*Click here for production status of specific part numbers.*

# MAX22520 Evaluation Kit

# Evaluates: MAX22520

## General Description

The MAX22520 evaluation kit (EV kit) is a fully assembled and tested circuit board that evaluates the MAX22520 OTP programmable digital output (DO).

The EV kit includes Windows®-compatible software that provides a graphical user interface (GUI) for exercising the test and programming features of the MAX22520. The EV kit is connected to a PC through a USB-A-to-micro-B cable.

## Features

- OTP Progammable Digital Output (DO)
- 1-Wire Interface Terminals
- Windows 10-Compatible Software
- USB-PC Connection
- Proven PCB Layout
- Fully Assembled and Tested

***Ordering Information* appears at end of data sheet.**

## Quick Start

### Recommended Equipment

- MAX22520 EV kit (USB-A-to-micro-B cable included)
- User-supplied Windows 10 PC with a spare USB port
- 24V, 1A DC power supply
- Two multimeters/voltmeters

**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/evkitsoftware** to download the latest version of the EV kit software, **MAX22520EVKITSetupVx.xx.ZIP**. Save the EV kit software to a temporary folder and uncompress the ZIP file.

2) Install the EV kit software and USB driver on your computer by running the **MAX22520EVKITSetupVx.xx.EXE** program 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 can show a warning message indicating that this software is from an unknown publisher. This is not an error condition and it is safe to proceed with installation. Administrator privileges are required to install the USB device driver on Windows.

*Windows is registered trademark of Microsoft Corporation.*

*319-100456; Rev 0; 10/19*

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3) Verify that all the jumpers are in their default positions, as shown in Table 1.
4) Connect one multimeter to the VCC testpoint (TP1).
5) Connect the other multimeter to the VLDO testpoint (TP2).
6) Connect the USB cable from the PC to the EV kit board. A Windows message appears when connecting the EV kit.
7) Start the EV kit software by opening its icon in the Windows **Start | Programs | Maxim Integrated** menu.
8) Click on the **Device** menu and select **Connect** to connect to the board. Verify that **Status: MAX22520 EV Kit Connected** is displayed on the status bar at the bottom right of the main window (Figure 1). Note that the voltage on the VCC test point is 0V (typ) when the board is connected.
9) Select the **Test Mode** radio button and click on the **Enter Test Mode** button to set the device into test mode. On-board LEDs turn off and on as the device enters test mode. The VCC test point is 14.8V (typ) when the device is in test mode and ready for evaluation. Verify that **OTP Ready for Test Mode Evaluation** is displayed in the bottom right of the main window.
10) Default register values are unknown in test mode when OTP is not programmed. Select the **3.3V** radio button in the **VLDO** box and click on the **Write Registers** button. Verify that the voltage on the VLDO test point is 3.3V (typ).
11) Select the **5V** radio button in the **VLDO** box and click on the **Write Registers** button. Verify that the voltage on the VLDO test point changes to 5V (typ).

## Detailed Description of Software

### Configuring the Registers in Test Mode

Once the EV kit is connected, select **Test Mode** to access the MAX22520 in OTP test mode. The EV kit software provides two ways to access the OTP registers when the device is in test mode: the **OTP** tab and the **Registers** tab.

In the **OTP** tab (Figure 1), use the drop-down menus, counters, and radio buttons to enable/disable functionality and set desired thresholds. Press the **Write Registers** button to write values to all of the registers in both OTP banks (C1 and C2). Press the **Read Registers** button to read all registers in both banks.

The **Registers** tab includes a tabular listing of available reigsters and bits (Figure 2). Click on a register name in the left register table to access the individual bits in that register. When the register name is selected in the register table, the right register table shows the individual bits for that register. Click on the drop-down menu next to each bit in the lower table to select the bit setting. When all of the bits are set as desired, click on the **Write Registers** button to write the selected bit settings to the OTP registers.

### Burn Mode

Select **Burn Mode** in the **Mode Select** box after the MAX22520 has entered test mode and the desired register values have been written to the device. Click on the **Verify Burn Ready** button to verify that the C1 and C2 banks are ready for OTP burn. Once the GUI has verified that the MAX22520 is ready to program, click on the **OTP Bank 1 Burn** or **OTP Bank 2 Burn** button to program the desired OTP registers.

Note that Bank C1 and Bank C2 must be programmed separately. After a bank is programmed, the VCC voltage on the MAX22520 EV kit drops to 0V and the part must be accessed in test mode again. Repeat the burn process for the unprogrammed bank.

## Detailed Description of Hardware

The MAX22520 EV kit includes the MAX22520 OTP programmable digital output (DO) and the external components for writing to and evaluating the device. All logic-level I/Os and the digital output are available on yellow test points.

### 1-Wire Interface

The MAX22520 is 1-Wire OTP programmable using the $V_{CC}$, DO, and GND pins. The MAX22520 EV kit uses the FT2232 USB-to-I²C transceiver to communicate with the PC and the DS2484 1-Wire master to communicate with the MAX22520.

Close the J2 and J3 jumpers on the MAX22520 EV kit for 1-Wire communication with the MAX22520. Remove the shunts on J2 and J3 to evaluate the part after the part has been programmed and the **Exit Test Mode** button on the GUI has been pressed, or after OTP programming.

*1-Wire is a registered trademark of Maxim Integrated Products, Inc..*

## Power

### On-Board Power Supplies

The MAX22520 EV kit includes the power circuitry required to evaluate the device in test mode and for programming the OTP registers. Close the J3 jumper to power the MAX22520 using the on-board supplies.

The MAX8880 low-dropout linear regulator generates the 4V (typ) needed to enter test mode. After the **Enter Test Mode** button is pressed, the MAX22520 is connected to this supply.

The MAX17062 DC-DC circuit generates 15V (typ). The $V_{CC}$ input of the MAX22520 is connected to this voltage after the device has successfully entered test mode.

### Evaluating the EV Kit with an External Supply

To evaluate the MAX22520 in test mode with a $V_{CC}$ voltage other than 15V use the on-board power circuitry to set the device in test mode. After the IC is in test mode, set an external power supply to 15V and connect it to the open J3 jumper and change the voltage of the external supply to the desired $V_{CC}$ voltage.

Click on the **Exit Test Mode** button and remove the J2 jumper to evaluate DO functionality after the OTP registers have been programmed.

## Digipot (RT, WP, RB)

The MAX22520 features an integrated digipot. Place a shunt on the J4 jumper to connect RT to $V_{LDO}$. Place a shunt on the J8 jumper to connect RB to ground. Remove the shunts on J4 and J8 to connect RT and RB to other voltages, respectively. Ensure that $V_{RT} > V_{RB}$ and $V_{RT} \leq V_{LDO}$ when using external voltages for the digipot.

## Open-Drain Logic Outputs (LO1, LO2, LO3)

The MAX22520 includes three configurable open-drain logic outputs, LO1, LO2, and LO3. Each logic output on the EV kit is connected to a current-limiting resistor and LED for visual feedback. Program the logic outputs (LO_) by selecting the required function from a drop-down menu (LO1 and LO2), or selecting the desired radio button (LO3). Click on the **Write Registers** button to program the OTP regsiters in the GUI.

