Evaluation Board User Guide

# ADM6840 Evaluation Kit

Evaluates ADM6840

## General Description

The ADM6840 evaluation kit (EV kit) monitors and sequences up to eight voltages. This ADM6840 provides an adjustable delay as each supply is turned on as well as monitor each power supply voltage.

The ADM6840 EV kit includes an installed ADM6840EAWABFH+T. This product is RoHS compliant.

## Features

- 2.7V to 15.0V Wide Operating Voltage Range
- Monitor Up to Eight Voltages
- Sequence Up to Eight Voltages
- Included LED Indicators for System Events
- Included Onboard LDOs for Sequencing/Monitoring
- Daisy-Chaining for Multiple Boards
- Proven 6-Layer, 1oz Copper PCB Layout
- Fully Assembled and Tested

## ADM6840 EV Kit Files

| FILE | DESCRIPTION |
|---|---|
| ADM6840 EV BOM | EV Kit BOM |
| ADM6840 EV PCB LAYOUT | EV Kit Layout |
| ADM6840 EV SCHEMATIC | EV Kit Schematic |

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

## Quick Start

### Required Equipment

- ADM6840 EV kit
- 25V, 1A DC power supply
- Oscilloscope
- Digital multimeter

## Procedure

The EV kit is fully assembled and tested. Use the following steps and make the required hardware connections to operate the kit.

**Caution: Do not turn on the power supply until all connections are completed.**

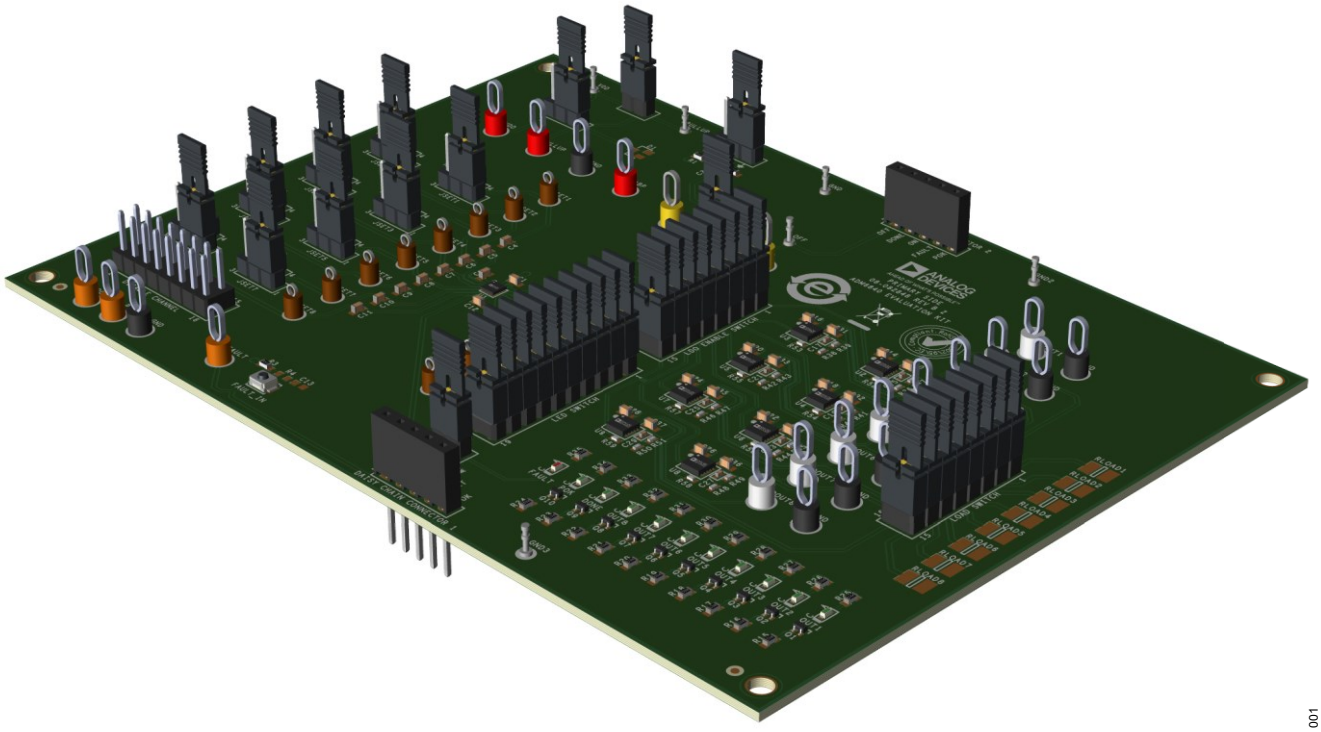
1. Verify that shunts P1, P10, P11, ON/OFF, JSET_, LDO ENABLE SWITCH, LED SWITCH, LED_FAULT_SW, and LOAD SWITCH are configured as shown in *Table 1*.
2. If VDD is more than 5V, do not install a P1 shunt.
   **Note:** A separate power supply must be connected to the VPULLUP test point.
3. Connect the positive terminal of the power supply to the VDD test point.
4. Connect the negative terminal of the power supply to the GND test point.
5. Adjust the voltage to 5V and turn on the VDD power supply.
6. Check the FAULT indicator LED and ensure it is not turned on.
7. Remove shunt from P10 (2-3) and connect to P10 (1-2) to initiate the power-on sequencing.
8. Verify that the status LEDs indicate the correct state of all OUT_, DONE, and POK outputs during the power-on sequencing.
9. Once power-on sequencing is completed, remove shunt P10 (1-2) and connect to P10 (2-3) to initiate the power-off sequencing.

319-101159; Rev 0; 03/26



One Analog Way, Wilmington, MA 01887-2356, U.S.A. | Tel: 781.329.4700 

## ADM6840 EV Board



001

## ADM6840 EV Kit Board Connections

### Table 1. ADM6840 EV Kit Jumper Description

| JUMPER | SIGNAL | SHUNT POSITION | FUNCTION |
|---|---|---|---|
| P1 | VDD | **1-2** | Connects VDD to VPULLUP |
| | | Not installed | If VDD > 5V, an additional power supply is needed for VPULLUP. |
| P10 | VPULLUP | 1-2 | Power-on sequencing |
| | | **2-3** | Power-off sequencing |
| | | Not installed | Power-on and power-off sequencing are using programmable controllers. |
| P11 | OUT1 to OUT8 | 1-2 | Connects OUT1 to OUT8 to VDD with a pull-up resistor |
| | | **2-3** | Connects OUT1 to OUT8 to VPULLUP with a pull-up resistor |
| ON/OFF | ON and OFF | **1-2** | ON is tied to OFF. |
| | | Not installed | ON and OFF are controlled separately; do not install shunt P2. |
| JSET1 | SET1 | **1-2** | OUT1 is connected to SET1. |
| | | 2-3 | Feedback from VLDO_PG1 |
| | | 2-4 | Feedback from VLDOOUT1 |

