

MAX22007 Evaluation Kit

Evaluates: MAX22007

General Description

The MAX22007 evaluation kit (EV kit) provides the hardware and software necessary to evaluate the MAX22007 Industrial Four-Channel Configurable Analog Output. The MAX22007 EV kit communicates with a graphical user interface (GUI) running on a PC through a USB port. The EV kit provides the on-board FT2232 USB-to-SPI bridge for SPI communication, but also allows an external SPI master to communicate with the MAX22007 through the PMOD1 connector. The onboard DC-DC converters generate necessary supply voltages, +15V for HVDD, +3.3V for V_{DD}, and -2V for HVSS to power the MAX22007.

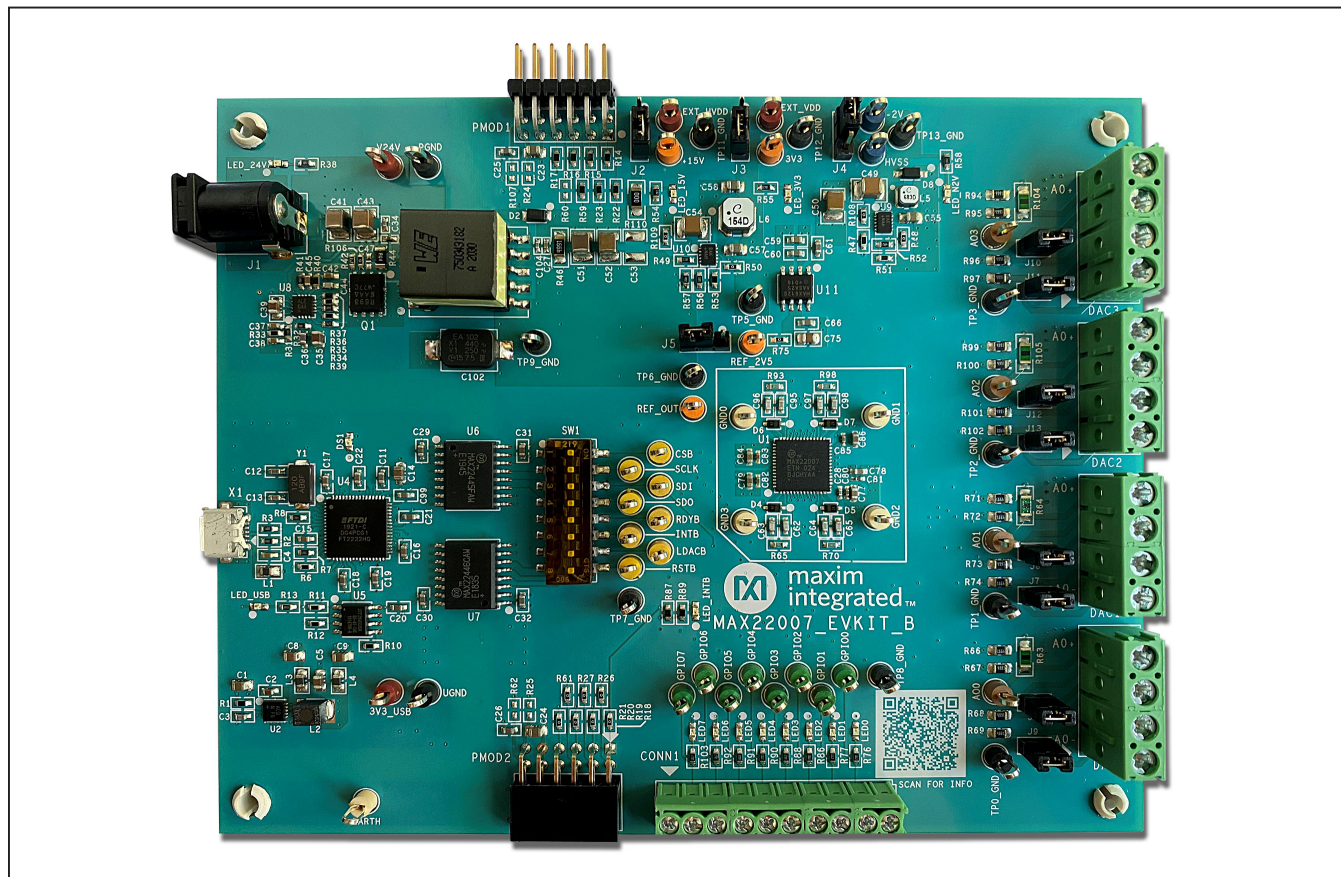
Multiple MAX22007 EV kit boards can be connected in daisy-chain mode using PMOD1 and PMOD2 connectors.

Features

- Two Accessible Modes:
 - Analog Output-Voltage Mode
 - Analog Output-Current Mode
- Supports Load Impedance Detection
- Access to All GPIOs
- Windows® 10-Compatible Software
- Proven PCB Layout
- Fully Assembled and Tested

Ordering Information appears at end of data sheet.

MAX22007 EV Kit Photo



Windows is a registered trademark of Microsoft Corporation.

Quick Start

Required Equipment

- MAX22007EVKIT#
- Micro-USB cable
- 24V, 1A DC power supply
- Windows 10 PC with a spare USB port
- Multimeter

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 before exercising the full features of the device:

- 1) Visit www.maximintegrated.com to download the latest version of the EV kit software installer, MAX22007EVKITSetupV1.0.EXE or newer.
- 2) Install the EV kit software and USB driver on your computer by running the EV kit software installer inside the temporary folder. The program files are copied to your PC and icons are created in the Windows **Start | Programs | Maxim Integrated** menu. During software installation, some versions of Windows might show a warning message indicating that this software is from Maxim Integrated. This is not an error condition and it is safe to proceed with installation. Administrator privileges are required to install the USB device driver.
- 3) Verify that all the jumpers are in their default positions as shown in [Table 1](#).
- 4) Connect a 24V DC power adapter to the barrel connector J1, or use a 24V DC power supply connected on the V24V and PGND test points on the EV kit board. The green LEDs (LED_24V, LED_15V, LED_3V3, and LED_N2V) should be on to indicate all onboard supplies are up and running.
- 5) Connect the micro-USB cable from the PC to the EV kit board. The green LED (LED_USB) should be on to indicate the USB-to-SPI bridge is powered up. 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**, then proceed to the next step.
- 6) Start the EV kit software by opening its icon in the Windows **Start | Programs | Maxim Integrated** menu. The EV kit software **Analog Output** tab appears, as shown in [Figure 1](#).
- 7) Verify that **Status: MAX22007EVKIT Connected** is displayed on the status bar at the bottom of the application window ([Figure 1](#)).
- 8) To test Analog Output Voltage Mode on Channel 3, connect a voltmeter across pin 1 and pin 4 of terminal DAC3, or between test point AO3 and TP3_GND.
- 9) In the **Channel 3 Mode** dropdown list, select **Voltage 0-10V**.
- 10) Select the **Setting** text box and type "10."
- 11) Click the **Set** pushbutton and then click the **Toggle LDACB** pushbutton to update the channel 3 output. Verify that the voltmeter now reads about 10V.
- 12) To test Analog Output Current Mode on Channel 2, connect an ampere meter between pin 1 and pin 4 of terminal DAC2, or between test point AO2 and TP2_GND. In the **Channel 2 Mode** dropdown list, select **Current 0-20mA**.
- 13) Select the **Setting** text box and type "20."
- 14) Click the **Set** pushbutton and then click the **Toggle LDACB** pushbutton to update the channel 2 output. Verify that the ampere meter now reads about 20mA.
- 15) Select the **Register** tab and click on the **Read All** button to read all of the registers in the device.
- 16) Inspect the contents of register 0x0A CHANNEL3_DATA and register 0x09 CHANNEL2_DATA are 0xCCCC and match the values from the previous steps ([Figure 2](#)).