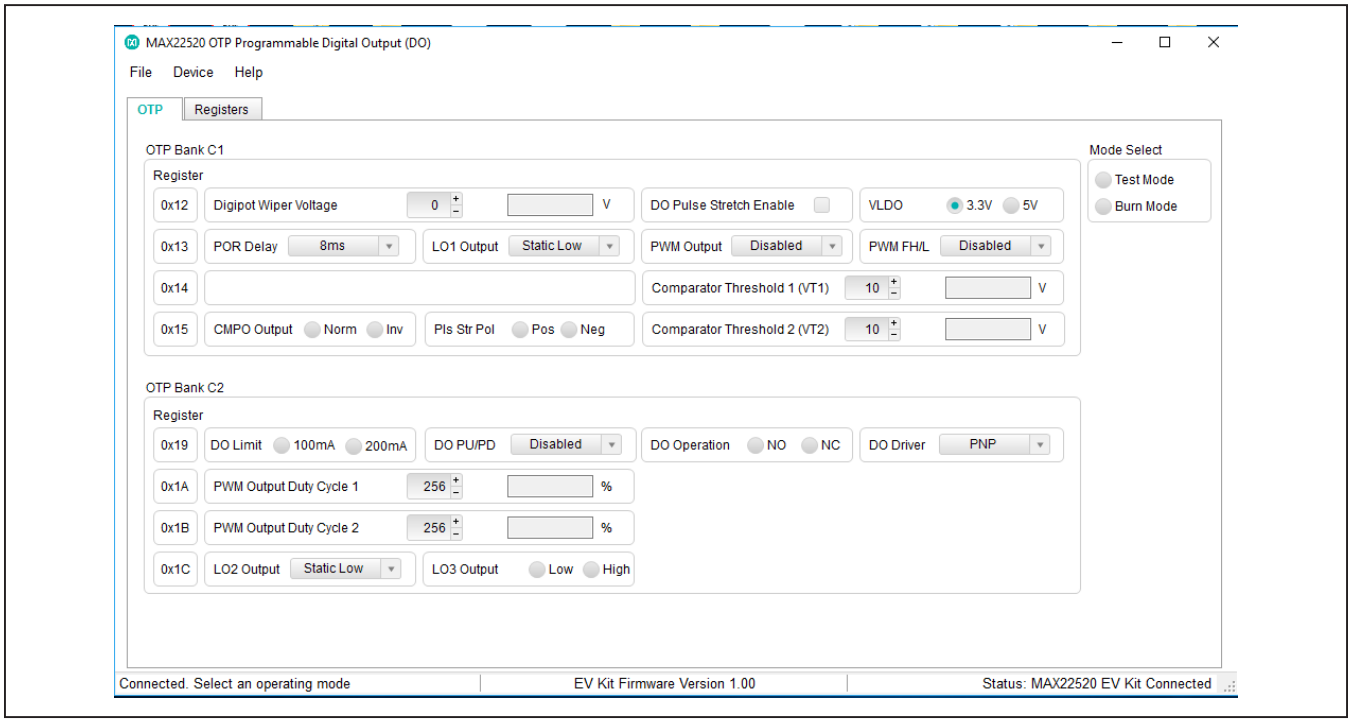



*Figure 1. MAX22520 EV Kit Software, EV Kit is Connected*

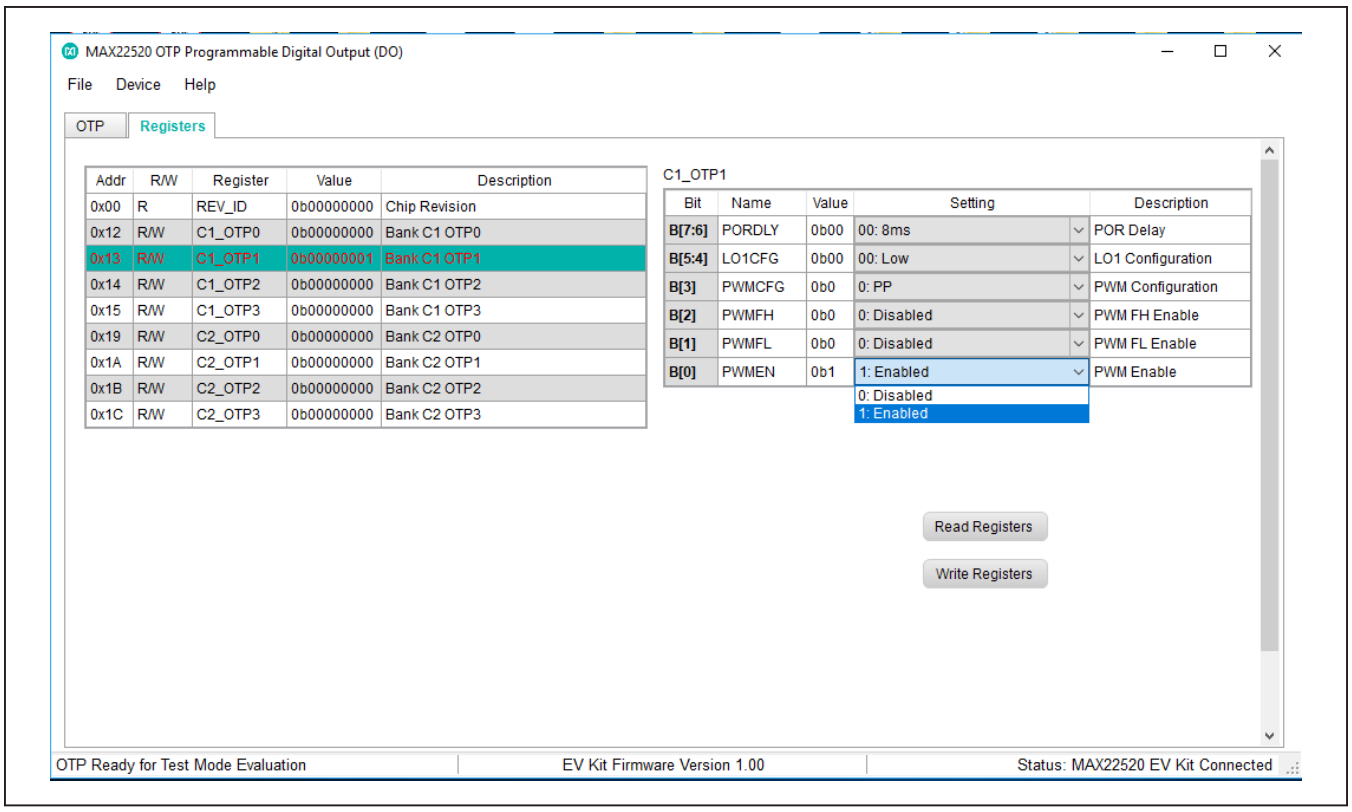



*Figure 2. MAX22520 EV Kit Software, Interrupt Received*

## Table 1. Jumper Descriptions

| JUMPER | SHUNT POSITON | DESCRIPTION |
|---|---|---|
| J2 | Open | The on-board 1-Wire transceiver is not connected to DO. |
| | **Closed*** | The on-board 1-Wire transceiver is connected to DO. Use this configuration to access OTP registers. |
| J3 | Open | The MAX22520 is not connected to the on-board power supplies. |
| | **Closed*** | The MAX22520 is connected to the on-board power supplies. Use this configuration to access OTP registers. |
| J4 | Open | RT is not connected to $V_{LDO}$. |
| | **Closed*** | RT is connected to $V_{LDO}$. |
| J5 | **Open*** | REGEN is unconnected. |
| | Closed | REGEN is connected to ground. |
| J6 | Open | AIN is not connected to the on-board potentiometer (R21). |
| | **Closed*** | AIN is connected to the on-board potentiometer (R21). |
| J7 | **Open*** | DO is not connected to an LED. |
| | Closed | DO is connected to an LED. |
| J8 | Open | RB is not connected to ground. |
| | **Closed*** | RB is connected to ground. |
| J11 | **Open*** | PWM output is not connected to an LED. |
| | Closed | PWM output is connected to an LED. |