| | | | |
|---|---|---|---|
| | | Not installed | When channel 1 is skipped; shunt is connected to DISABLE CHANNEL (1-2). |
| JSET2 | SET2 | **1-2** | OUT2 is connected to SET2 |
| | | 2-3 | Feedback from VLDO_PG2 |
| | | 2-4 | Feedback from VLDOOUT2 |
| | | Not installed | When channel 2 is skipped; shunt is connected to DISABLE CHANNEL (3-4). |
| JSET3 | SET3 | **1-2** | OUT3 is connected to SET3 |
| | | 2-3 | Feedback from VLDO_PG3 |
| | | 2-4 | Feedback from VLDOOUT3 |
| | | Not installed | When channel 3 is skipped; shunt is connected to DISABLE CHANNEL (5-6). |
| JSET4 | SET4 | **1-2** | OUT4 is connected to SET4 |
| | | 2-3 | Feedback from VLDO_PG4 |
| | | 2-4 | Feedback from VLDOOUT4 |
| | | Not installed | When channel 4 is skipped; shunt is connected to DISABLE CHANNEL (7-8) |
| JSET5 | SET5 | **1-2** | OUT5 is connected to SET5 |
| | | 2-3 | Feedback from VLDO_PG5 |
| | | 2-4 | Feedback from VLDOOUT5 |
| | | Not installed | When channel 5 is skipped; shunt is connected to DISABLE CHANNEL (9-10). |
| JSET6 | SET6 | **1-2** | OUT6 is connected to SET6 |
| | | 2-3 | Feedback from VLDO_PG6 |
| | | 2-4 | Feedback from VLDOOUT6 |
| | | Not installed | When channel 6 is skipped; shunt is connected to DISABLE CHANNEL (11-12). |
| JSET7 | SET7 | **1-2** | OUT7 is connected to SET7 |
| | | 2-3 | Feedback from VLDO_PG7 |
| | | 2-4 | Feedback from VLDOOUT7 |
| | | Not installed | When channel 7 is skipped; shunt is connected to DISABLE CHANNEL (13-14). |
| JSET8 | SET8 | **1-2** | OUT8 is connected to SET8 |
| | | 2-3 | Feedback from VLDO_PG8 |
| | | 2-4 | Feedback from VLDOOUT8 |
| | | Not installed | When channel 8 is skipped; shunt is connected to DISABLE CHANNEL (15-16). |
| LDO ENABLE SWITCH | EN1 | **1-2** | Connects OUT1 to EN of U2 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |
| | EN2 | **3-4** | Connects OUT1 to EN of U3 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |

| | | | |
|---|---|---|---|
| | EN3 | **5-6** | Connects OUT1 to EN of U4 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |
| | EN4 | **7-8** | Connects OUT1 to EN of U5 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |
| | EN5 | **9-10** | Connects OUT1 to EN of U6 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |
| | EN6 | **11-12** | Connects OUT1 to EN of U7 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |
| | EN7 | **13-14** | Connects OUT1 to EN of U8 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |
| | EN8 | **15-16** | Connects OUT1 to EN of U9 |
| | | Not installed | Sequencer only operation; DC-DC mode with feedback from LDO is disabled. |
| LED SWITCH | OUT1 | **1-2** | Enables LED indicator for OUT1 |
| | OUT2 | **3-4** | Enables LED indicator for OUT2 |
| | OUT3 | **5-6** | Enables LED indicator for OUT3 |
| | OUT4 | **7-8** | Enables LED indicator for OUT4 |
| | OUT5 | **9-10** | Enables LED indicator for OUT5 |
| | OUT6 | **11-12** | Enables LED indicator for OUT6 |
| | OUT7 | **13-14** | Enables LED indicator for OUT7 |
| | OUT8 | **15-16** | Enables LED indicator for OUT8 |
| | DONE | **17-18** | Enables LED indicator for DONE |
| | POK | **19-20** | Enables LED indicator for POK |
| LED_FAULT_SW | FAULT | **1-2** | Enables LED indicator for FAULT |
| LOAD SWITCH | VLDOOUT1 | **1-2** | Connects VLDOOUT1 with RLOAD1 |
| | VLDOOUT2 | **3-4** | Connects VLDOOUT2 with RLOAD2 |
| | VLDOOUT3 | **5-6** | Connects VLDOOUT3 with RLOAD3 |
| | VLDOOUT4 | **7-8** | Connects VLDOOUT4 with RLOAD4 |
| | VLDOOUT5 | **9-10** | Connects VLDOOUT5 with RLOAD5 |
| | VLDOOUT6 | **11-12** | Connects VLDOOUT6 with RLOAD6 |
| | VLDOOUT7 | **13-14** | Connects VLDOOUT7 with RLOAD7 |
| | VLDOOUT8 | **15-16** | Connects VLDOOUT with RLOAD8 |
| DISABLE CHANNEL | ABP | 1-2 | SET1 is connected to ABP, skips OUT1/disables channel 1. |
| | | 3-4 | SET2 is connected to ABP, skips OUT2/disables channel 2. |
| | | 5-6 | SET3 is connected to ABP, skips OUT3/disables channel 3. |
| | | 7-8 | SET4 is connected to ABP, skips OUT4/disables channel 4. |
| | | 9-10 | SET5 is connected to ABP, skips OUT5/disables channel 5. |
| | | 11-12 | SET6 is connected to ABP, skips OUT6/disables channel 6. |

| | | | |
|---|---|---|---|
| | | 13-14 | SET7 is connected to ABP, skips OUT7/disables channel 7. |
| | | 15-16 | SET8 is connected to ABP, skips OUT8/disables channel 8. |

*Default options appear in bold.*

## Detailed Description of Hardware

The ADM6840 EV kit evaluates the 8-channel power-supply sequencing and monitoring. Monitoring the power supplies ensures the proper power-on and power-off conditions for systems requiring voltage sequencing. During power-off, the outputs can be reversed-sequenced by driving $\overline{OFF}$ low. The ADM6840 EV kit's VDD power supply input requires 2.7V to 15V and VPULLUP requires 2.7V to 5V.

This ADM6840 EV kit should be used with the following documents:

- ADM6840 data sheet
- ADM6840 EV kit data sheet (this document)

### Sequencer Operation

#### Power-On Sequencing

When the sequencer initiates power-on sequencing, the power-on threshold ($V_{SEQON\_TH}$) is enabled, and the ADM6840 provides a capacitor-adjustable sequence delay period ($t_{DLY}$) before OUT1 or the first output is asserted. The first sensing input voltage must reach above the $V_{SEQON\_TH}$ within its power-good timeout period ($t_{PGT}$) before it enables the next output after $t_{DLY}$. The power-on sequencing repeats until OUT8 or the last output is asserted. After SET8 or the last sensing input reaches the $V_{SEQON\_TH}$, DONE output is asserted.

#### Power-Off Sequencing

When the sequencer initiates power-off sequencing, the power-off threshold ($V_{SEQOFF\_TH}$) is enabled, and the ADM6840 waits the delay time ($t_{DLY}$) before OUT8 or the last output is deasserted. The last sensing input voltage must drop below its $V_{SEQOFF\_TH}$ before it disables the next output. The power-off sequencing repeats until OUT1 or the first output is deasserted. After SET1 or the first sensing input reaches the $V_{SEQOFF\_TH}$, DONE output is deasserted.

#### Sequencer Only

To operate in this mode, do not install the shunts on the LDO ENABLE SWITCH. They should be kept floating to isolate the LDO's connection with the ADM6840 IC. See *Table 1* for the connection guide.