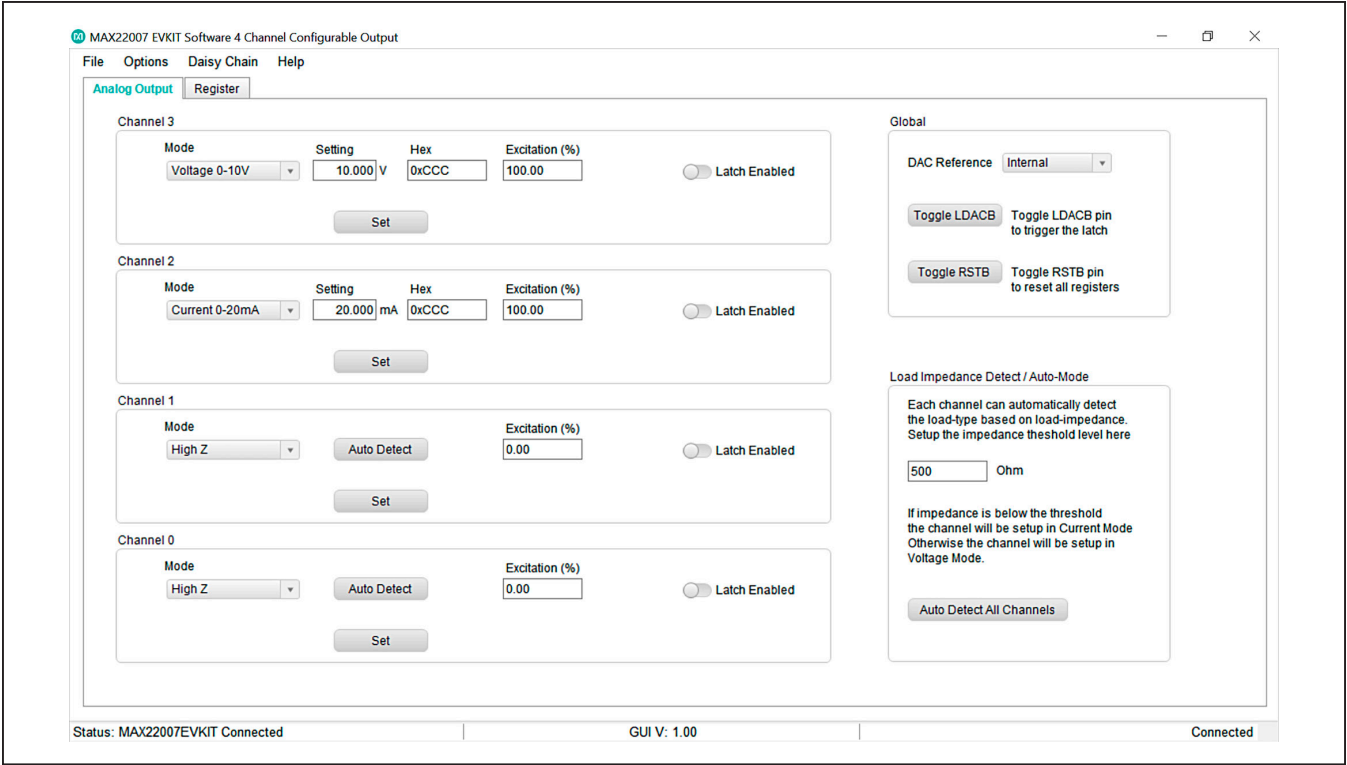


Figure 1. MAX22007 EV Kit Software, Analog Output Tab

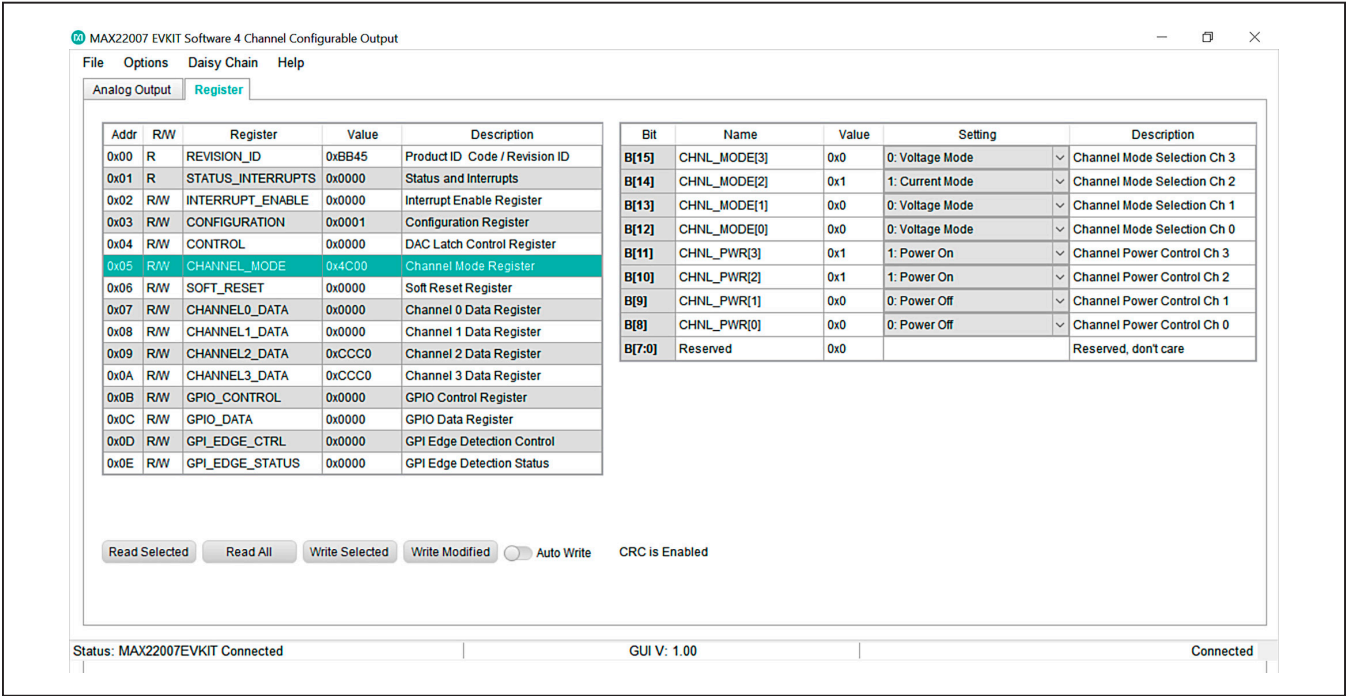


Figure 2. MAX22007 EV Kit Software, Register Tab

Table 1. MAX22007 EV Kit Shunt Positions and Settings

JUMPER	SHUNT POSITON	DESCRIPTION
POWER SUPPLIES AND REFERENCE		
J2	1–2	Use the external power supply from the EXT_HVDD test point as the MAX22007 HVDD supply
	2–3*	Use onboard +15V supply as the MAX22007 HVDD supply
J3	1–2	Use the external power supply from the EXT_VDD test point as the MAX22007 V _{DD} supply
	2–3*	Use onboard +3.3V supply as the MAX22007 V _{DD} supply
J4	1–2*	Use onboard -2V supply as the MAX22007 HVSS supply
	2–3	Connect the MAX22007 HVSS to GND
	Open	Use the external power supply from the HVSS test point as the MAX22007 HVSS supply
J5	1–2	Use the onboard +2.5V reference from the MAX6126 as the MAX22007 external reference voltage
	2–3*	Connect the MAX22007 external reference pin REF_EXT to GND; use the MAX22007 in internal reference mode
ANALOG OUTPUTS		
J6	Open	Disconnect Channel 1 CIN1 and VIP1; use in 4-wire mode
	Closed*	Connect Channel 1 CIN1 and VIP1; use in 2-wire mode
J7	Open	Disconnect Channel 1 VIN1 and GND; use in 4-wire mode
	Closed*	Connect Channel 1 VIN1 and GND; use in 2-wire mode
J8	Open	Disconnect Channel 0 CIN0 and VIP0; use in 4-wire mode
	Closed*	Connect Channel 0 CIN0 and VIP0; use in 2-wire mode
J9	Open	Disconnect Channel 0 VIN0 and GND; use in 4-wire mode
	Closed*	Connect Channel 0 VIN0 and GND; use in 2-wire mode
J10	Open	Disconnect Channel 3 CIN3 and VIP3; use in 4-wire mode
	Closed*	Connect Channel 3 CIN3 and VIP3; use in 2-wire mode
J11	Open	Disconnect Channel 3 VIN3 and GND; use in 4-wire mode
	Closed*	Connect Channel 3 VIN3 and GND; use in 2-wire mode
J12	Open	Disconnect Channel 2 CIN2 and VIP2; use in 4-wire mode
	Closed*	Connect Channel 2 CIN2 and VIP2; use in 2-wire mode
J13	Open	Disconnect Channel 2 VIN2 and GND; use in 4-wire mode
	Closed*	Connect Channel 2 VIN2 and GND; use in 2-wire mode

*Default position.

Table 2. MAX22007 EV Kit Connector Description

CONNECTOR	DESCRIPTION
J1	Barrel connector with positive center polarity as EV kit main power supply, connect +24V DC to J1, or connect +24V DC between V24V and PGND test points
X1	Micro-USB connector to connect the MAX22007 EV kit to a PC USB port
PMOD1	12-pin PMOD-compatible male connector to allow external microcontroller to configure the MAX22007. It can also be used in daisy-chain mode by connecting to the PMOD2 connector of another MAX22007 EV kit
PMOD2	12-pin PMOD-compatible female connector to be used in daisy-chain mode by connecting to the PMOD1 connector of another MAX22007 EV kit. Pin 1 of PMOD2 is routed to the MAX22007 $\overline{\text{RDY}}$ signal
CONN1	Terminal block for the MAX22007 GPIO0–GPIO7. Refer to the MAX22007 EV Kit Schematic Diagrams for the CONN1 pinout.
DAC0	Terminal Block for MAX22007 Channel 0. In 4-wire mode, remove shunts J8 and J9 and connect the load. In 2-wire mode, close shunts J8 and J9, and connect the load between pin 1 and pin 4, or between pin 2 and pin 3.
DAC1	Terminal Block for MAX22007 Channel 1. In 4-wire mode, remove shunts J6 and J7 and connect the load. In 2-wire mode, close shunts J6 and J7, and connect the load between pin 1 and pin 4, or between pin 2 and pin 3.
DAC2	Terminal Block for MAX22007 Channel 2. In 4-wire mode, remove shunts J12 and J13 and connect the load. In 2-wire mode, close shunts J12 and J13, and connect the load between pin 1 and pin 4, or between pin 2 and pin 3.
DAC3	Terminal Block for MAX22007 Channel 3. In 4-wire mode, remove shunts J10 and J11 and connect the load. In 2-wire mode, close shunts J10 and J11, and connect the load between pin 1 and pin 4, or between pin 2 and pin 3.

Table 3. MAX22007 EV Kit Test Point Description

TEST POINT	DESCRIPTION
MAX22007 LOGIC INTERFACE	
CSB (YELLOW)	MAX22007 $\overline{\text{CS}}$ pin; same as PMOD1 pin 1
SCLK (YELLOW)	MAX22007 SCLK pin; same as PMOD1 pin 4 and PMOD2 pin 4
SDI (YELLOW)	MAX22007 SDI pin; same as PMOD1 pin 2 and PMOD2 pin 2
SDO (YELLOW)	MAX22007 SDO pin; same as PMOD1 pin 3 and PMOD2 pin 3
INTB (YELLOW)	MAX22007 $\overline{\text{INT}}$ pin; same as PMOD1 pin 9 and PMOD2 pin 9
LDACB (YELLOW)	MAX22007 $\overline{\text{LDAC}}$ pin; same as PMOD1 pin 8 and PMOD2 pin 8
RDYB (YELLOW)	MAX22007 $\overline{\text{RDY}}$ pin; same as PMOD2 pin 1
RSTB (YELLOW)	MAX22007 $\overline{\text{RST}}$ pin; same as PMOD1 pin 7 and PMOD2 pin 7
TP7_GND (BLACK)	MAX22007 Analog Ground
GND0 (WHITE)	MAX22007 GND0 pin and analog ground
GND1 (WHITE)	MAX22007 GND1 pin and analog ground
GND2 (WHITE)	MAX22007 GND2 pin and analog ground
GND3 (WHITE)	MAX22007 GND3 pin and analog ground
GPIO0 (GREEN)	MAX22007 GPIO0 pin; same as CONN1 pin 9
GPIO1 (GREEN)	MAX22007 GPIO1 pin; same as CONN1 pin 8
GPIO2 (GREEN)	MAX22007 GPIO2 pin; same as CONN1 pin 7
GPIO3 (GREEN)	MAX22007 GPIO3 pin; same as CONN1 pin 6
GPIO4 (GREEN)	MAX22007 GPIO4 pin; same as CONN1 pin 5

Table 3. MAX22007 EV Kit Test Point Description (continued)

TEST POINT	DESCRIPTION
GPIO5 (GREEN)	MAX22007 GPIO5 pin; same as CONN1 pin 4
GPIO6 (GREEN)	MAX22007 GPIO6 pin; same as CONN1 pin 3
GPIO7 (GREEN)	MAX22007 GPIO7 pin; same as CONN1 pin 2
TP8_GND (BLACK)	MAX22007 Analog Ground
MAX22007 ANALOG OUTPUTS AND REFERENCE	
AO0 (BROWN)	MAX22007 Channel 0 Analog Output; same as DAC0 pin 4
TP0_GND (BLACK)	MAX22007 Analog Ground
AO1 (BROWN)	MAX22007 Channel 1 Analog Output; same as DAC1 pin 4
TP1_GND (BLACK)	MAX22007 Analog Ground
AO2 (BROWN)	MAX22007 Channel 2 Analog Output; same as DAC2 pin 4
TP2_GND (BLACK)	MAX22007 Analog Ground
AO3 (BROWN)	MAX22007 Channel 3 Analog Output; same as DAC3 pin 4
TP3_GND (BLACK)	MAX22007 Analog Ground
REF_2V5 (ORANGE)	MAX6126 Reference Output; it is connected to the MAX22007 REF_EXT pin when J5 is in 1–2 position
TP5_GND (BLACK)	MAX22007 Analog Ground
REF_OUT (ORANGE)	MAX22007 Internal Reference Output Pin
TP6_GND (BLACK)	MAX22007 Analog Ground
MAX22007 POWER SUPPLIES	
+15V (ORANGE)	Onboard isolated +15V generated by the MAX17690 for MAX22007 HVDD supply
EXT_HVDD (RED)	External supply input for MAX22007 HVDD
TP9_GND (BLACK)	MAX22007 Analog Ground
TP11_GND (BLACK)	MAX22007 Analog Ground
3V3 (ORANGE)	Onboard +3.3V generated by the MAX17532 for MAX22007 V _{DD} supply
EXT_VDD (RED)	External supply input for MAX22007 V _{DD}
TP12_GND (BLACK)	MAX22007 Analog Ground
-2V (BLUE)	Onboard -2V generated by the MAX17532 for optional MAX22007 HVSS supply
HVSS (BLUE)	External supply input for MAX22007 HVSS
TP13_GND (BLACK)	MAX22007 Analog Ground
EV KIT SUPPLY, USB SUPPLY, EARTH	
V24V (RED)	+24V DC power supply for the EV kit; same as the J1 connector
PGND (BLACK)	EV kit power ground; same as the J1 connector
3V3_USB (RED)	Onboard +3.3V logic supply generated by the MAX1556 for the FT2232 and logic-side circuitry
UGND (BLACK)	Logic-Side or USB Ground
EARTH (WHITE)	Protected earth on the MAX22007 EV kit

Detailed Description of Software

The MAX22007 EV kit along with its software provides an easy-to-use and flexible solution to evaluate the MAX22007, four-channel, 12-bit configurable analog output.

Generating an Analog Output

The **Analog Output** tab of the MAX22007 EV kit software quickly sets a voltage or current at AO₊ and GND terminals of connectors DAC0–DAC3. To set a voltage or current:

- Select the desired voltage or current mode using the **Mode** dropdown list
- Enter a voltage (V) or current (mA) in the **Setting** text box. The voltage range is 0V–12.5V and current range is 0mA–25mA.
- Click the **Set** pushbutton
- If the Latch slider bar is set to **Latch Transparent**, the output updates immediately, but if the **Latch Enabled** mode is used, the user must click the **Toggle LDACB** pushbutton to update the output voltage or current.

Instead of a voltage or current value, a specific DAC code can be entered in the **Hex** text box.

The **DAC Reference** dropdown list selects between the internal reference and an external reference on the EV kit.

If an external reference is selected, place a shunt across pins 1 and 2 of J5 to use the MAX6126 onboard reference. To use an off-board reference, remove any shunt on J5, and supply the reference voltage on pin 2 of J5.

Analog Output Calibration

The MAX22007 is factory calibrated for gain and offset. The EV kit software does not support analog output calibration.

Voltage-/Current-Mode Auto-Detection

The MAX22007 EV kit software demonstrates a voltage-/current-mode auto-detection feature using MAX22007 internal comparators.

In the **Load Impedance Detect/Auto-Mode** box, the user can define an impedance threshold value (default is 500Ω). The output level is set by the **Excitation (%)** text box in each channel configuration box. Once the load impedance is determined, the output level is set to the excitation percentage multiply by 10V or 20mA, depending on the output mode. The maximum allowed excitation level is 125%. By clicking the **Auto Detect All Channels** pushbutton, the EV kit software determines the load impedance for each channel by utilizing the internal comparator, which has a typical 500mV threshold voltage. Each channel is initially configured in the current mode. Based on the output current value that toggles the comparator output, the software calculates the load impedance and determines whether to configure the channel in voltage mode or current mode. If the calcu-

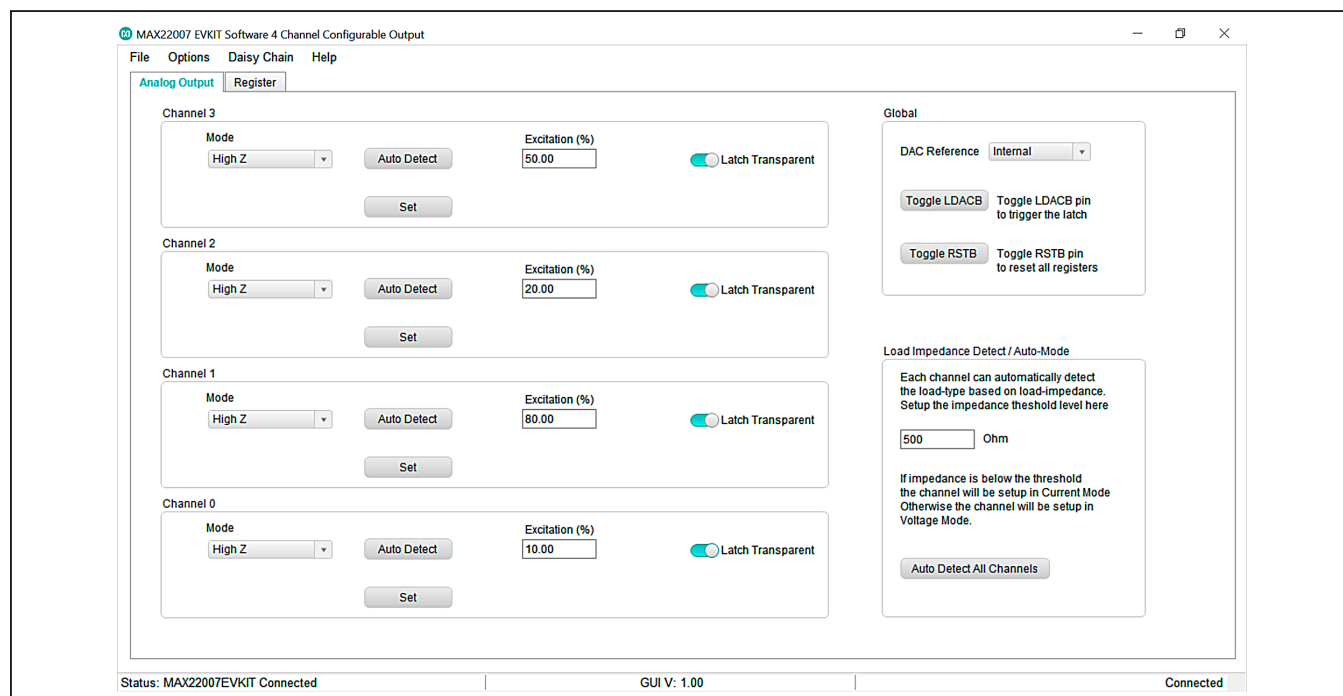


Figure 3. MAX22007 EV Kit Software, Load-Impedance Detect Setup

lated impedance is below the threshold, the output is set to the current mode, and conversely if the impedance is above the threshold, it is set to the voltage mode. The voltage-/current-mode auto-detection feature of the MAX22007 EV kit software can be seen in [Figure 3](#) and [Figure 4](#). Refer to the *MAX22007 IC data sheet* for details on the comparator.

