

Evaluates: MAX77646

MAX77646 Evaluation Kit

General Description

The MAX77646 evaluation kit (EV kit) allows for easy experimentation with various MAX77646 features, including the resistor programmability of the SIMO and onboard electronic loads.

The Windows®-based software provides a user-friendly graphical interface to manage the onboard electronic loads.

[Ordering Information](#) appears at end of data sheet.

Features

- Easy to Use
- GUI-Driven I²C Interface
- Assembled and Fully Tested
- On-Board Electronic Loads
 - Steady-State, Transient, and Random Modes
- Demonstration of End-to-End Analog Multiplexer Implementation
- On-Board ADC

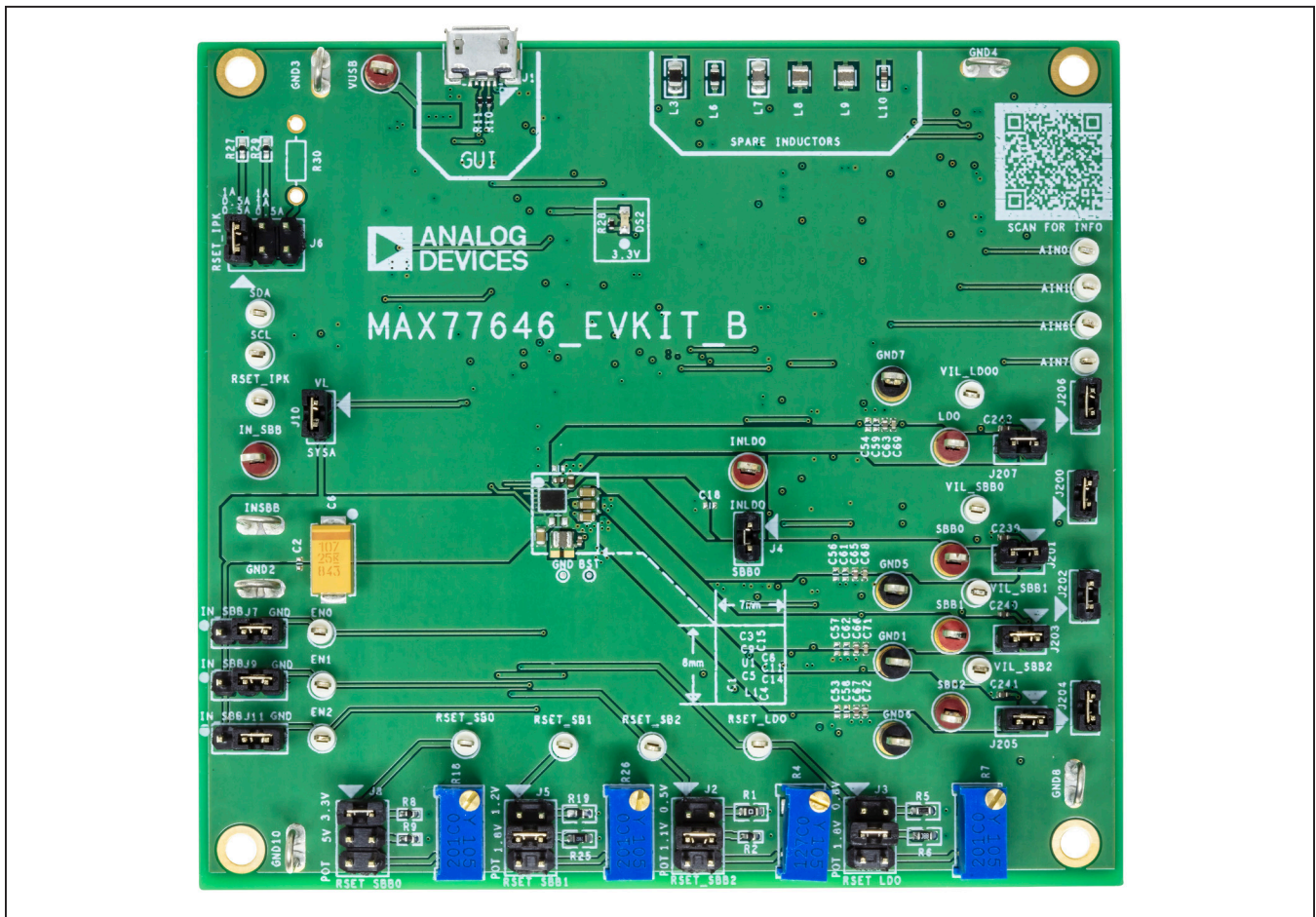


Figure 1. MAX77646 EV Kit Photo

Windows is a registered trademark and registered service mark of Microsoft Corporation.

