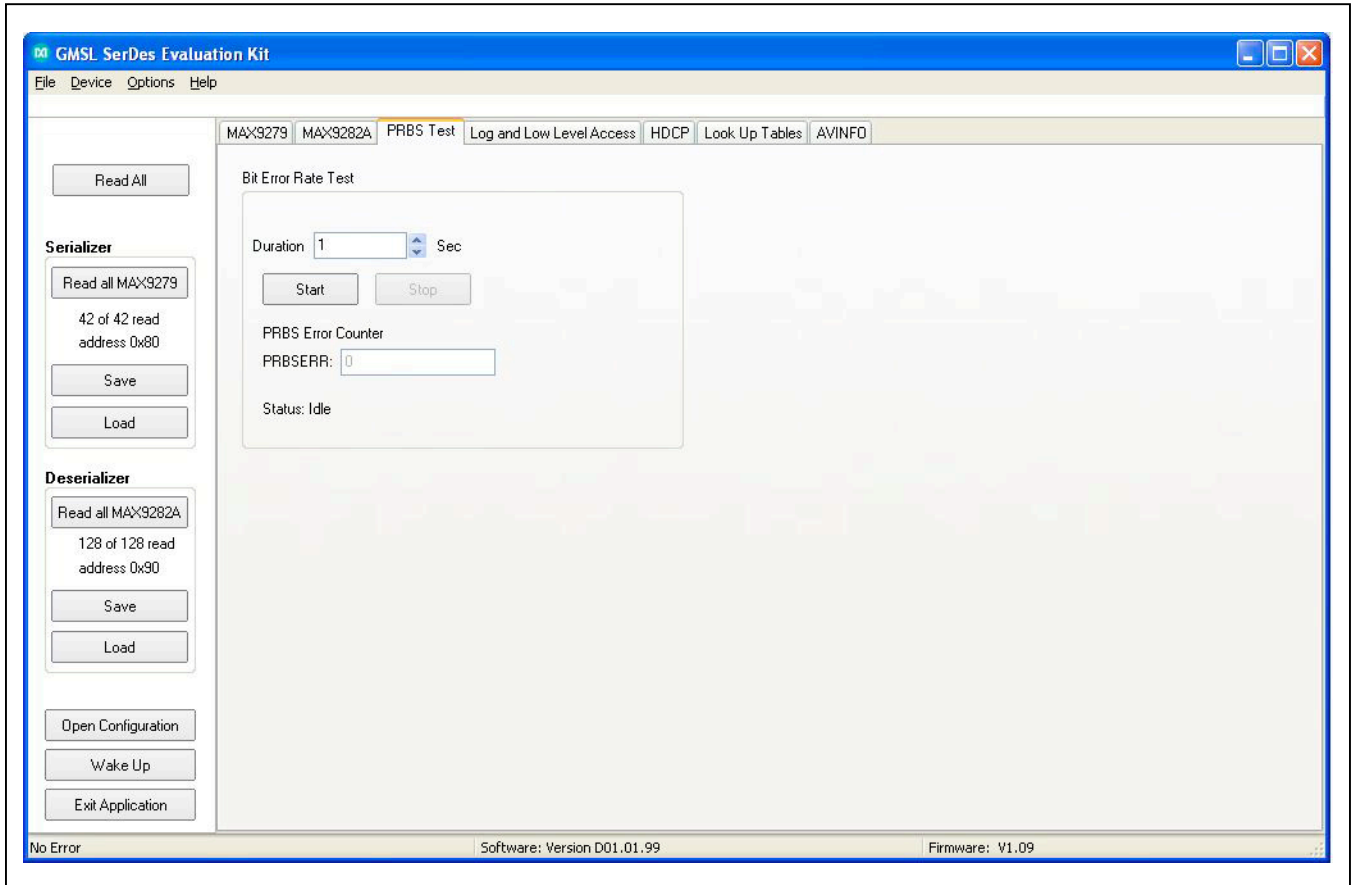


Figure 6. MAXSerDesEV-D Evaluation Kit Software (PRBS Test Tab)

Log and Low Level Access Tab

The **Log and Low Level Access** tab (Figure 7) logs all activities between the GUI and DUTs.

The **Register Access** group box allows 1-byte read or writes of the specified **Device Address** and **Register Address**. Press the **Send String to EVKIT** button

to communicate with devices that are not register-based (such as the MAX7324). User-supplied devices requiring other interface protocols must use the **Raw TX byte codes** to communicate. Note that in bypass mode, raw data is passed to the user-supplied slave device directly without modification.

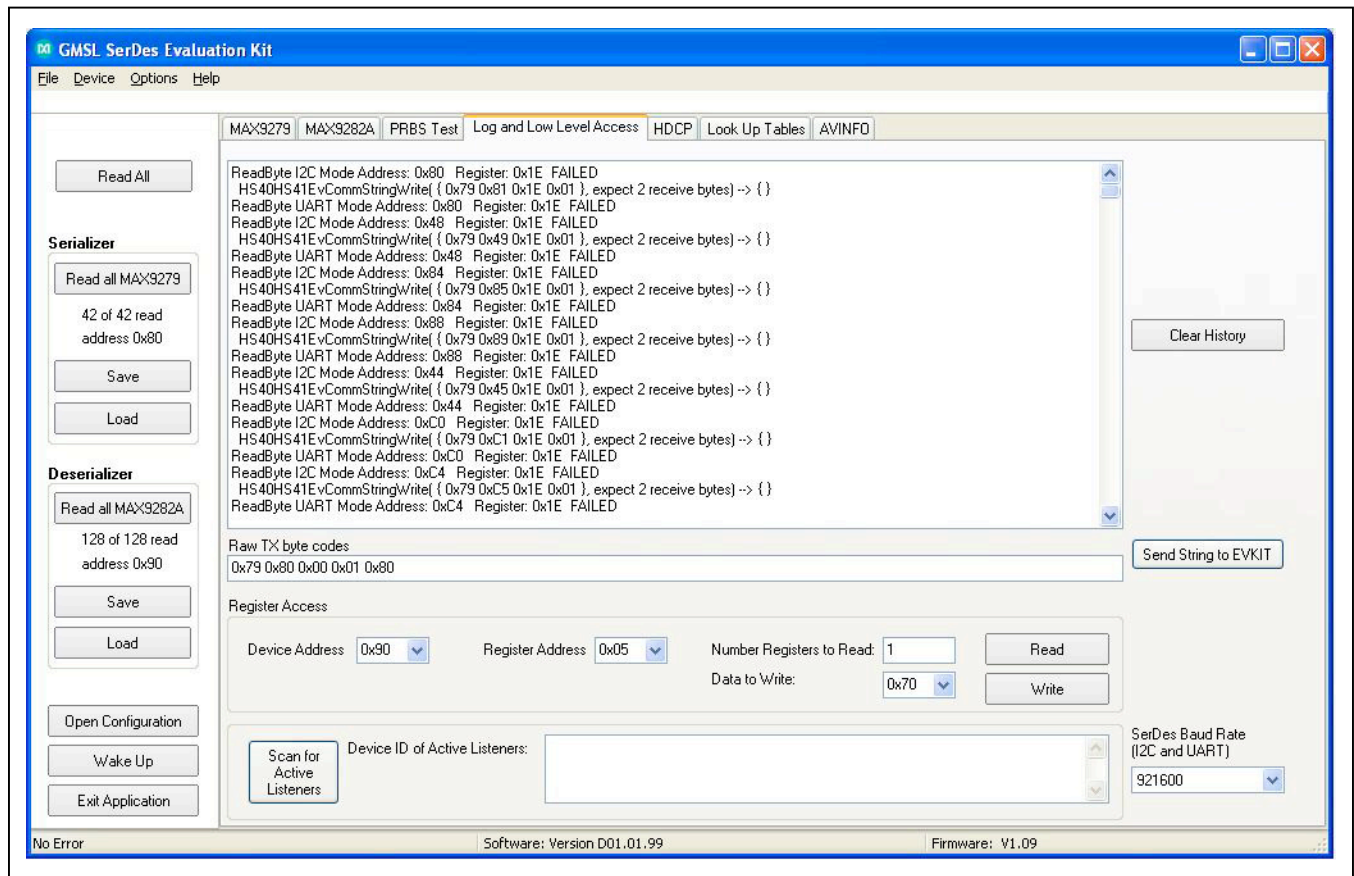


Figure 7. MAXSerDesEV-D Evaluation Kit Software (Log and Low Level Access Tab)

HDCP Tab

The **HDCP** tab (Figure 8) is viewable only for SerDes that support the HDCP function. The HDCP registers of both SerDes are listed side-by-side with **Read** and **Write** buttons for each register. **Authenticate** and **Enable**

Encryption pushbuttons initiate the HDCP verification process. At the end of the operation, the color of the LED indicator turns green to indicate success or red to indicate failure of the function. **Note:** This tab is only functional for DUTs that support the HDCP function.

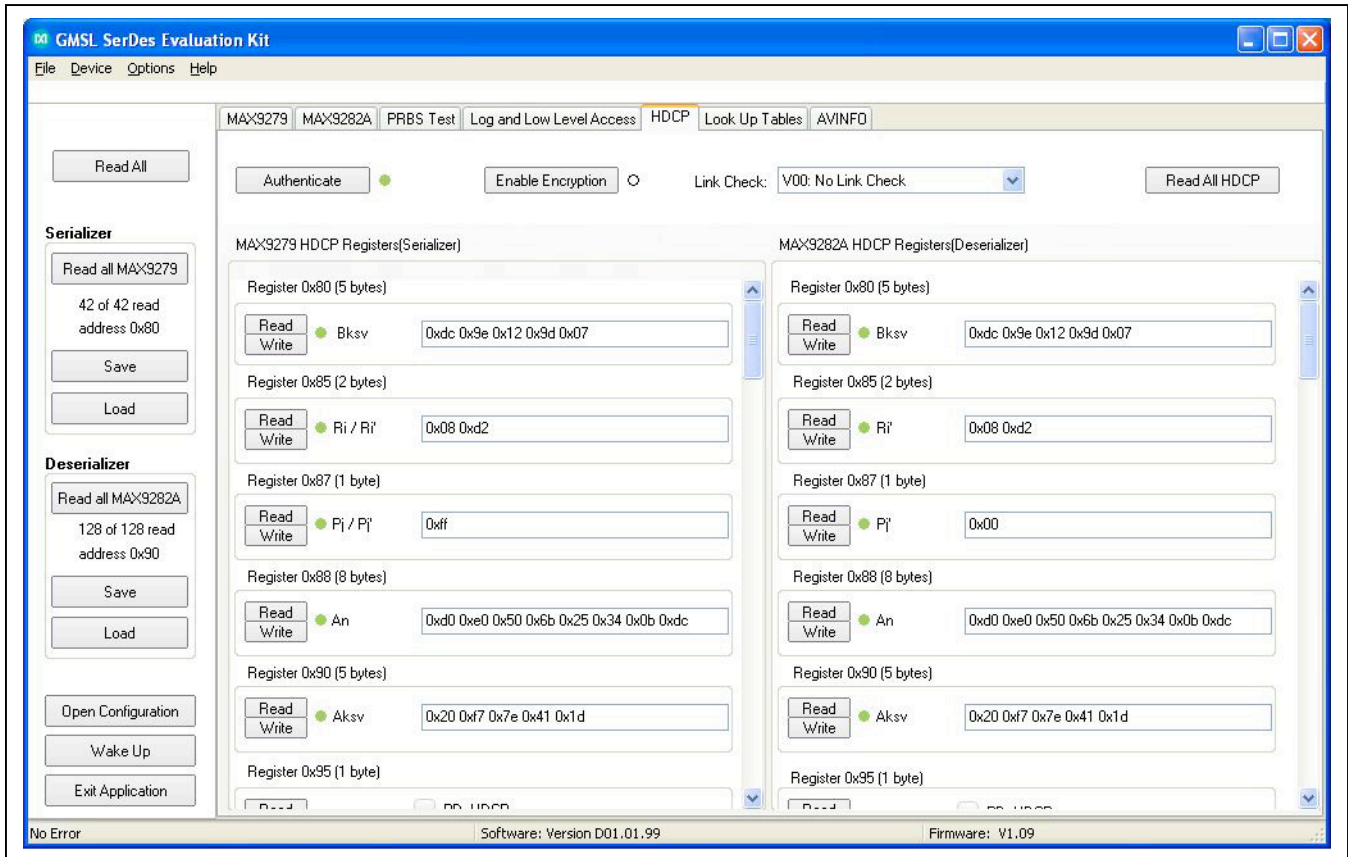


Figure 8. MAXSerDesEV-D Evaluation Kit Software (HDCP Tab)

Look Up Tables Tab

The **Look Up Tables** tab (Figure 9) provides access to the lookup tables (LUTs) of the deserializer. Use this tab to program, view, and edit the LUT settings of the red, green, and blue colors for color translation. LUT content edits can be performed on the entire 256 bytes of all three colors, of an individual color, or individual pixel of any color table.

The LUT contents can be saved in a .csv file to be used as a template or can be uploaded from an existing file. Sample LUT content is provided in the evaluation kit GUI.

If any of the **Save to File** or **Read from File** functions are executed, the operation progress is shown in the **Read/Write Progress Window** (Figure 10).