Configuring the Registers

The **Register** tab permits read/write access to individual MAX22007 registers. As shown in [Figure 2](#), the table at

left side lists each of the MAX22007 registers. The table at right side lists the bit fields for any register selected in the left table.

To modify the writable bits of any register, update either the **Value** cell in the register table, or the **Setting** cell in the bit field table, then click either the **Write Selected** button or the **Write Modified** button.

The row associated with a modified register highlights red until that register is either written or read.

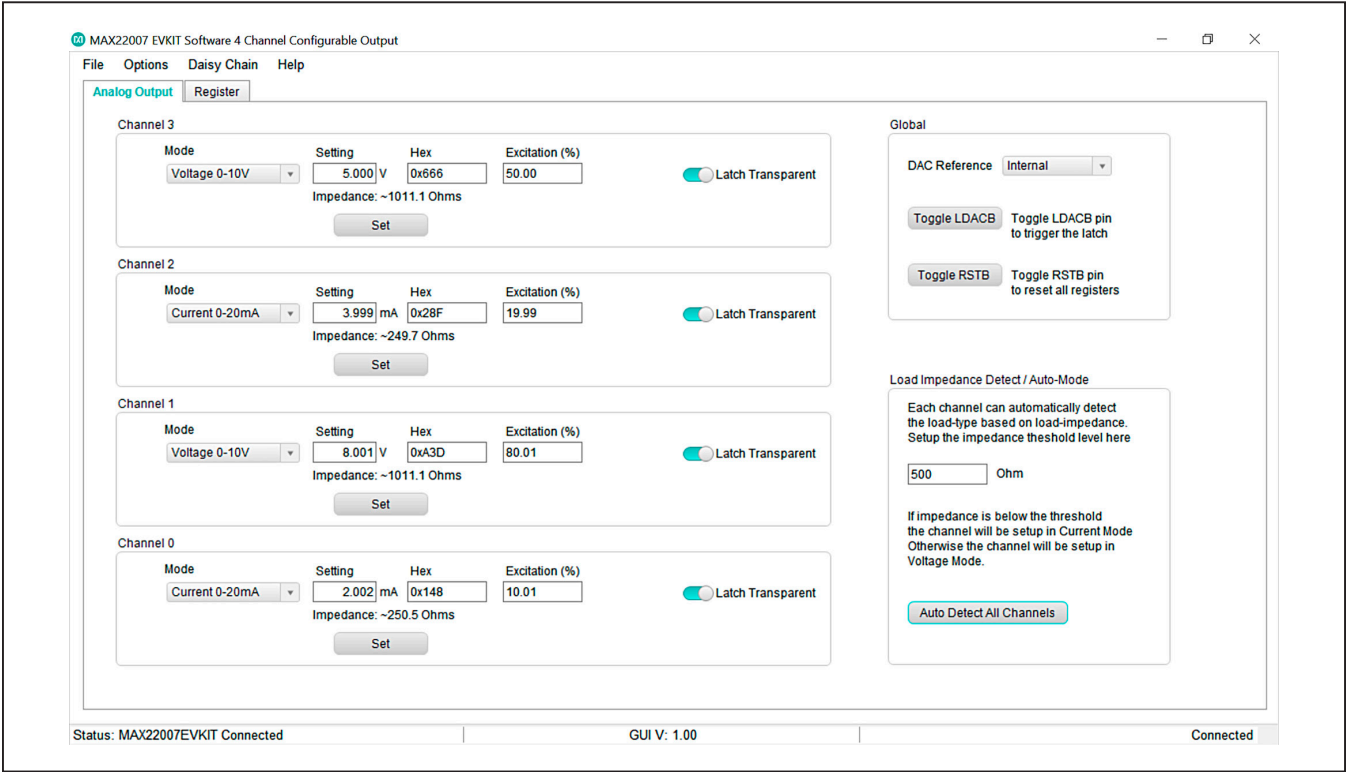


Figure 4. MAX22007 EV Kit Software, Load-Impedance Detect Result

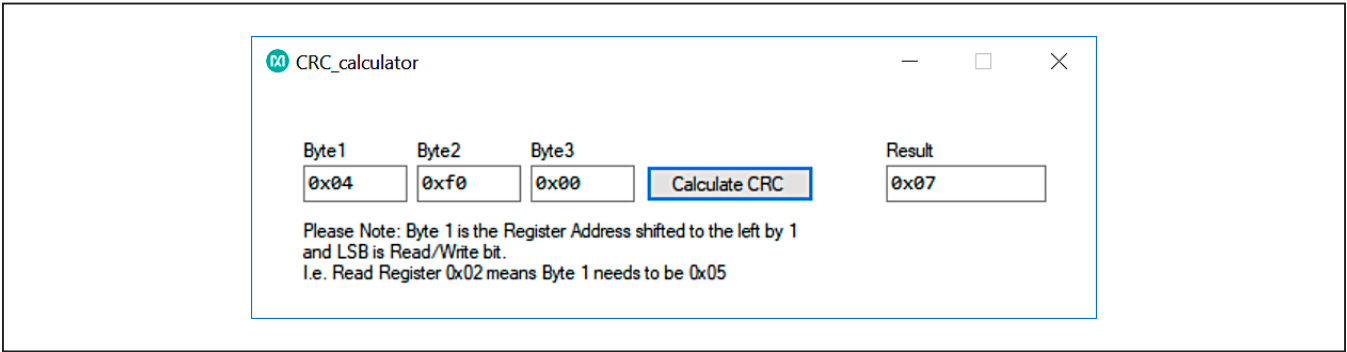


Figure 5. MAX22007 EV Kit Software, CRC Calculator

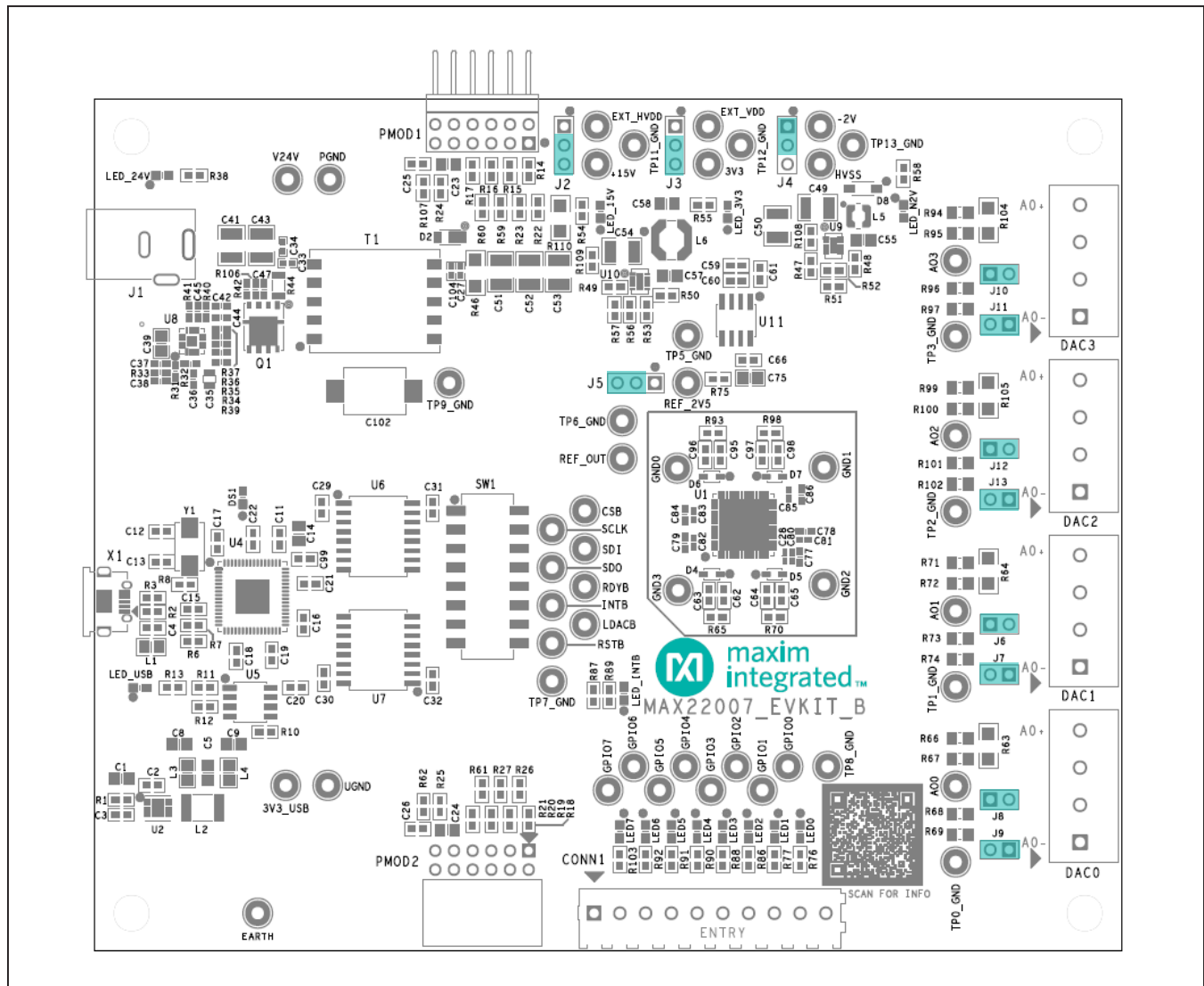


Figure 6. MAX22007 EV Kit, Default Jumper Settings

CRC Calculator

The MAX22007 EV kit software provides a CRC calculator to help the user verify their CRC calculation. Clicking **CRC Calculator** under the **Help** menu opens the CRC calculator window (Figure 5). The software calculates the CRC byte based on the first three bytes and displays the result (the fourth byte).

Daisy-Chain Operation

The MAX22007 EV kit software supports up to 4 MAX22007 devices configured in daisy-chain mode. By

default, the software operates in non-daisy-chain mode and communicates with only one device, which is indicated by “**No Daisy Chain**” in the **Daisy Chain** menu.

When more than two devices are connected in daisy-chain mode, after selecting which device to communicate with in the **Daisy Chain** menu, the **Analog Output** tab and the **Register** tab are updated to show the selected device’s register content, and the software only sends commands to the specified device. The software maintains all four devices’ register contents in the PC memory.

Detailed Description of Hardware

The MAX22007 EV kit includes the MAX22007 configurable analog output, and the external components needed to evaluate the device. All important signals are available on color-coded test points (Table 3). The default jumper settings are shown in Table 1 and Figure 6.

Isolated Power Domains

The MAX22007 EV kit, except the logic/USB domain, is powered by a +24V DC supply through J1. The power supply circuitry with the MAX17690 (U8) and MAX17532 (U9, U10) converts this +24V into isolated supplies for HVDD (+15V), HVSS (-2V), and VDD (+3.3V) needed by the MAX22007.

To reduce noise induced to loop currents going off-board, the MAX22007 EV kit isolates the connection to a PC through the USB connector.

The isolated USB section takes power exclusively from the USB connector X1. Digital isolators MAX22445 (U6) and MAX22446 (U7) keep the USB ground separate from the MAX22007 ground and the +24V power ground. The onboard USB-to-SPI bridge FT2232 is also powered by the USB supply.

Configuring the Voltage Supplies

The MAX22007 configurable analog output needs 3 voltage supplies, HVDD, HVSS, and VDD, referenced to GND. The MAX22007 powers its analog output channels from a pair of high-voltage supplies, HVDD and HVSS. The on-chip DACs and logic interface are powered through VDD.

The MAX22007 EV kit makes it easy to provide main power through a barrel connector J1. Provide +24V DC through this connector, positive in the center. If a +24V DC power adapter with a barrel connector is not available, alternatively the +24V DC can be supplied through the V24V and PGND test points. LED_24V near J1 illuminates when voltage is applied either through J1 or V24V/PGND. The default jumper configuration provides isolated on-board +15V for HVDD, -2V for HVSS, and +3.3V for VDD.

The MAX22007 EV kit can be configured to use different voltage levels on HVDD, HVSS, and VDD through jumpers J2, J3 and J4. Ensure that the MAX22007 EV kit is unpowered before reconfiguring any jumpers.

To supply HVDD from the on-board +15V supply, ensure that J2 is in the 2–3 position. If powering HVDD from an external supply, set J2 to the 1–2 position and provide a suitable voltage on the EXT_HVDD test point. LED_15V illuminates to confirm that HVDD is powered.

To supply HVSS from the on-board -2V supply, ensure that J4 is in the 1–2 position. If no negative supply is required in the application, connect HVSS to GND by setting J4 to the 2–3 position. If powering HVSS from an external supply, open J4 and provide a suitable voltage on the HVSS test point. LED_N2V illuminates to confirm that HVSS is powered.

To supply VDD from the on-board +3.3V supply, ensure that J3 is in the 2–3 position. If powering VDD from an external supply, set J3 to the 1–2 position and provide a suitable voltage on the EXT_VDD test point. LED_3V3 illuminates to confirm that VDD is powered.

CAUTION: when supplying HVDD, HVSS and VDD externally, make sure that HVDD, HVSS, and VDD are in the normal operating range. Refer to the MAX22007 IC data sheet for details.

Output Configuration Options

The MAX22007 EV kit analog output channel is very flexible. Under software control, each output can be independently configured to behave as a voltage output from 0V to 12.5V, or a current output from 0mA to 25mA. The output can also be configured for 2-wire or 4-wire mode.

For channel 0, in 2-wire mode, close shunts J8 and J9, and connect the load between terminal DAC0 pin 1 and pin 4, or between pin 2 and pin 3. In 4-wire mode, remove shunts J8 and J9, and connect the load to 4-pin terminal DAC0.

Table 4 summarizes the jumper settings and modes for four channels.