319-100996; Rev 0; 5/23

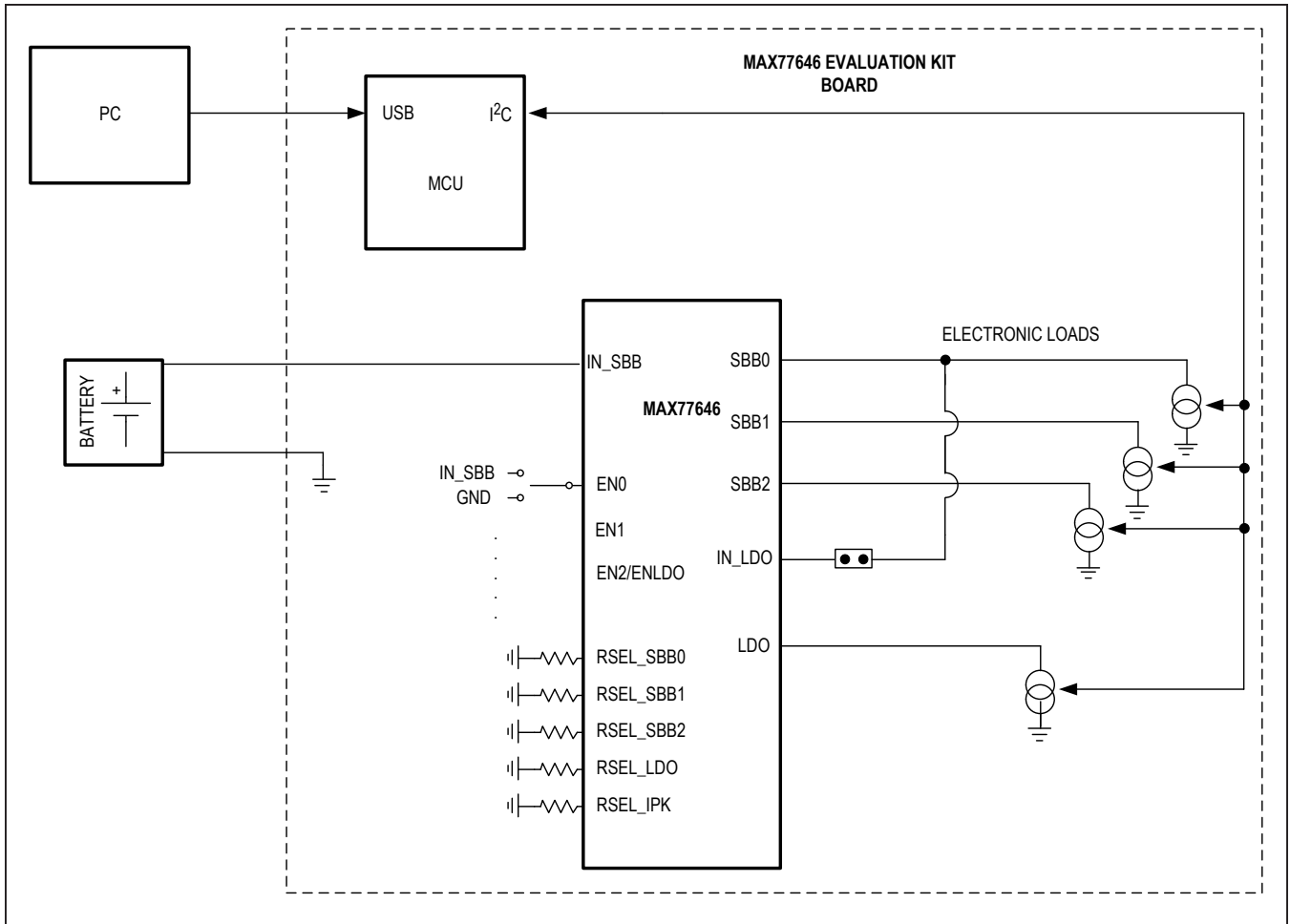


Figure 2. EV Kit Simplified Block Diagram

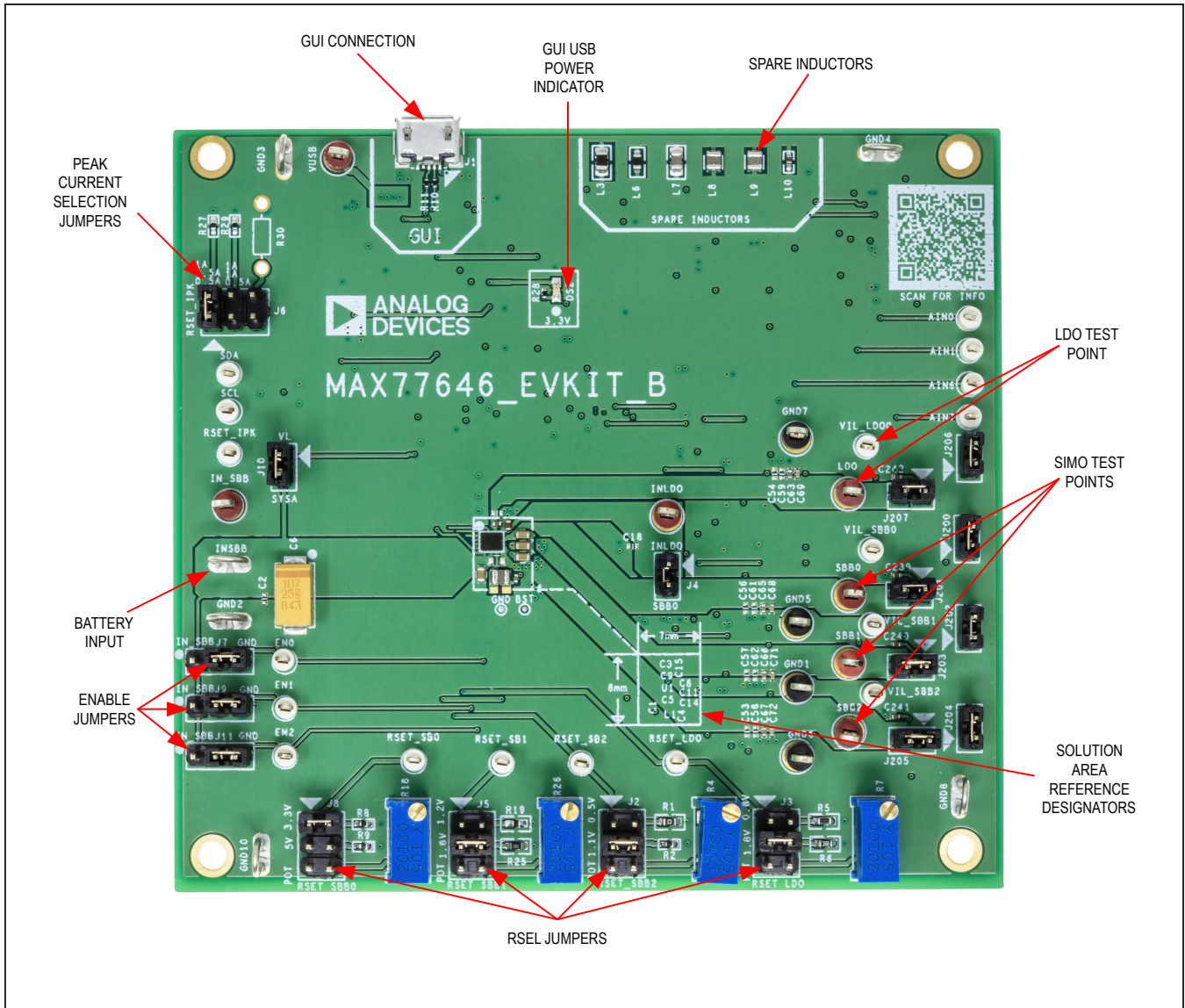


Figure 3. MAX77646 EV Kit Top View

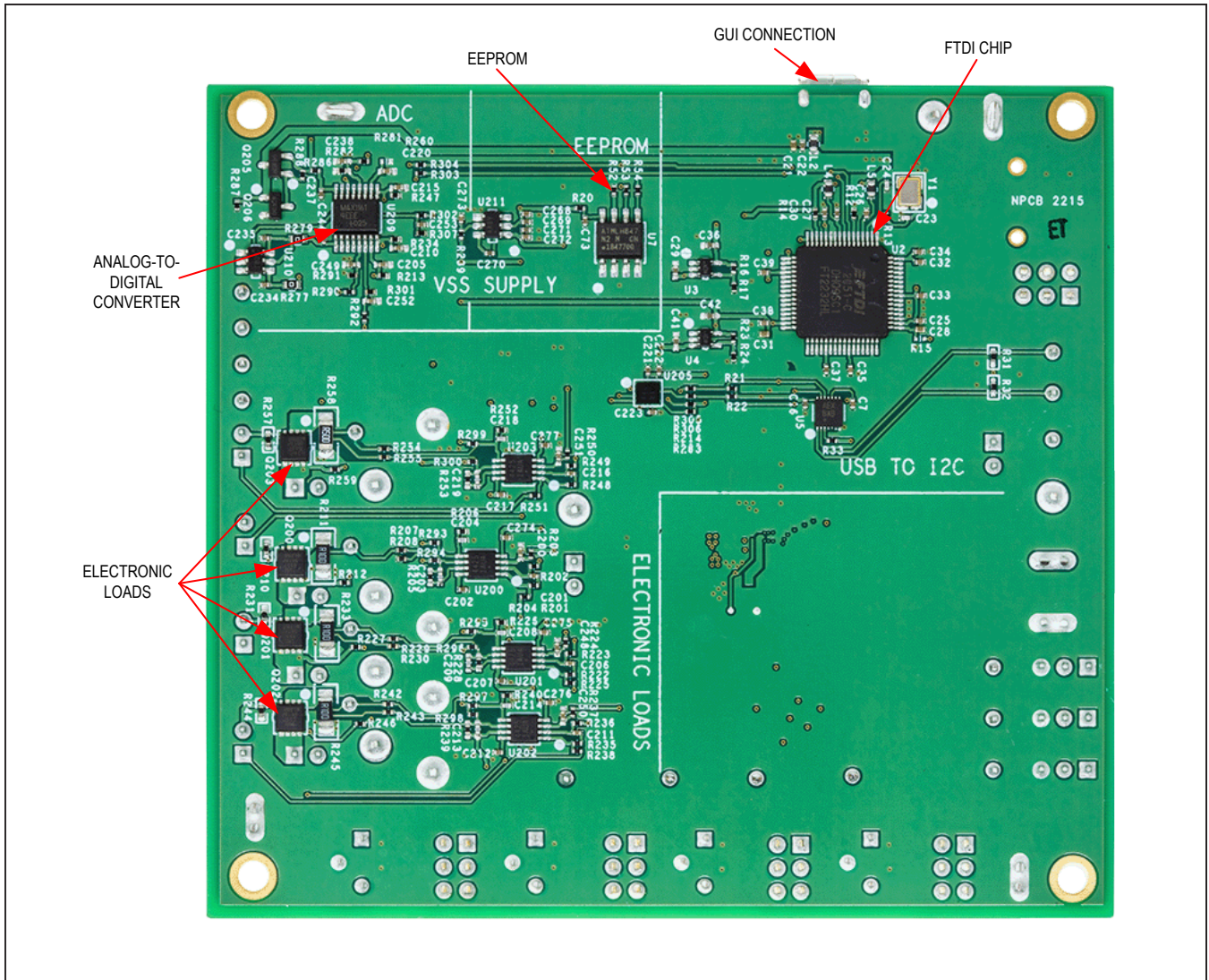


Figure 4. MAX77646 EV Kit Bottom View

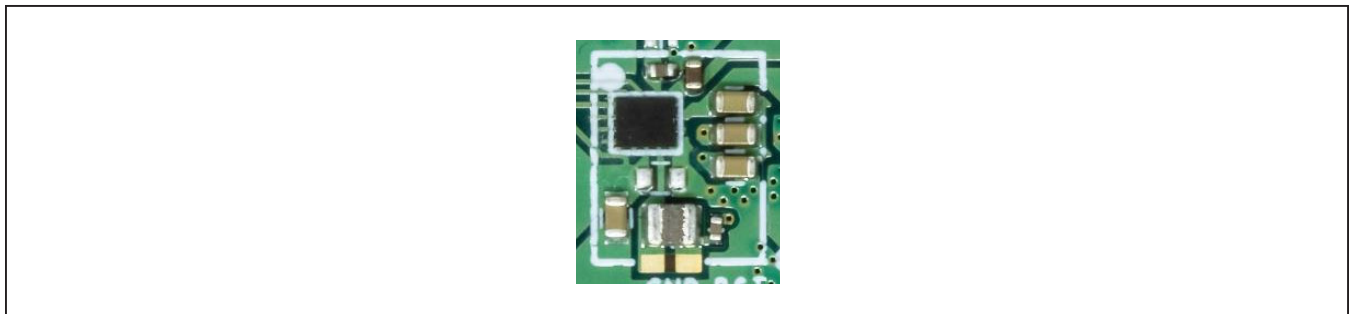


Figure 5. MAX77646 EV Kit Solution Area

MAX77658 EV Kit Files

FILE	DESCRIPTION
MAX77646_EVKIT_B_BOM.xlsx	BOM
MAX77646_EVKIT_B_SCH.pdf	Schematic
MAX77646_EVKIT_B_MARKETING_PCB.pdf	Layout

Quick Start

Follow this procedure to familiarize yourself with the EV kit.

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.

Required Equipment

- MAX77646 EV kit
- MAX77646 EV kit GUI
- Windows-based PC
- Power supply
- Ammeter
- DVM
- Micro-USB cable

Procedure

- 1) Install the GUI software. Visit the product webpage at www.analog.com/max77646evkit and navigate to *Design Resources* to download the latest version of the EV kit software. Save the EV kit software to a temporary folder and extract the files from the ZIP file.
- 2) Install EV kit shunts according to [Table 1](#).
- 3) Connect a Micro-B USB cable between the EV kit USB port labeled “GUI” and your Windows-based PC.
- 4) Apply a 2.4V supply (set for 100mA current limit) through an ammeter (set for 10mA range) across the INSB and GND2 terminals of the EV kit. Turn the supply on.
- 5) Open the GUI and select **Device** → **Connect** in the upper-left corner. Wait for a CONNECTED DEVICE LIST window to pop up, and then press the **Connect** button.
- 6) Measure the voltages on SBB0, SBB1, SBB2, and LDO with a DMM.