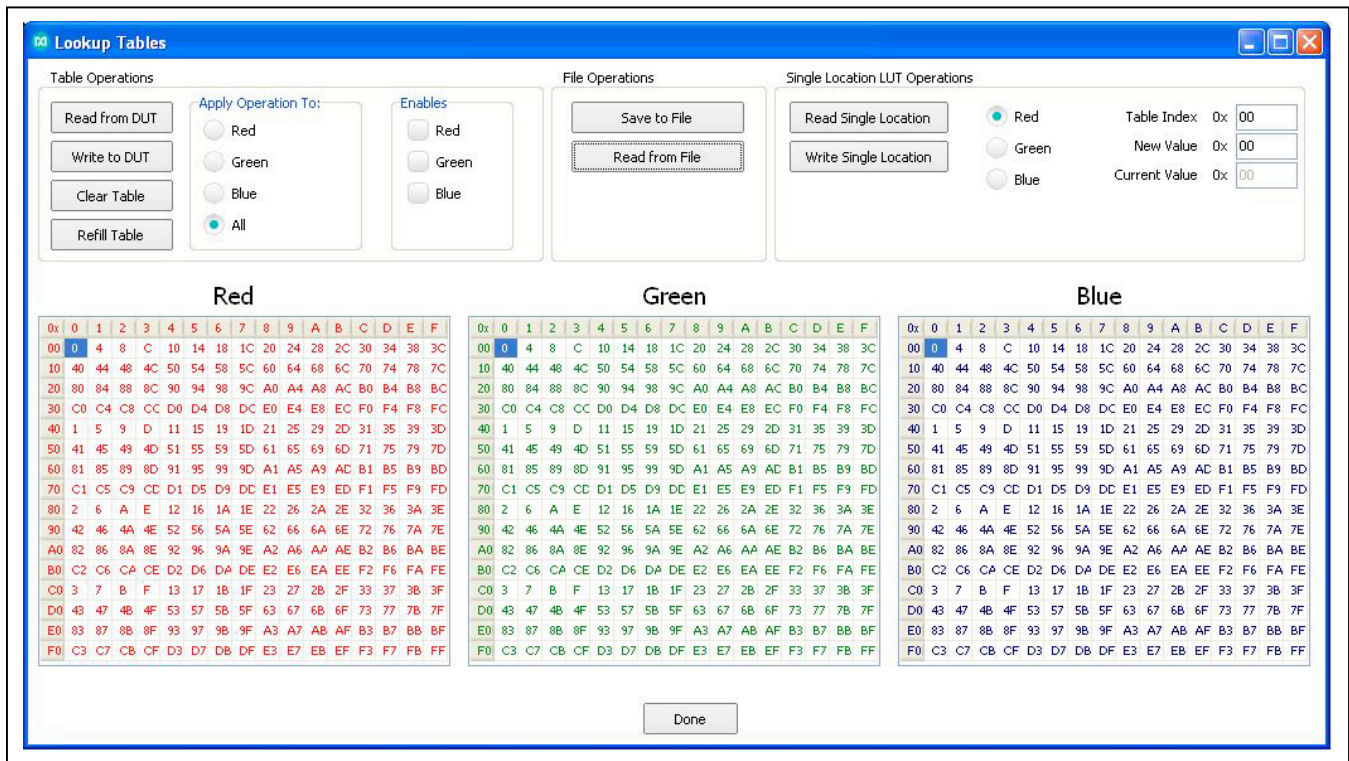


Figure 9. MAX9278A/MAX9282A Deserializers (Initial Jumper Settings for Coax Link and I²C Communication)

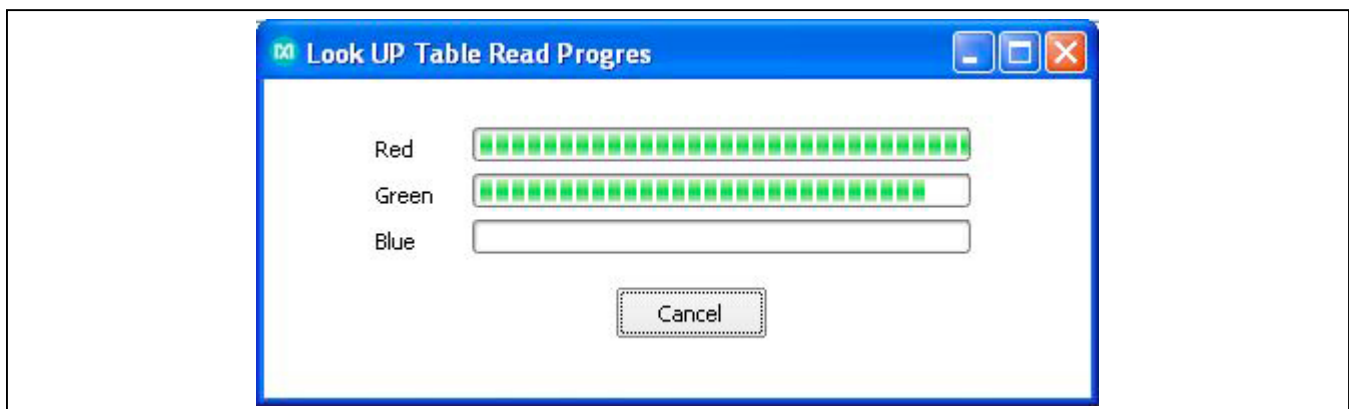


Figure 10. MAXSerDesEV-D Evaluation Kit Software (Look Up Tables Read/Wrote {Read/Write Progress Window—relevant only to deserializers with image-enhancing capability)

AVINFO Tab

The **AVINFO** tab (Figure 11) provides easy read/write access to the general-purpose registers for storing user information. These registers are not associated with any of the IC functions.

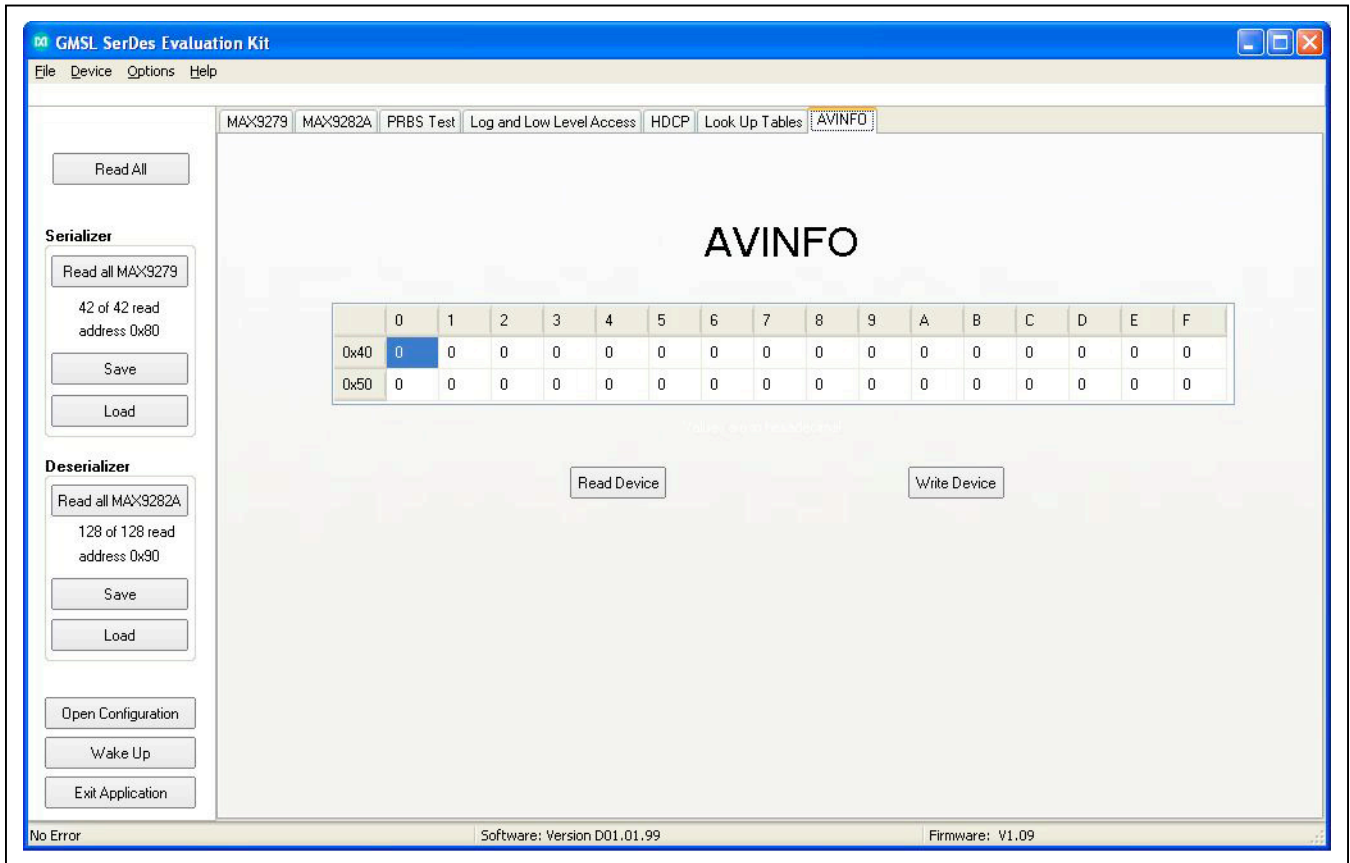


Figure 11. MAXSerDesEV-D Evaluation Kit Software (AVINFO Tab)

Detailed Description of Firmware

The DS89C450 microcontroller (U12) runs custom firmware that ensures reliable communication between the PC and DUTs. The firmware records 9-bit even-parity data received from the USB interface while RTS is set, and plays back the 9-bit data with 1.5 stop bits timing when RTS is cleared. Data received by the DUTs is immediately relayed to the USB port.

Detailed Description of Hardware

The MAX9278A/MAX9282A coax EV kit provides a proven design and layout for the GMSL deserializers with the use of a standard FAKRA coax cable. On-board level translators and an easy-to-use USB-PC connection are included on the EV kit.

The deserializer EV kit board layout is divided into three principal sections:

- 1) Power-supply circuitry (on-board LDO regulators U2 and U3 power the AVDD, DVDD, and IOVDD supplies from +5VIN)
- 2) MAX9278A/MAX9282A and support components
- 3) Microcontrollers (U10, U12) and support components

On-Board USB Interface

The EV kit board provides UART and I²C interface (through U12 and U14), which is intended to operate while both SerDes boards are powered and properly configured.

User-Supplied Interface

To use the EV kit with a user-supplied interface, connect “external” controller signals to the corresponding pins on the EXT_UC (J12) header. If the signal level of the external controller is different from the on-board AVDD, then remove the J16 shunt and connect an external controller V_{DD} signal to the J16 header as well.

Power-Supply Block

The EV kit can be powered from the USB port, a 5V power supply, a 12V AC adapter jack, or dedicated power source for each of the AVDD, DVDD, and IOVDD signals. Header VIN selects between the 5V USB supply, +5VIN applied on the +5VIN (J39) wire loop, or the regulator (which is sourced from the 12V), and then the on-board LDOs generate the AVDD, DVDD, and IOVDD voltages required by the DUTs.

To test the DUTs with voltage levels different from the on-board-generated AVDD, DVDD, and IOVDD levels, move the shunts on the AVDD, DVDD, and IOVDD headers from the INT to EXT positions and apply the desired voltages on the corresponding AVDD_EXT, DVDD_EXT, and IOVDD_EXT terminals.

Table 1. Jumper Description

| JUMPER | SIGNAL | SHUNT | FUNCTION |
|--------|--------------|--------|--|
| J1 | IN+ | — | GMSL positive input |
| J2 | IN- | — | GMSL negative input |
| J4 | UC_PWR | VIN | Power UC with the board power |
| | | USB+5V | Power UC from USB power |
| J6 | I_IOVDD | Short* | Connect ammeter to measure DUT IOVDD current |
| J7 | 12V jack | — | 12V AC adapter jack |
| J9 | ENABLE | Short* | Pull MAX9276 ENABLE pin high |
| J11 | LFL- | Open* | Line fault checked by DUT (local) on IN- |
| J12 | EXT_UC | — | External μC connections |
| J13 | LFL+ | Short* | Line fault checked by DUT (local) on IN+ |
| J14 | LVDS outputs | — | LVDS outputs header |
| J16 | AVDD66 | Short* | External UC signals level shifter V-high |
| J17 | UCSDAPU | Short* | External UC SDA pullup |
| J22 | TXSCLPU | Short* | DUTs TX/SCL pullup |
| J23 | RXSDAPU | Short* | DUTs RX/SDA pullup |

Table 1. Jumper Description (continued)

| JUMPER | SIGNAL | SHUNT | FUNCTION |
|--------|-----------|--------|---|
| J24 | AUTO571 | Short* | Pull MAX9277 AUTOS pin high |
| J29 | I_DVDD | Short* | Connect ammeter to measure DUT DVDD current |
| J30 | I_AVDD | Short* | Connect ammeter to measure DUT AVDD current |
| J35 | UCSCLPU | Short* | External UC SCL pullup |
| J36 | GND | — | GND terminal |
| J37 | AVDD_EXT | — | Terminal to apply external AVDD voltage |
| J38 | DVDD_EXT | — | Terminal to apply external DVDD voltage |
| J39 | +5VIN | — | +5VIN terminal |
| J40 | IOVDD_EXT | — | Terminal to apply external IOVDD voltage |
| J47 | H_BRIDGE | — | MAX9276/MAX9277 Control channel signals Bridge header |
| J49 | P21 | Open* | Pulls DS89C450 P2.1/A9 to GND |
| J50 | P20 | Open* | Pulls DS89C450 P2.0/A8 to GND |
| J53 | PWDN76 | — | Cut trace, 9276 PWDN pin connected to IOVDD_BR |
| J56 | GPI61 | Short* | Pull MAX9276 GPI pin high |
| J57 | RX/SDA_BR | Open* | Connects application RX/SDA signals to MAX9276 |
| J58 | TX/SCL_BR | Open* | Connects application TX/SCL signals to MAX9276 |
| J59 | HIM61 | Open* | Pull MAX9276 SD/HIM pin high |
| J61 | LFR- | Open* | Line fault checked by serializer OUT- |
| J62 | LFR+ | Open* | Line fault checked by serializer OUT+ |
| JU1 | SSEN | H | High: LVDS output at 2% spread spectrum |
| | | L* | Low: LVDS output with no spread spectrum |
| JU2 | OEN | H* | OEN pin pulled high |
| | | L | OEN pin pulled low |
| JU3 | MCLK/LMN1 | MCLK* | MCLK/LMN1 pin driven by the MCLK test point |
| | | LMN1 | MCLK/LMN1 pin driven by the LMN1, IN- line-fault signal |
| JU4 | EQS | H | EQS pin pulled high |
| | | L* | EQS pin pulled low |
| JU5 | GPI | H | GPI pin pulled high |
| | | L* | GPI pin pulled low |
| JU6 | ADD0 | H | DUT ADD0 pin pulled high (see Table 2) |
| | | L* | DUT ADD0 pin pulled low (see Table 2) |
| JU7 | ADD1 | H | DUT ADD1 pin pulled high (see Table 2) |
| | | L* | DUT ADD1 pin pulled low (see Table 2) |
| JU8 | HIM | H | DUT HIM pin pulled high |
| | | L* | DUT pin pulled low |