Table 4. Output Channel Configuration Options

CHANNEL	CONNECTOR	OUTPUT CONFIGURATION	
		2-WIRE MODE	4-WIRE MODE
Channel 0	DAC0	J8 = J9 = Closed	J8 = J9 = Open
Channel 1	DAC1	J6 = J7 = Closed	J6 = J7 = Open
Channel 2	DAC2	J12 = J13 = Closed	J12 = J13 = Open
Channel 3	DAC3	J10 = J11 = Closed	J10 = J11 = Open

MAX22007 Reference Options

Besides the reference integrated in the MAX22007, the MAX22007 EV kit also has an on-board reference (MAX6126), as well as the means to connect an off-board bench reference.

To choose the internal reference for the MAX22007, select **Internal** from **DAC Reference** in the software and ensure that J5 is in the 2–3 position.

To use the on-board reference, select **External** from **DAC Reference** in the software and ensure that J5 is in the 1–2 position.

To choose an off-board reference, select **External** from **DAC Reference** in the software, ensure that J5 is open, and provide a 2.500V reference voltage on pin 2 of J5.

Communicating with the MAX22007

The MAX22007 EV kit communicates to a PC through a commonly available USB A-to-micro-B cable. Since there is no on-board microprocessor, all coordination and low-level SPI transactions are managed by code on the PC as part of the MAX22007 EV kit software. This is ideal for quick evaluation and to explore the features and functions of the MAX22007.

For users who prefer more direct control through their own software, logic signals are made available through PMOD1, a 6 x 2 header with 0.1" spacing that is some-

times called a Pmod™ connector making it compatible with many FPGA and microcontroller systems. As well as independent dedicated connection, PMOD1 can also mate with Maxim's USB2GPIO# control card. If PMOD1 is used, disconnect the USB-to-SPI interface from the MAX22007 by opening all switches on SW1.

Daisy-Chain Mode with the MAX22007

The MAX22007 EV kit can operate as a standalone unit, or be daisy-chained with other MAX22007 EV kits. The MAX22007 EV kit software supports up to 4 devices in a daisy chain, but the device itself can support more.

The first device in the daisy chain (Device 0) communicates to a PC through a USB interface. The PMOD2 connector on the Device 0 EV kit connects to the PMOD1 connector on the Device 1 EV kit. In this way the RDY signal from Device 0 connects to the CS signal of Device 1. Refer to the [MAX22007 EV Kit Schematic Diagrams](#) for details.

On the Device 0 EV kit, close all switches on SW1 in order to allow the MAX22007 EV kit software communicating with all devices in the daisy chain using Device 0 EV kit USB-to-SPI bridge. On all trailing EV kits, open all switches on SW1 to disconnect the MAX22007 SPI from their own USB-to-SPI bridge, preventing any bus contention.

Refer to the *MAX22007 IC data sheet* for further details on daisy-chain mode.

Ordering Information

PART	TYPE
MAX22007EVKIT#	EV Kit

#Denotes RoHS compliant.

Pmod is a trademark of Digilent Inc.

MAX22007 EV Kit Bill of Materials

ITEM	REF_DES	DN/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION
1	+15V, 3V3, REF_2V5, REF_OUT	—	4	5013	KEystone	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; ORANGE; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
2	-2V, HVSS	—	2	5127	KEystone	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; BLUE; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
3	3V3_USB, EXT_HVDD, EXT_VDD, V24V	—	4	5010	KEystone	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; RED; PHOSPHOR BRONZE WIRE SIL;
4	A00-A03	—	4	5125	KEystone	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; BROWN; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
5	C1, C23, C24, C55, C57, C58	—	6	CL21B106K0QNNN; GRM21BZ71C106KE15	SAMSUNG; MURATA	10µF	CAPACITOR; SMT (0805); CERAMIC CHIP; 10µF; 16V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R
6	C2	—	1	C1608X7R1H474K080AC	TDK	0.47µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.47µF; 50V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R; AUTO
7	C3, C67-C74, C87-C94	—	17	C1608C0G2A102J080AA; C0603C102J1GAC	TDK;KEMET	1000PF	CAPACITOR; SMT (0603); CERAMIC CHIP; 1000PF; 100V; TOL = 5% ; TG = -55°C TO +125°C; TC = C0G
8	C4, C37, C38	—	3	C0603C103K2RAC	KEMET	0.01µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.01µF; 200V; TOL = 10% ; MODEL = ; TG = -55°C TO +125°C; TC = X7R
9	C5	—	1	C2012X5R1C226K125AC	TDK	22µF	CAPACITOR; SMT (0805); CERAMIC CHIP; 22µF; 16V; TOL = 10% ; MODEL = C SERIES; TG = -55°C TO +85°C; TC = X5R
10	C6, C7, C10, C11, C15-C22, C25, C26, C29-C32, C36, C60, C61, C66, C99	—	23	CC0603KRX7R0BB104; GRM188R72A104KA35; HMK107B7104KA; 06031C104KAT2A; GRM188R72A104K	YAGEO; MURATA; TAIYO YUDEN; AVX;MURATA	0.1µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.1µF; 100V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R
11	C8, C9, C14	—	3	TMK212AB7475K; CG4J1X7R1E475K125AC; C2012X7R1E475K125AB; CG4J1X7R1E475K125AC; GRM21BZ71E475KE15	TAIYO YUDEN; TDK;TDK;TDK; MURATA	4.7µF	CAPACITOR; SMT (0805); CERAMIC CHIP; 4.7µF; 25V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R
12	C12, C13	—	2	C0603C0G500-180JNE; C1608C0G1H180J080AA; GRM1885C1H180J	VENKEL LTD.; TDK;MURATA	18PF	CAPACITOR; SMT (0603); CERAMIC CHIP; 18PF; 50V; TOL = 5% ; MODEL = ; TG = -55°C TO +125°C; TC = C0G
13	C27, C33, C80-C83, C85	—	7	C1005X7R1H104K050BB; GRM155R71H104KE14; C1005X7R1H104K050BE; UMK105B7104KV-FR	TDK;MURATA; TDK; TAIYO YUDEN	0.1µF	CAPACITOR; SMT (0402); CERAMIC CHIP; 0.1µF; 50V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R
14	C28, C34, C104	—	3	C1005C0G2A151J050BA	TDK	150PF	CAP; SMT (0402); 150PF; 5% ; 100V; C0G; CERAMIC CHIP
15	C35	—	1	C2012X7S2A105K125AB; GRJ21BC72A105KE11; CG4J3X7S2A105K125AB; GRM21BC72A105KE01	TDK; MURATA;TDK	1µF	CAPACITOR; SMT (0805); CERAMIC CHIP; 1µF; 100V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7S
16	C39, C75	—	2	C2012X7R1H225K125AC	TDK	2.2µF	CAPACITOR; SMT (0805); CERAMIC CHIP; 2.2µF; 50V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R
17	C41, C51, C52, C76	—	4	GRM32ER71H106KA12; CL32B106KBJNNN; UMJ325KB7106KMH; 12105C106K422A	MURATA; SAMSUNG ELECTRONICS; TAIYO YU	10µF	CAPACITOR; SMT (1210); CERAMIC CHIP; 10µF; 50V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R
18	C42	—	1	C0603C683J5RAC; C0603X683J5RAC	KEMET; KEMET	0.068µF	CAPACITOR; SMT; 0603; CERAMIC; 0.068µF; 50V; 5% ; X7R; -55°C to + 125°C; 0 ±15% °C MAX.
19	C43, C49, C50, C54	—	4	GRM32ER72A225KA35; CGA6N3X7R2A225K230AB; CC1210KX7R0BB225; HMK325B7225KM	MURATA;TDK; YAGEO; TAIYO YUDEN	2.2µF	CAPACITOR; SMT (1210); CERAMIC CHIP; 2.2µF; 100V; TOL = 10% ; MODEL = GRM SERIES; TG = -55°C TO +125°C; TC = X7R
20	C44, C63, C65, C96, C98	—	5	GCM1885C2A471JA16	MURATA	470PF	CAP; SMT (0603); 470PF; 5% ; 100V; C0G; CERAMIC CHIP
21	C45, C46	—	2	CGA3E2X7R2A223K080AA	TDK	0.022µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.022µF; 100V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R
22	C56	—	1	C1608X7R1H224K080; GRM188R71H224KAC4	TDK;MURATA	0.22µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.22µF; 50V; TOL = 10% ; TG = -55°C TO +125°C; TC = X7R

MAX22007 EV Kit Bill of Materials (continued)

ITEM	REF_DES	DN/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION
23	C59, C77-C79, C84, C86	—	6	UMK107AB7105KA; CC0603KRX7R9BB105	TAIYO YUDEN; YAGEO	1µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 1µF; 50V; TOL = 10%; TG = -55°C TO +125°C; TC = X7R
24	C62, C64, C95, C97	—	4	06031U240FAT2A	AVX	24PF	CAP; SMT (0603); 24PF; 1%; 100V; COG; CERAMIC CHIP
25	C102	—	1	DK1E3EA102M86RAH01	MURATA	1000PF	CAP; SMT; 1000PF; 20%; 250V; E; CERAMIC CHIP
26	CONN1	—	1	1984691	PHOENIX CONTACT	1984691	CONNECTOR; FEMALE; THROUGH HOLE; TERMINAL BLOCK; RIGHT ANGLE; 10PINS
27	CSB, INTB, LDACB, RDYB, RSTB, SCLK, SDI, SDO	—	8	5014	KEYSTONE	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; YELLOW; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
28	D1	—	1	DFLS1200	DIODES INCORPORATED	DFLS1200	DIODE; RECT; SMT (POWERDI-123); PIV = 200V; IF = 1A
29	D2	—	1	DFLS1100-7	DIODES INCORPORATED	DFLS1100-7	DIODE; SCHOTTKY; SMT; PIV = 100V; IF = 1A
30	D4-D7	—	4	BAT46WJ	NXP	BAT46WJ,115	DIODE; SCH; SMT (SOD-323F); PIV = 100V; IF = 0.25A
31	D8	—	1	BAT41Z	ST MICROELECTRONICS	BAT41Z	DIODE; SCH; SMT (SOD-123); PIV = 100V; IF = 0.2A
32	D9	—	1	SM30T39AY	ST MICROELECTRONICS	38.6V	DIODE; TVS; SMC (DO-214AB); VRM = 38.6V; IPP = 56.3A
33	D10-D13	—	4	SMBJ36CA	FAIRCHILD SEMICONDUCTOR	36V	DIODE; TVS; SMB (DO-214AA); VRM = 36V; IPP = 10.3A
34	DAC0-DAC3	—	4	1935187	PHOENIX CONTACT	1935187	CONNECTOR; FEMALE; THROUGH HOLE; GREEN TERMINAL BLOCK; STRAIGHT; 4PINS
35	DS1, LED_3V3, LED_15V, LED_24V, LED_N2V, LED_USB	—	6	LTST-C193KGKT-5A	LITE-ON ELECTRONICS INC.	LTST-C193KGKT-5A	DIODE; LED; STANDARD; YELLOW-GREEN; SMT (0603); PIV = 1.9V; IF = 0.005A; -55°C TO +85°C
36	EARTH, GND0-GND3	—	5	5012	KEYSTONE	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; WHITE; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
37	GPIO0-GPIO7	—	8	5126	KEYSTONE	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; GREEN; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
38	J1	—	1	PJ-202AH	CUI INC.	PJ-202AH	CONNECTOR; MALE; THROUGH HOLE; DC POWER JACK; RIGHT ANGLE; 3PINS
39	J2-J5	—	4	PCC03SAAN	SULLINS	PCC03SAAN	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 3PINS; -65°C TO +125°C
40	J6-J13	—	8	PCC02SAAN	SULLINS	PCC02SAAN	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 2PINS; -65°C TO +125°C
41	L1, L3, L4	—	3	BLM21PG331SN1	MURATA	330	INDUCTOR; SMT (0805); FERRITE-BEAD; 330; TOL = ±25%; 1.5A
42	L2	—	1	B82432T1332K000	TDK	3.3µH	INDUCTOR; SMT (1812); FERRITE CORE; 3.3µH; TOL = ±10%; 0.9A
43	L5	—	1	LPS3015-683MR	COILCRAFT	68µH	INDUCTOR; SMT; FERRITE CORE; 68µH; TOL = ±20%; 0.33A
44	L6	—	1	LPS5030-154MR	COILCRAFT	150µH	INDUCTOR; SMT; SHIELDED; 150µH; TOL = ±20%; 0.57A
45	LED0-LED7	—	8	LTST-C193KSKT-5A	LITE-ON ELECTRONICS INC.	LTST-C193KSKT-5A	DIODE; LED; YELLOW; SMT (0603); VF = 2V; IF = 0.005A
46	LED_INTB	—	1	LTST-C193KRKT-2A	LITE-ON ELECTRONICS INC.	LTST-C193KRKT-2A	DIODE; LED; EXTRA THIN; EXTRA BRIGHT; RED; SMT (0603); VF = 2.2V; IF = 0.002A
47	MTH1-MTH4	—	4	9032	KEYSTONE	9032	MACHINE FABRICATED; ROUND-THRU HOLE SPACER; NO THREAD; M3.5; 5/8IN; NYLON
48	PGND, TP0_GND, TP1_GND-TP3_GND, TP5_GND-TP9_GND, TP11_GND-TP13_GND, UGND	—	14	5011	KEYSTONE	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.445IN; BOARD HOLE = 0.063IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
49	PMOD1	—	1	TSW-106-08-S-D-RA	SAMTEC	TSW-106-08-S-D-RA	CONNECTOR; THROUGH HOLE; DOUBLE ROW; RIGHT ANGLE; 12PINS;
50	PMOD2	—	1	PPPC062LJBN-RC	SULLINS ELECTRONICS CORP.	PPPC062LJBN-RC	CONNECTOR; FEMALE; THROUGH HOLE; 0.1IN CC; HEADER; 2 ROW; RIGHT ANGLE; 12PINS
51	Q1	—	1	SIR698DP-T1-GE3	VISHAY SILICONIX	SIR698DP-T1-GE3	TRAN; N-CHANNEL 100 V (D-S) MOSFET; NCH; SO-8; PD(23W); I(7.5A); V-(100V)
52	R1	—	1	CRCW0603100R0FK; ERJ-3EKF1000; RC0603FR-07100RL	VISHAY DALE; PANASONIC	100	RESISTOR; 0603; 100Ω; 1%; 100PPM; 0.10W; THICK FILM
53	R2, R3	—	2	CRCW060310R0FK; MCR03EZPFX10R0; ERJ-3EKF10R0	VISHAY DALE; ROHM	10	RESISTOR; 0603; 10Ω; 1%; 100PPM; 0.10W; THICK FILM