**Default position.*

## Ordering Information

| PART | TYPE |
|---|---|
| MAX22520EVKIT# | EV Kit |

*#Denotes RoHS-compliance.*

## MAX22520 EV Kit Bill of Materials

| ITEM | REF_DES | DNI/DNP | QTY | MFG PART # | MANUFACTURER | VALUE | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 1 | C1 | - | 1 | NMC0402X7R103K16TRP; GRM155R71C103KA01; CC0402KRX7R7BB103; C0402C103K4RACAUTO | NIC COMPONENTS CORP.; MURATA;YAGEO; KEMET | 0.01UF | CAPACITOR; SMT (0402); CERAMIC CHIP; 0.01UF; 16V; TOL=10%; MODEL=; TG=-55 DEGC TO +125 DEGC; TC=X7R |
| 2 | C2, C5, C6, C8, C9, C12, C15-C18, C24, C38, C39 | - | 13 | C0402C104J4RAC; GCM155R71C104JA55 | KEMET;MURATA | 0.1UF | CAPACITOR; SMT (0402); CERAMIC CHIP; 0.1UF; 16V; TOL=5%; MODEL=; TG=-55 DEGC TO +125 DEGC; TC=X7R |
| 3 | C3 | - | 1 | CL21A106KOQNNN; GRM21BR61C106KE15; EMK212ABJ106KD | SAMSUNG ELECTRONICS; MURATA;TAIYO YUDEN | 10UF | CAPACITOR; SMT (0805); CERAMIC CHIP; 10UF; 16V; TOL=10%; TG=-55 DEGC TO +85 DEGC; TC=X5R |
| 4 | C4 | - | 1 | C0805C226M9PAC; GRM21BR60J226ME39; JMK212BJ226MG; CL21A226MQCLQN | KEMET;MURATA; TAIYO YUDEN; SAMSUNG EL | 22UF | CAPACITOR; SMT (0805); CERAMIC CHIP; 22UF; 6.3V; TOL=20%; TG=-55 DEGC TO +125 DEGC; TC=X5R |
| 5 | C7, C13, C14 | - | 3 | C1005X5R1A475K050 | TDK | 4.7UF | CAPACITOR; SMT (0402); CERAMIC CHIP; 4.7UF; 10V; TOL=10%; TG=-55 DEGC TO +85 DEGC; TC=X5R |
| 6 | C10, C11 | - | 2 | C1005C0G1H330J050BA; GRM1555C1H330JA01 | TDK;MURATA | 33PF | CAPACITOR; SMT; 0402; CERAMIC; 33pF; 50V; 5%; C0G; -55degC to + 125degC; 0 +/- 30PPM/degC |
| 7 | C19, C20, C28 | - | 3 | C0603C475K8PAC; LMK107BJ475KA;CGB3B1X5R1A475K;C1608X5R1A475K080AC;CL10A475KP8NNN | KEMET;TAIYO YUDEN;TDK; TDK;SAMSUNG ELECTRONICS | 4.7UF | CAPACITOR; SMT (0603); CERAMIC CHIP; 4.7UF; 10V; TOL=10%; TG=-55 DEGC TO +85 DEGC; TC=X5R |
| 8 | C21, C22, C30, C32 | - | 4 | C0603C105K4RAC; GRM188R71C105KA12;C1608X7R1C105K080AC;EMK107B7105KA; GCM188R71C105KA64;CGA3E1X7R1C105K080AC | KEMET;MURATA;TDK; TAIYO YUDEN;MURATA;TDK | 1UF | CAPACITOR; SMT (0603); CERAMIC CHIP; 1UF; 16V; TOL=10%; MODEL=; TG=-55 DEGC TO +125 DEGC; TC=X7R |
| 9 | C23 | - | 1 | EMK107BJ333KA | TAIYO YUDEN | 0.033UF | CAPACITOR; SMT (0603); CERAMIC CHIP; 0.033UF; 16V; TOL=10%; MODEL=M SERIES; TG=-55 DEGC TO +85 DEGC; TC=X5R |
| 10 | C25, C26 | - | 2 | C1608X5R1E106M080AC; CL10A106MA8NRNC;GRM188R61E106MA73;ZRB18AR61E106ME01;GRT188R61E106ME13 | TDK;SAMSUNG ELECTRONICS; MURATA;;MURATA | 10UF | CAPACITOR; SMT (0603); CERAMIC CHIP; 10UF; 25V; TOL=20%; TG=-55 DEGC TO +85 DEGC; TC=X5R |
| 11 | C27 | - | 1 | C0402C561K5GAC | KEMET | 560PF | CAPACITOR; SMT (0402); CERAMIC CHIP; 560PF; 50V; TOL=10%; MODEL=C0G; TG=-55 DEGC TO +125 DEGC; TC=+/ |
| 12 | C29, C31 | - | 2 | GCJ188R71H104KA12; GCM188R71H104K; CGA3E2X7R1H104K080AA | MURATA;MURATA;TDK | 0.1UF | CAPACITOR; SMT (0603); CERAMIC CHIP; 0.1UF; 50V; TOL=10%; TG=-55 DEGC TO +125 DEGC; TC=X7R; AUTO |
| 13 | C33 | - | 1 | C0603C102K5RAC; GRM188R71H102KA01; C0603X7R500-102KNE | KEMET;MURATA;VENKEL | 1000PF | CAPACITOR; SMT; 0603; CERAMIC; 1000pF; 50V; 10%; X7R; -55degC to + 125degC; +/-15% from -55degC to +125degC |
| 14 | C34 | - | 1 | CGA2B3X7R1H104K050BB; C1005X7R1H104K050BB;GRM155R71H104KE14;GCM155R71H104KE02;C1005X7R1H104K050BE;UMK105B7104KV-FR;CGA2B3X7R1H104K050BE | TDK;TDK;MURATA; MURATA;TDK;TAIYO YUDEN;TDK | 0.1UF | CAPACITOR; SMT (0402); CERAMIC CHIP; 0.1UF; 50V; TOL=10%; TG=-55 DEGC TO +125 DEGC; TC=X7R |
| 15 | C35 | - | 1 | C0402C105K8PAC; CC0402KRX5R6BB105 | KEMET;YAGEO | 1UF | CAPACITOR; SMT (0402); CERAMIC CHIP; 1UF; 10V; TOL=10%; TG=-55 DEGC TO +85 DEGC; TC=X5R |
| 16 | C37 | - | 1 | GRM1885C1H102JA01; C1608C0G1H102J080AA; GCM1885C1H102JA16 | MURATA;TDK;MURATA | 1000PF | CAPACITOR; SMT (0603); CERAMIC CHIP; 1000PF; 50V; TOL=5%; TG=-55 DEGC TO +125 DEGC |
| 17 | D1 | - | 1 | CMS03 | TOSHIBA | CMS03 | DIODE; SCH; SCHOTTKY BARRIER RECTIFIER; 3-4E1A; PIV=30V; IF=3A; -40 DEGC TO +150 DEGC |
| 18 | D2 | - | 1 | PLVA650A | NXP | 5V | DIODE; ZNR; SMT (SOT-23); VZ=5V; IZ=0.00025A; PD=0.25W |