Table 1. Jumper Description (continued)

| JUMPER | SIGNAL | SHUNT | FUNCTION |
|--------|------------|-------|--|
| JU9 | GPIO1/LMN0 | GPIO1 | GPIO1/LMN0 pin driven by the GPIO1 (JU41) header |
| | | LMN0* | GPIO1/LMN0 pin driven by the LMN0, IN+ line-fault signal |
| JU10 | MS | L* | DUT MS pin pulled low |
| | | H | DUT MS pin pulled high |
| JU11 | TI | L | µC (U12) pin P3.5/TI is pulled low |
| | | H | µC (U12) pin P3.5/TI is pulled high |
| | | Open* | µC (U12) pin P3.5/TI is Open |
| JU13 | CDS | L* | DUT CDS pin pulled low |
| | | H | DUT CDS pin pulled high |
| JU14 | VIN | +5V | DUT power levels supplied from 5V applied on +5VIN/GND terminals |
| | | EXT | DUT power levels supplied from IOVDD_EXT, DVDD_EXT, and AVDD_EXT terminals |
| | | USB* | DUT power levels supplied from USB port |
| JU15 | DRS | L* | DUT DRS pin pulled low |
| | | H | DUT DRS pin pulled high |
| JU16 | GPIO0 | L | DUT GPIO0 pin pulled low |
| | | H | DUT GPIO0 pin pulled high |
| | | Open* | DUT GPIO0 pin left unconnected |
| JU17 | RXSDA | RX | UART-to-UART or UART-to-I ² C mode of communication |
| | | SDA* | I ² C-to-I ² C mode of communication |
| JU18 | I2CSEL | L | DUT in UART mode of communication |
| | | H* | DUT in I ² C mode of communication |
| JU19 | RXSDA | TX | UART-to-UART or UART-to-I ² C mode of communication |
| | | SCL* | I ² C-to-I ² C mode of communication |
| JU21 | CDS_571 | H | MAX9277 CDS_571 pin is pulled high |
| | | L | MAX9277 CDS_571 pin is pulled low |
| | | CNTL3 | MAX9277 CDS_571 pin is driven by CNTL3 pin of the DUT (MAX9278/MAX9282) |
| | | Open* | MAX9277 CDS_571 pin left unconnected |
| JU22 | MS_571 | H | MAX9277 MS_571 pin is pulled high |
| | | L | MAX9277 MS_571 pin is pulled low |
| | | CNTL0 | MAX9277 MS_571 pin is driven by CNTL0 pin of the DUT (MAX9278/MAX9282) |
| | | Open* | MAX9277 MS_571 pin left unconnected |

Table 1. Jumper Description (continued)

| JUMPER | SIGNAL | SHUNT | FUNCTION |
|--------|-----------|-------|--|
| JU26 | CONF1_571 | H | MAX9277 CONF1 pin pulled high |
| | | L | MAX9277 CONF1 pin pulled high |
| | | Open* | MAX9277 CONF1 pin left unconnected |
| JU27 | PWDN\ | H* | DUT is powered up |
| | | L | DUT is powered down |
| JU28 | BWS | H | DUT BWS pin pulled high |
| | | L* | DUT BWS pin pulled low |
| | | Open | DUT BWS pin left unconnected |
| JU29 | CONF0_571 | H | MAX9277 CONF0pin pulled high |
| | | L | MAX9277 CONF0 pin pulled high |
| | | Open* | MAX9277 CONF0 pin left unconnected |
| JU30 | ADD1_571 | H | MAX9277 ADD1 pin pulled high |
| | | L* | MAX9277 ADD1 pin pulled low |
| JU31 | DVDD | INT* | DUT DVDD source is from on-board LDO |
| | | EXT | DUT DVDD source is applied on DVDD_EXT terminal |
| JU32 | AVDD | INT* | DUT AVDD, LVDSVDD, MAX9276 AVDD source is from on-board LDO |
| | | EXT | DUT AVDD, LVDSVDD, MAX9276 AVDD source is applied on AVDD_EXT terminal |
| JU33 | IOVDD | 1.8V | DUT IOVDD = 1.8V source is from on-board LDO |
| | | 3.3V* | DUT IOVDD = 3.3V source is from on-board LDO |
| | | EXT | DUT IOVDD source is applied on IOVDD_EXT terminal |
| JU34 | CXTTP | L | STP GMSL link (see Table 2) |
| | | H* | Coax+ GMSL link (see Table 2) |
| | | Open | Coax- GMSL link (see Table 2) |
| JU35 | BWS_61 | H | MAX9276 BWS pin pulled high |
| | | L* | MAX9276 BWS pin pulled low |
| | | Open | MAX9276 BWS pin left unconnected |
| JU37 | BWS_571 | H | MAX9277 BWS pin pulled high |
| | | L* | MAX9277 BWS pin pulled low |
| | | Open | MAX9277 BWS pin left unconnected |
| JU38 | ADD0_571 | H | MAX9277 ADD0 pin pulled high |
| | | L* | MAX9277 ADD0 pin pulled low |

Table 1. Jumper Description (continued)

| JUMPER | SIGNAL | SHUNT | FUNCTION |
|--------|----------|-------|--|
| JU39 | T2EX | L | U12-41 to GND (factory use only) |
| | | H | U12-41 to USB+5V (factory use only) |
| | | Open* | U12-41 open (factory use only) |
| JU40 | GPIO1 | L | DUT GPIO1 pin pulled low |
| | | H | DUT GPIO1 pin pulled high |
| | | Open* | DUT GPIO1 pin left unconnected |
| JU51 | ADD161 | H | MAX9276 ADD1 pin pulled high |
| | | L* | MAX9276 ADD1 pin pulled low |
| JU52 | I2CSELBR | L | MAX9276 /MAX9277 in UART mode of communication |
| | | H* | MAX9276 /MAX9277 in I ² C mode of communication |
| J53 | MS61 | L* | MAX9276 MS pin pulled low |
| | | H | MAX9276 MS pin pulled high |
| JU54 | ADD061 | H* | MAX9276 ADD0 pin pulled high |
| | | L | MAX9276 ADD0 pin pulled low |
| JU55 | ADD261 | H | MAX9276 ADD2 pin pulled high |
| | | L* | MAX9276 ADD2 pin pulled low |

*Default position (selected for coax link and I²C communication).

Table 2. Device Address Selection (register 0x00, 0x01)

| PIN | | | | DEVICE ADDRESS (bin) | | | | | | | | DEVICE ADDRESS (hex) | |
|----------|-------|-------|-------|----------------------|----|----|----|----|----|----|-----|----------------------|--------------|
| CX/TP* | ADD2 | ADD1 | ADD0 | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | SERIALIZER | DESERIALIZER |
| High/Low | Low** | Low** | Low** | 1 | 0 | 0 | X | 0 | 0 | 0 | R/W | 80 | 90 |
| High/Low | Low | Low | High | 1 | 0 | 0 | X | 0 | 1 | 0 | R/W | 84 | 94 |
| High/Low | Low | High | Low | 1 | 0 | 0 | X | 1 | 0 | 0 | R/W | 88 | 98 |
| High/Low | Low | High | High | 0 | 1 | 0 | X | 0 | 1 | 0 | R/W | 44 | 54 |
| High/Low | High | Low | Low | 1 | 1 | 0 | X | 0 | 0 | 0 | R/W | C0 | D0 |
| High/Low | High | Low | High | 1 | 1 | 0 | X | 0 | 1 | 0 | R/W | C4 | D4 |
| High/Low | High | High | Low | 1 | 1 | 0 | X | 1 | 0 | 0 | R/W | C8 | D8 |
| High/Low | High | High | High | 0 | 1 | 0 | X | 1 | 0 | 0 | R/W | 48 | 58 |
| Open | Low | Low | Low | 1 | 0 | 0 | X | 0 | 0 | X | R/W | 80 | 92 |
| Open | Low | Low | High | 1 | 0 | 0 | X | 0 | 1 | X | R/W | 84 | 96 |
| Open | Low | High | Low | 1 | 0 | 0 | X | 1 | 0 | X | R/W | 88 | 9A |
| Open | Low | High | High | 0 | 1 | 0 | X | 0 | 1 | X | R/W | 44 | 56 |
| Open | High | Low | Low | 1 | 1 | 0 | X | 0 | 0 | X | R/W | C0 | D2 |
| Open | High | Low | High | 1 | 1 | 0 | X | 0 | 1 | X | R/W | C4 | D6 |
| Open | High | High | Low | 1 | 1 | 0 | X | 1 | 0 | X | R/W | C8 | DA |
| Open | High | High | High | 0 | 1 | 0 | X | 1 | 0 | X | R/W | 48 | 5A |

*CX/TP determines the serial cable type. CX/TP = open = addresses only for coax mode.