Table 1. Default Shunt Positions and Jumper Descriptions

REFERENCE DESIGNATOR	DEFAULT POSITION	FUNCTION
J2	3-4	1-2: Connects RSET_SBB2 to 0kΩ which programs SBB2 to 0.5V. 3-4: Connects RSET_SBB2 to 11.8kΩ which programs SBB2 to 1.1V. 5-6: Connects RSET_SBB2 to the onboard potentiometer to program SBB2's output voltage. Refer to the <i>SIMO Output Voltage Configuration</i> section of the MAX77646/MAX77647 data sheet for more information. RSET_<regulator> is connected to RSEL_<regulator>
J3	3-4	1-2: Connects RSET_LDO to 7.15kΩ which programs the LDO to 0.8V. 3-4: Connects RSET_LDO to 80.6kΩ which programs the LDO to 1.8V. 5-6: Connects RSET_LDO to the onboard potentiometer to program the LDO's output voltage. Refer to the <i>LDO Output Voltage Configuration</i> section of the MAX77646/MAX77647 data sheet for more information.
J4	1-2	1-2: Connects INLDO to SBB0.
J5	3-4	1-2: Connects RSET_SBB1 to 14kΩ which programs SBB1 to 1.2V. 3-4: Connects RSET_SBB1 to 28kΩ which programs SBB1 to 1.8V. 5-6: Connects RSET_SBB1 to the onboard potentiometer to program SBB1's output voltage. Refer to the <i>SIMO Output Voltage Configuration</i> section of the MAX77646/MAX77647 data sheet for more information.

Table 1. Default Shunt Positions and Jumper Descriptions (continued)

REFERENCE DESIGNATOR	DEFAULT POSITION	FUNCTION
J6	1-2	1-2: Connects RSET_IPK to 47.5kΩ. 3-4: Connects RSET_IPK to 56.2kΩ. 5-6: Connects RSET_IPK to an open-through-hole radial lead for through-hole resistors. Refer to the <i>Peak Current Configuration</i> section in the MAX77646/MAX77647 data sheet for more information on how to set the peak current limit of the SIMO. RSET_IPK is connected to RSEL_IPK.
J7	1-2	1-2: Connects EN0 to INSBB, enabling SBB0. 2-3: Connects EN0 to GND, disabling SBB0.
J8	1-2	1-2: Connects RSET_SBB0 to 191kΩ which programs to 3.3V. 3-4: Connects RSET_SBB0 to 768kΩ which programs SBB1 to 5.0V. 5-6: Connects RSET_SBB0 to the onboard potentiometer to program SBB0's output voltage. Refer to the <i>SIMO Output Voltage Configuration</i> section of the MAX77646/MAX77647 data sheet for more information.
J9	1-2	1-2: Connects EN1 to INSBB, enabling SBB1. 2-3: Connects EN1 to GND, disabling SBB1.
J10	1-2	1-2: Connects INSBB to the VL side of the onboard level shifter.
J11	1-2	1-2: Connects EN2 to INSBB, enabling SBB2 and LDO. 2-3: Connects EN2 to GND, disabling SBB2 and LDO.
J201	1-2	1-2: Connects SBB0 to the onboard electronic load and ADC.
J203	1-2	1-2: Connects SBB1 to the onboard electronic load and ADC.
J205	1-2	1-2: Connects SBB2 to the onboard electronic load and ADC.
J207	1-2	1-2: Connects LDO to the onboard electronic load and ADC.
J200	1-2	1-2: Connects the gate of the Q200 load FET to the U200 amplifier.
J202	1-2	1-2: Connects the gate of the Q201 load FET to the U201 amplifier.
J204	1-2	1-2: Connects the gate of the Q202 load FET to the U202 amplifier.
J206	1-2	1-2: Connects the gate of the Q203 load FET to the U203 amplifier.

Detailed Description of Hardware (or Software)

Enable Key Options

The MAX77646 features individual hardware enable pins for each of the SIMO outputs. Note that SBB2 and LDO are connected to the same enable pin. These enable pins can be connected to INSBB (to enable the corresponding resource) or GND (to disable the corresponding resource) through jumpers in J7, J9, and J11.

Changing the Output Voltages

The SIMO's and LDO's output voltages are programmed by connecting resistors from their corresponding RSEL pins to ground. The EV kit features pre-selected resistors

which can be tied to RSEL pins through jumpers J2, J3, J5, and J8. Additionally, onboard potentiometers can be used to program the entire output voltage range. Refer to the *SIMO Output Voltage Configuration* and the *LDO Output Voltage Configuration* sections of the MAX77646/MAX77647 data sheet for more information.

Programming the Inductor Peak Current

The SIMO's inductor peak current is programmed by connecting resistors from RSEL_IPK to ground. Several pre-selected resistors are placed on the EV kit and can be tied to the RSEL_IPK pin through the jumper J6. A through-hole resistor can be placed in R30 for additional options. See the *Inductor Peak Current Setting* section of the MAX77646/MAX77647 data sheet for more information.

Electronic Load

The EV kit comes with an electronic load allowing the user to evaluate the SIMO and LDO load current capabilities. Onboard circuits set the load current through the I²C interface. J201, J203, J205, and J207 are used to connect the load to the output of the SBB0, SBB1, SBB2, and LDO respectively. To exercise the load transient response, remove J200 (for SBB0), J202 (for SBB1), J204 (for SBB2), and J206 (for LDO) and connect a signal generator to the gate of the load MOSFET (pin 2 of the respective header). Drive the gate with a signal between 1V (off) and 3V (fully on) to apply transients to the output of the SIMO or LDO. Note that there are 0.1Ω sense resistors with test points (called VIL_SBB0, VIL_SBB1, and VIL_SBB2) and a 0.5Ω sense resistor with a test point (called VIL_LDO) for a 10:1 and 2:1 conversion of load current to voltage.

Installation

Visit the product webpage at www.analog.com/max-77646evkit and navigate to *Design Resources* to download the latest version of the EV kit software. Save the

EV kit software to a temporary folder and decompress the ZIP file.

Windows Drivers

Upon connection of a Micro-USB cable between your PC and the EV kit for the first time, wait a few minutes for Windows to automatically install drivers.

Graphical User Interface (GUI) Details

The GUI software allows for a convenient, quick, and thorough evaluation of the MAX77646. When the EV kit software detects that a MAX77646 EV kit is connected, only the “Load Control” portion of the GUI can be accessed.

Load Control Tab

The **Load Control** tab contains controls for load currents on the regulator outputs. The GUI is capable of setting steady-state, transient, and random load currents. To set a load current, use the slider bar or text field to input a value (mA) and check the **Enable** box. Shuffle through the modes to exercise different load conditions.

The offset and gain values are set by Analog Devices and do not need to be altered.