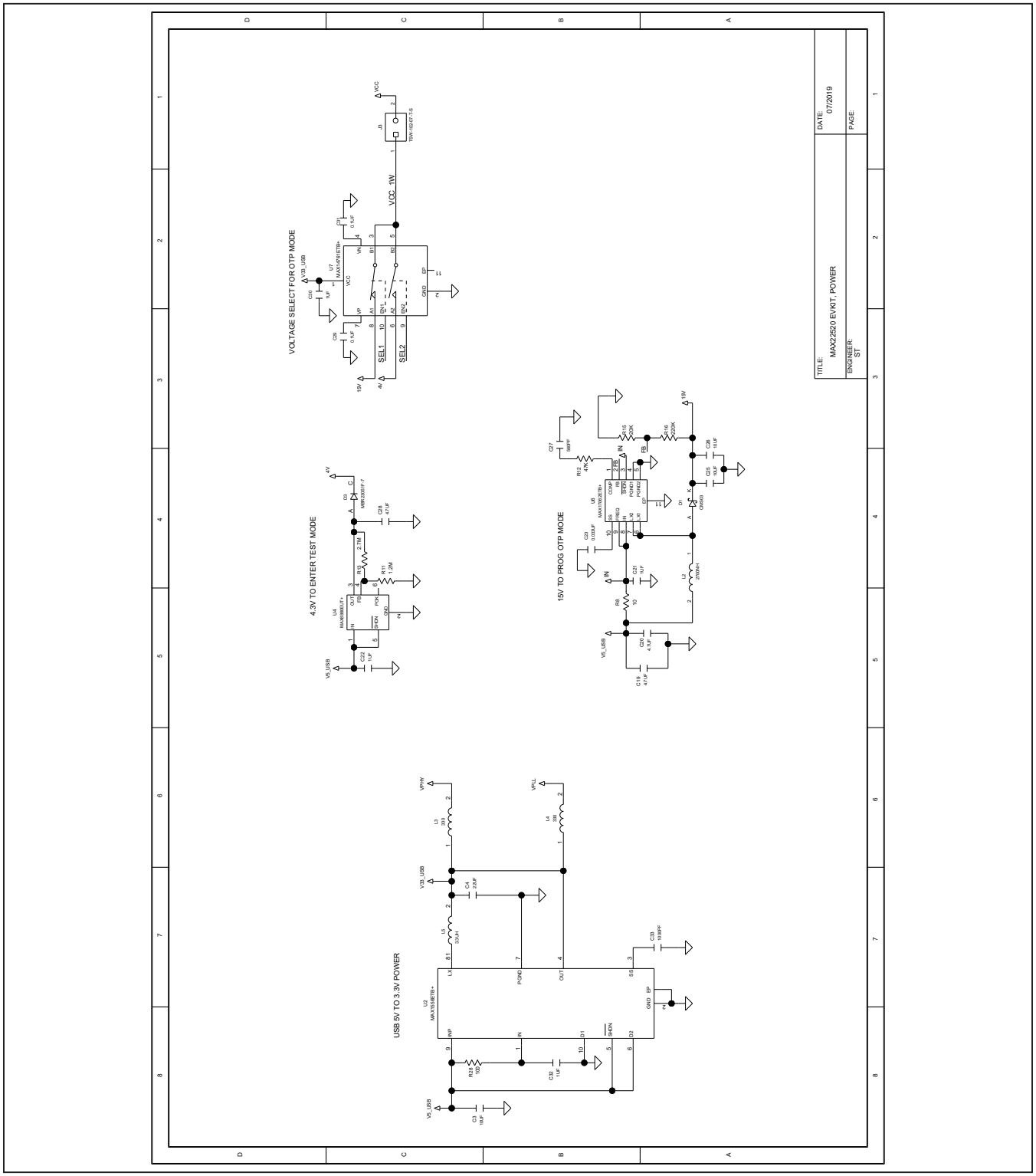
## MAX22520 EV Kit Bill of Materials (continued)

| ITEM | REF_DES | DNI/DNP | QTY | MFG PART # | MANUFACTURER | VALUE | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 19 | D3 | - | 1 | MBR230S1F-7 | DIODES INCORPORATED | MBR230S1F-7 | DIODE; RECT; SMT (SOD-123F); PIV=30V; IF=2A |
| 20 | DS1-DS6 | - | 6 | LY L29K-J1K2-26 | OSRAM | LY L29K-J1K2-26 | DIODE; LED; SMARTLED; GREEN; SMT (0603); VF=1.8V; IF=0.002A |
| 21 | J1 | - | 1 | 105017-0001 | MOLEX | 105017-0001 | CONNECTOR; FEMALE; SMT; MICRO-USB B RECEPTACLE; RIGHT ANGLE; 5PINS |
| 22 | J2-J8, J11 | - | 8 | TSW-102-07-T-S | SAMTEC | TSW-102-07-T-S | CONNECTOR; THROUGH HOLE; TSW SERIES; SINGLE ROW; STRAIGHT; 2PINS; -55 DEGC TO +105 DEGC |
| 23 | J9 | - | 1 | 1727010 | PHOENIX CONTACT | 1727010 | CONNECTOR; FEMALE; THROUGH HOLE; GREEN TERMINAL BLOCK; RIGHT ANGLE; 2PINS |
| 24 | L1 | - | 1 | BLM21AG601SN1 | MURATA | 600 | INDUCTOR; SMT (0805); FERRITE-BEAD; 600; TOL=+/-25%; 0.2A |
| 25 | L2 | - | 1 | 1008CS-272XJL | COILCRAFT | 2700NH | INDUCTOR; SMT (1008); CERAMIC CHIP; 2700NH; TOL=+/-5%; 0.29A; -40 DEGC TO +125 DEGC |
| 26 | L3, L4 | - | 2 | BLM21PG331SN1 | MURATA | 330 | INDUCTOR; SMT (0805); FERRITE-BEAD; 330; TOL=+/-25%; 1.5A |
| 27 | L5 | - | 1 | B82432T1332K000 | TDK | 3.3UH | INDUCTOR; SMT (1812); FERRITE CORE; 3.3UH; TOL=+/-10%; 0.9A |
| 28 | MISC1 | - | 1 | 68784-0001 | MOLEX | 68784-0001 | CONNECTOR; MALE; USB; USB A PLUG TO MICRO B PLUG CABLE ASSY; STRAIGHT; 4PINS-5PINS |
| 29 | R1, R5, R25-R27 | - | 5 | CRCW040210K0FK; RC0402FR-0710KL | VISHAY DALE; YAGEO PHICOMP | 10K | RESISTOR; 0402; 10K; 1%; 100PPM; 0.0625W; THICK FILM |
| 30 | R2 | - | 1 | CRCW04022K20FK; RC0402FR-072K2L | VISHAY DALE; YAGEO PHICOMP | 2.2K | RESISTOR, 0402, 2.2K OHM, 1%, 100PPM, 0.0625W, THICK FILM |
| 31 | R3, R4 | - | 2 | ERJ-2RKF27R0X; RC0402FR-0727RL; CRCW040227R0FK | PANASONIC; YAGEO PHICOMP;VISHAY DALE | 27 | RESISTOR, 0402, 27 OHM, 1%, 100PPM, 0.0625W, THICK FILM |
| 32 | R6 | - | 1 | CRCW040215K0FK | VISHAY DALE | 15K | RESISTOR; 0402; 15K; 1%; 100PPM; 0.0625W; THICK FILM |
| 33 | R7 | - | 1 | ERJ-2RKF1202 | PANASONIC | 12K | RESISTOR; 0402; 12K OHM; 1%; 100PPM; 0.1W; THICK FILM |
| 34 | R8 | - | 1 | CRCW060310R0FK; MCR03EZPFX10R0; ERJ-3EKF10R0 | VISHAY DALE;ROHM | 10 | RESISTOR; 0603; 10 OHM; 1%; 100PPM; 0.10W; THICK FILM |
| 35 | R9, R10 | - | 2 | CRCW06034K70FK | VISHAY DALE | 4.7K | RESISTOR; 0603; 4.7K; 1%; 100PPM; 0.10W; THICK FILM |
| 36 | R11 | - | 1 | RK73H1ETTP1204F | KOA SPEER ELECTRONICS INC. | 1.2M | RESISTOR, 0402, 1.2M OHM, 1%, 100PPM, 0.0625W, THICK FILM |
| 37 | R12 | - | 1 | CRCW040247K0FK | VISHAY DALE | 47K | RESISTOR, 0402, 47K OHM, 1%, 100PPM, 0.0625W, THICK FILM |
| 38 | R13 | - | 1 | CRCW04022M70FK | VISHAY DALE | 2.7M | RESISTOR, 0402, 2.7M OHM, 1%, 100PPM, 0.0625W, THICK FILM |
| 39 | R15 | - | 1 | CRCW040220K0FK | VISHAY DALE | 20K | RESISTOR; 0402; 20K OHM; 1%; 100PPM; 0.063W; THICK FILM |
| 40 | R16 | - | 1 | ERJ-2RKF2203 | PANASONIC | 220K | RESISTOR; 0402; 220K OHM; 1%; 100PPM; 0.1W; THICK FILM |
| 41 | R17-R20, R29 | - | 5 | ERJ-2RKF5600 | PANASONIC | 560 | RESISTOR, 0402, 560 OHM, 1%, 100PPM, 0.0625W, THICK FILM |
| 42 | R21 | - | 1 | 3361P-1-103GLF | BOURNS | 10K | RESISTOR; SMT GULL-LEAD; 3361P SERIES; 10K OHM; 10%; 100PPM; 0.5W |
| 43 | R22 | - | 1 | CRCW06030000ZS; MCR03EZPJ000; ERJ-3GEY0R00 | VISHAY DALE;ROHM; PANASONIC | 0 | RESISTOR; 0603; 0 OHM; 0%; JUMPER; 0.10W; THICK FILM |
| 44 | R23 | - | 1 | ERJ-3GEYJ242 | PANASONIC | 2.4K | RESISTOR; 0603; 2.4K OHM; 5%; 200PPM; 0.10W; THICK FILM |
| 45 | R28 | - | 1 | CRCW0603100RFK; ERJ-3EKF1000; RC0603FR-07100RL | VISHAY DALE;PANASONIC | 100 | RESISTOR; 0603; 100 OHM; 1%; 100PPM; 0.10W; THICK FILM |
| 46 | TP1, TP2 | - | 2 | 5010 | KEYSTONE | N/A | TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; RED; PHOSPHOR BRONZE WIRE SIL; |