**Default position.

X = 0 for the serializer address; X = 1 for the deserializer address

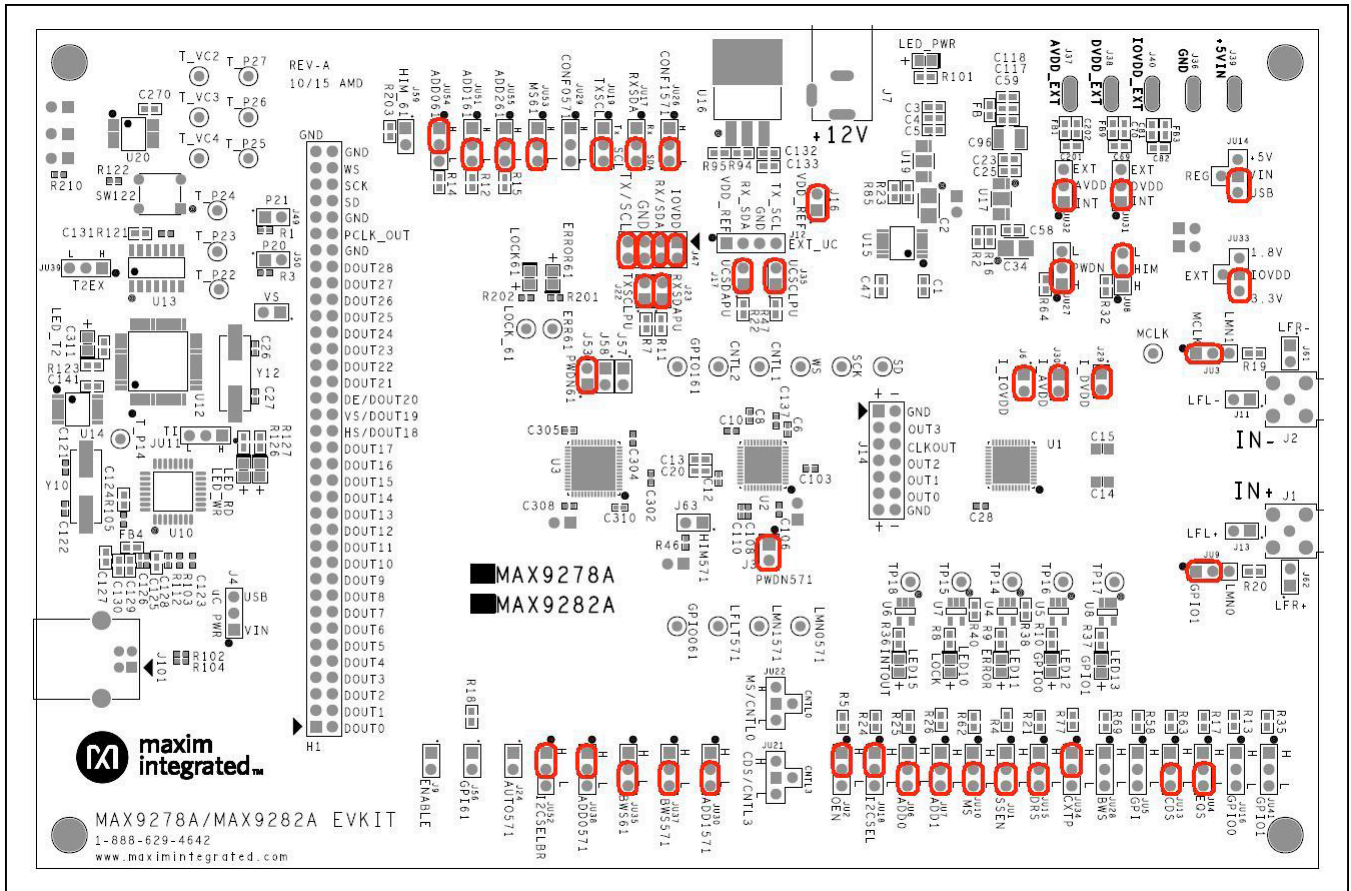


Figure 12. MAX9278A/MAX9282A Initial Jumper Settings for I²C-COAX Mode

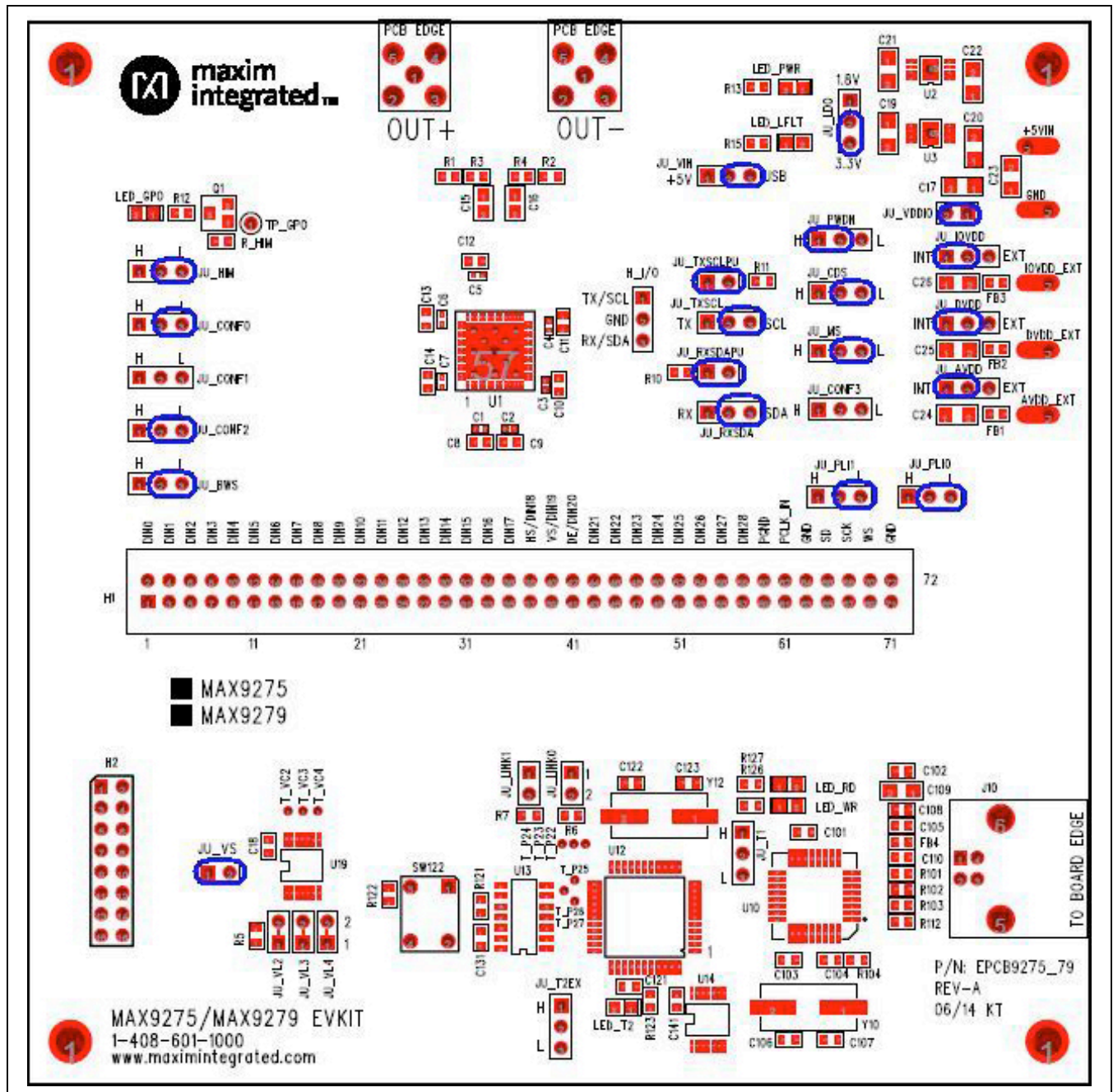


Figure 13. MAX9275/MAX9279 Initial Jumper Settings for I²C-COAX Mode

Troubleshooting

Possible causes of board test failure:

- Coax cable not properly connected between OUT+ of the serializer to IN+ of the deserializer.
- PCLKIN is not applied (e.g., FG output is disabled): Verify signal at the pins on the board.
- PCLKIN function generator output is not correct: Verify signal at the pins on the board.
- Incorrect jumper setting on the deserializer board: Reverify.
- Incorrect jumper setting on the serializer board: Reverify.
- Bus selection on the GUI is not consistent with jumpers' position on the boards: Check and verify that the USB cable has been properly connected.
- USB port has locked: Exit the application/GUI and remove the USB cable from the board and reinsert, then relaunch the GUI.
- Nuvoton μ C is not communicating: Exit the application/GUI and remove the USB cable from the board and reinsert, then relaunch the GUI.
- Deserializer board is faulty: Try a different board (if available).
- Serializer board is faulty: Try a different board (if available).

Component Suppliers

| SUPPLIER | PHONE | WEBSITE |
|--------------------------------------|-------------------|-------------------------|
| Amphenol RF | 800-627-7100 | www.amphenolrf.com |
| Hong Kong X'tals Ltd. | 852-35112388 | www.hongkongcrystal.com |
| Murata Americas | 770-436-1300 | www.murataamericas.com |
| ON Semiconductor | 602-244-6600 | www.onsemi.com |
| Rosenberger Hochfrequenztechnik GmbH | 011-49-86 84-18-0 | www.rosenberger.de |
| TDK Corp. | 847-803-6100 | www.component.tdk.com |

Note: Indicate that you are using the MAX9278A or MAX9282A when contacting these component suppliers.

Component Lists, Schematics, and PCB Layout Diagrams

Click on the links below for component information, schematics, and PCB layout diagrams:

- [MAX9278A/MAX9282A EV Kit BOM](#)
- [MAX9278A/MAX9282A EV Kit Schematics](#)
- [MAX9278A/MAX9282A EV Kit PCB Layout](#)

Ordering Information

| PART | TYPE |
|--------------------|-------------|
| MAX9278ACOAXEVKIT# | EV Kit |
| MAX9282ACOAXEVKIT# | EV Kit |
| MAXCOAX2STP-HSD# | Adapter Kit |

#Denotes RoHS compliant.

Note: The MAX9278A and MAX9282A deserializer coax EV kits are normally ordered with a companion serializer board:

- MAX9275 EV kit (MAX9275COAXEVKIT#), or
- MAX9279 EV kit (MAX9279COAXEVKIT#)

Revision History

| REVISION NUMBER | REVISION DATE | DESCRIPTION | PAGES CHANGED |
|-----------------|---------------|-----------------|---------------|
| 0 | 3/16 | Initial release | — |

For pricing, delivery, and ordering information, please contact Maxim Direct at 1-888-629-4642, or visit Maxim Integrated's website at www.maximintegrated.com.

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TITLE: Bill of Materials**DATE: 3/4/16****DESIGN: max9278a_82a_evkit_a**

| QTY | REF_DES | VALUE | DNI/DNP | MFG PART # | DESCRIPTION | MANUFACTURER | COMMENTS |
|-----|--|---------|---------|---|---|------------------|----------|
| 32 | C1, C3, C5, C7, C9, C11, C23, C25, C47, C59, C104, C105, C107, C109, C116, C117, C120, C124, C127-C132, C141, C270, C301, C303, C306, C307, C309, C311 | 0.1UF | - | C0603C104K3RAC; GRM188R71E104KA01; C1608X7R1E104K | CAPACITOR; SMT; 0603; CERAMIC; 0.1uF; 25V; 10%; X7R; -55degC to + 125degC; +/- 15% from -55degC to +125degC; | KEMET/MURATA/TDK | |
| 2 | C2, C34 | 10UF | - | TAJB106M016RNJ | CAPACITOR; SMT (3528); TANTALUM CHIP; 10UF; 16V; TOL=20%; MODEL=TAJ SERIES | AVX | |
| 3 | C4, C118, C133 | 10UF | - | C1608JB1C106M080AB | CAPACITOR; SMT (0603); CERAMIC CHIP; 10UF; 16V; TOL=20%; TG=-25 DEGC TO +85 DEGC; TC=JB | TDK | |
| 21 | C6, C8, C10, C12, C65, C72-C76, C79, C103, C106, C108, C110, C137, C302, C304, C305, C308, C310 | 0.001UF | - | 04022R102K9B20D | CAPACITOR; SMT (0402); CERAMIC CHIP; 0.001UF; 50V; TOL=10%; MODEL=CC SERIES; TG=-55 DEGC TO +125 DEGC; TC=X7R | YAGEO PHYCOMP | |
| 2 | C13, C20 | 0.22UF | - | GRM188F51H224ZA01D | CAPACITOR; SMT (0603); CERAMIC CHIP; 0.22UF; 50V; TOL=20%; MODEL=Y5V; TG=-55 DEGC TO +125 DEGC; TC=+ | MURATA | |

| QTY | REF_DES | VALUE | DNI/DNP | MFG PART # | DESCRIPTION | MANUFACTURER | COMMENTS |
|-----|-------------------------------------|---------|---------|--|---|--|----------|
| 2 | C14, C15 | 0.22UF | - | C0805C224K5RAC;GRM21BR71H224KA;CGJ4J2X7R1H224K125AA | CAPACITOR; SMT; 0805; CERAMIC; 0.22uF; 50V; 10%; X7R; -55degC to + 125degC | KEMET/MURATA/TDK | |
| 7 | C16, C17, C19, C21, C22, C24, C49 | 0.1UF | - | C0402X7R160-104KNE; CL05B104KO5NNNC; GRM155R71C104KA88; C1005X7R1C104K; CC0402KRX7R7BB104; EMK105B7104KV | CAPACITOR; SMT (0402); CERAMIC CHIP; 0.1UF; 16V; TOL=10%; TG=-55 DEGC TO +125 DEGC; TC=X7R; | VENKEL LTD./SAMSUNG ELECTRONICS/MURATA/TDK/YAGEO PHICOMP/TAIYO YUDEN | |
| 3 | C18, C28, C53 | 3.3UF | - | AMK105BJ335MV-F | CAPACITOR; SMT (0402); CERAMIC CHIP; 3.3UF; 4V; TOL=20%; MODEL=C SERIES; TG=-55 DEGC TO +85 DEGC; TC=X5R | TAIYO YUDEN | |
| 4 | C26, C27, C121, C122 | 22PF | - | C0402C220J3GAC | CAPACITOR; SMT (0402); CERAMIC CHIP; 22PF; 25V; TOL=5%; MODEL=; TG=-55 DEGC TO +125 DEGC; TC=C0G | KEMET | |
| 7 | C58, C69, C70, C81, C82, C201, C202 | 4.7UF | - | C1608X5R0J475M080AB; GRM188R60J475ME19; JMK107BJ475MA-T | CAPACITOR; SMT (0603); CERAMIC; 4.7UF; 6.3V; TOL=20%; MODEL=C SERIES; TG=-55 DEGC TO +85 DEGC; TC=X5R | TDK/MURATA/TAIYO YUDEN | |
| 1 | C96 | 100UF | - | C3225Y5V0J107Z; GRM32EF50J107ZE20L | CAPACITOR; SMT (1210); CERAMIC CHIP; 100UF; 6.3V; TOL=+80%-20%; MODEL=C SERIES; TG=-30 DEGC TO +85 DEGC; TC=Y5V | TDK/MURATA | |
| 1 | C123 | 0.033UF | - | GRM155R71A333KA01 | CAPACITOR; SMT (0402); CERAMIC CHIP; 0.033UF; 10V; TOL=10%; MODEL=GRM SERIES; TG=-55 DEGC TO +125 DEGC; TC=X7R | MURATA | |

| QTY | REF_DES | VALUE | DNI/DNP | MFG PART # | DESCRIPTION | MANUFACTURER | COMMENTS |
|-----|--|----------------|---------|--|--|------------------------------|----------|
| 1 | C125 | 1UF | - | C0402X5R100-105KNE; GRM155R61A105KE15 | CAPACITOR; SMT (0402); CERAMIC CHIP; 1UF; 10V; TOL=10%; MODEL=; TG=-55 DEGC TO +85 DEGC; TC=X5R | VENKEL LTD./MURATA | |
| 1 | C126 | 10UF | - | CL05A106MP5NUNC | CAPACITOR; SMT (0402); CERAMIC CHIP; 10UF; 10V; TG= 55 DEGC TO +85 DEGC; TC=X5R | SAMSUNG ELECTRONICS | |
| 28 | SD, WS, SCK, MCLK, TP14-TP18, CNTL1, CNTL2, ERR61, T_P14, T_P22-T_P27, T_VC2- T_VC4, GPIO061, LMN0571, GPIO161, LFLT571, LMN1571, LOCK_61 | N/A | - | 5000 | TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; RED; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH; | KEYSTONE | |
| 9 | LED11-LED13, LED15, LED_RD, LED_T2, LED_WR, ERROR61, LED_PWR | SML-210VTT86 | - | SML-210VTT86 | DIODE; LED; SML-21 SERIES; RED; SMT (0805); PIV=2V; IF=0.02A | ROHM | |
| 5 | FB, FB1, FB3, FB4, FB9 | 120 | - | BLM18SG121TN1 | INDUCTOR; SMT (0603); FERRITE-BEAD; 120; TOL=+/- 25%; 3A | MURATA | |
| 1 | H1 | PBC36DFBN | - | PBC36DFBN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 72PINS | SULLINS ELECTRONICS CORP. | |
| 2 | J1, J2 | 59S2AX-400A5-A | - | 59S2AX-400A5-A | CONNECTOR; FEMALE; THROUGH HOLE; FAKRA-HF RIGHT ANGLE PLUG; RIGHT ANGLE; 5PINS | ROSENBERGER | |

| QTY | REF_DES | VALUE | DNI/DNP | MFG PART # | DESCRIPTION | MANUFACTURER | COMMENTS |
|-----|--|-----------|---------|------------|--|---------------------------|----------|
| 1 | J3 | PBC02SAAN | - | PBC02SAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 2PINS; -65 DEGC TO +125 DEGC | SULLINS ELECTRONICS CORP. | |
| 36 | J4, JU1-JU11, JU13, JU15-JU19, JU26-JU32, JU34, JU35, JU37-JU39, JU41, JU51-JU55 | PCC03SAAN | - | PCC03SAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 3PINS; -65 DEGC TO +125 DEGC | SULLINS | |
| 17 | J6, J9, VS, J11, J13, J16, J17, J22-J24, J29, J30, J35, J49, J50, J61, J62 | PCC02SAAN | - | PCC02SAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 2PINS; -65 DEGC TO +125 DEGC | SULLINS | |
| 1 | J7 | PJ-002AH | - | PJ-002AH | CONNECTOR; MALE; THROUGH HOLE; DC POWER JACK; RIGHT ANGLE; 3PINS | CUI INC. | |
| 1 | J12 | PBC04SAAN | - | PBC04SAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 4PINS; -65 DEGC TO +125 DEGC | SULLINS ELECTRONICS CORP. | |
| 1 | J14 | PEC07DAAN | - | PEC07DAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 14PINS | SULLINS ELECTRONICS CORP. | |
| 5 | J36-J40 | MAXIMPAD | - | 9020 BUSS | EVK KIT PARTS; MAXIM PAD; WIRE; NATURAL; SOLID; WEICO WIRE; SOFT DRAWN BUS TYPE-S; 20AWG | WEICO WIRE | |