## Table 2. LED Indicator Status

| STATUS LED | DESCRIPTION |
|---|---|
| OUT1 | The green LED indicates the status of OUT1, turns on when it is high. |
| OUT2 | The green LED indicates the status of OUT2, turns on when it is high. |
| OUT3 | The green LED indicates the status of OUT3, turns on when it is high. |
| OUT4 | The green LED indicates the status of OUT4, turns on when it is high. |
| OUT5 | The green LED indicates the status of OUT5, turns on when it is high. |
| OUT6 | The green LED indicates the status of OUT6, turns on when it is high. |
| OUT7 | The green LED indicates the status of OUT7, turns on when it is high. |
| OUT8 | The green LED indicates the status of OUT8, turns on when it is high. |
| DONE | The green LED indicates the status of DONE, turns on when it is high. |
| POK | The green LED indicates the status of POK, turns on when it is high. |
| FAULT | The red LED indicates the status of FAULT, turns on when it is low. |

### Sequence Delay Control

Capacitor C12 sets the sequence delay period ($t_{DLY}$) for the ADM6840. Replace the capacitor with different values to adjust the $t_{DLY}$ or leave DLY unconnected for the minimum 58µs (typ) delay. Use the following formula to estimate the delay:

$$t_{DLY} = 125k\Omega \times C12$$

where $t_{DLY}$ is in seconds and C12 is in Farads. After each $t_{DLY}$, the DLY capacitor discharges (internal 4Ω) at 51µs (typical). The accuracy of $t_{DLY}$ is affected by the C12 capacitor leakage and tolerance. A low-leakage ceramic capacitor is recommended.

In the EV kit, the sequencing delay period ($t_{DLY}$) is 125ms.

### $\overline{\text{FAULT}}$ Input/Output

$\overline{\text{FAULT}}$ is bidirectional. It is active-low input and active-low, open-drain output. Refer to the ADM6840 data sheet for all conditions that trigger a $\overline{\text{FAULT}}$.

To manually trigger a fault in the EV kit, push the FAULT_IN switch. If extended pulse width is desired, mount R4 and C13 to avoid channel skipping during initialization.

### SKIP or DISABLE Channels

If fewer than eight channels are required, install the shunt on the DISABLE CHANNEL to skip a channel. This connects the SET_ pin to the ABP pin. The sequencing is similar with eight channel sequencing, proceed as though the ADM6840 has fewer channels (e.g., if SET2 is connected to ABP, all logic for channel 2 is removed from the state machine, no delay, no timer, no UV detection, and no fault triggered from this channel). If all channels are skipped, the device asserts DONE and POK immediately after initialization.

### Open-Drain Outputs

The ADM6840 includes open-drain outputs wherein pull-up resistors are required. The exact value of the pull-up resistors is not critical, but some consideration should be made to ensure a proper logic levels when the device is sinking current. For example, if VDD = 3.3V and the pull-up voltage is 5V, keep the sink current less than 3.2mA as shown in the *Electrical Characteristics* table of the ADM6840 data sheet. As a result, the pull-up resistor needs to be greater than 1.6kΩ. For a 12V pull-up, the resistor should be larger than 3.74kΩ.

In the EV kit, pull-up resistors R5 to R14 are set to 10kΩ. OUT1 to OUT8 can be pulled up to VDD or VPULLUP by connecting the shunt P12 (1-2) or P12 (2-3), respectively.

### SET_ Input Threshold and LDO Setting

The EV kit input-voltage thresholds are set to operate with 3.6V, 3.3V, 2.5V, 2V, 1.8V, 1.2V, 0.9V, and 0.85V (ADM6840) voltage systems. All input-voltage thresholds can be reconfigured by replacing the corresponding resistors (R36 to R51) as shown in *Figure 1*. Refer to the *Applications Information* section of the ADM6840 data sheet and *Resistor Value Selection* section in the MAX38903 IC data sheet to calculate the new resistor values when reconfiguring the EV kit input thresholds.

### Configuring the Daisy-Chain Operation

The ADM6840 EV kit can be configured for daisy-chain operation of multiple ADM6840s by using the DAISY CHAIN CONNECTOR 1 and DAISY CHAIN CONNECTOR 2 headers. Using a 5-pin jumper wire ribbon cable, connect the DAISY CHAIN CONNECTOR 1 of the first ADM6840 EV kit [1] to the DAISY CHAIN CONNECTOR 2 of the second ADM6840 EV kit [2]. See *Figure 1* and *Table 3* for the connection and proper jumper configuration of all boards, respectively, to configure the EV kit for daisy-chain operation. Connect the GND (ground) of each board together.

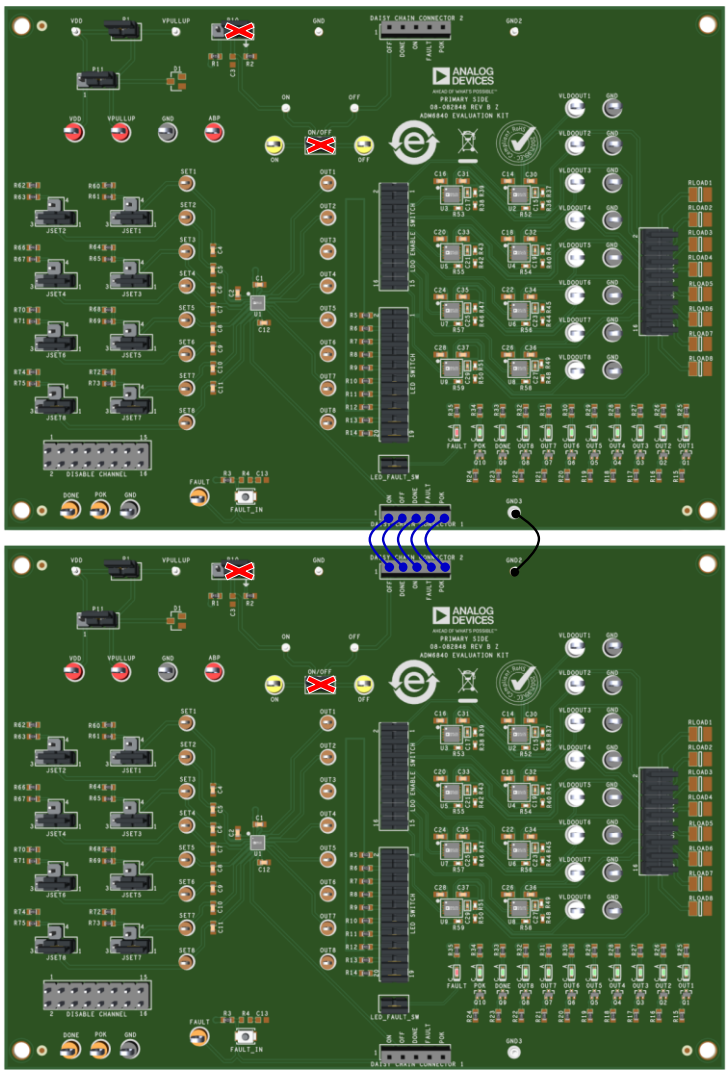



*Figure 1. Daisy-Chaining Two ADM6840 EV Kits*

## Table 3. Jumper Configuration for Daisy-Chain Operation

| JUMPER | SHUNT POSITION | EV KIT OPERATION |
|---|---|---|
| P1 | 1-2 | Connects VDD to VPULLUP |
| | Not installed | If VDD > 5V, an additional power supply is needed for VPULLUP. |
| P10 | Not installed | ON and OFF are controlled separately. |
| ON/OFF | Not installed | ON [1] and OFF [2] are already connected. |

For the remaining jumper configuration, see *Table 1*.