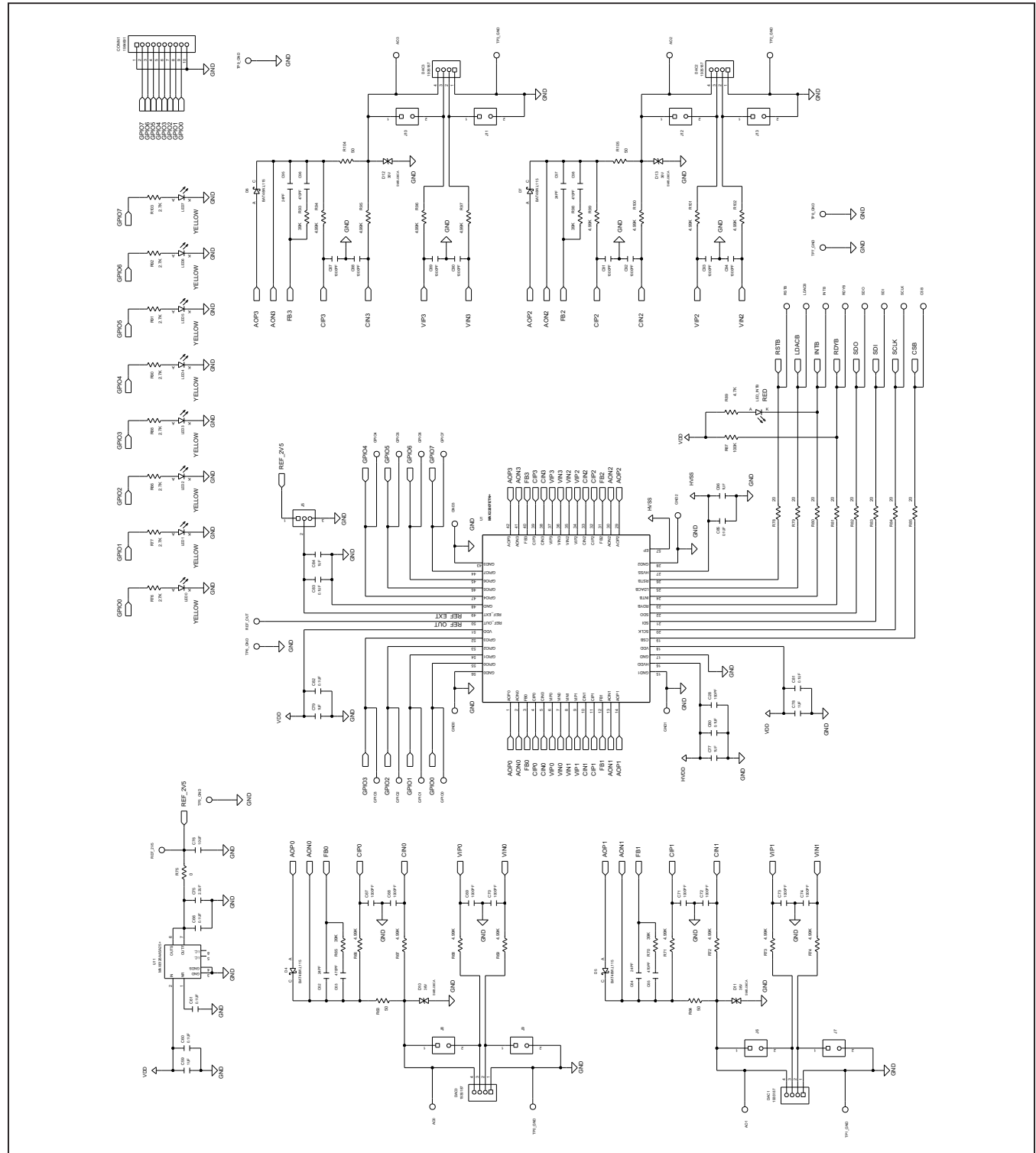
MAX22007 EV Kit Bill of Materials (continued)

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION
54	R4, R6, R10-R12, R33, R34	—	7	CRCW060310K0FK; ERJ-3EKF1002; AC0603FR-0710KL; RMC0603FT10K0	VISHAY DALE; PANASONIC; YAGEO	10K	RESISTOR; 0603; 10K; 1%; 100PPM; 0.10W; THICK FILM
55	R5	—	1	CRCW06032K20FK	VISHAY DALE	2.2K	RESISTOR; 0603; 2.2KΩ; 1%; 100PPM; 0.10W; THICK FILM
56	R7	—	1	CRCW060315K0FK	VISHAY DALE	15K	RESISTOR; 0603; 15KΩ; 1%; 100PPM; 0.10W; THICK FILM
57	R8	—	1	CRCW060312K0FK	VISHAY DALE	12K	RESISTOR; 0603; 12KΩ; 1%; 100PPM; 0.10W; THICK FILM
58	R9, R13	—	2	CRCW06031K00FK; ERJ-3EKF1001; CR0603AFX-1001ELF	VISHAY; PANASONIC; BOURNS	1K	RESISTOR; 0603; 1K; 1%; 100PPM; 0.10W; THICK FILM
59	R14-R17, R22, R23, R59, R78-R85	—	15	CRCW060320R0FK; ERJ-3EKF20R0	VISHAY DALE; PANASONIC	20	RESISTOR; 0603; 20Ω; 1%; 100PPM; 0.10W; THICK FILM
60	R18-R21, R26, R27, R48, R50, R61, R75, R106, R108, R109	—	13	CRCW06030000ZS; MCR03EZPJ000; ERJ-3GEY0R00; CR0603AJ-000ELF	VISHAY; ROHM SEMICONDUCTOR; PANASONIC; BOURNS	0	RESISTOR; 0603; 0Ω; 0%; JUMPER; 0.10W; THICK FILM
61	R28-R30, R37, R87	—	5	CRCW0603100KFK; RC0603FR-07100KL; RC0603FR-13100KL; ERJ-3EKF1003; AC0603FR-07100KL	VISHAY DALE; YAGEO; YAGEO; PANASONIC	100K	RESISTOR; 0603; 100K; 1%; 100PPM; 0.10W; THICK FILM
62	R31	—	1	CRCW060310K7FK; ERJ-3EKF1072	VISHAY DALE; PANASONIC	10.7K	RESISTOR; 0603; 10.7KΩ; 1%; 100PPM; 0.10W; THICK FILM
63	R32	—	1	CRCW0603280KFK	VISHAY DALE	280K	RESISTOR; 0603; 280KΩ; 1%; 100PPM; 0.10W; THICK FILM
64	R35	—	1	CRCW0603287KFK	VISHAY DALE	287K	RESISTOR; 0603; 287KΩ; 1%; 100PPM; 0.10W; METAL FILM
65	R36, R51	—	2	ERJ-3EKF7502	PANASONIC	75K	RESISTOR; 0603; 75KΩ; 1%; 100PPM; 0.10W; THICK FILM
66	R38	—	1	CRCW060318K0FK	VISHAY DALE	18K	RESISTOR; 0603; 18KΩ; 1%; 100PPM; 0.10W; THICK FILM
67	R39	—	1	CRCW0603162KFK	VISHAY DALE	162K	RESISTOR; 0603; 162KΩ; 1%; 100PPM; 0.1W; THICK FILM
68	R40	—	1	CRCW06037K32FK	VISHAY DALE	7.32K	RESISTOR; 0603; 7.32KΩ; 1%; 100PPM; 0.1W; THICK FILM
69	R41, R52, R57	—	3	CRCW060349K9FK; ERJ-3EKF4992	VISHAY DALE; PANASONIC	49.9K	RESISTOR; 0603; 49.9KΩ; 1%; 100PPM; 0.10W; THICK FILM
70	R42	—	1	ERJ-3RQF2R2	PANASONIC	2.2	RESISTOR; 0603; 2.2Ω; 1%; 100PPM; 0.10W; THICK FILM
71	R43	—	1	CRCW12069K10FK	VISHAY DALE	9.1K	RESISTOR; 1206; 9.1KOHMS; 1%; 100PPM; 0.25W; THICK FILM
72	R44	—	1	WSL1206R0400FEA18	VISHAY	0.04	RES; SMT (1206); 0.04; 1%; ±75PPM/DEGC; 0.5W
73	R46	—	1	CRCW12064K99FKEAHP	VISHAY	4.99K	RES; SMT (1206); 4.99K; 1%; ±100PPM/DEGC; 0.75W
74	R47	—	1	ERJ-3EKF1303	PANASONIC	130K	RESISTOR; 0603; 130KΩ; 1%; 100PPM; 0.10W; THICK FILM
75	R49	—	1	CRCW0603191KFK	VISHAY DALE	191K	RESISTOR; 0603; 191KΩ; 1%; 100PPM; 0.10W; METAL FILM
76	R53	—	1	CRCW060322R1FK	VISHAY DALE	22.1	RESISTOR; 0603; 22.1Ω; 1%; 100PPM; 0.10W; THICK FILM
77	R54	—	1	CRCW060313K0FK; ERJ-3EKF1302	VISHAY DALE; PANASONIC	13K	RESISTOR; 0603; 13KOHMS; 1%; 100PPM; 0.1W; THICK FILM
78	R55, R76, R77, R86, R88, R90-R92, R103	—	9	CRCW06032K70FK; ERJ-3EKF2701	VISHAY DALE; PANASONIC	2.7K	RESISTOR; 0603; 2.7KΩ; 1%; 100PPM; 0.10W; THICK FILM
79	R56	—	1	CRCW0603158KFK; ERJ-3EKF1583	VISHAY DALE; PANASONIC	158K	RESISTOR; 0603; 158KΩ; 1%; 100PPM; 0.10W; THICK FILM
80	R58	—	1	CRCW06032000FK	VISHAY DALE	200	RESISTOR; 0603; 200Ω; 1%; 100PPM; 0.10W; THICK FILM
81	R63, R64, R104, R105	—	4	PATT1206E50R0BG	VISHAY	50	RES; SMT (1206); 50; 0.1%; ±25PPM/°K; 0.4W
82	R65, R70, R93, R98	—	4	TNPW060339K0BE	VISHAY	39K	RES; SMT (0603); 39K; 0.1%; ±25PPM/°K; 0.125W
83	R66-R69, R71-R74, R94-R97, R99-R102	—	16	CRCW08054K99FKEAHP	VISHAY	4.99K	RES; SMT (0805); 4.99K; 1%; ±100PPM/°C; 0.5W
84	R89	—	1	CRCW06034K70FK	VISHAY DALE	4.7K	RESISTOR; 0603; 4.7K; 1%; 100PPM; 0.10W; THICK FILM
85	R110	—	1	CRCW12060000Z0EAHP	VISHAY	0	RES; SMT (1206); 0; JUMPER; JUMPER; 0.75W
86	SU1-SU12	—	12	S1100-B; SX1100-B; STC02SYAN	KYCON; KYCON; SULLINS ELECTRONICS CORP.	SX1100-B	TEST POINT; JUMPER; STR; TOTAL LENGTH = 0.24IN; BLACK; INSULATION = PBT; PHOSPHOR BRONZE CONTACT = GOLD PLATED

MAX22007 EV Kit Bill of Materials (continued)

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION
87	SW1	—	1	219-8MST	CTS	219-8MST	SWITCH; SPST; SMT; STRAIGHT; 20V; 0.1A; SURFACE MOUNT DIP SWITCH-AUTO PLACABLE; RINSULATION = 1000MΩ
88	T1	—	1	750343182	WURTH ELECTRONICS INC.	750343182	EVKIT PART -TRANSFORMER; 1:1; SMT-10
89	U1	—	1	MAX22007ETN+	MAXIM	MAX22007ETN+	EVKIT PART - IC; RX11; PACKAGE OUTLINE DRAWING: 21-0135; PACKAGE LAND PATTERN: 90-0047; PACKAGE CODE: T5688-3; TQFN56-EP
90	U2	—	1	MAX1556ETB+	MAXIM	MAX1556ETB+	IC; CONV; PWM STEP-DOWN DC-DC CONVERTER; TDFN10-EP 3X3
91	U3	—	1	93LC66BT-I/OT	MICROCHIP	93LC66BT-I/OT	IC; EPROM; 4K MICROWIRE SERIAL EEPROM; SOT23-6
92	U4	—	1	FT2232HQ	FUTURE TECHNOLOGY DEVICES INTL LTD.	FT2232HQ	IC; MMRY; DUAL HIGH SPEED USB TO MULTIPURPOSE UART/FIFO; QFN64-EP
93	U5	—	1	SST25VF020B-80-4I-SAE	MICROCHIP	SST25VF020B-80-4I-SAE	IC; MMRY; 2 MBIT SPI SERIAL FLASH MEMORY; NSOIC8
94	U6	—	1	MAX22445FAWE+	MAXIM	MAX22445FAWE+	IC; DISO; REINFORCED; FAST; LOW-POWER; FOUR CHANNEL DIGITAL ISOLATOR; WSOIC16; 300MIL
95	U7	—	1	MAX22446CAWE+	MAXIM	MAX22446CAWE+	IC; DISO; REINFORCED; FAST; LOW-POWER; FOUR CHANNEL DIGITAL ISOLATOR; WSOIC16; 300MIL
96	U8	—	1	MAX17690ATE+	MAXIM	MAX17690ATE+	IC; CTRL; 60V; NO-OPTO ISOLATED FLYBACK CONTROLLER; TQFN16-EP
97	U9, U10	—	2	MAX17532ATB+	MAXIM	MAX17532ATB+	IC; CONV; 42V; 0.1A; ULTRA-SMALL; HIGH-EFFICIENCY; SYNCHRONOUS STEP-DOWN DC-DC CONVERTER; TDFN10-EP 3X2
98	U11	—	1	MAX6126AASA25+	MAXIM	MAX6126AASA25+	IC; VREF; ULTRA HIGH PRECISION; ULTRA LOW NOISE VOLTAGE REFERENCE; SOIC8 150MIL; VOUT = 2.5V, 3PPM/°C MAX TEMPCO; NSOIC8
99	X1	—	1	ZX62RD-AB-5P8(30)	HIROSE ELECTRIC CO LTD.	ZX62RD-AB-5P8(30)	CONNECTOR; MALE; THROUGH HOLE; MICRO-USB CONNECTOR MEETING REQUIREMENTS OF USB 2.0 STANDARD; RIGHT ANGLE; 5PINS
100	Y1	—	1	ABM7-12.000MHZ-D2Y-T	ABRACON	12MHZ	CRYSTAL; SMT; 18PF; 12MHZ; ±20PPM; ±30PPM
101	PCB	—	1	MAX22007	MAXIM	PCB	PCB:MAX22007
102	C40	DNP	0	TAJV226K050RNJ	AVX	22μF	CAP; SMT (7361); 22μF; 10%; 50V; TANTALUM CHIP
103	C47	DNP	0	C1608COG2A221J080AA	TDK	220PF	CAP; SMT (0603); 220PF; 5%; 100V; COG; CERAMIC CHIP
104	C53	DNP	0	GRM32ER71H106KA12; CL32B106KBJNN; UMJ325KB7106KMH; 12105C106K4Z2A	MURATA; SAMSUNG ELECTRONICS; TAIYO YU	10UF	CAPACITOR; SMT (1210); CERAMIC CHIP; 10μF; 50V; TOL = 10%; TG = -55°C TO +125°C; TC = X7R
105	C100, C101	DNP	0	DK1E3EA102M86RAH01	MURATA	1000PF	CAP; SMT; 1000PF; 20%; 250V; E; CERAMIC CHIP
106	C48	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 0603 NON-POLAR CAPACITOR
107	C103	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 0402 NON-POLAR CAPACITOR
108	R24, R25, R60, R62, R107	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 0603 RESISTOR
109	R45	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 1206 RESISTOR
110	R111	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 2512 RESISTOR
111	R112	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 0805 RESISTOR
TOTAL			336				