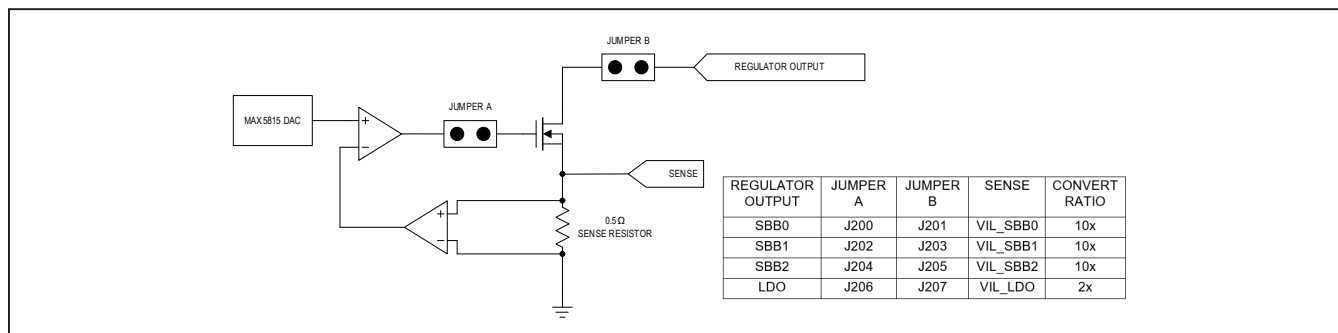


Figure 6. Electronic Load Block Diagram

Ordering Information

PART	IC	TYPE
MAX77646EVKIT#	MAX77646ANP+	EV Kit

#Denotes RoHS compliant.