## Ordering Information

| PART | TYPE |
|---|---|
| ADM6840EVKIT# | EV Kit |

*#Denotes RoHS compliance.*

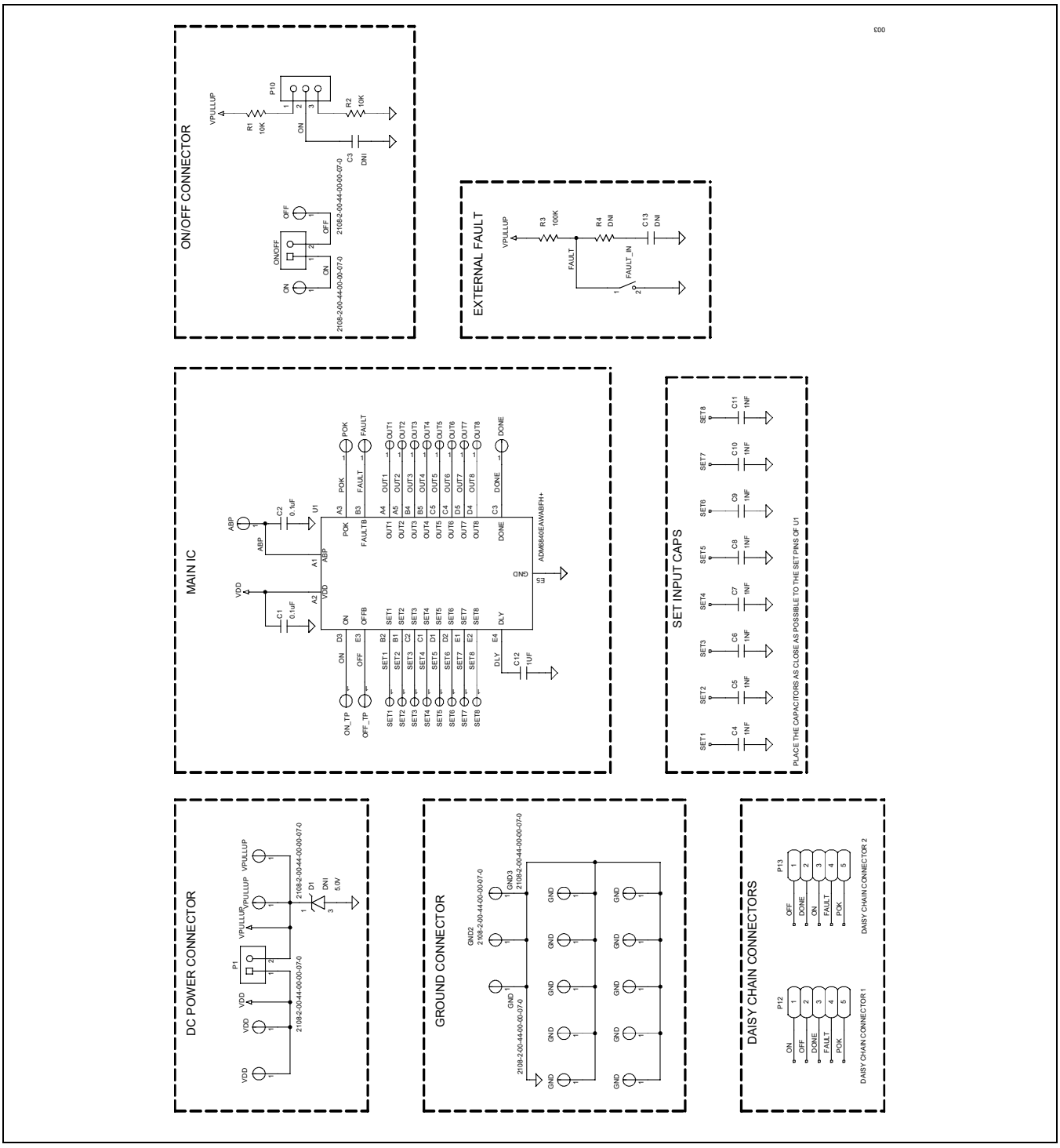
## ADM6840 EV Kit Bill of Materials

| ITEM | REF_DES | DNI | QTY | MFG_PART# | MANUFACTURER | VALUE | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 1 | ABP, VDD_TP, VPULLUP_TP | — | 3 | 5010 | KEYSTONE ELECTRONICS | — | CONN-PCB TEST POINT RED |
| 2 | C1, C2 | — | 2 | C0603C104K3RACTU | KEMET | 0.1uF | CAP CER 0.1uF 25V 10% X7R 0603 |
| 3 | C4–C11 | — | 8 | 06031C102KAT2A | AVX CORPORATION | 1NF | CAP CER 1UF 6.3V 10% X7R 0603 |
| 4 | C12 | — | 1 | C0603X105K9RACTU | KEMET | 1UF | CAP CER 1UF 6.3V 10% X7R 0603 |
| 5 | C14, C16, C18, C20, C22, C24, C26, C28, C30–C37 | — | 16 | CL10B106MQ8NRNC | SAMSUNG | 10uF | CAP CER 10uF 6.3V 20% X7R 0603 |
| 6 | C15, C17, C19, C21, C23, C25, C27, C29 | — | 8 | GRM155R71H473KE14J | MURATA | 0.047uF | CAP CER 0.047uF 50V 10% X7R 0402 |
| 7 | DONE, FAULT, POK | — | 3 | 5013 | KEYSTONE ELECTRONICS | — | CONN-PCB TEST POINT ORANGE |
| 8 | DS1–DS10 | — | 10 | KP DELPS1.FP-UGVI-34-Z555 | OSRAM OPTO SEMICONDUCTORS | — | LED GREEN DIFFUSED 560NM, AEC-Q102 |
| 9 | DS11 | — | 1 | KS DELPS1.22-TIVH-68-H3Q4 | OSRAM OPTO SEMICONDUCTORS | — | LED RED CLEAR 628NM, AEC-Q102 |
| 10 | FAULT_IN | — | 1 | B3U-1000P | OMRON | — | SWITCH ULTRA SMALL TACTILE |
| 11 | GND, GND2, GND3, OFF, ON, VDD, VPULLUP | — | 7 | 2108-2-00-44-00-00-07-0 | MILL-MAX | — | CONN-PCB SOLDER TERMINAL TURRETS, FOR 62MILS BRD THK |
| 12 | GND1_TP–GND8_TP, GND_TP, GND_TP2 | — | 10 | 5011 | KEYSTONE ELECTRONICS | — | CONN-PCB TEST POINT BLACK |
| 13 | OFF_TP, ON_TP | — | 2 | 5014 | KEYSTONE ELECTRONICS | — | CONN-PCB MULTIPURPOSE THM TEST POINT - YELLOW, 3.2MM TAIL LENGTH |
| 14 | ON/OFF, P1, P26 | — | 3 | PEC02SAAN | SULLINS | — | CONN-PCB 2.54MM HEADER SINGLE STR 2POS |
| 15 | OUT1–OUT8, SET1–SET8 | — | 16 | 5115 | KEYSTONE ELECTRONICS | — | CONN-PCB TEST POINT BROWN |
| 16 | P10, P11, P15–P22 | — | 10 | PEC03SAAN | SULLINS | — | CONN-PCB 3POS MALE HDR UNSHROUDED SINGLE ROW ST, 2.54MM |