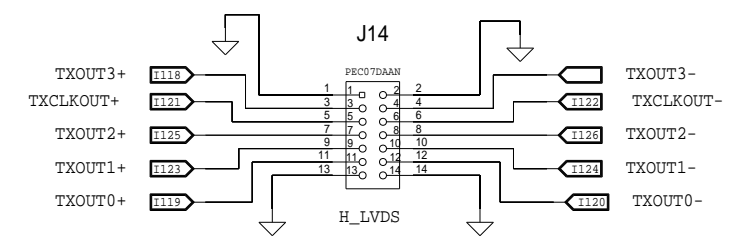
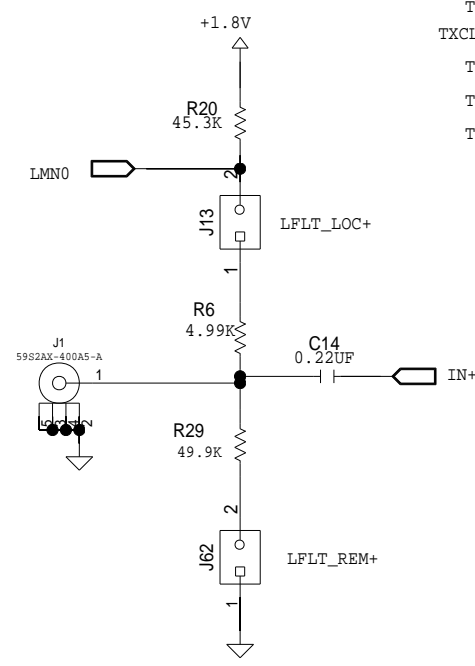
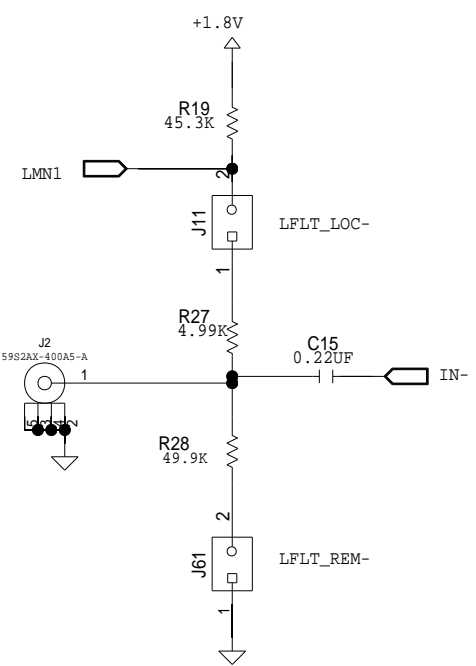
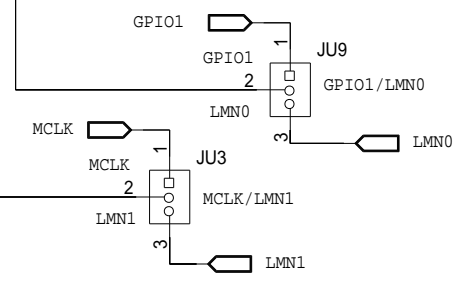
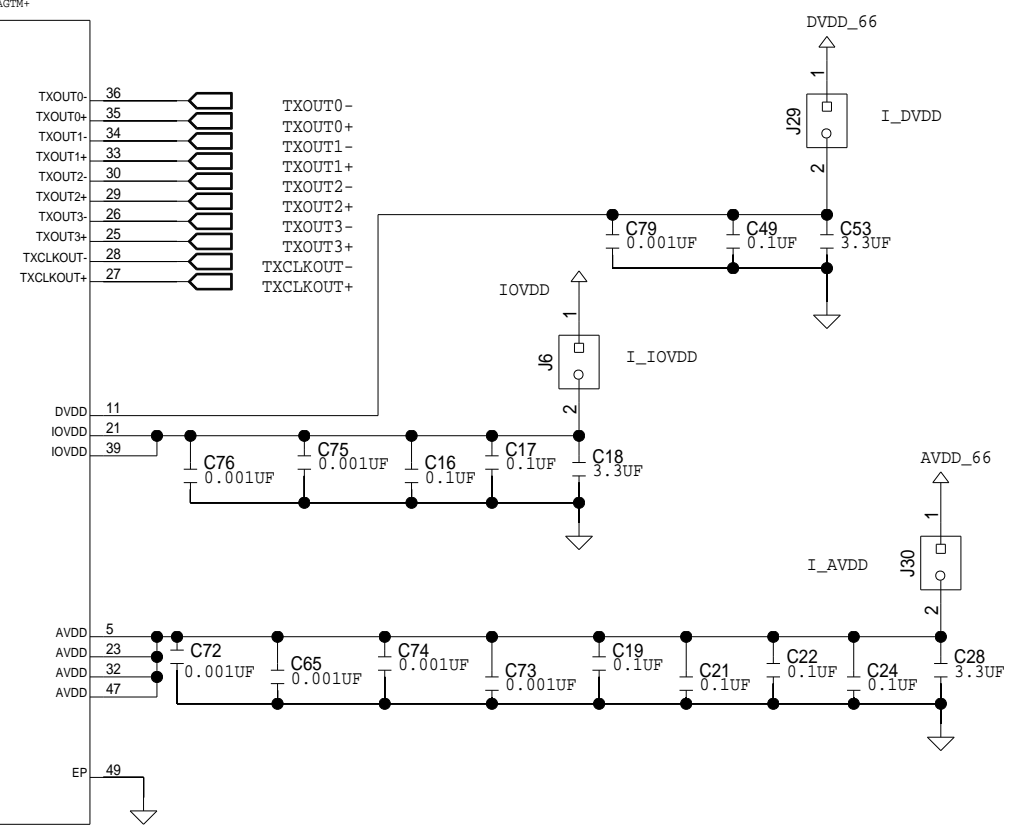
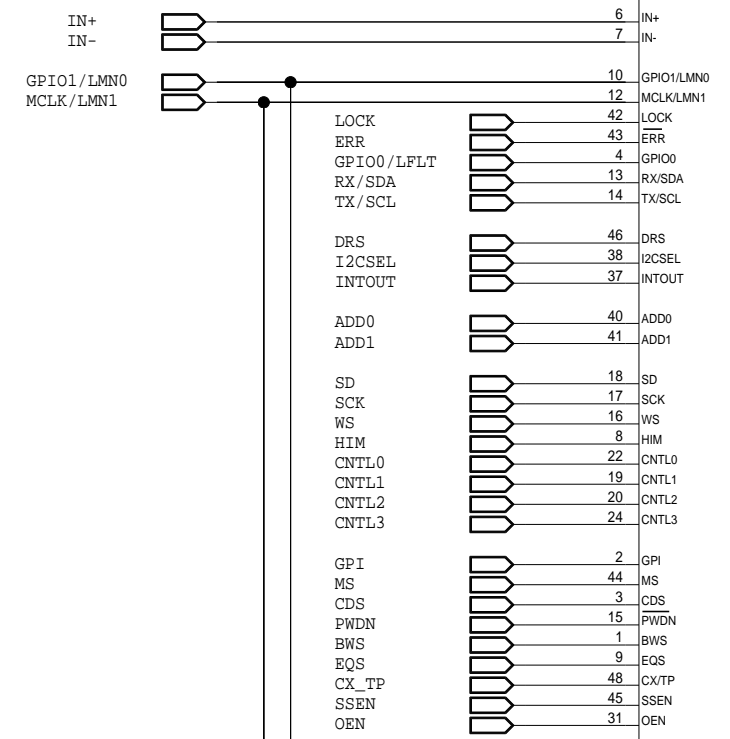
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|-----|--|-----------------|---------|-------------------|--|---------------------------|----------|
| 1 | J47 | PEC04DAAN | - | PEC04DAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 8PINS | SULLINS ELECTRONICS CORP. | |
| 6 | J53, J56-J59, J63 | PEC02SAAN | - | PEC02SAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 2PINS | SULLINS | |
| 1 | J101 | 690-004-221-023 | - | 690-004-221-023 | CONNECTOR; FEMALE; THROUGH HOLE; USB-B TYPE; SINGLE DECK; RIGHT ANGLE; 4PINS | EDAC | |
| 4 | JU14, JU21, JU22, JU33 | PEC04SAAN | - | PEC04SAAN | CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 4PINS | SULLINS ELECTRONICS CORP. | |
| 2 | LED10, LOCK61 | SML-210MTT86 | - | SML-210MTT86 | DIODE; LED; SML-21 SERIES; GREEN; SMT (0805); PIV=2.2V; IF=0.02A | ROHM | |
| 4 | R1, R3, R122, R210 | 10K | - | ERJ-2RKF1002 | RESISTOR; 0402; 10K OHM; 1%; 100PPM; 0.10W; THICK FILM | PANASONIC | |
| 2 | R2, R85 | 24.9K | - | CRCW060324K9FK | RESISTOR; 0603; 24.9K OHM; 1%; 100PPM; 0.10W; THICK FILM | VISHAY DALE | |
| 32 | R4, R5, R7-R11, R13, R17, R18, R21, R22, R24-R26, R32, R35-R38, R40, R47, R58, R62-R64, R69, R77, R101, R123, R126, R127 | 1K | - | CR0603-FX-1001ELF | RESISTOR; 0603; 1K OHM; 1%; 100PPM; 0.10W; THICK FILM | BOURNS | |

| QTY | REF_DES | VALUE | DNI/DNP | MFG PART # | DESCRIPTION | MANUFACTURER | COMMENTS |
|-----|---------------------|-------|---------|-------------------------------|--|-----------------------|----------|
| 2 | R6, R27 | 4.99K | - | CRCW06034K99FK; ERJ-3EKF4991V | RESISTOR; 0603; 4.99K; 1%; 100PPM; 0.10W; THICK FILM | VISHAY DALE/PANASONIC | |
| 4 | R12, R14, R15, R203 | 30K | - | CRCW060330K0FK | RESISTOR; 0603; 30K OHM; 1%; 100PPM; 0.10W; THICK FILM | VISHAY DALE | |
| 1 | R16 | 41.2K | - | CRCW060341K2FK | RESISTOR; 0603; 41.2K OHM; 1%; 100PPM; 0.10W; METAL FILM | VISHAY DALE | |
| 2 | R19, R20 | 45.3K | - | CRCW060345K3FK; ERJ-3EKF4532V | RESISTOR; 0603; 45.3KOHM; 1%; 100PPM; 0.10W; THICK FILM | VISHAY DALE/PANASONIC | |
| 1 | R23 | 11K | - | ERJ-3GEYJ113V | RESISTOR; 0603; 11K OHM; 5%; 200PPM; 0.10W; THICK FILM | PANASONIC | |
| 2 | R28, R29 | 49.9K | - | CRCW060349K9FK; ERJ-3EKF4992V | RESISTOR; 0603; 49.9K OHM; 1%; 100PPM; 0.10W; THICK FILM | VISHAY DALE/PANASONIC | |
| 1 | R46 | 30.1K | - | CRCW04023012FK | RESISTOR; 0402; 30.1K; 1%; 100PPM; 0.0625W; THICK FILM | VISHAY DALE | |
| 1 | R94 | 240 | - | ERJ-3GEYJ241V | RESISTOR; 0603; 240 OHM; 5%; 200PPM; 0.10W; THICK FILM | PANASONIC | |
| 1 | R95 | 715 | - | CRCW0603715RFK | RESISTOR; 0603; 715 OHM; 1%; 100PPM; 0.10W; METAL FILM | VISHAY DALE | |
| 2 | R102, R104 | 27 | - | ERJ-2GEYJ270V | RESISTOR; 0402; 27 OHM; 5%; 200PPM; 0.10W; THICK FILM | PANASONIC | |
| 1 | R103 | 1.5K | - | ERJ-2RKF1501X | RESISTOR; 0402; 1.5K OHM; 1%; 100PPM; 0.10W; THICK FILM | PANASONIC | |