MAX77646 EV Kit Bill of Materials

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION	COMMENTS
1	AIN0, AIN1, AIN6, AIN7, EN0-EN2, RSET_IPK, RSET_LDO, RSET_SB0-RSET_SB2, SCL, SDA, VIL_LDO0, VIL_SBB0-VIL_SBB2	-	18	5002	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; WHITE; PHOSPHOR BRONZE WIRE SILVER;	
2	C1, C8, C11, C14	-	4	C1608X5R1A226M080AC;GRM188R61A226ME15;CL10A226MPCNUBE;CL10A226MFMNUJ	TDK;MURATA;SAMSUNG;SAMSUNG ELECTRO-MECHANICS	22UF	CAP; SMT (0603); 22UF; 20%; 10V; X5R; CERAMIC	
3	C4	-	1	C0402C104J4RAC;GCM155R71C104JA55	KEMET;MURATA	0.1UF	CAP; SMT (0402); 0.1UF; 5%; 16V; X7R; CERAMIC	
4	C6	-	1	16TQC100MYF	PANASONIC	100UF	CAP; SMT (7343); 100UF; 20%; 16V; TANTALUM	
5	C7, C22, C25-C27, C30, C32-C35, C37-C39, C63, C65-C67, C73, C202, C207, C212, C217, C221-C223, C234, C235, C237, C244, C268, C272-C277	-	36	GRM155R71E104KE14;C1005X7R1E104K050BB;TMK106B7104KHVH;CGJ283X7R1E104K050BB	MURATA;TDK;TAIYO YUDEN;TDK	0.1UF	CAP; SMT (0402); 0.1UF; 10%; 25V; X7R; CERAMIC	
6	C9, C16, C29, C36, C41, C42, C239-C242, C269-C271	-	13	C0402C105K8PAC;CC0402KRX5R6BB105	KEMET;YAGEO	1UF	CAP; SMT (0402); 1UF; 10%; 10V; X5R; CERAMIC	
7	C15	-	1	GRM155R61C225KE44;GRM155R61C225KE11	MURATA;MURATA	2.2UF	CAP; SMT (0402); 2.2UF; 10%; 16V; X5R; CERAMIC	
8	C21, C28, C31	-	3	C1005X5R1A47XK050	TDK	4.7UF	CAP; SMT (0402); 4.7UF; 10%; 10V; X5R; CERAMIC	
9	C23, C24	-	2	GRM0335C1H270JA01	MURATA	27PF	CAP; SMT (0201); 27PF; 5%; 50V; COG; CERAMIC	
10	C68, C69, C71, C72	-	4	CL05B103KPSNNN	SAMSUNG ELECTRONICS	0.01UF	CAP; SMT (0402); 0.01UF; 10%; 10V; X7R; CERAMIC	
11	C200, C205, C210, C215, C220, C238, C248-C253	-	12	C0402C472K5RAC;GRM155R71H472KA01;C1005X7R1H472K050BA	KEMET;MURATA;TDK	4700PF	CAP; SMT (0402); 4700PF; 10%; 50V; X7R; CERAMIC;	
12	C201, C206, C211, C216	-	4	C0402H02J5GAC	KEMET	1000PF	CAP; SMT (0402); 1000PF; 5%; 50V; COG; CERAMIC	
13	C203, C204, C208, C209, C213, C214, C218, C219	-	8	C0402C180J5GAC;GRM1555C1H180JA01;C1005COG1H180J050BA	KEMET;MURATA;TDK	18PF	CAP; SMT (0402); 18PF; 5%; 50V; COG; CERAMIC	
14	DS2	-	1	LTST-C190CKT	LITE-ON ELECTRONICS INC.	LTST-C190CKT	DIODE; LED; STANDARD; RED; SMT (0603); PIV=5.0V; IF=0.04A; -55 DEGC TO +85 DEGC	
15	GND1, GND5-GND7	-	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;	
16	GND2-GND4, GND8, GND10, INSB8	-	6	9020 BUSS	WEICO WIRE	MAXIMPAD	EVK KIT PARTS: MAXIM PAD; WIRE; NATURAL; SOLID; WEICO WIRE; SOFT DRAWN BUS TYPE-S; 20AWG	
17	IN1DO, IN_SBB, LDO, SBB0-SBB2, VUSB	-	7	5010	KEYSTONE	N/A	TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; RED; PHOSPHOR BRONZE WIRE SIL;	
18	J1	-	1	10118193-0001LF	FCI CONNECT	10118193-0001LF	CONNECTOR; FEMALE; SMT; MICRO USB B TYPE RECEPTACLE; RIGHT ANGLE; 5PINS	
19	J2, J3, J5, J6, J8	-	5	TSW-103-07-L-D	SAMTEC	TSW-103-07-L-D	CONNECTOR; MALE; THROUGH HOLE; THROUGH HOLE 0.025 POST HEADER; STRAIGHT; 6PINS	
20	J4, J10, J200-J207	-	10	TSW-102-07-T-S	SAMTEC	TSW-102-07-T-S	CONNECTOR; THROUGH HOLE; TSW SERIES; SINGLE ROW; STRAIGHT; 2PINS; -65 DEGC TO +105 DEGC	
21	J7, J9, J11	-	3	PBC03SAAN	SULLINS	PBC03SAAN	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 3PINS; -65 DEGC TO +125 DEGC	
22	L1	-	1	DFE201612E-1R5M	MURATA	1.5UH	INDUCTOR; SMT (0806); METAL; 1.5UH; 20%; 2.30A	
23	L2, L4, L5	-	3	BLM18AG601SN1	MURATA	600	INDUCTOR; SMT (0603); FERRITE-BEAD; 600; TOL=+/-; 0.5A	
24	L3	-	1	DFE201210S-2R2M=P2	MURATA	2.2UH	EVKIT PART-INDUCTOR; SMT (0805); MAGNETICALLY SHIELDED; 2.2UH; TOL=+/-20%; 1.8A	
25	L6	-	1	DFE18SBN1R0MEO	MURATA	1UH	INDUCTOR; SMT (0603); METAL ALLOY; 1UH; 20%; 1.8A	
26	L7	-	1	DFE201210U-1R5M=P2	TOKO	1.5UH	INDUCTOR; SMT (0805); METAL ALLOY CHIP; 1.5UH; TOL=+/-20%; 1.9A	
27	L8	-	1	DFE201612E-1R0M	MURATA	1UH	INDUCTOR; SMT (0806); WIREWOUND CHIP; 1UH; TOL=+/-20%; 2.9A	
28	L9	-	1	DFE201612E-2R2M	MURATA	2.2UH	INDUCTOR; SMT (0806); WIREWOUND CHIP; 2.2UH; TOL=+/-20%; 1.8A	
29	L10	-	1	MCEE100S11R0MHN	TAIYO YUDEN	1UH	INDUCTOR; SMT (0402); METAL; 1UH; 20%; 0.80A	
30	MISC1	-	1	AK67421-2	ASSMANN	AK67421-2	CABLE; MALE; USB; USB2.0 MICRO CONNECTION CABLE; USB B MICRO MALE TO USB A MALE; 2000 MILLIMETERS; SPINS-4PINS	
31	Q200-Q203	-	4	IRFHM8337TRPBF	INTERNATIONAL RECTIFIER	IRFHM8337TRPBF	TRAN; HEXFET POWER MOSFET; NCH; POFN8; PD-(2.8W); I-(18A); V-(30V)	
32	Q205	-	1	FDN360P	ON SEMICONDUCTOR	FDN360P	TRANSISTOR; MOSFET P-CHANNEL; SUPERSOT-3; PD=0.5W, ID=2.0A, VDSS=-30V, VGS=+/-20V	
33	Q206	-	1	2N7002;2N7002;2N7002;2N7002	DIODES INCORPORATED;ST MICROELECTRONICS;ON SEMICONDUCTOR;MICRO COMMERCIAL COMPONENTS	2N7002	TRAN ; NCH; SOT-23; PD-(0.33W); IC-(0.5A); VCEO(-60V); -55 DEGC TO +150 DEGC	
34	R1	-	1	CRCW06030000ZS;MCR03EZPJ000;ERJ-3GEY0R00;CR0603AJJ-000ELF	VISHAY;ROHM SEMICONDUCTOR;PANASONIC;BOURNS	0	RES; SMT (0603); 0; JUMPER; JUMPER; 0.1000W	
35	R2	-	1	ERJ-2RKF1182	PANASONIC	11.8K	RES; SMT (0402); 11.8K; 1%; +/-100PPM/DEGC; 0.1000W	
36	R4, R7, R18, R26	-	4	3296Y-1-105LF	BOURNS	1M	RES; THROUGH HOLE-RADIAL LEAD; 1M; 10%; +/-100PPM/DEGC; 0.5W	
37	R5	-	1	ERJ-3EKF7151	PANASONIC	7.15K	RES; SMT (0603); 7.15K; 1%; +/-100PPM/DEGC; 0.1000W	
38	R6	-	1	CRCW060389K9FK;ERJ-3EKF8052;RC0603FR-0790KGL	VISHAY;PANASONIC;YAGEO	80.6K	RES; SMT (0603); 80.6K; 1%; +/-100PPM/DEGC; 0.1000W	
39	R8	-	1	CRCW0402191KFK	VISHAY DALE	191K	RES; SMT (0402); 191K; 1%; +/-100PPM/DEGC; 0.0630W	
40	R9	-	1	CRCW0402788KFK	VISHAY DALE	768K	RES; SMT (0402); 768K; 1%; +/-100PPM/DEGC; 0.0630W	
41	R10, R11	-	2	RC0402FR-0727RL	YAGEO	27	RES; SMT (0402); 27; 1%; +/-100PPM/DEGC; 0.0630W	
42	R12	-	1	ERJ-2RKF1202	PANASONIC	12K	RES; SMT (0402); 12K; 1%; +/-100PPM/DEGC; 0.1000W	
43	R13, R210, R231, R244, R257, R291, R301, R307	-	8	CRCW04021M00FK	VISHAY DALE	1M	RES; SMT (0402); 1M; 1%; +/-100PPM/DEGC; 0.0630W	
44	R14, R207, R238, R229, R230, R242, R243, R254, R255	-	9	ERJ-2RKF1001	PANASONIC	1K	RES; SMT (0402); 1K; 1%; +/-100PPM/DEGC; 0.1000W	
45	R16, R27	-	2	CRCW04024752FK;9C04021A4752FLHF3;CRCW040247K5FK	VISHAY DALE;YAGEO;VISHAY DALE	47.5K	RES; SMT (0402); 47.5K; 1%; +/-100PPM/DEGC; 0.0630W	
46	R17, R24, R214, R283	-	4	CRCW0402100KFK;RC0402FR-07100KL	VISHAY;YAGEO	100K	RES; SMT (0402); 100K; 1%; +/-100PPM/DEGC; 0.0630W	
47	R19	-	1	ERJ-3EKF1402;CRCW060314K0FK;A0603FR-0714KLL	PANASONIC;VISHAY;YAGEO	14K	RES; SMT (0603); 14K; 1%; +/-100PPM/DEGC; 0.1000W	
48	R20, R33, R52-R54, R204, R225, R238, R251, R259, R286, R290, R292, R302-R306	-	18	ERJ-2GE0R00	PANASONIC	0	RES; SMT (0402); 0; JUMPER; JUMPER; 0.1000W	
49	R21, R22	-	2	ERJ-2GEJ472	PANASONIC	4.7K	RES; SMT (0402); 4.7K; 5%; +/-200PPM/DEGC; 0.1000W	
50	R23	-	1	CRCW0402169KFK	VISHAY DALE	169K	RES; SMT (0402); 169K; 1%; +/-100PPM/DEGC; 0.0630W	