MAX22007 EV Kit Schematic Diagrams

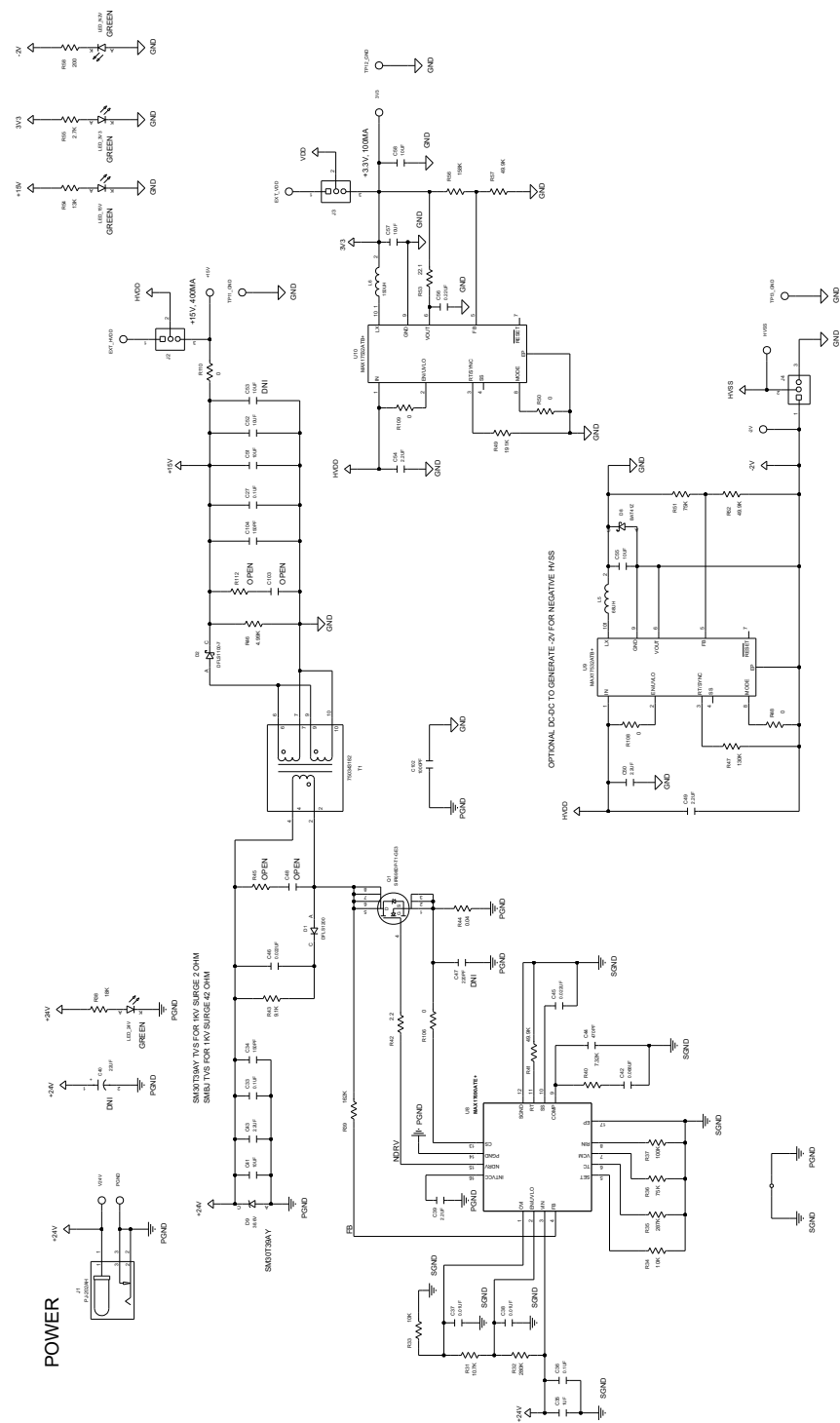


DIGITAL ISOLATION

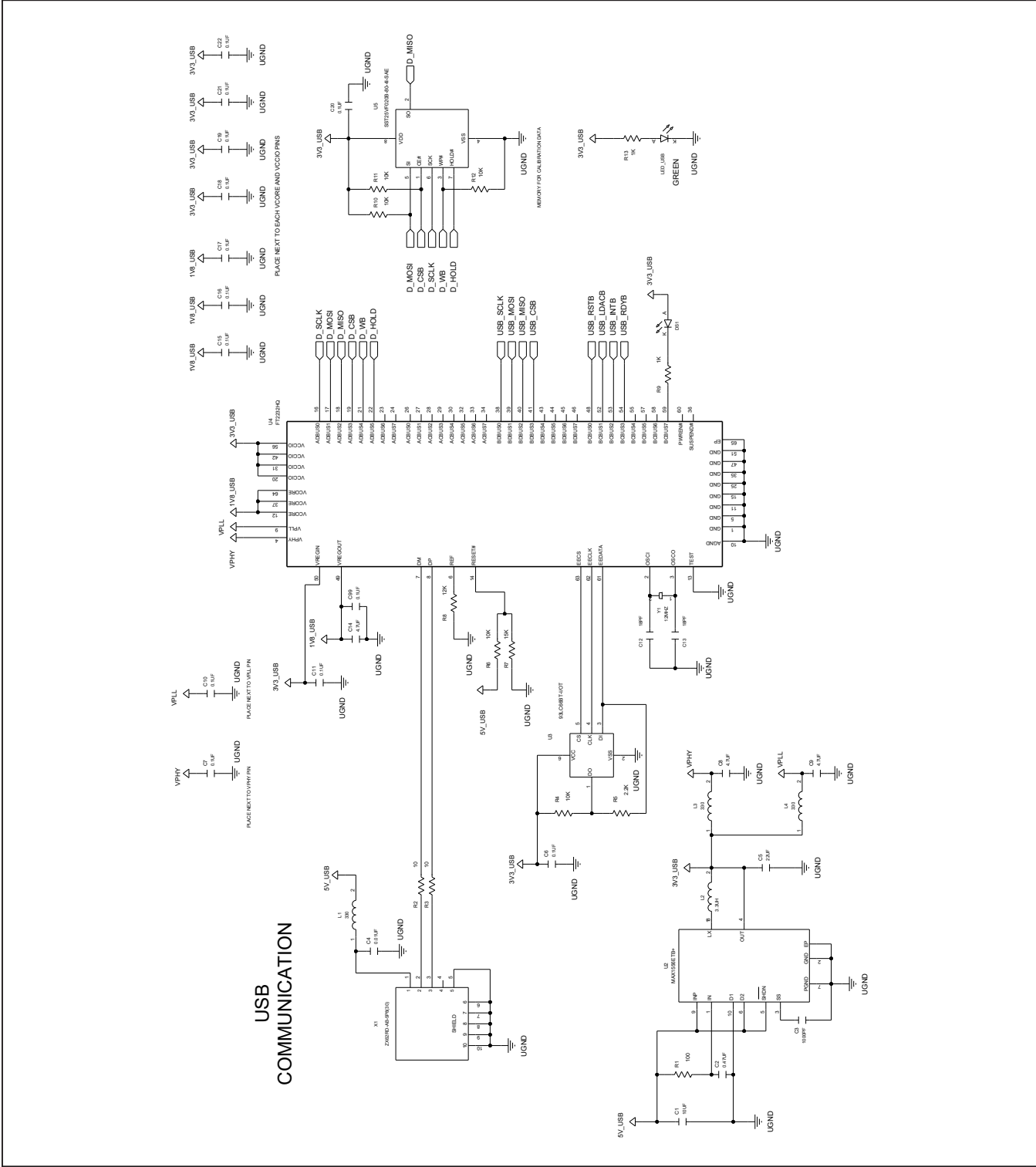
SW1 POSITIONS
 ONBOARD FTDI: ALL CLOSE
 EXTERNAL MICRO: ALL OPEN, CONNECT TO PMOD1, NO ISOLATION
 DAISY CHAIN 1ST DEVICE: ALL CLOSE
 DAISY CHAIN TRAILING DEVICES: ALL OPEN, INTB ORED TOGETHER

The schematic shows two MAX2466EPM isolators (U6 and U7) connected to various digital signals. The signals being isolated include USB_CSBLK, USB_SCLK, USB_MOSI, USB_MISO, USB_RDYB, USB_INTB, USB_LDACB, and USB_RSTB. The diagram includes power supply connections for 3V3_USB and VDD, decoupling capacitors (C29, C30, C31, C32), and pull-up resistors (R20, R28, R29). It also shows a 3V2_USB input and a 3V3_USB output. The diagram is labeled 'DIGITAL ISOLATION' and includes a note about SW1 positions: 'ONBOARD FTDI: ALL CLOSE', 'EXTERNAL MICRO: ALL OPEN, CONNECT TO PMOD1, NO ISOLATION', 'DAISY CHAIN 1ST DEVICE: ALL CLOSE', and 'DAISY CHAIN TRAILING DEVICES: ALL OPEN, INTB ORED TOGETHER'.

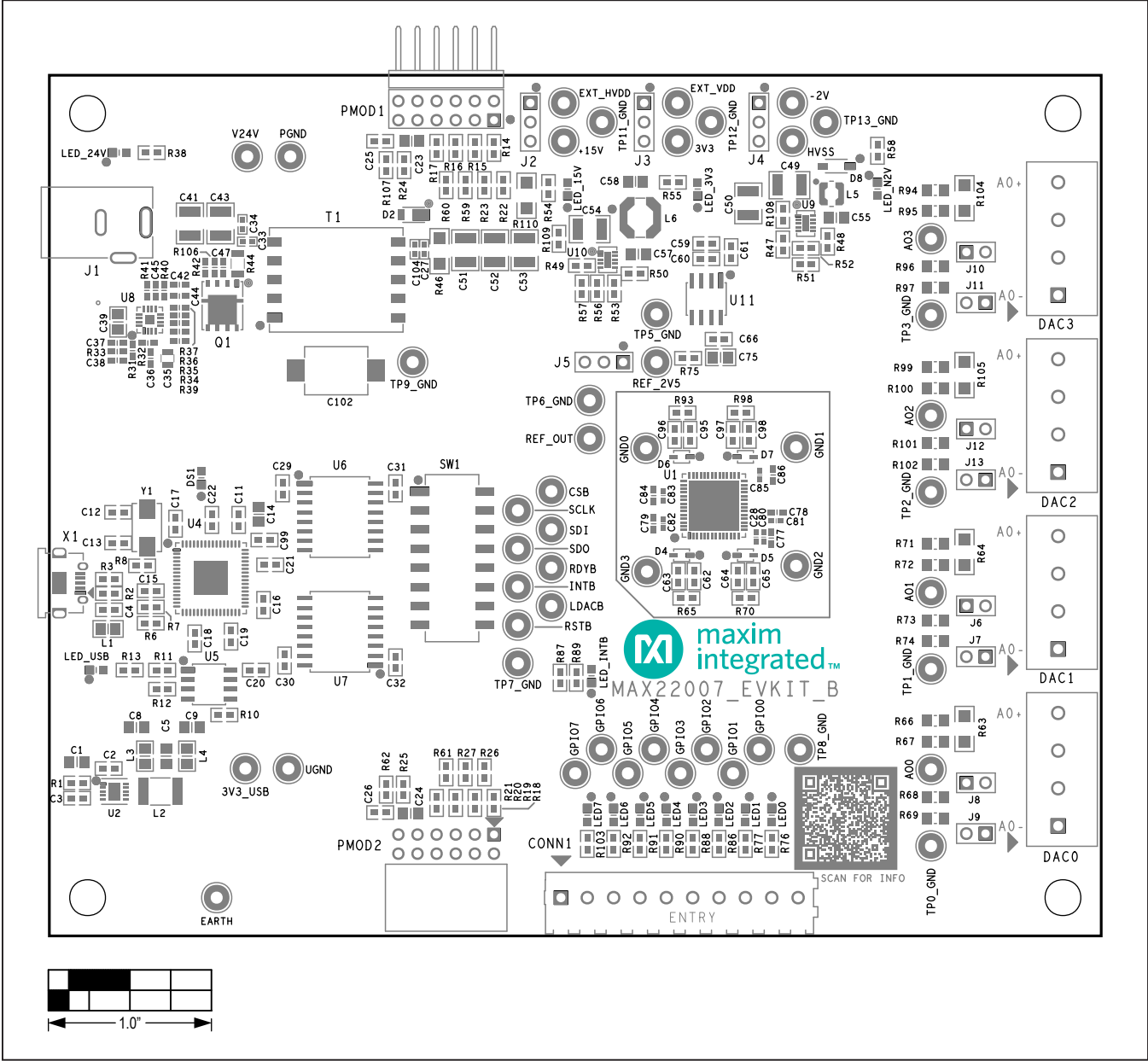
MAX22007 EV Kit Schematic Diagrams (continued)