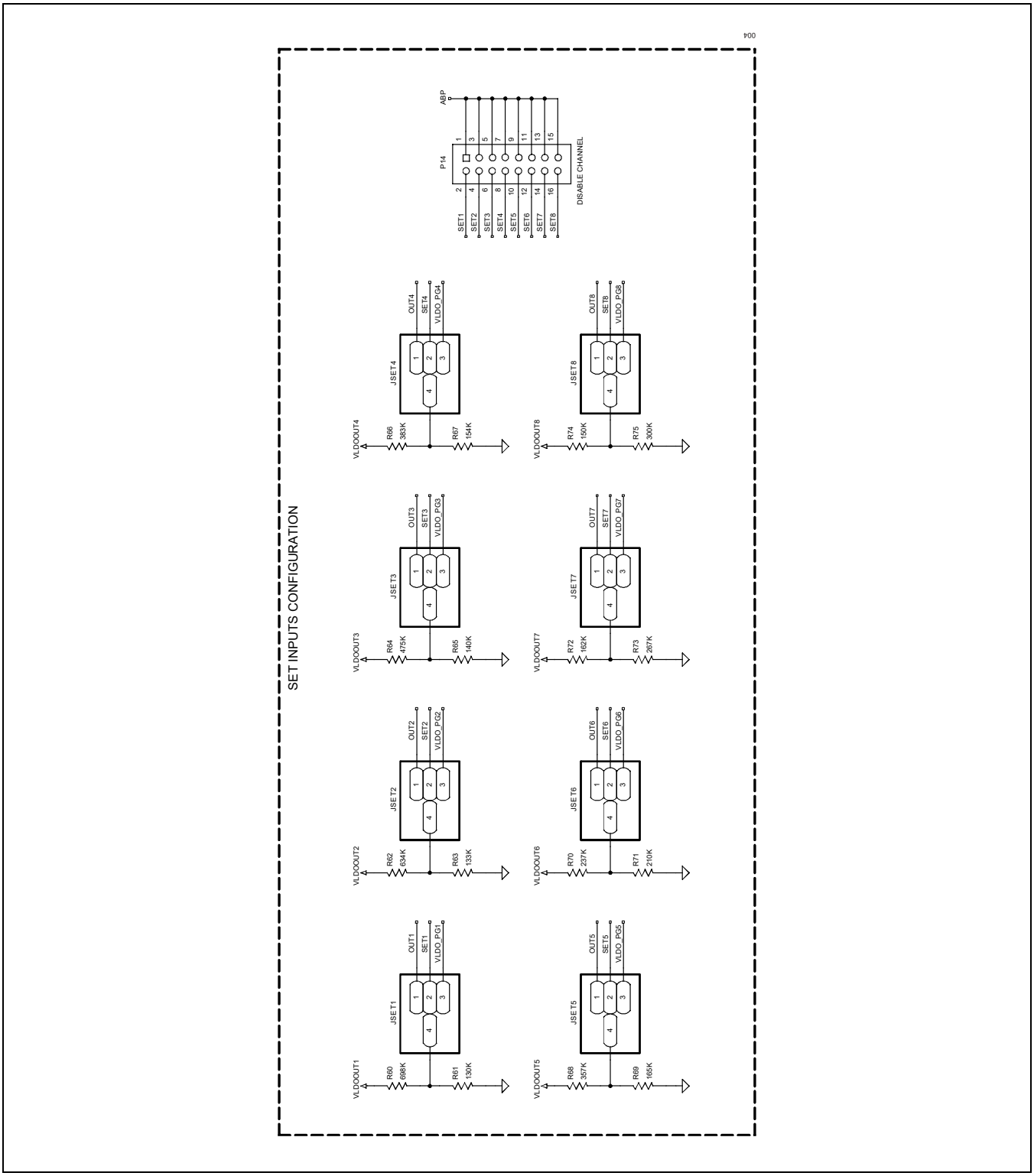
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | PITCH, 3.05MM SOLDER TAIL |
| 17 | P12, P13 | — | 2 | SSQ-105-03-T-S | SAMTEC INC. | — | CONN-PCB 5POS FEMALE HDR/SKT SINGLE ROW ST, 2.54MM PITCH, 10MM SOLDER TAIL |
| 18 | P14, P24, P25 | — | 3 | PEC08DAAN | SULLINS | — | CONN-PCB 16POS MALE HDR UNSHROUDED DUAL ROW ST, 5.84MM POST HEIGHT, 3.05MM SOLDER TAIL, 2.54MM PITCH |
| 19 | P2–P9 | — | 8 | PEC01SAAN | SULLINS | — | CONN-PCB 1POS MALE HEADER UNSHROUDED 2.54MM PITCH, 3.05MM SOLDER TAIL |
| 20 | P23 | — | 1 | PEC10DAAN | SULLINS | — | CONN-PCB BERG HDR ST MALE 20P |
| 21 | Q1–Q10 | — | 10 | 2N7002T | ONSEMI | — | TRAN N-CHANNEL MOSFET, 0.115A |
| 22 | R1, R2 | — | 2 | ERJ-3EKF1002V | PANASONIC | 10K | RES SMD 10K Ohm 1% 1/10W 0603 AEC-Q200 |
| 23 | R5–R14 | — | 10 | RC0603JR-0710KL | YAGEO | 10K | RES SMD 10K Ohm 5% 1/10W 0603 |
| 24 | R15–R24 | — | 10 | ERJ-3EKF1003V | PANASONIC | 100K | RES SMD 100K Ohm 1% 1/10W 0603 AEC-Q200 |
| 25 | R25–R34 | — | 10 | RC0603FR-072KL | YAGEO | 2K | RES SMD 2K Ohm 1% 1/10W 0603 |
| 26 | R3 | — | 1 | CR0603-FX-1003ELF | BOURNS | 100K | RES SMD 100K Ohm 1% 1/10W 0603 |
| 27 | R35 | — | 1 | ERJ-3EKF1001V | PANASONIC | 1K | RES SMD 1K Ohm 1% 1/10W 0603 AEC-Q200 |
| 28 | R36, R38, R40, R42, R44, R46, R47, R48, R50 | — | 9 | ERJ-2RKF3003X | PANASONIC | 300K | RES SMD 300K Ohm 0.1% 1/10W 0402 AEC-Q200 |
| 29 | R37 | — | 1 | RC0402FR-071M5L | YAGEO | 1.5M | RES SMD 1.5M OHM 1% 1/16W 0402 |
| 30 | R39 | — | 1 | RC0402FR-071M37L | YAGEO | 1.37M | RES SMD 1.37MEG OHM 1% 1/16W 0402 |
| 31 | R41 | — | 1 | CRCW0402953KFKED | VISHAY | 953K | RES SMD 953K OHM 1% 1/16W 0402 AEC-Q200 |
| 32 | R43 | — | 1 | ERJ-2RKF6983X | PANASONIC | 689K | RES SMD 698K Ohm 1% 1/10W 0402 AEC-Q200 |
| 33 | R45 | — | 1 | ERJ-2RKF6043X | PANASONIC | 604K | RES SMD 604K Ohm 1% 1/10W 0402 AEC-Q200 |
| 34 | R49 | — | 1 | ERJ-2RKF1503X | PANASONIC | 150K | RES SMD 150K Ohm 1% 1/10W 0402 AEC-Q200 |
| 35 | R51 | — | 1 | RC0402FR-07124KL | YAGEO | 124K | RES SMD 124K Ohm 1% 1/16W 0402 |
| 36 | R52–R59 | — | 8 | ERJ-2RKF1003X | PANASONIC | 100K | RES SMD 100K Ohm 1% 1/10W 0402 AEC-Q200 |
| 37 | R60 | — | 1 | RC0603FR-07698KL | YAGEO | 698K | RES SMD 698K Ohm 1% 1/10W 0603 |