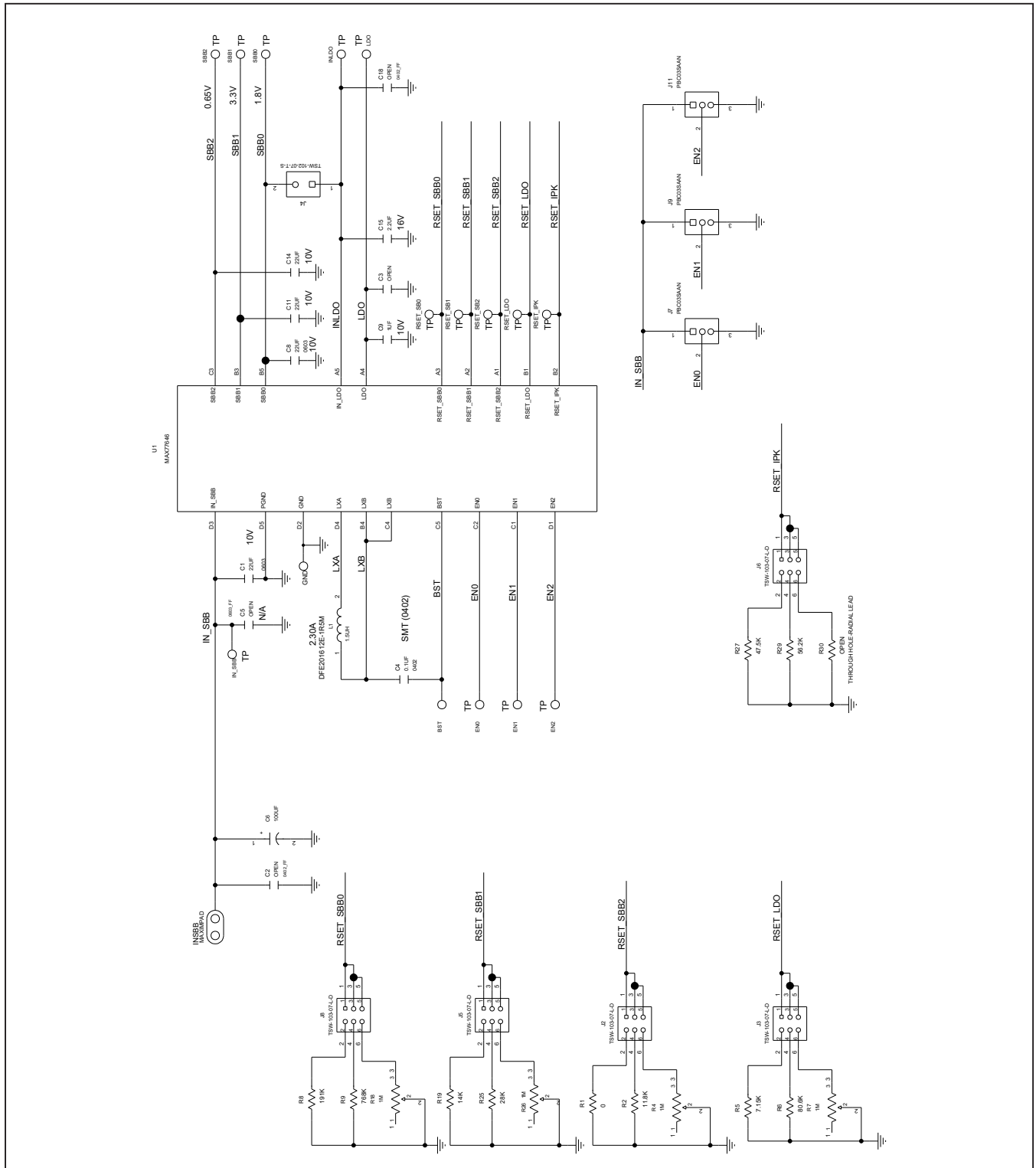
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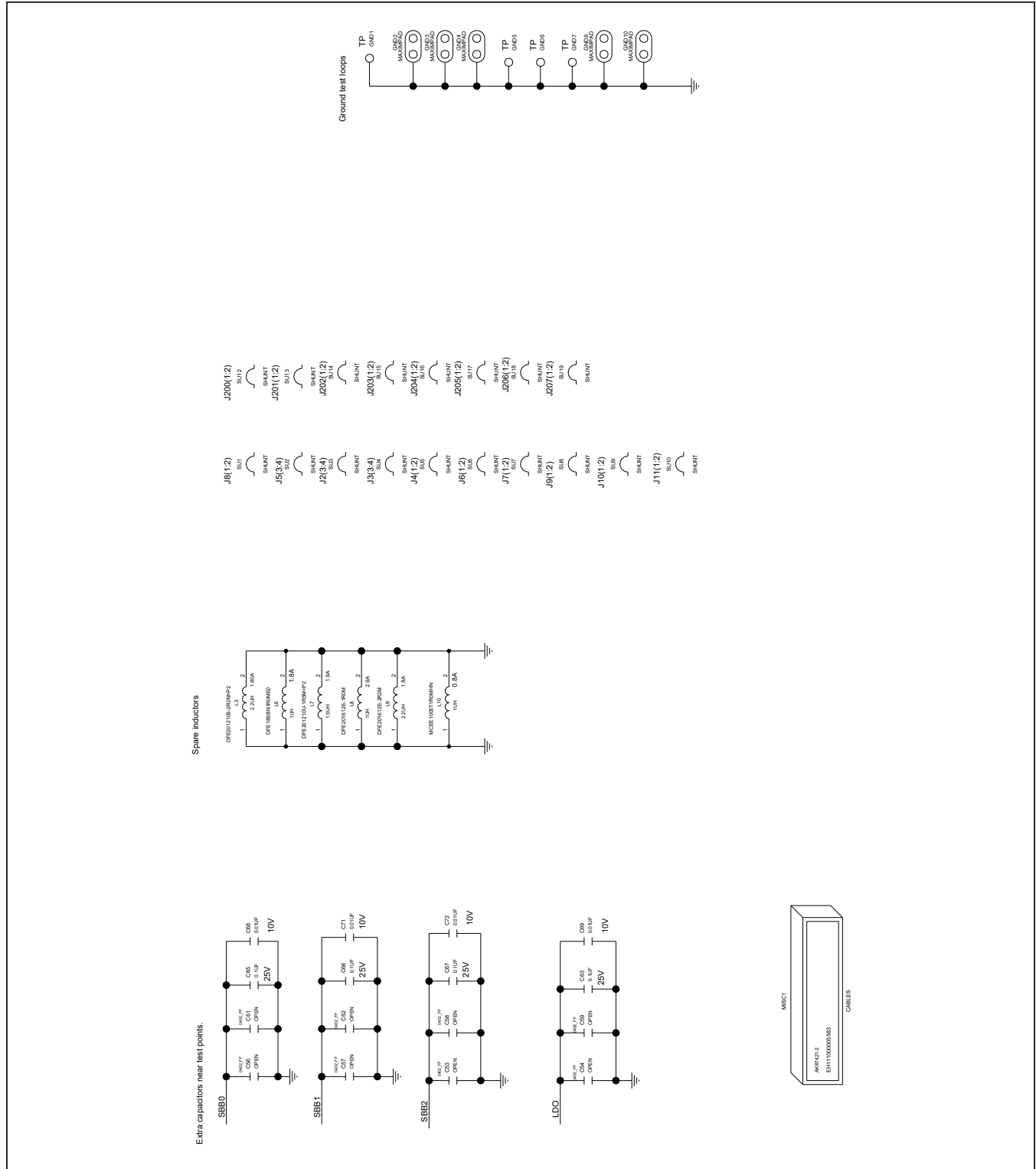
MAX77646 EV Kit Bill of Materials (continued)