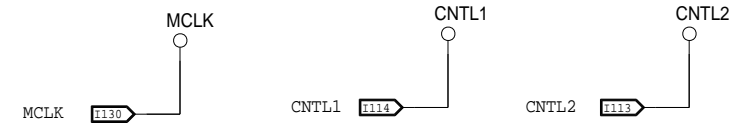
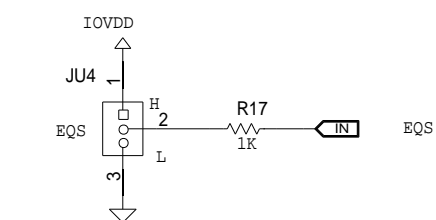
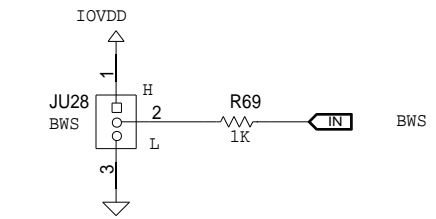
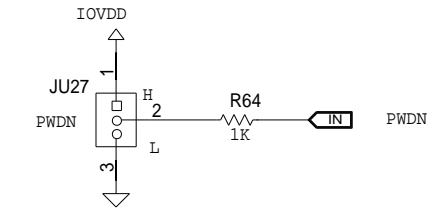
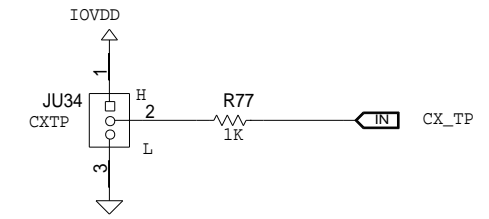
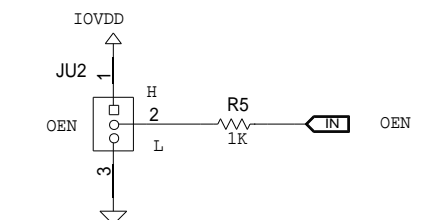
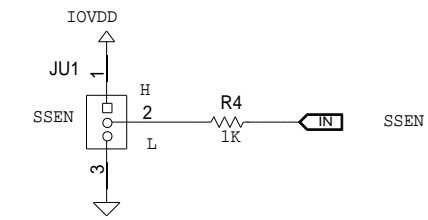
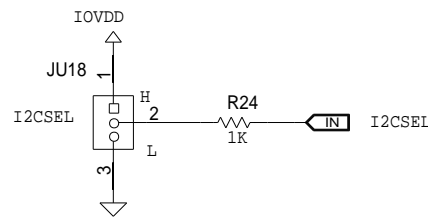
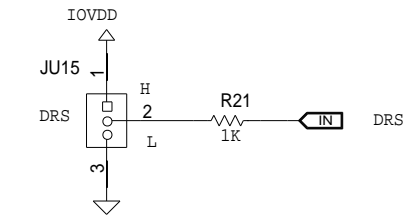
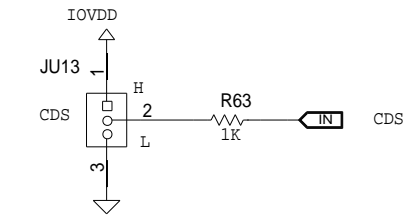
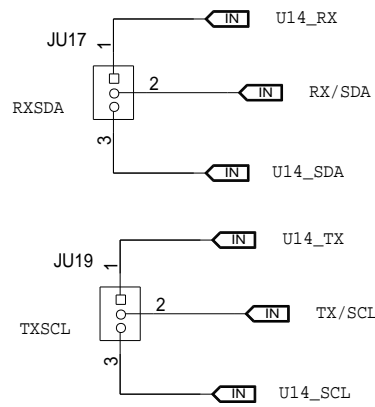
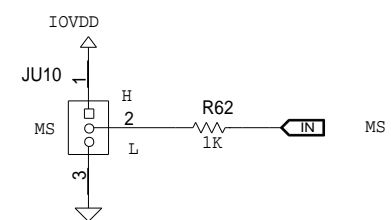
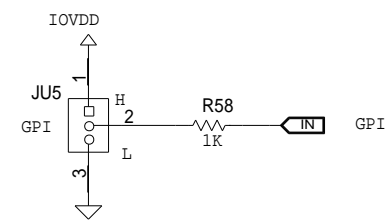
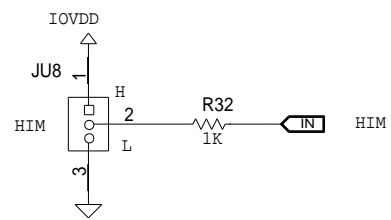
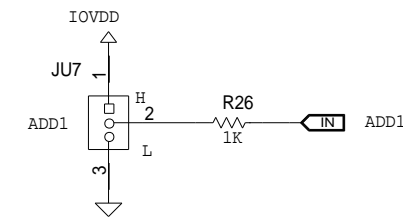
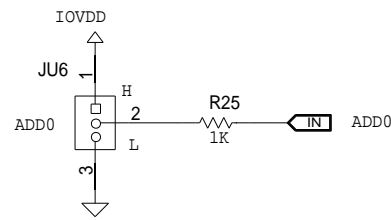
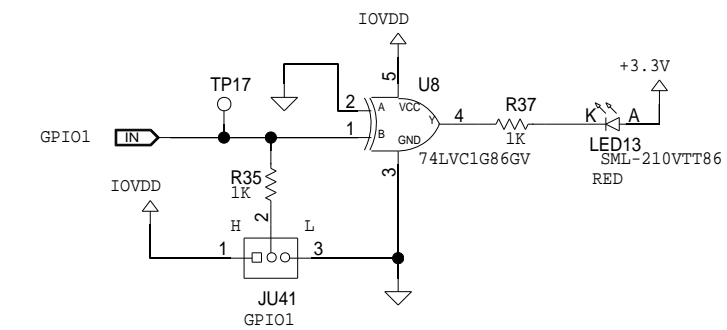
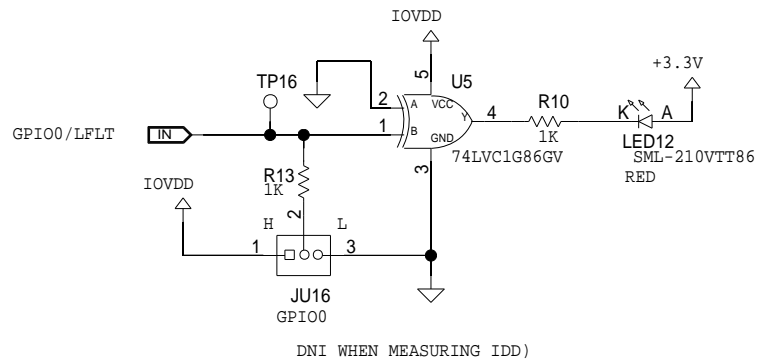
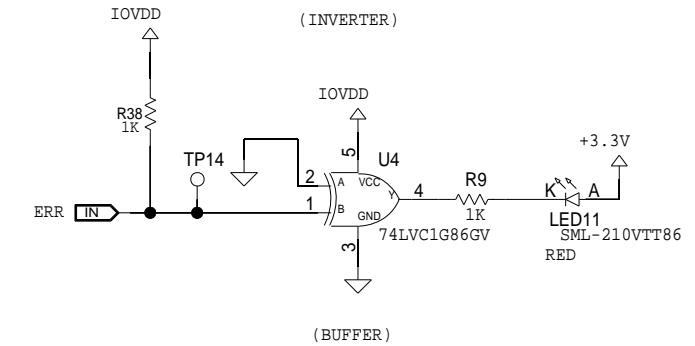
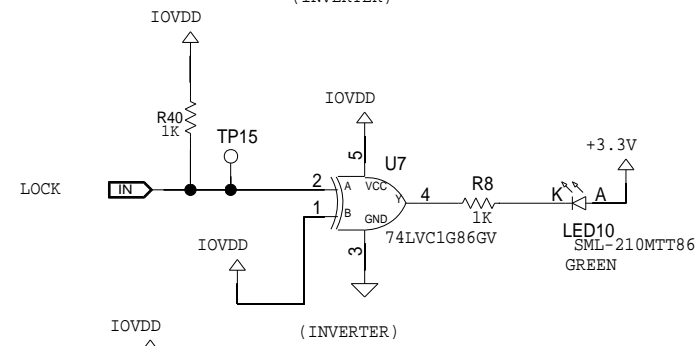
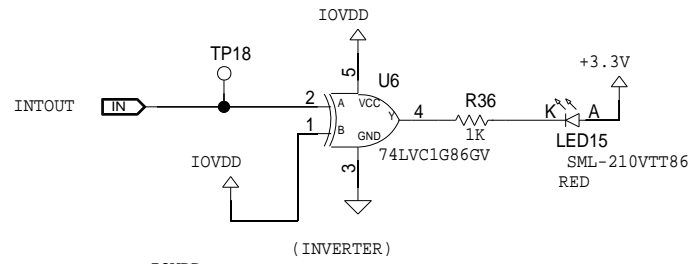
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|-----|------------|--------------|---------|------------------------------------|--|-------------------------------|--|
| 1 | R105 | 470 | - | CRCW0402470RFK | RESISTOR, 0402, 470 OHM, 1%, 100PPM, 0.0625W, THICK FILM | VISHAY DALE | |
| 1 | R112 | 10K | - | CRCW040210K0FK; RC0402FR-0710K | RESISTOR; 0402; 10K; 1%; 100PPM; 0.0625W; THICK FILM | VISHAY DALE; YAGEO PHICOMP | |
| 1 | R121 | 1.1K | - | CRCW04021K10FK | RESISTOR, 0402, 1.1KOHMS, 1%, 100PPM, 0.063W, THICK FILM | VISHAY DALE | |
| 2 | R201, R202 | 1.8K | - | CRCW04021K80FK; RC0402FR-071K8L | RESISTOR, 0402, 1.8K OHM, 1%, 100PPM, 0.0625W, THICK FILM | VISHAY DALE/YAGEO PHICOMP | |
| 1 | SW122 | B3F-1000 | - | B3F-1000 | SWITCH; SPST; THROUGH HOLE; 24V; 0.05A; NORMALLY OPEN-HIGH FORCE TACTILE SWITCH; RCOIL= OHM; RINSULATION= OHM; OMRON | OMRON | |
| 1 | U1 | MAX9278AGTM+ | - | MAX9278AGTM+ | EVKIT PART; IC; DSRLZR; 3.12GBPS GMSL DESERIALIZER FOR COAX/STP INPUT AND LVDS OUTPUT; TQFN48-EP | MAXIM | FOR MAX9278ACOAXEVKI T USE MAX9278AGTM+ OR MAX9278AGTM/V+ ; FOR MAX9282A USE MAX9282AGTM+ OR MAX9282AGTM/V+ |
| 1 | U2 | MAX9277GTM+ | - | MAX9277GTM+ | IC; SRLZR; 3.12GBPS GMSL SERIALIZERS; TQFN48-EP 7X7 | MAXIM | |
| 1 | U3 | MAX9276AGTN+ | - | MAX9276AGTN+ | IC; DSRLZR; 3.12GBPS GMSL DESERIALIZER FOR COAX/STP INPUT AND PARALLEL OUTPUT; TQFN56-EP | MAXIM | |

| QTY | REF_DES | VALUE | DNI/DNP | MFG PART # | DESCRIPTION | MANUFACTURER | COMMENTS |
|-----|-------------|---------------|---------|----------------------|---|---------------------------|--|
| 5 | U4-U8 | 74LVC1G86GV | - | 74LVC1G86GV | IC; XOR; 2-INPUT EXCLUSIVE-OR GATE; SOT753 | NXP | |
| 1 | U10 | FT232BL | - | FT232BL | IC, INFC, UART INTERFACE IC USB TO SERIAL, LQFP32 7X7 | FTDI | |
| 1 | U12 | DS89C450-ENL+ | - | DS89C450-ENL+ | IC; CTRL; ULTRA-HIGH-SPEED FLASH MICROCONTROLLERS; TQFP44 | MAXIM | |
| 1 | U13 | 74AC125SC | - | 74AC125SC | IC; BUF; QUAD BUFFER WITH 3-STATE OUTPUTS; NSOIC14 150MIL | GENERIC PART | |
| 3 | U14,U15,U20 | MAX3378EEUD+ | - | MAX3378EEUD+ | IC; TRANS; +/-15KV ESD-PROTECTED, 1UA, 16MBPS, QUAD LOW-VOLTAGE LEVEL TRANSLATOR; TSSOP14 | MAXIM | |
| 1 | U16 | LM317KTTR | - | LM317KTTR | IC; VREG; 3-TERMINAL ADJUSTABLE REGULATOR; TO263 | TEXAS INSTRUMENTS | |
| 2 | U17,U19 | MAX1792EUA33 | - | MAX1792EUA33 | IC; VREG; LOW-DROPOUT LINEAR REGULATOR; UMAX8 | MAXIM | |
| 1 | Y10 | 6MHZ | - | SSL60000N1HK188F0-0 | CRYSTAL; SMT ; 12PF; 6MHZ; +/-30PPM; +/-50PPM; -10 DEGC TO +60 DEGC | HONG KONG CRYSTALS | |
| 1 | Y12 | 14.7456MHZ | - | ABLS-14.7456MHZ-B4-T | CRYSTAL; SMT; 18PF; 14.7456MHZ; +/-30PPM; -20 DEGC TO +70 DEGC | ABRACON | |
| 45 | SU1-SU45 | STC02SYAN | DNI | STC02SYAN | TEST POINT; JUMPER; STR; TOTAL LENGTH=0.256IN; BLACK; INSULATION=PBT CONTACT=PHOSPHOR BRONZE; COPPER PLATED TIN OVERALL | SULLINS ELECTRONICS CORP. | (TO BE USED TO CONFIGURE THE EV BOARD BEFORE TESTING THE BOARD.) |

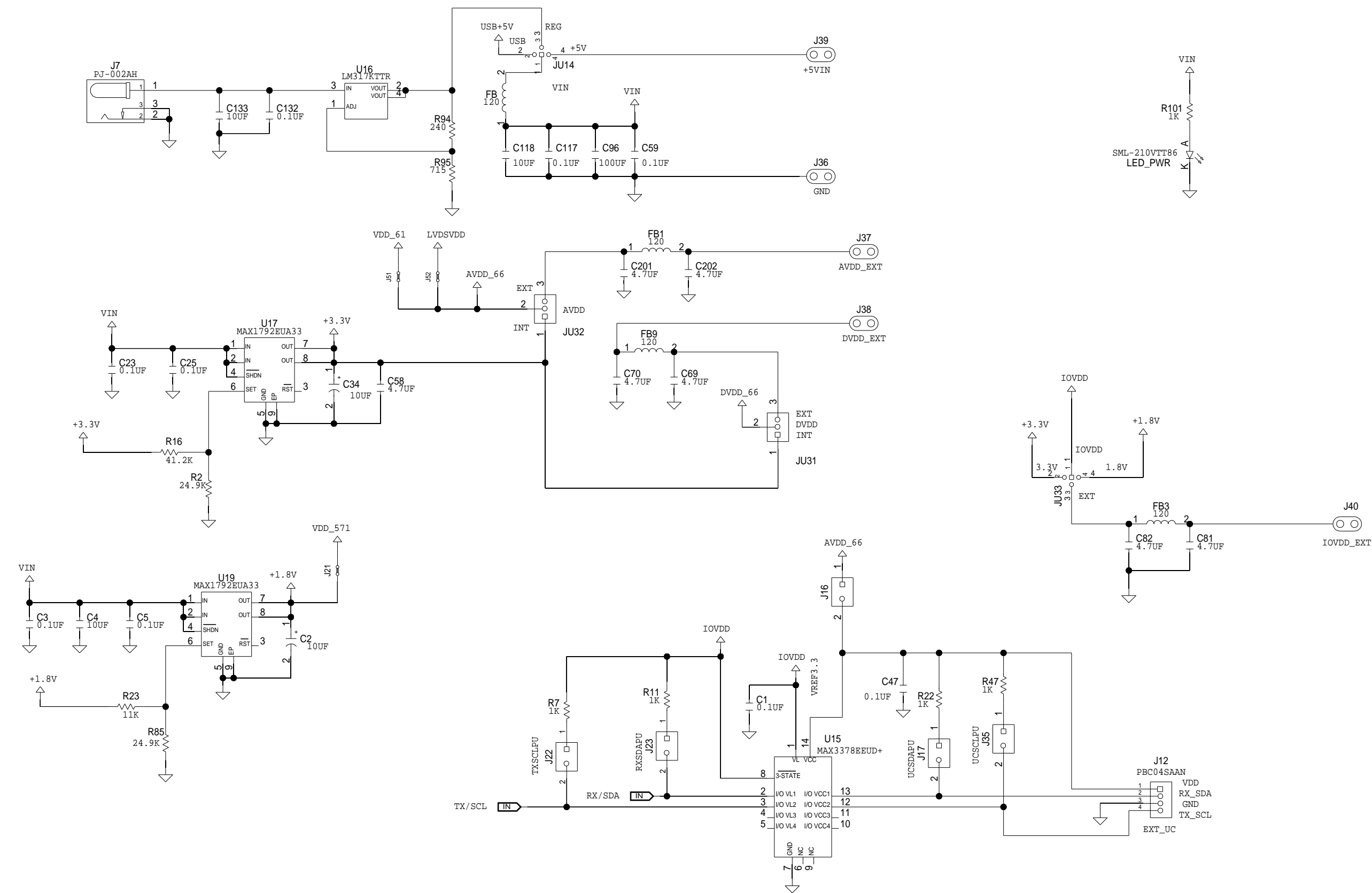
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|-----|---------|-------------------------|---------|---------------------|--|-----------------------|--|
| 1 | WIRE1 | 229730 | DNI | 229730 | CONNECTOR; MALE; WIREMOUNT; USB TYPE-A TO TYPE-B ADAPTER; STRAIGHT; 4PINS | MSL ENTERPRISES CORP. | |
| 1 | WIRE2 | LEONI DACAR 302 | DNI | LEONI DACAR 302 | EVKIT PART; HIGH QUALITY COAX CABLE; LEONI DACAR 302 | LEONI | (Alternate part for WIRE2) (LEONI DACAR 302 IS THE RECOMMENDED CABLE TO USE IN ACTUAL APPLICATION AND DETAILED PRODUCT EVALUATION) |
| 1 | WIRE2 | 02E-59K1-59K1- 02000 | DNI | 02E-59K1-59K1-02000 | CONNECTOR; COAX; RG 174 CABLE ASSEMBLY; STRAIGHT; 2PINS | ROSENBERGER | (LEONI DACAR 302 IS THE RECOMMENDED CABLE TO USE IN ACTUAL APPLICATION AND DETAILED PRODUCT EVALUATION) |