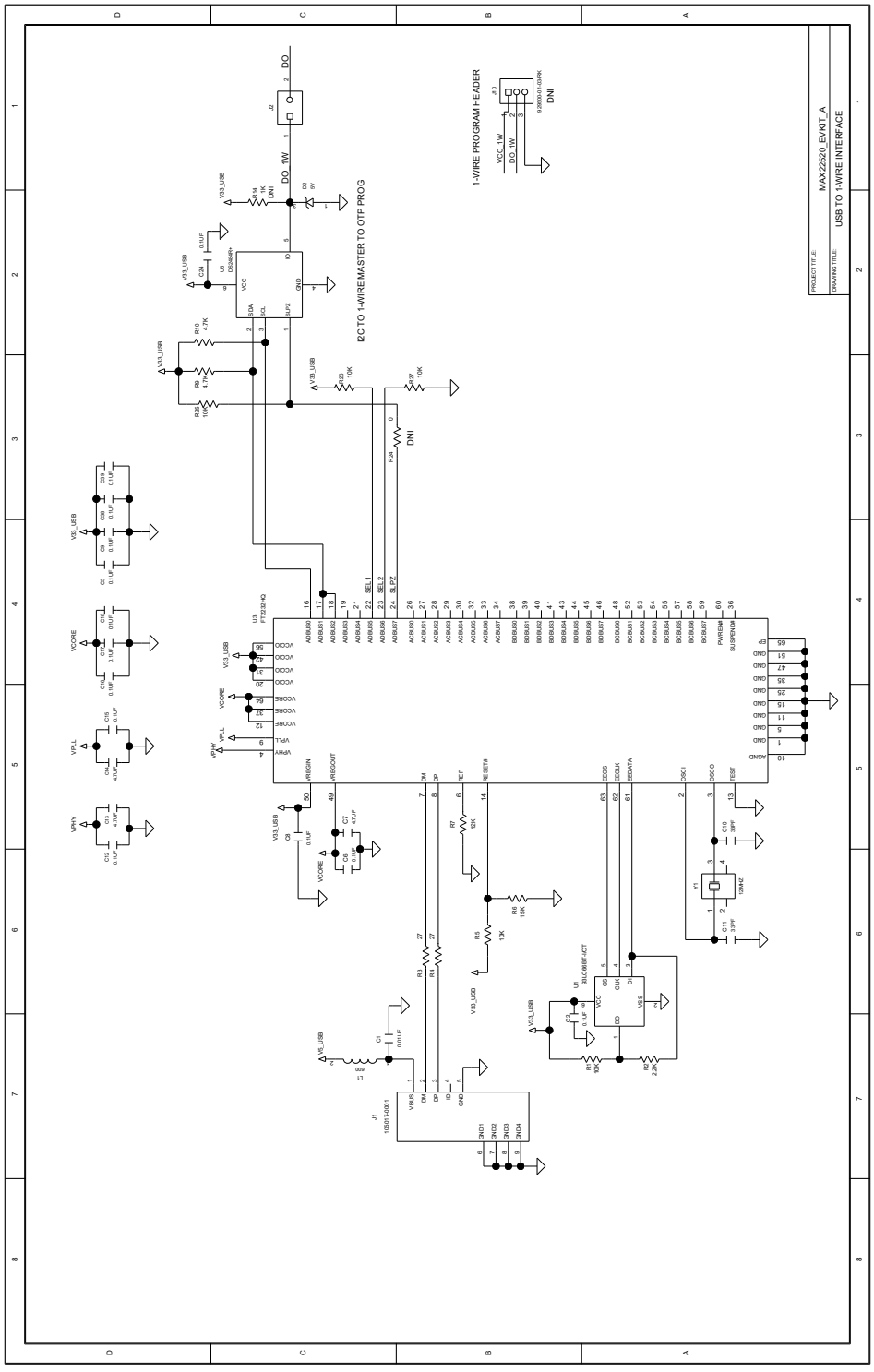
## MAX22520 EV Kit Bill of Materials (continued)