| 38 | R61 | — | 1 | MC0603SAF1303T5E | MULTICOMP (SPC) | 130K | RES SMD 130K Ohm 1% 1/10W 0603 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 39 | R62 | — | 1 | CRCW0603634KFKEA | VISHAY | 634K | RES SMD 634K Ohm 1% 1/10W 0603 AEC-Q200 |
| 40 | R63 | — | 1 | RC0603FR-07133KL | YAGEO | 133K | RES SMD 133K Ohm 1% 1/10W 0603 |
| 41 | R64 | — | 1 | ERJ-3EKF4753V | PANASONIC | 475K | RES SMD 475K Ohm 1% 1/10W 0603 AEC-Q200 |
| 42 | R65 | — | 1 | ERJ-3EKF1403V | PANASONIC | 140K | RES SMD 140K Ohm 1% 1/10W 0603 AEC-Q200 |
| 43 | R66 | — | 1 | ERJ-3EKF3833V | PANASONIC | 383K | RES SMD 383K OHM 1% 1/10W 0603 AEC-Q200 |
| 44 | R67 | — | 1 | ERJ-3EKF1543V | PANASONIC | 154K | RES SMD 154K Ohm 1% 1/10W 0603 AEC-Q200 |
| 45 | R68 | — | 1 | RC0603FR-07357KL | YAGEO | 357K | RES SMD 357K OHM 1% 1/10W 0603 |
| 46 | R69 | — | 1 | ERJ-3EKF1653V | PANASONIC | 165K | RES SMD 165K OHM 1% 1/10W 0603 AEC-Q200 |
| 47 | R70 | — | 1 | CRCW0603237KFKEA | VISHAY | 237K | RES SMD 237K OHM 1% 1/10W 0603 AEC-Q200 |
| 48 | R71 | — | 1 | ERJ-3EKF2103V | PANASONIC | 210K | RES SMD 210K Ohm 1% 1/10W 0603 AEC-Q200 |
| 49 | R72 | — | 1 | ERJ-3EKF1623V | PANASONIC | 162K | RES SMD 162K OHM 1% 1/10W 0603 AEC-Q200 |
| 50 | R73 | — | 1 | CRCW0603267KFKEA | VISHAY | 267K | RES SMD 267K Ohm 1% 1/10W 0603 AEC-Q200 |
| 51 | R74 | — | 1 | ERJ-3EKF1503V | PANASONIC | 150K | RES SMD 150K Ohm 1% 1/10W 0603 AEC-Q200 |
| 52 | R75 | — | 1 | ERJ-PA3F3003V | PANASONIC | 300K | RES SMD 300K OHM 1% 1/4W 0603 AEC-Q200 |
| 53 | U1 | — | 1 | ADM6840EAWABFH+ | ANALOG DEVICES | — | IC-ADI ADJUSTABLE HEX/OCTAL SEQUENCER-SUPERVISOR |
| 54 | U2–U9 | — | 8 | MAX38903BATB+ | MAXIM INTEGRATED | — | IC 1A LOW NOISE LDO LINEAR REGULATORS |
| 55 | VLDOOUT1–VLDOOUT8 | — | 8 | 5012 | KEYSTONE ELECTRONICS | — | CONN-PCB TEST POINT WHITE |
| 56 | C3, C13 | DNI | 0 | TBD0603 | TBD0603 | — | DO NOT INSTALL (TBD_C0603) PLEASE USE SYM_3 AND/OR SYM_4 |
| 57 | D1 | DNI | 0 | BZX84-C5V1 | PHILIPS | — | DIODE BZX84C 5.1V ZENER SOT-23 |
| 58 | R4 | DNI | 0 | TBD0603 | TBD0603 | — | DO NOT INSTALL (TBD_R0603), PLEASE USE SYM_3 AND/OR SYM_4 |
| 59 | RLOAD1–RLOAD8 | DNI | 0 | TBD1210 | TBD1210 | — | DO NOT INSTALL (TBD_R1210), PLEASE USE SYM_3 AND/OR SYM_4 |