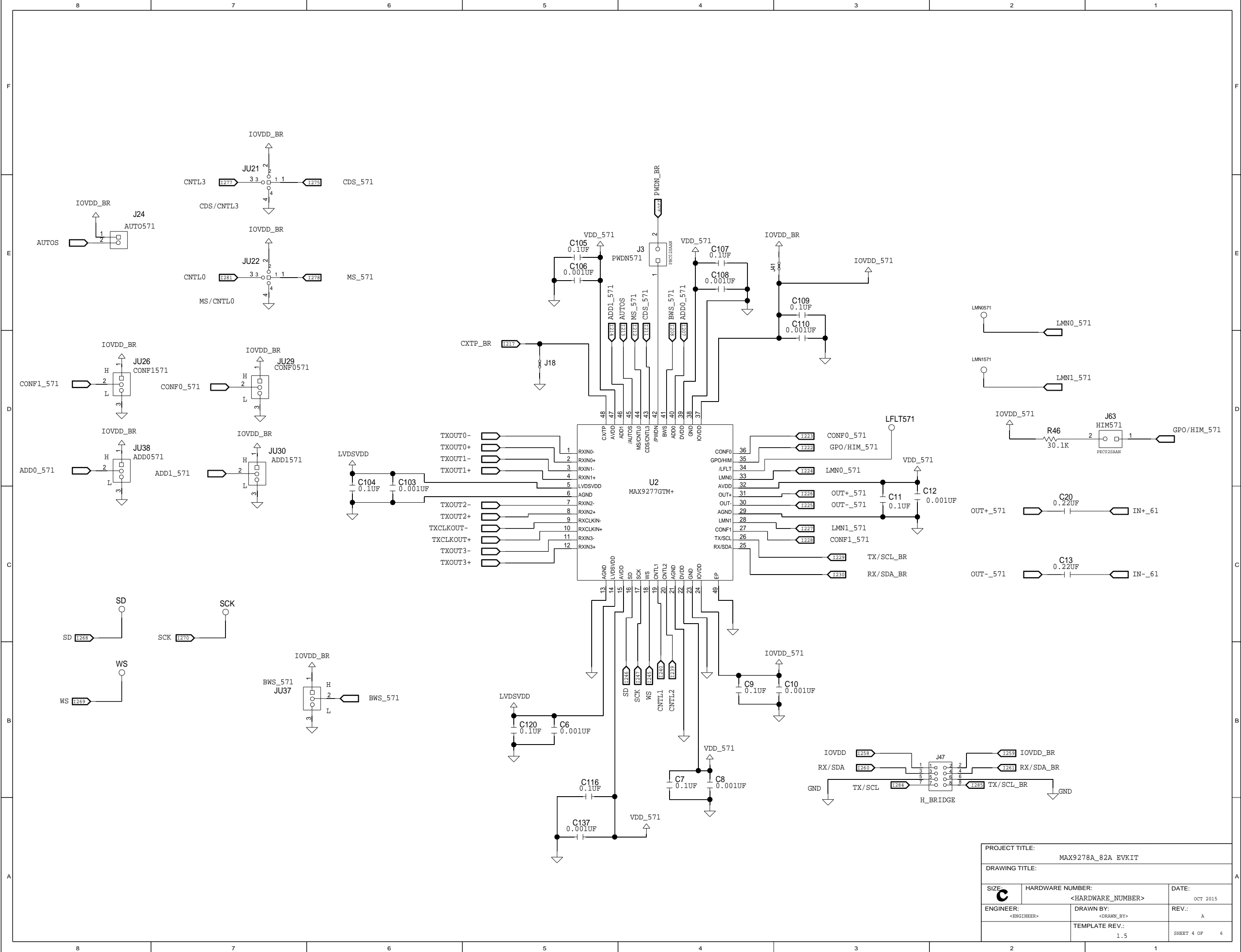
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| 1.5 | | |



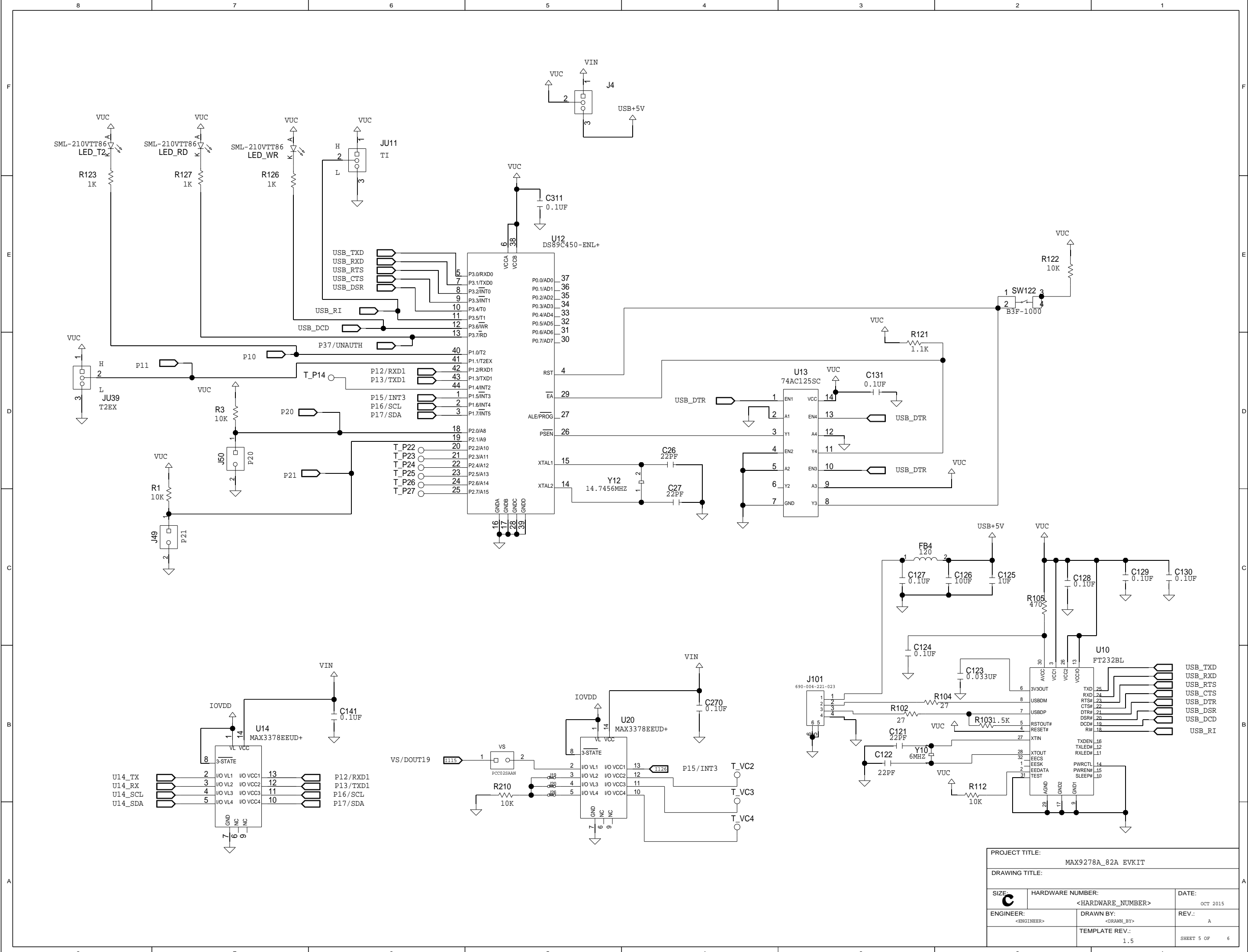
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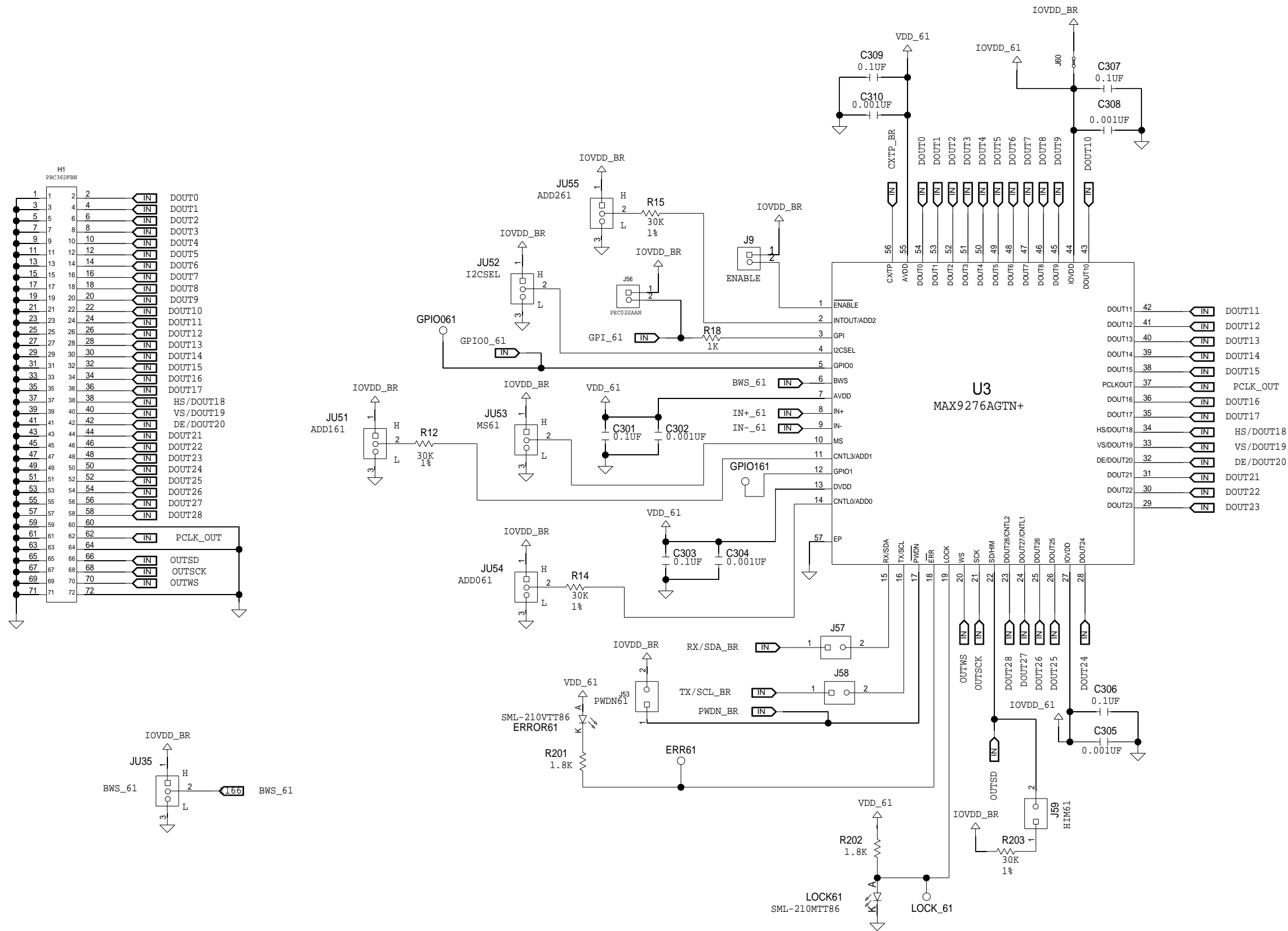
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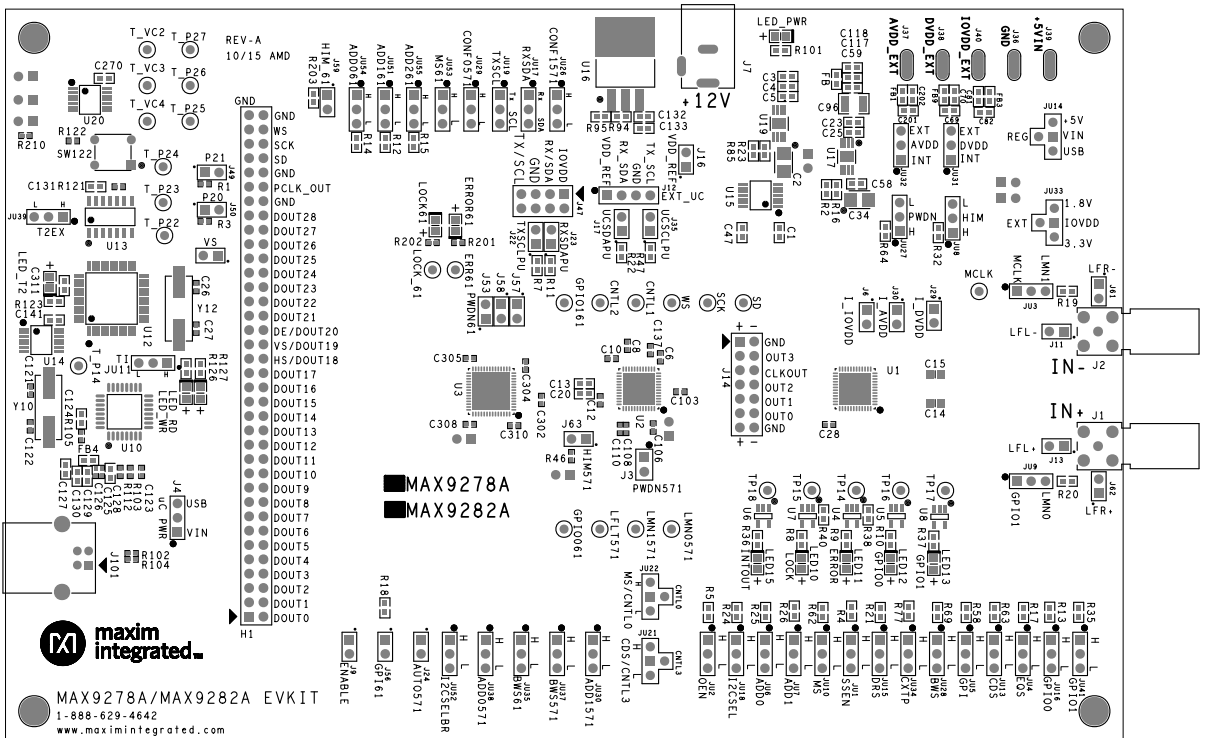
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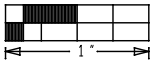
DESIGNER:

DATE: 10/03/2015

ODB++/GERBER: SILK_TOP



MAX9278A/MAX9282A EVKIT
1-888-629-4642
www.maximintegrated.com





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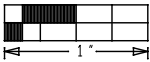
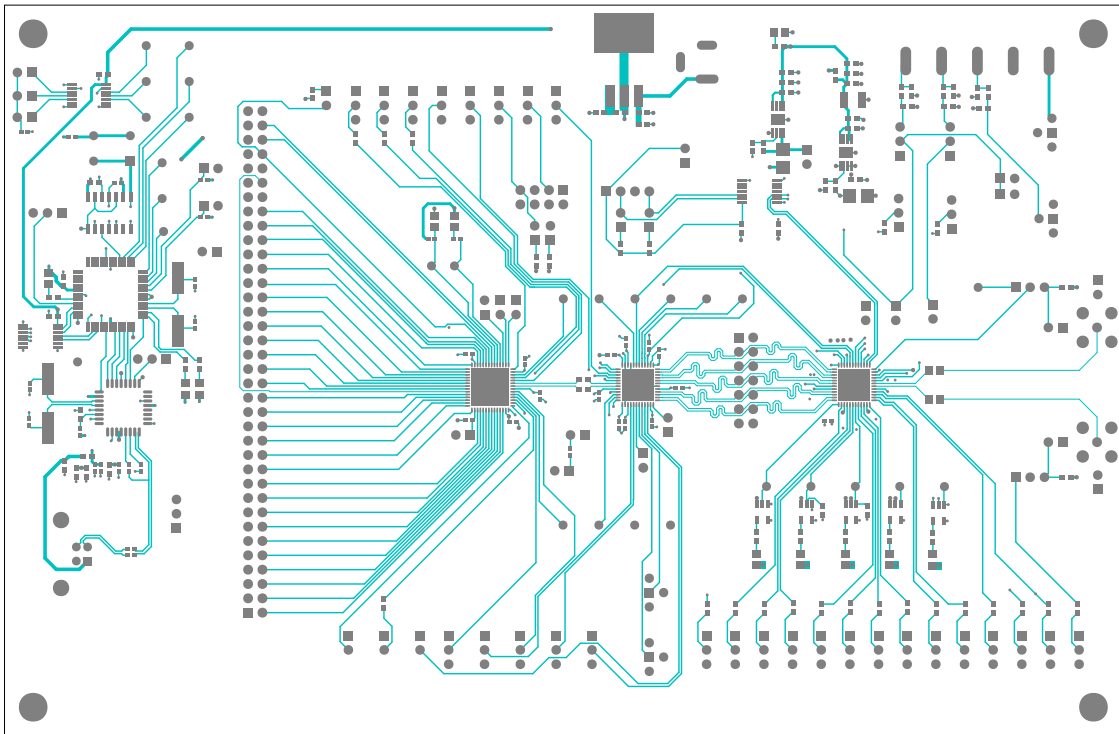
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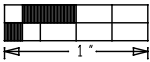
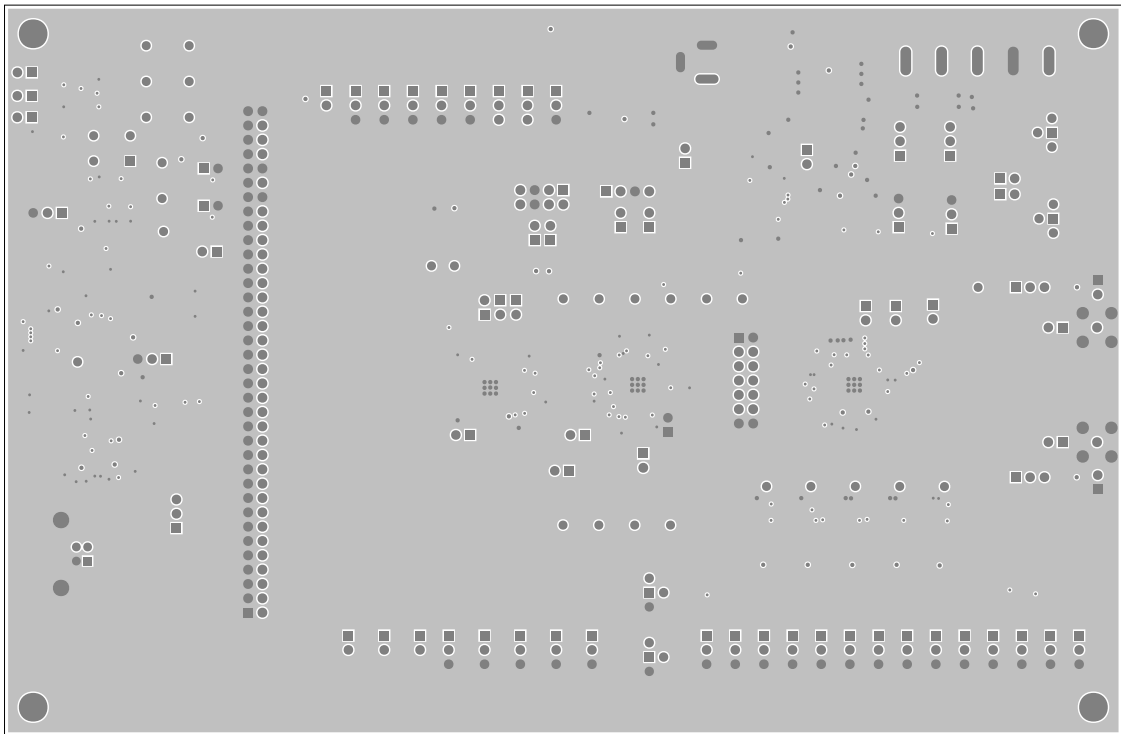
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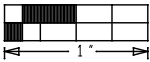
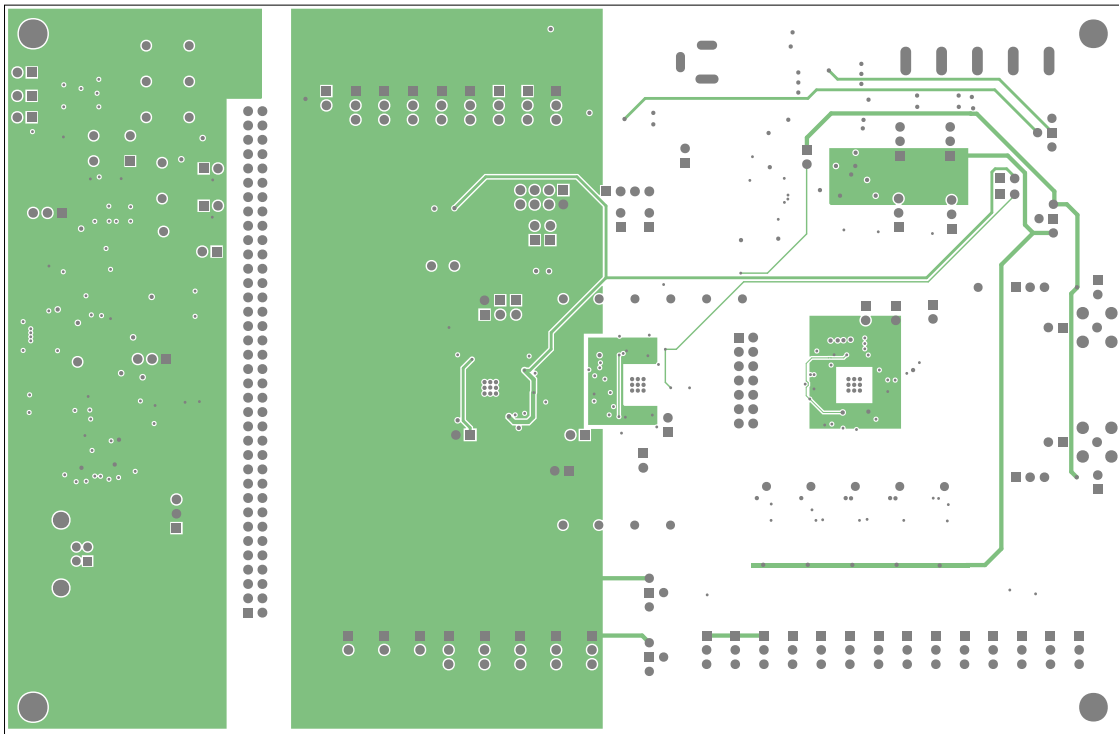
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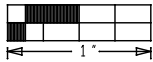
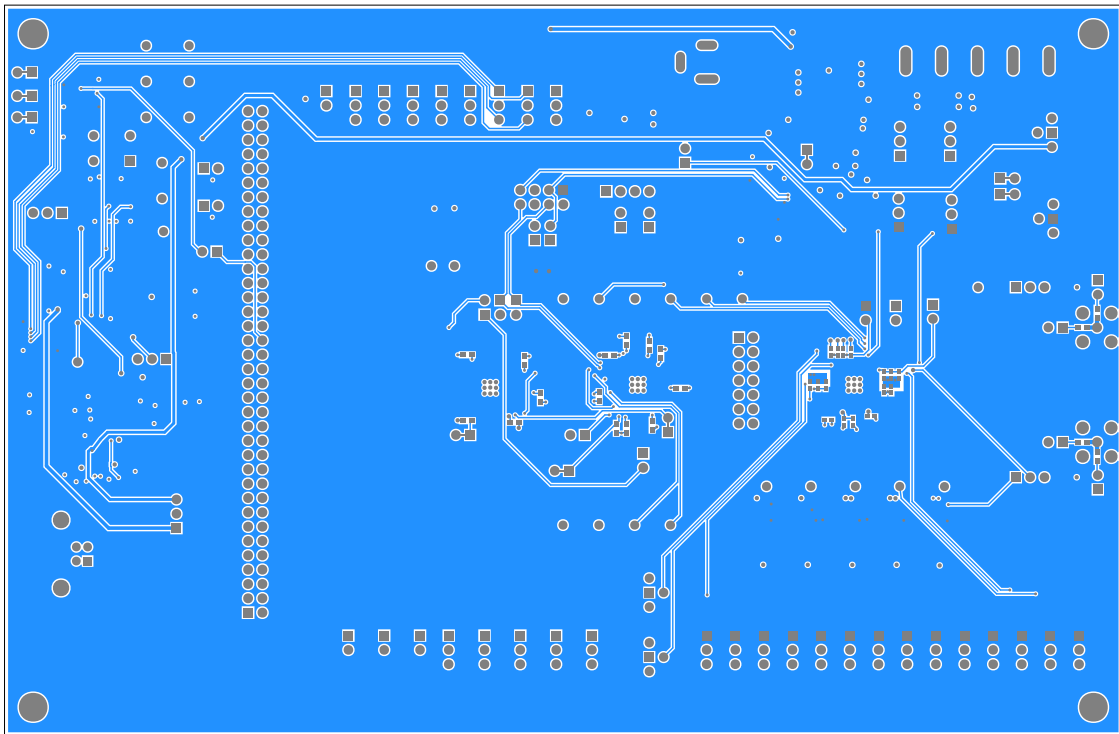
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| ENGINEER: | DESIGNER: |
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| HARDWARE NAME: MAX9278A_B2A_EVKIT_A | |
| HARDWARE NUMBER: | |
| ENGINEER: | DESIGNER: |
| DATE: 10/03/2015 | ODB++/GERBER: BOTTOM |





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| HARDWARE NUMBER: | |
| ENGINEER: | DESIGNER: |
| DATE: 10/03/2015 | ODB++/GERBER: SILK_BOT |