| ITEM | REF_DES | DNI/DNP | QTY | MFG PART # | MANUFACTURER | VALUE | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 47 | TP4-TP7 | - | 4 | 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; |
| 48 | TP8-TP17 | - | 10 | 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; |
| 49 | U1 | - | 1 | 93LC66BT-I/OT | MICROCHIP | 93LC66BT-I/OT | IC; EPROM; 4K MICROWIRE SERIAL EEPROM; SOT23-6 |
| 50 | U2 | - | 1 | MAX1556ETB+ | MAXIM | MAX1556ETB+ | IC; CONV; PWM STEP-DOWN DC-DC CONVERTER; TDFN10-EP 3X3 |
| 51 | U3 | - | 1 | FT2232HQ | FUTURE TECHNOLOGY DEVICES INTL LTD. | FT2232HQ | IC; MMRY; DUAL HIGH SPEED USB TO MULTIPURPOSE UART/FIFO; QFN64-EP |
| 52 | U4 | - | 1 | MAX8880EUT+ | MAXIM | MAX8880EUT+ | IC; VREG; ULTRA-LOW-IQ LOW-DROPOUT LINEAR REGULATOR WITH POK; SOT23-6 |
| 53 | U5 | - | 1 | DS2484R+ | MAXIM | DS2484R+ | IC; INFC; SINGLE-CHANNEL 1-WIRE MASTER WITH ADJUSTABLE TIMING AND SLEEP MODE; SOT23-6 |
| 54 | U6 | - | 1 | MAX17062ETB+ | MAXIM | MAX17062ETB+ | IC; CONV; STEP UP DC-TO-DC CONVERTER; TDFN-EP10; TDFN10-EP ; |
| 55 | U7 | - | 1 | MAX14761ETB+ | MAXIM | MAX14761ETB+ | IC; ASW; ABOVE- AND BELOW-THE-RAILS LOW ON-RESISTANCE ANALOG SWITCH; TDFN10-EP |
| 56 | U9 | - | 1 | MAX22520GWP+ | MAXIM | MAX22520GWP+ | EVKIT PART - IC; DRV; ONE-TIME PROGRAMMABLE INDUCTRIAL SENSOR OUTPUT DRIVER; PACKAGE OUTLINE DRAWING: 21-100314; PACKAGE CODE: W201K2+1; WLP20 |
| 57 | Y1 | - | 1 | ECS-120-20-33 | ECS INC | 12MHZ | CRYSTAL; SMT; 20PF; 12MHZ; +/-50PPM; +/-50PPM |
| 58 | PCB | - | 1 | MAX22520 | MAXIM | PCB | PCB:MAX22520 |
| 59 | C36 | DNP | 0 | C1608C0G1E103J080AA | TDK | 0.01UF | CAPACITOR; SMT (0603); CERAMIC CHIP; 0.01UF; 25V; TOL=5%; MODEL=; TG=-55 DEGC TO +125 DEGC; TC=C0G |
| 60 | J10 | DNP | 0 | 929500-01-03-RK | 3M | 929500-01-03-RK | CONNECTOR; MALE; THROUGH HOLE; PIN STRIP HEADER; RIGHT ANGLE; 3PINS |
| 61 | MH1-MH4 | DNP | 0 | 9032 | KEYSTONE | 9032 | MACHINE FABRICATED; ROUND-THRU HOLE SPACER; NO THREAD; M3.5; 5/8IN; NYLON |
| 62 | R14 | DNP | 0 | CRCW06031K00FK; ERJ-3EKF1001 | VISHAY DALE;PANASONIC | 1K | RESISTOR; 0603; 1K; 1%; 100PPM; 0.10W; THICK FILM |
| 63 | R24 | DNP | 0 | RC0402JR-070RL; CR0402-16W-000RJT | YAGEO PHYCOMP;VENKEL LTD. | 0 | RESISTOR; 0402; 0 OHM; 5%; JUMPER; 0.063W; THICK FILM |
| TOTAL | | | 116 | | | | |