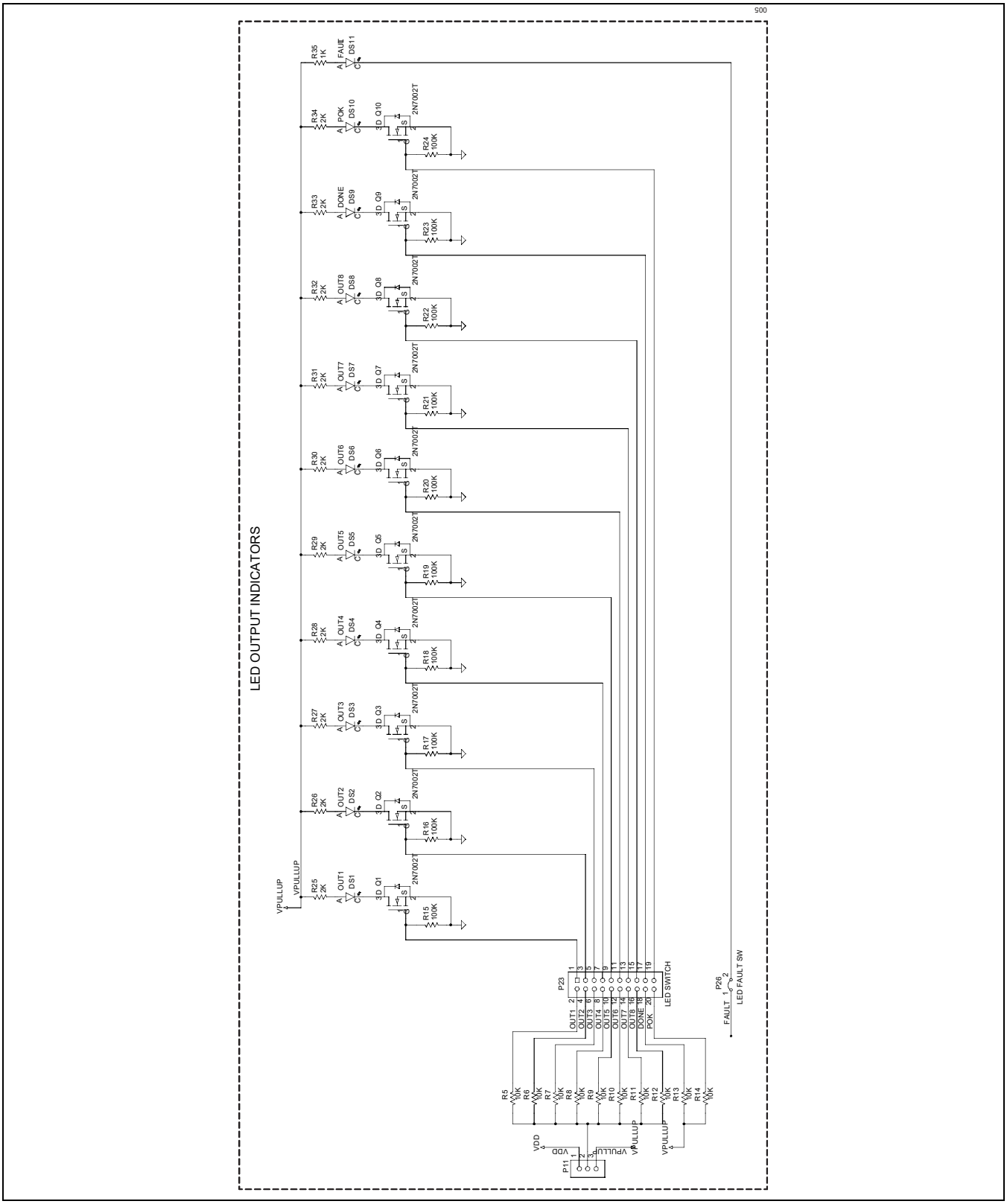
## ADM6840 EV Kit Schematic



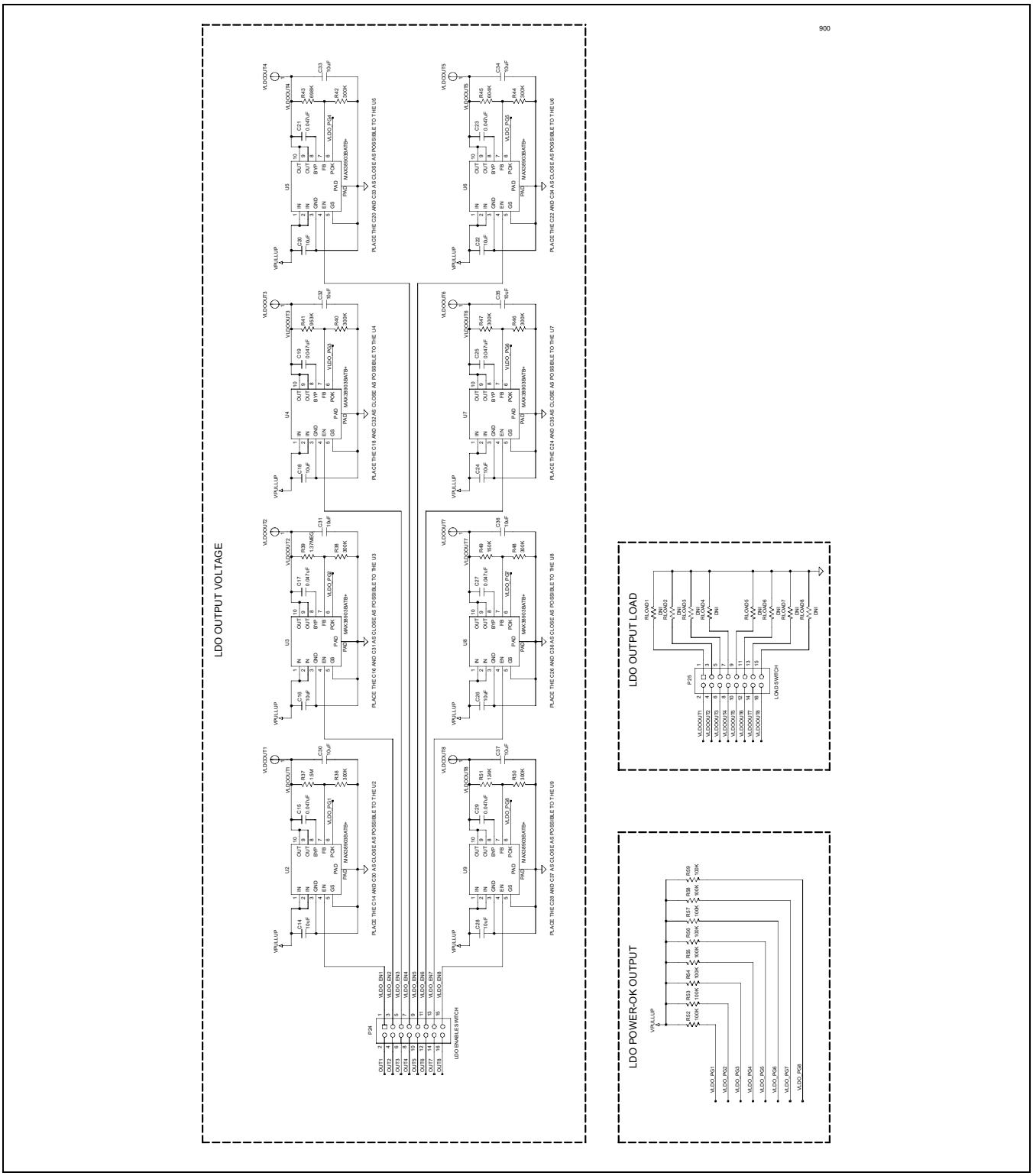
## ADM6840 EV Kit Schematic (continued)



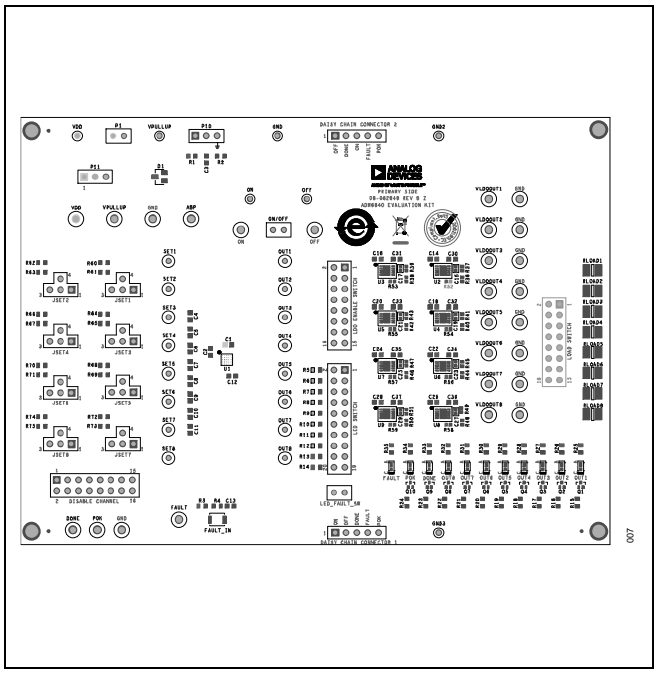
## ADM6840 EV Kit Schematic (continued)



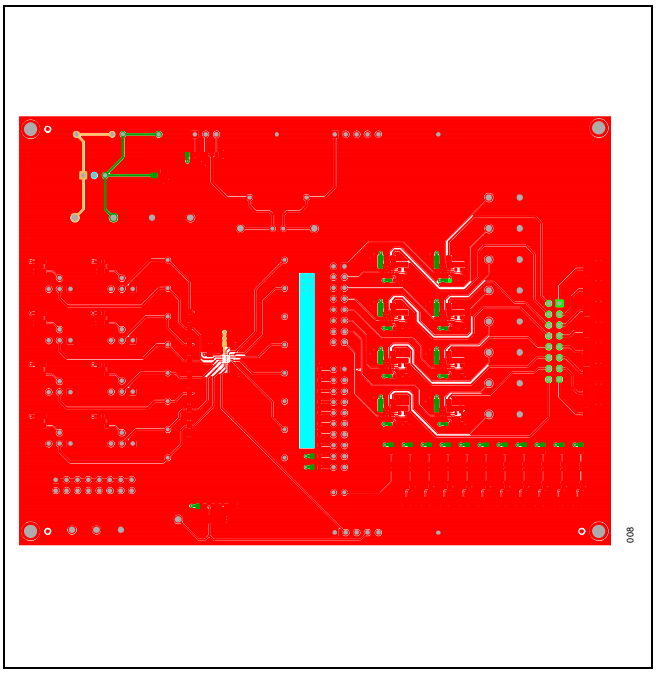
## ADM6840 EV Kit Schematic (continued)