MAX22007 EV Kit Schematic Diagrams (continued)

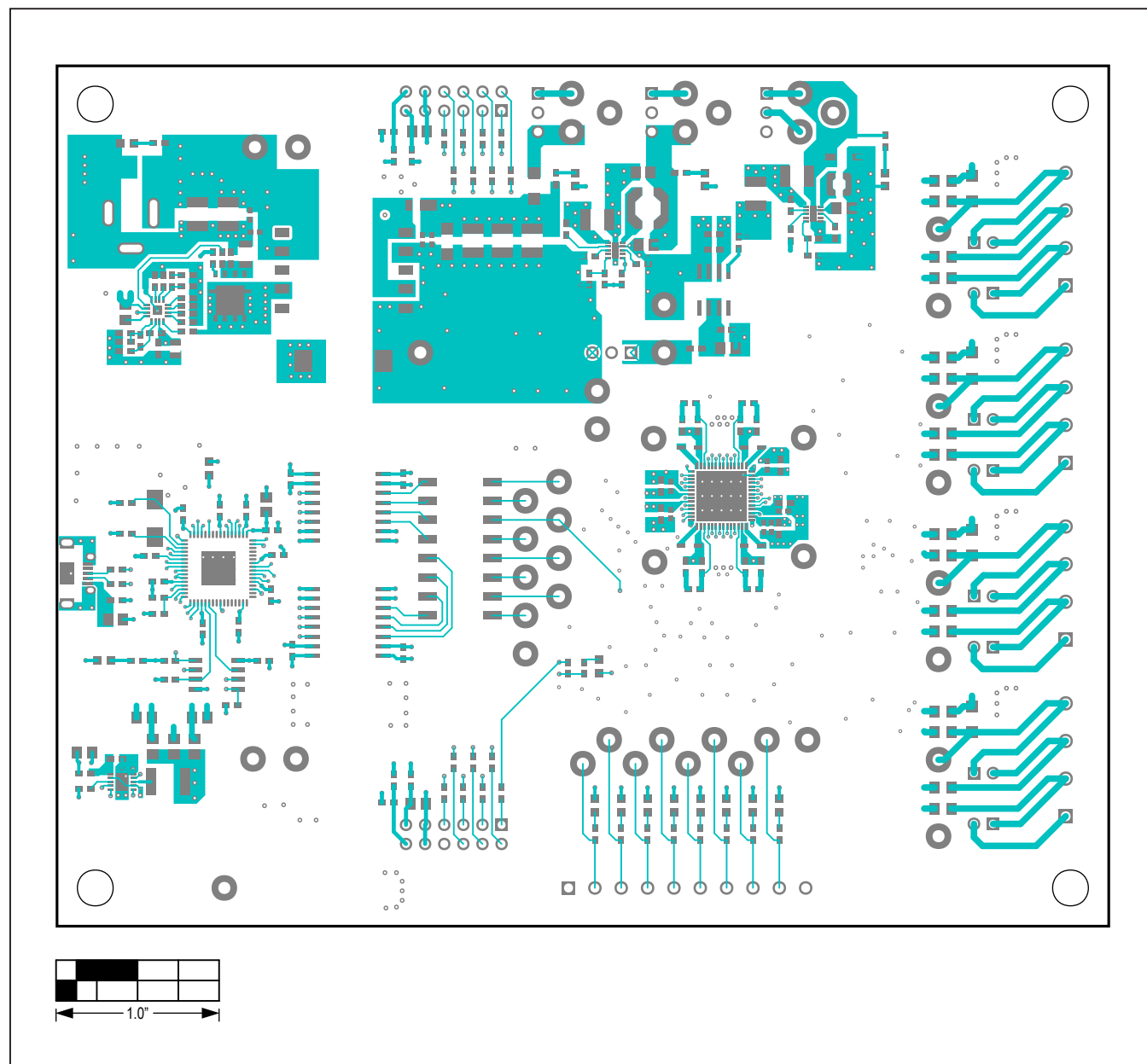


MAX22007 EV Kit PCB Layout Diagrams



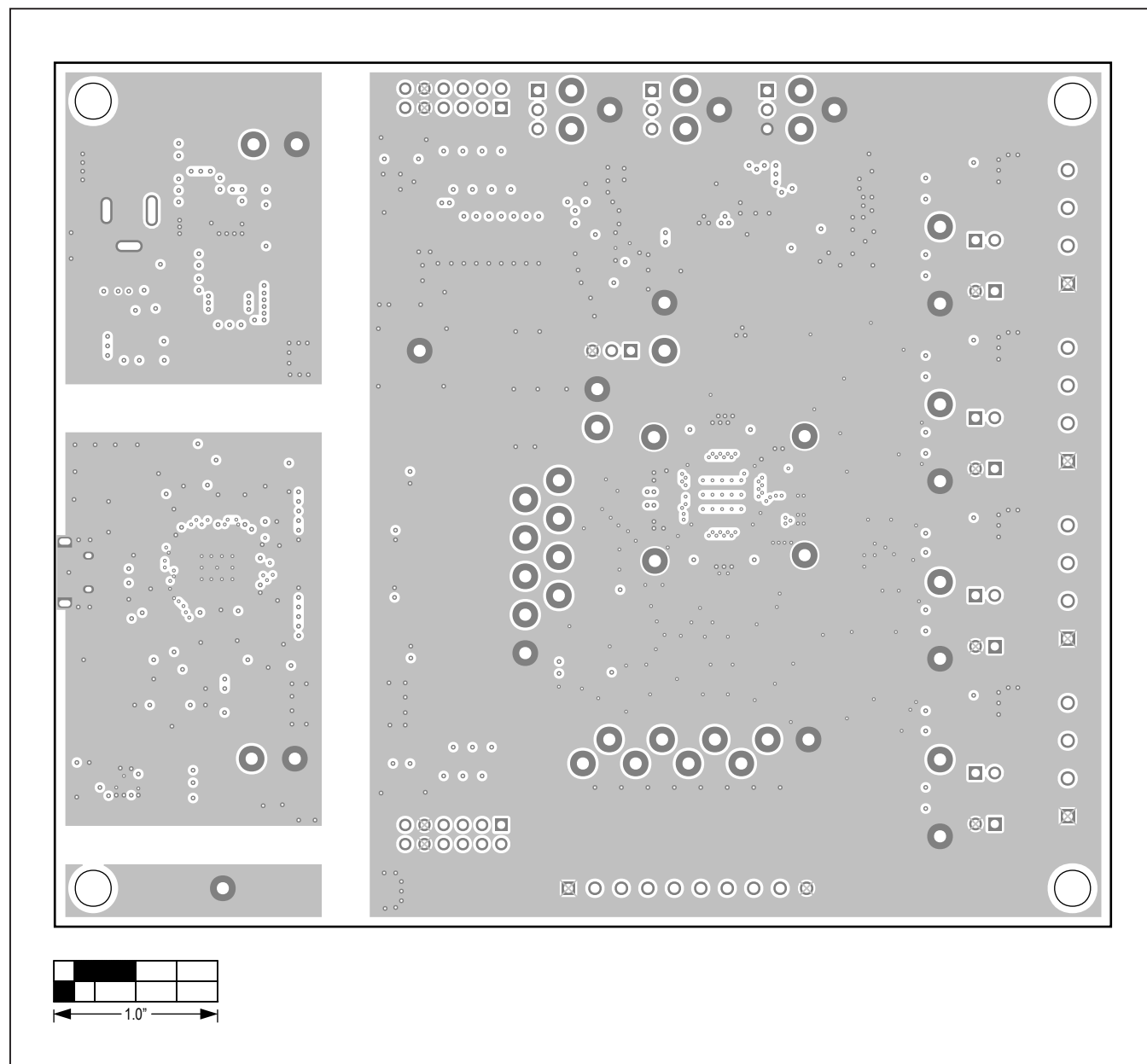
MAX22007 EV Kit PCB Layout—Top Silkscreen

MAX22007 EV Kit PCB Layout Diagrams (continued)



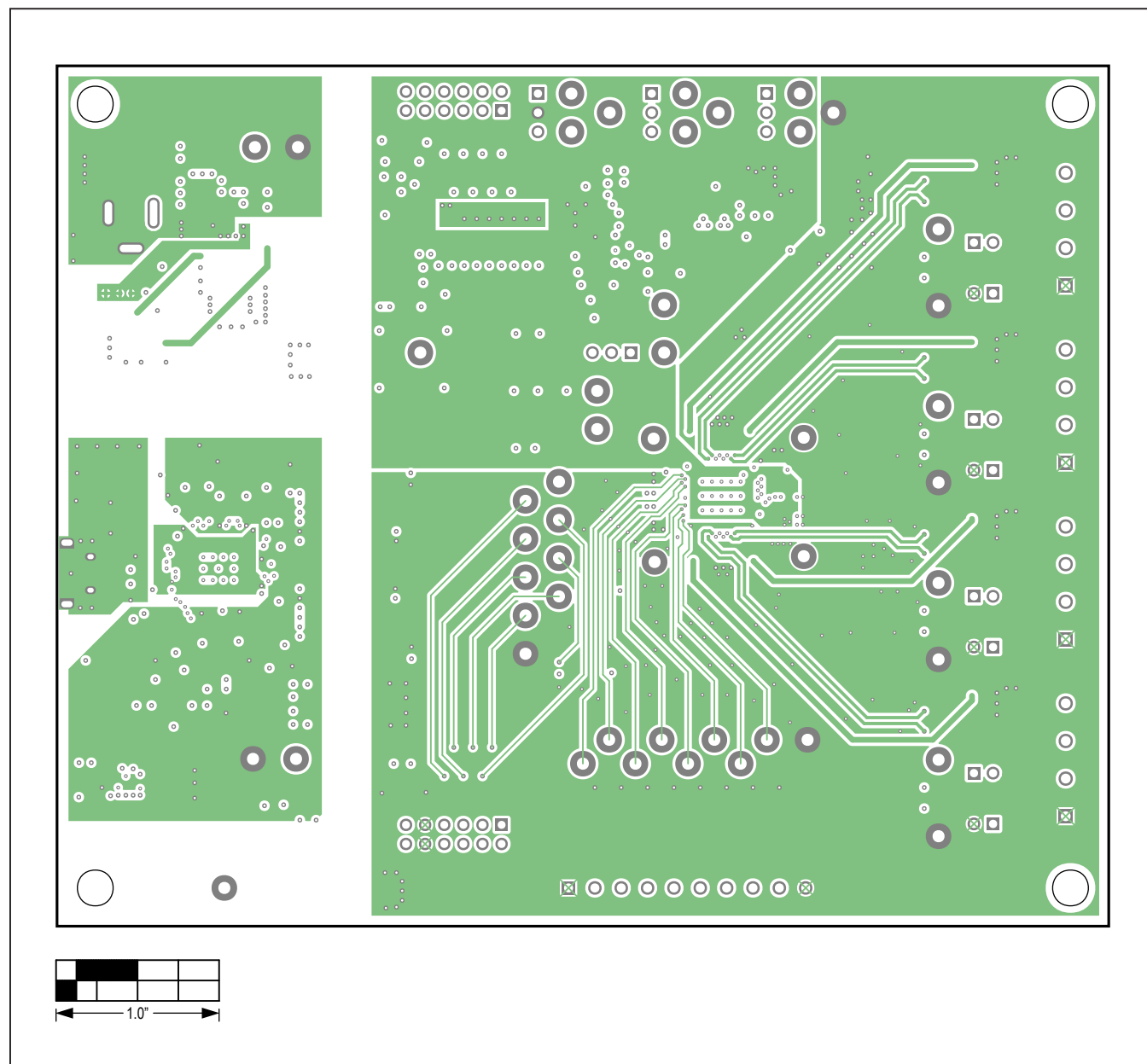
MAX22007 EV Kit PCB Layout—Top Layer

MAX22007 EV Kit PCB Layout Diagrams (continued)