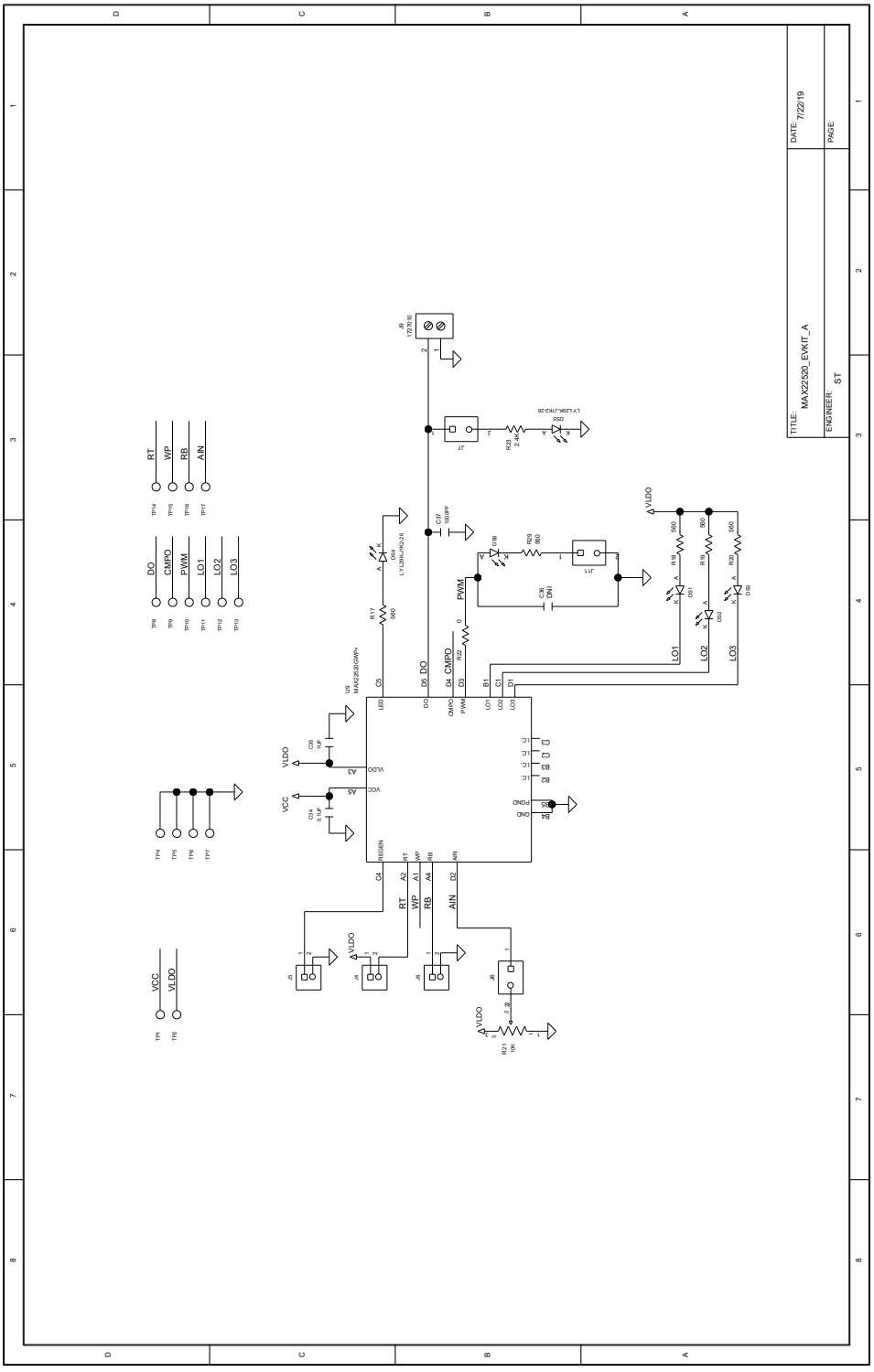
## MAX22520 EV Kit Schematic



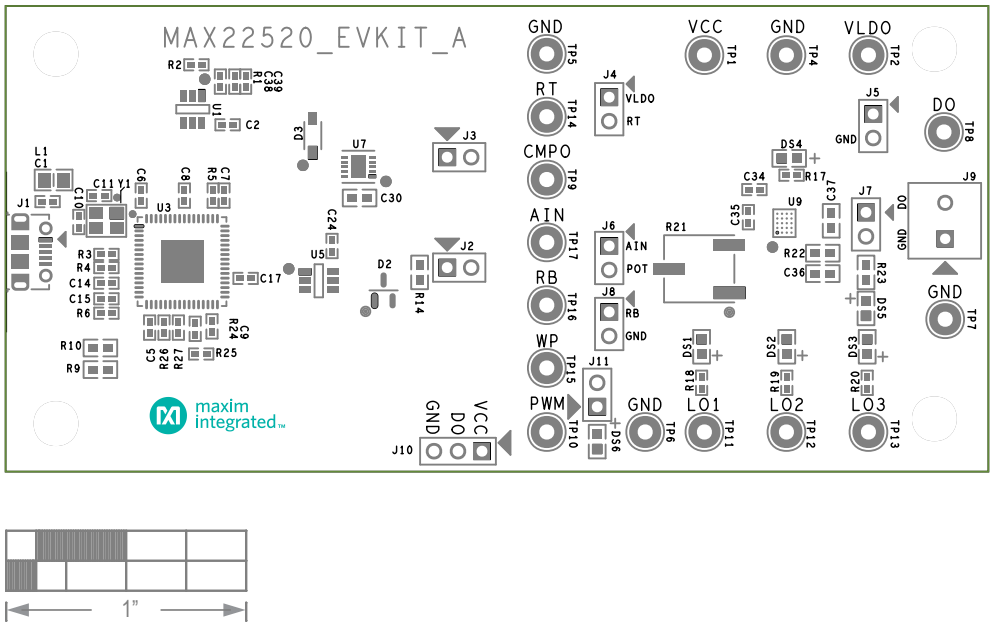
## MAX22520 EV Kit Schematic (continued)



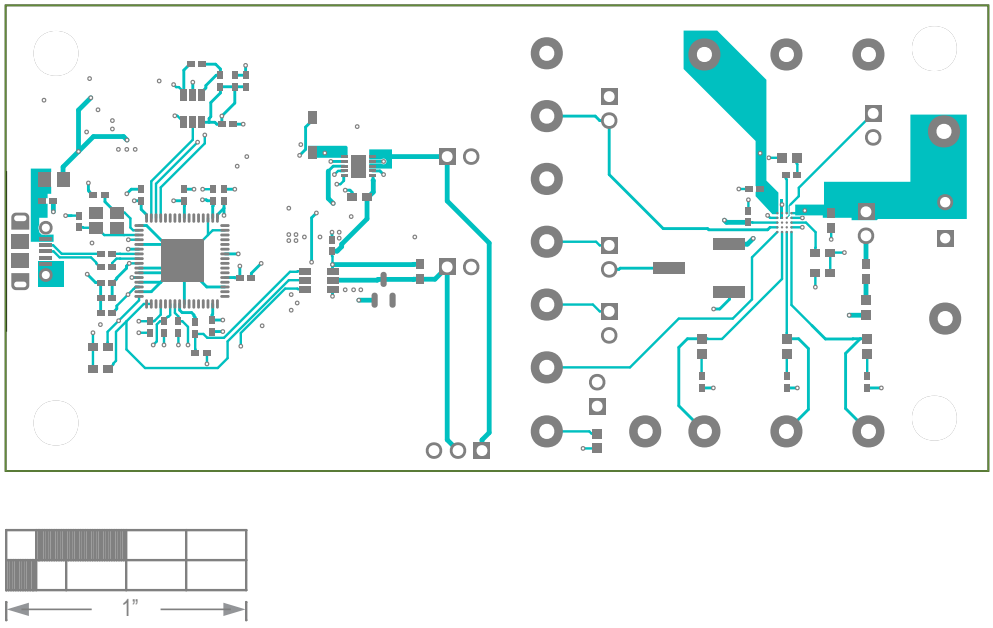
## MAX22520 EV Kit Schematic (continued)