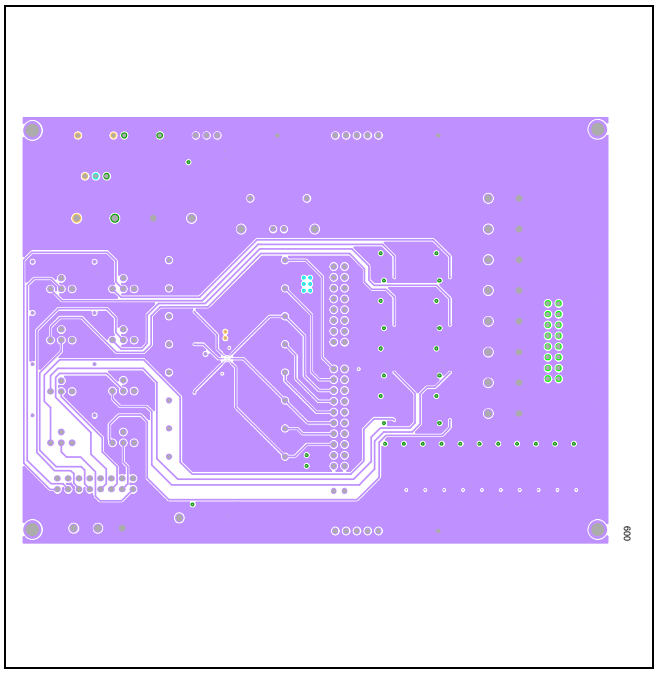
## ADM6840 EV Kit PCB Layout



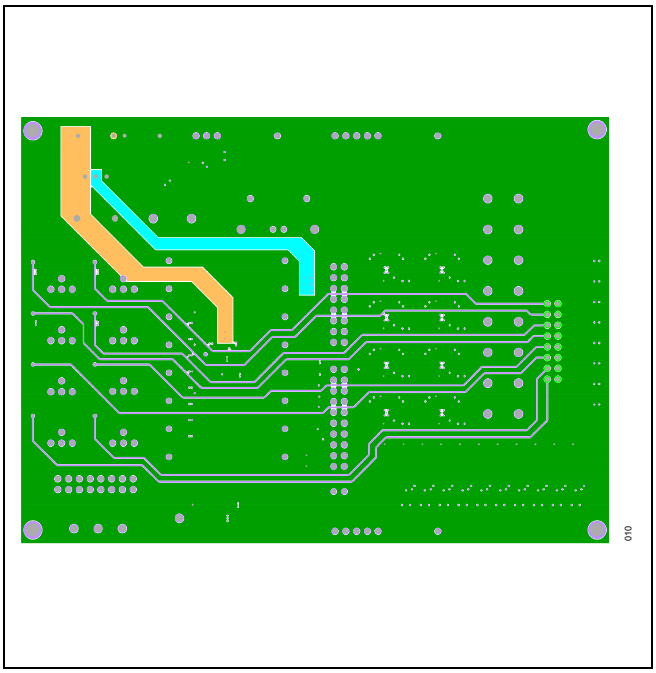
*ADM6840 EV Kit Component Placement Guide—Top Silkscreen*



*ADM6840 EV Kit PCB Layout—Top Layer*

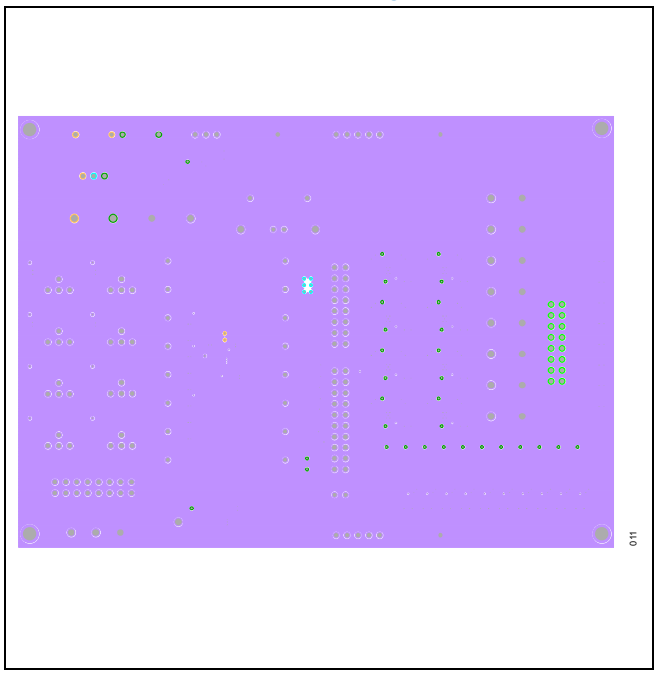


*ADM6840 EV Kit PCB Layout—Layer 2*

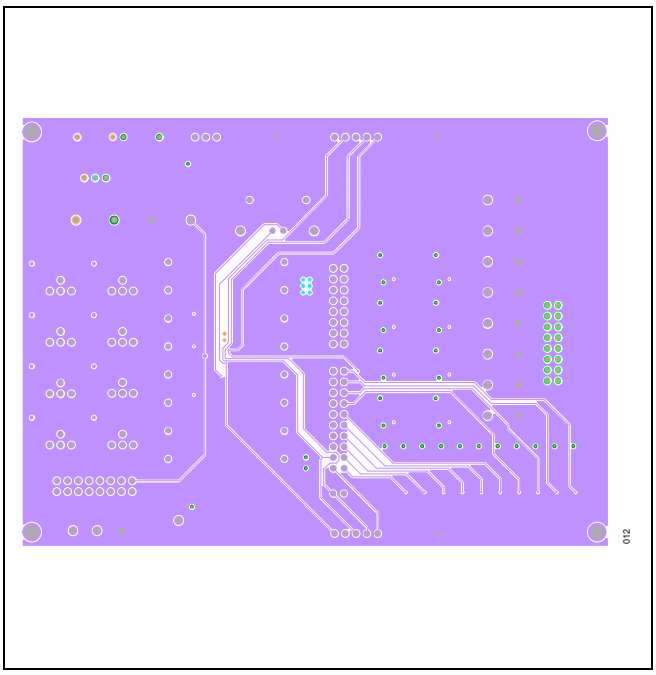


*ADM6840 EV Kit PCB Layout—Layer 3*

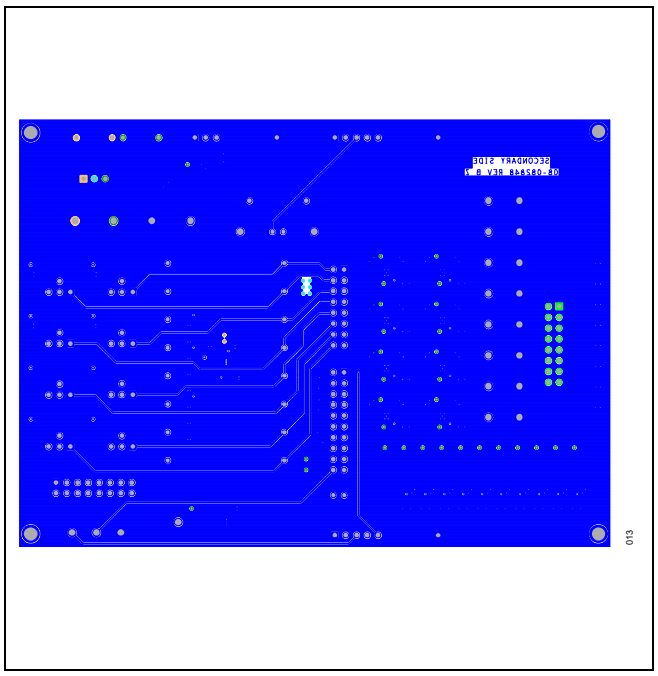
## ADM6840 EV Kit PCB Layout (continued)



*ADM6840 EV Kit PCB Layout—Layer 4*



*ADM6840 EV Kit Component Placement Guide—Layer 5*



*ADM6840 EV Kit PCB Layout—Bottom Layer*

## Revision History

| REVISION NUMBER | REVISION DATE | DESCRIPTION | PAGES CHANGED |
|---|---|---|---|
| 0 | 03/26 | Initial release | — |

## Notes