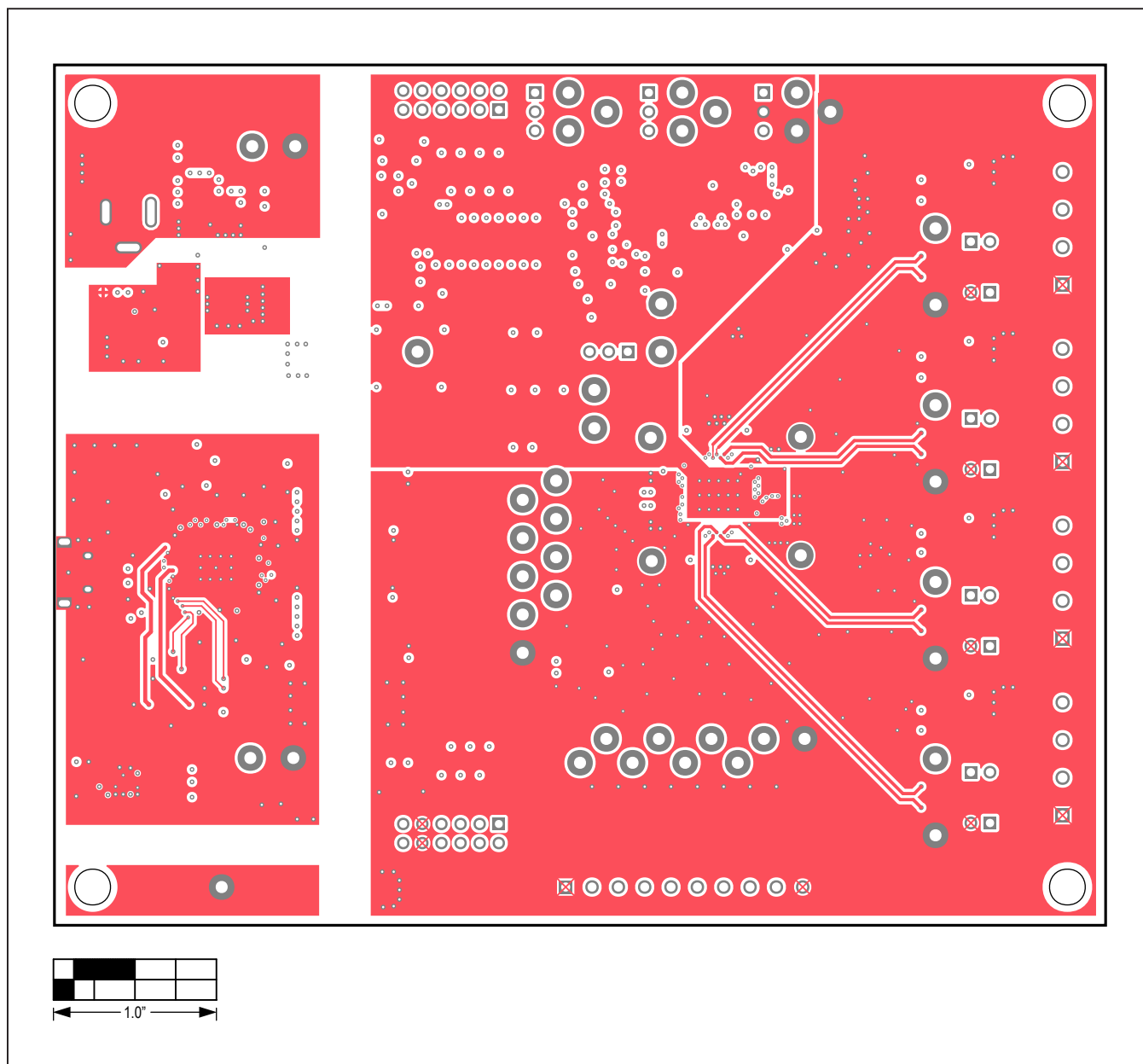
MAX22007 EV Kit PCB Layout—Layer 2

MAX22007 EV Kit PCB Layout Diagrams (continued)



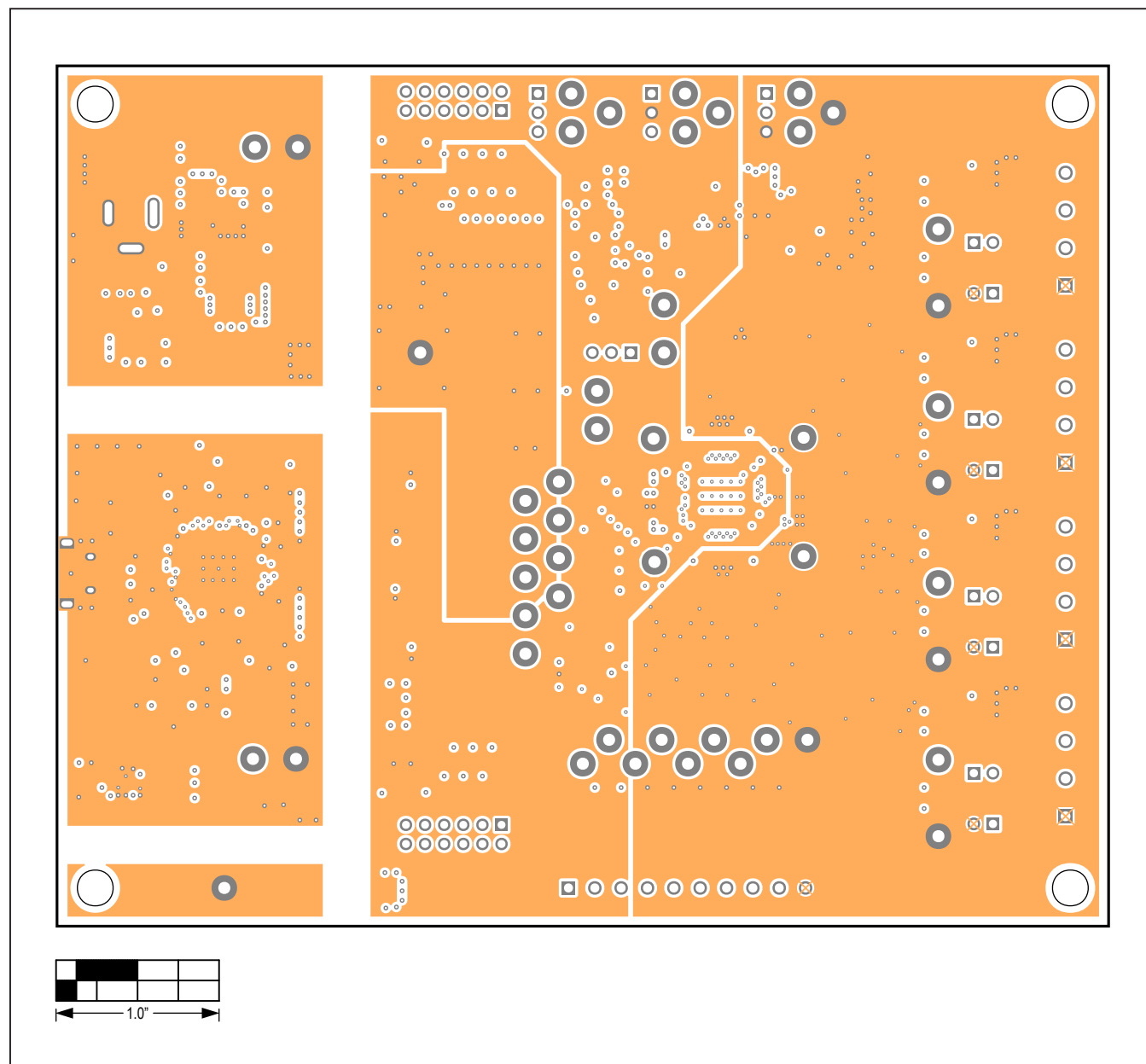
MAX22007 EV Kit PCB Layout—Layer 3

MAX22007 EV Kit PCB Layout Diagrams (continued)



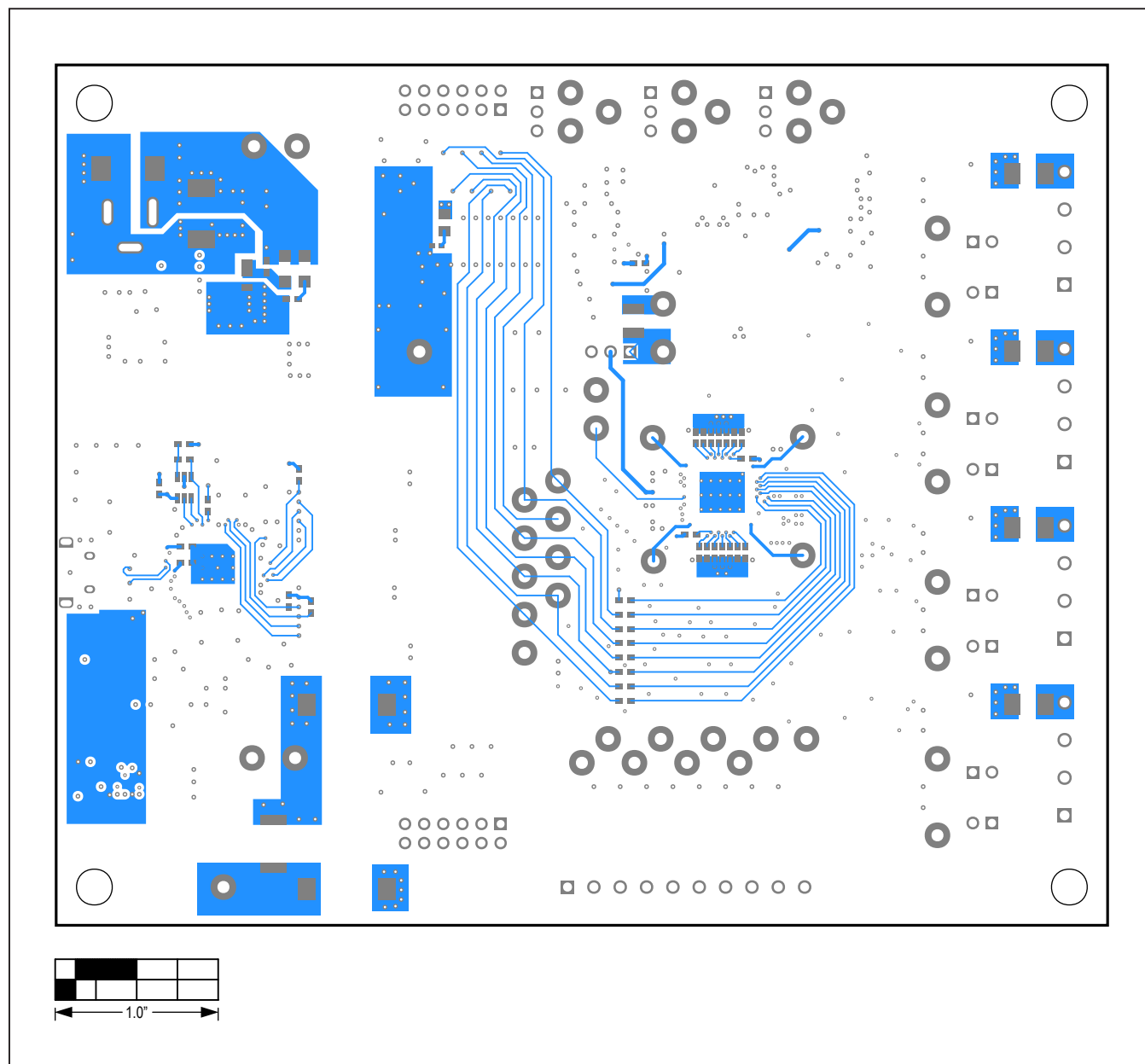
MAX22007 EV Kit PCB Layout—Layer 4

MAX22007 EV Kit PCB Layout Diagrams (continued)



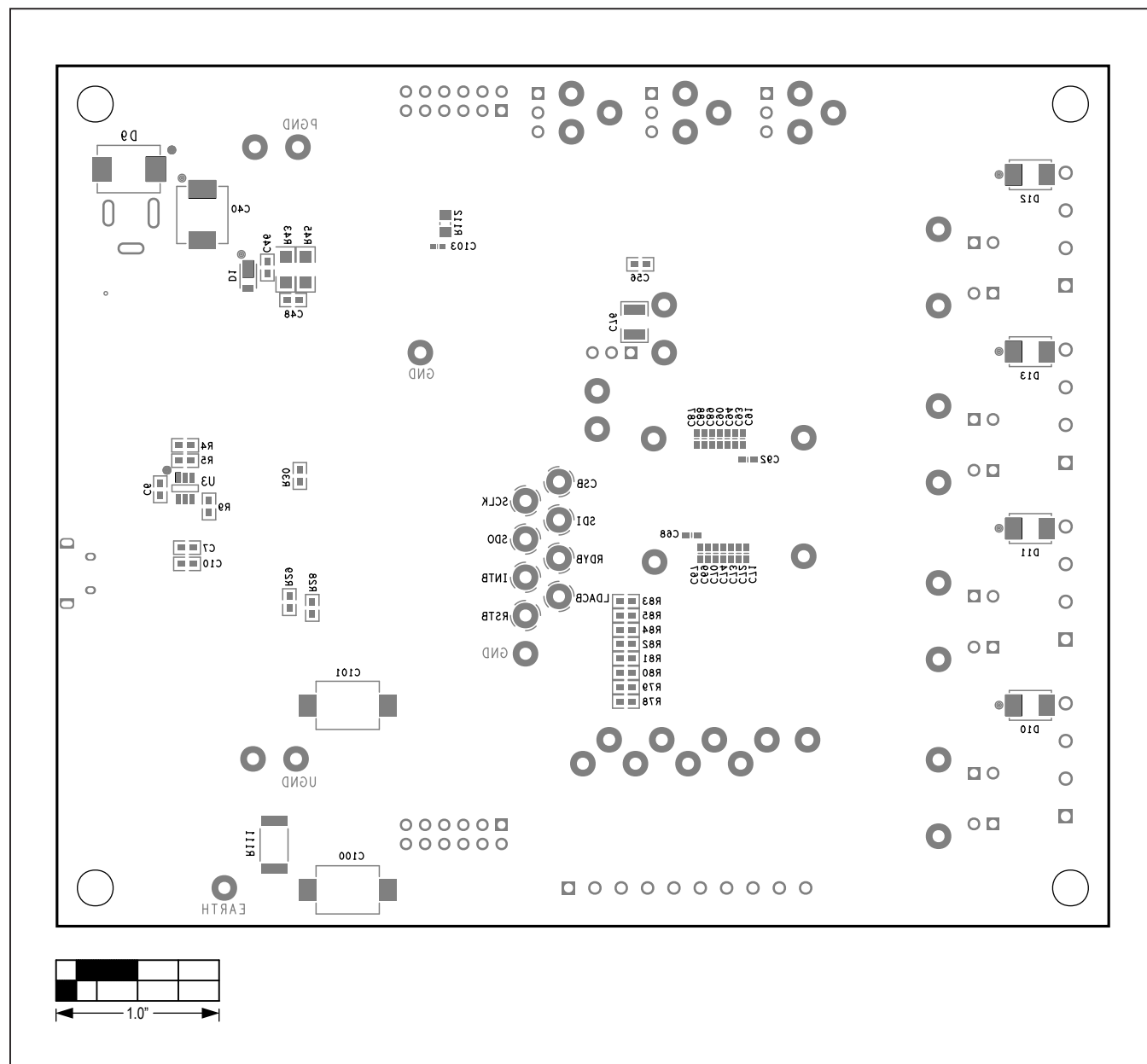
MAX22007 EV Kit PCB Layout—Layer 5

MAX22007 EV Kit PCB Layout Diagrams (continued)



MAX22007 EV Kit PCB Layout—Bottom Layer

MAX22007 EV Kit PCB Layout Diagrams (continued)



MAX22007 EV Kit PCB Layout—Bottom Silkscreen

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	9/20	Initial release	—

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