## MAX22520 EV Kit PCB Layout Diagrams

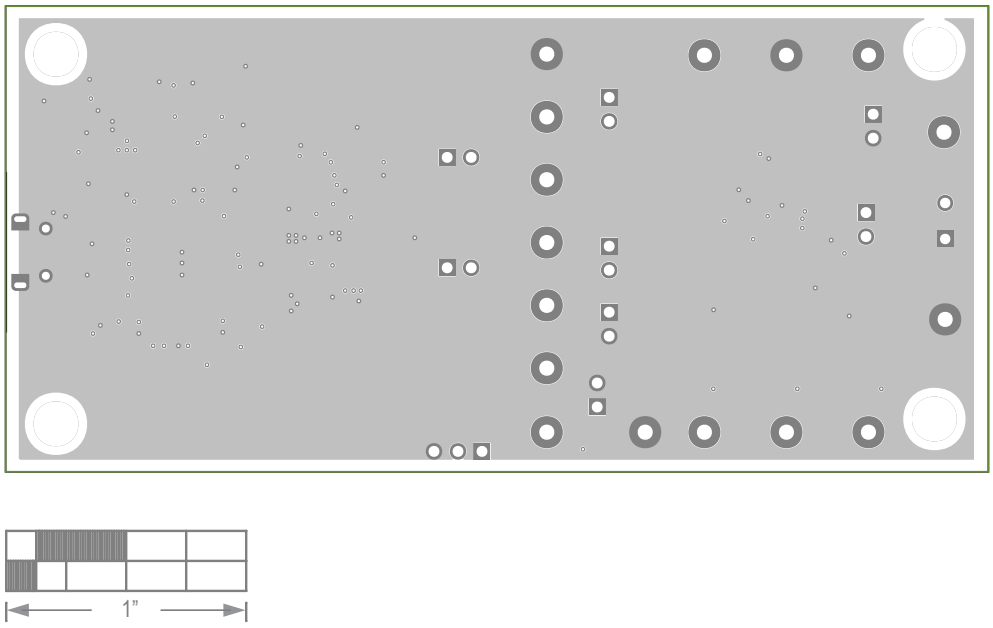



*MAX22520 EV Kit PCB Layout—Top Silkscreen*

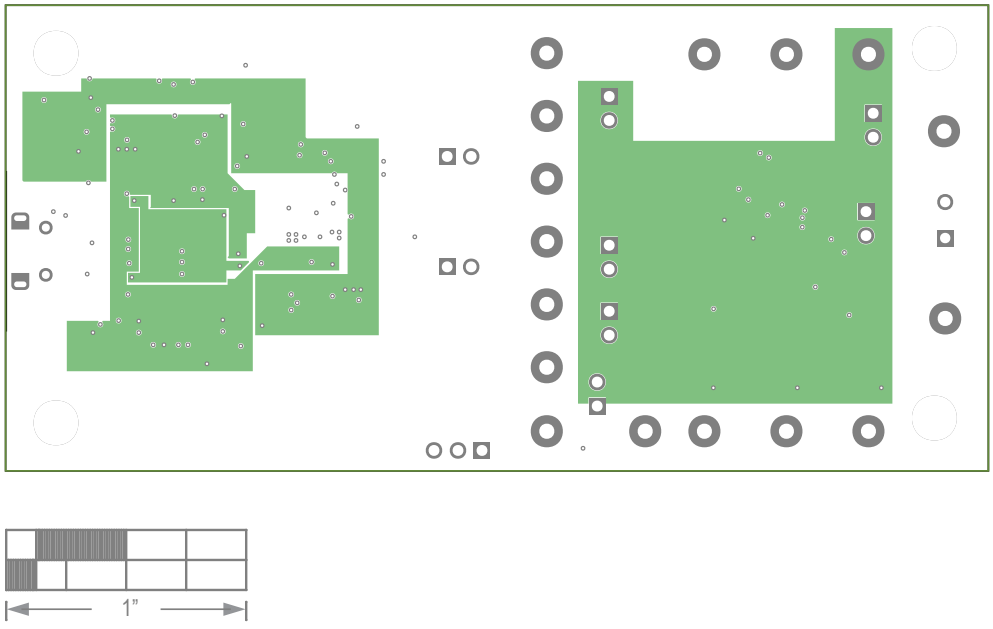



*MAX22520 EV Kit PCB Layout—Top Layer*

## MAX22520 EV Kit PCB Layout Diagrams (continued)

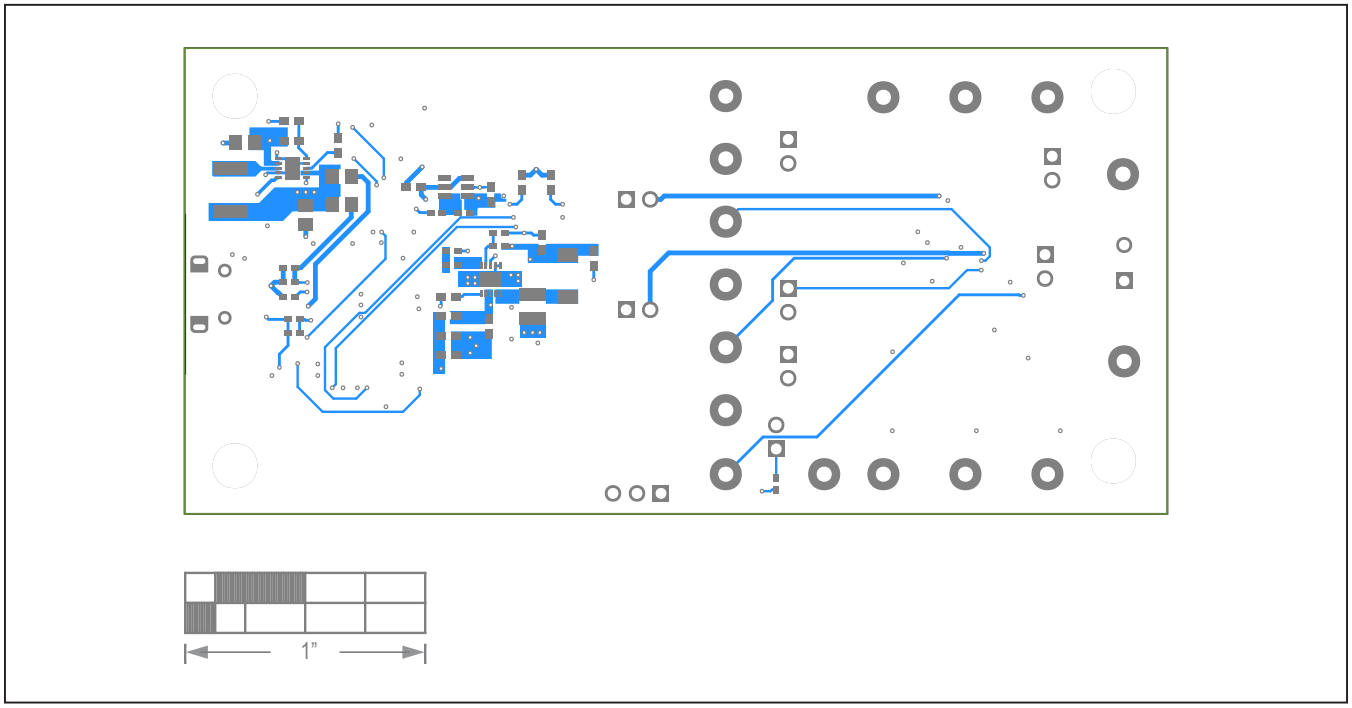



*MAX22520 EV Kit—Ground Layer*

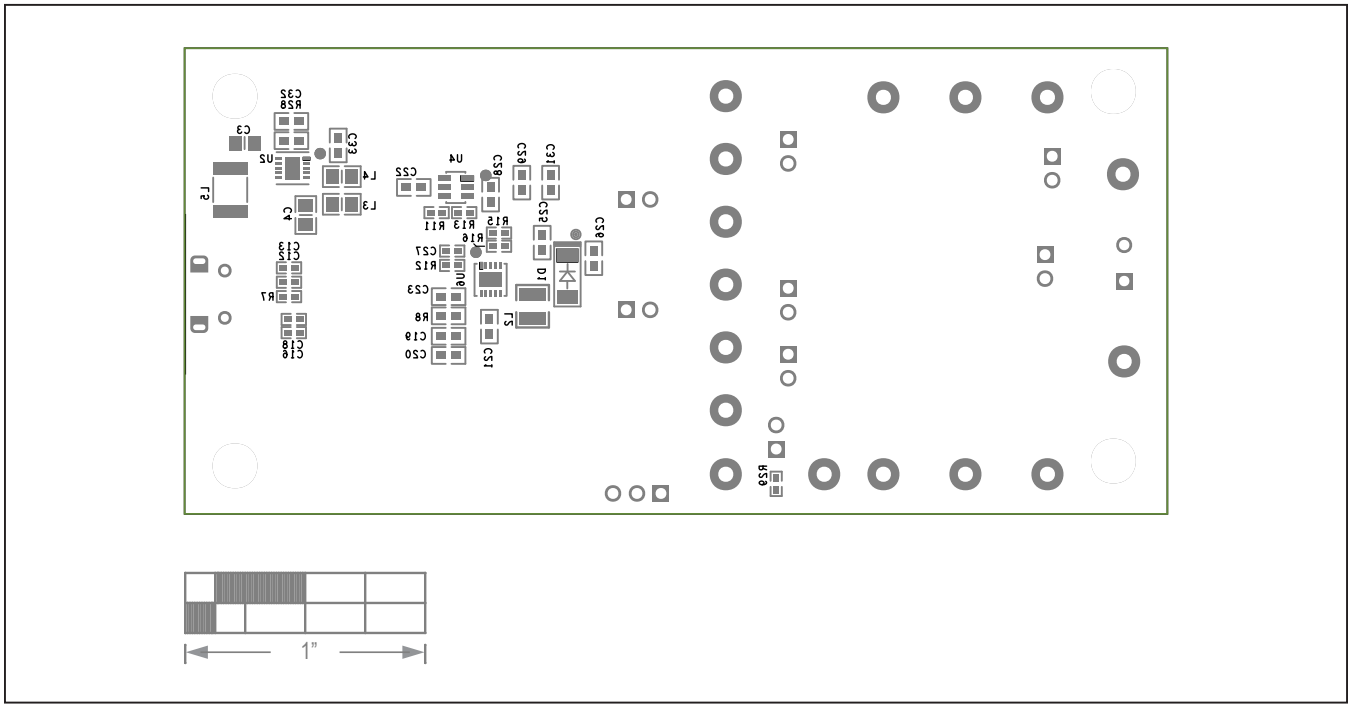



*MAX22520 EV Kit—Power Layer*

## MAX22520 EV Kit PCB Layout Diagrams (continued)




*MAX22520 EV Kit—Bottom Layer*




*MAX22520 EV Kit—Bottom Silkscreen*

## Revision History

| REVISION NUMBER | REVISION DATE | DESCRIPTION | PAGES CHANGED |
|---|---|---|---|
| 0 | 10/19 | Initial release | — |

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