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION	COMMENTS
51	R25	-	1	CRCW060328K0FK	VISHAY	28K	RES; SMT (0603); 28K; 1%; +/-100PPM/DEGC; 0.1000W	
52	R28	-	1	CRCW0402470RFK	VISHAY DALE	470	RES; SMT (0402); 470; 1%; +/-100PPM/DEGC; 0.0630W	
53	R29	-	1	CRCW040256K2FK	VISHAY	56.2K	RES; SMT (0402); 56.2K; 1%; +/-100PPM/DEGC; 0.0630W	
54	R31, R32	-	2	RC0402FR-072K2L	YAGEO	2.2K	RES; SMT (0402); 2.2K; 1%; +/-100PPM/DEGC; 0.0630W	
55	R201, R222, R235, R248, R289	-	5	9C04021A1000FL; RC0402FR-07100RL	PANASONIC; YAGEO PHYCOMP	100	RES; SMT (0402); 100; 1%; +/-100PPM/DEGC; 0.0630W	
56	R202, R223, R236, R249	-	4	RC0402FR-07880RL	YAGEO	680	RES; SMT (0402); 680; 1%; +/-100PPM/DEGC; 0.0630W	
57	R203, R205, R206, R224, R226, R228, R237, R239, R240, R250, R252, R253	-	12	ERJ-2RKF2002	PANASONIC	20K	RES; SMT (0402); 20K; 1%; +/-100PPM/DEGC; 0.1000W	
58	R211, R233, R245	-	3	CRL1206-JW-R100ELF	BOURNS	0.1	RES; SMT (1206); 0.1; 1%; +/-200PPM/DEGC; 0.2500W	
59	R212, R213, R227, R234, R246, R247	-	6	CRCW0402787KFK	VISHAY DALE	787K	RES; SMT (0402); 787K; 1%; +/-100PPM/DEGC; 0.0630W	
60	R258	-	1	CSR1206FTR500	STACKPOLE ELECTRONICS INC.	0.5	RES; SMT (1206); 0.5; 1%; +/-100PPM/DEGC; 0.5000W	
61	R277, R279	-	2	CRCW06030000Z0	VISHAY DALE	0	RES; SMT (0603); 0; JUMPER; JUMPER; 0.1000W	
62	R281, R282, R287, R288	-	4	RC0402FR-0710KL; CR0402-FX-1002GLF	YAGEO; BOURNS	10K	RES; SMT (0402); 10K; 1%; +/-100PPM/DEGC; 0.0630W	
63	R293, R295, R297, R299	-	4	ERJ-2RKF4703	PANASONIC	470K	RES; SMT (0402); 470K; 1%; +/-100PPM/DEGC; 0.0630W	
64	R294, R296, R298, R300	-	4	CRCW0402649KFK	VISHAY DALE	649K	RES; SMT (0402); 649K; 1%; +/-100PPM/DEGC; 0.0630W	
65	SU1-SU10, SU12-SU19	-	18	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	
66	U1	-	1	MAX77646ANP+	MAXIM	MAX77646	EVKIT PART - IC; MAX77646; ULTRA CONFIGURABLE SIMO PMIC FEATURING 3-OUTPUT BUCK-BOOST; 1-LDO FOR LONG BATTERY LIFE PRIMARY CELL APPLICATIONS; PACKAGE OUTLINE DRAWING: 21-100801; PACKAGE CODE: N201G2+1; WLP20	
67	U2	-	1	FT2232HL	FUTURE TECHNOLOGY DEVICES INTL LTD.	FT2232HL	IC; MMV; DUAL HIGH SPEED USB TO MULTIPURPOSE UART/FIFO; LOFP64	
68	U3, U4	-	2	MAX8512EXK+	MAXIM	MAX8512EXK	IC; VREG; Ultra-Low-Noise, High PSRR, Adjustable Vout; SC70-5	
69	U5	-	1	MAX14611ETD+	MAXIM	MAX14611ETD+	IC; TRANS; QUAD BIDIRECTIONAL LOW-VOLTAGE LOGIC LEVEL TRANSLATOR; TDFN14-EP	
70	U7	-	1	AT24CS02-SSHM	MICROCHIP	AT24CS02-SSHM	IC; EPROM; I2C-COMPATIBLE TWO-WIRE SERIAL EEPROM; 150MIL; NSOIC8	
71	U200-U203	-	4	MAX44251AUA+	MAXIM	MAX44251AUA+	IC; OPAMP; ULTRA-PRECISION; LOW-NOISE OP AMP; UMAX8	
72	U205	-	1	MAX5825AWP+	MAXIM	MAX5825AWP+T	IC; DAC; ULTRA-SMALL; OCTAL CHANNEL; 12-BIT BUFFERED OUTPUT DAC WITH INTERNAL REFERENCE AND I2C INTERFACE; WLP20	
73	U209	-	1	MAX11614EEE+	MAXIM	MAX11614EEE+	IC; ADC; LOW-POWER; 8-CHANNEL; I2C; 12-BIT ADC IN ULTRA-SMALL PACKAGE; QSOP16	
74	U210	-	1	MAX6071AAUT41+	MAXIM	MAX6071AAUT41+	IC; VREF; LOW NOISE; HIGH-PRECISION SERIES VOLTAGE REFERENCE; SOT23-6	
75	U211	-	1	MAX1697UEUT+	MAXIM	MAX1697UEUT+	IC; INV; INVERTING CHARGE PUMP WITH SHUTDOWN; SOT23-6	
76	Y1	-	1	7M-12.000MAAJ	TXC CORPORATION	12MHZ	CRYSTAL; SMT; 12MHZ; 18PF; TOL = +/-30PPM; STABILITY = +/-30PPM	
77	PCB	-	1	MAX77646	MAXIM	PCB	PCB:MAX77646	
78	R30	DNI	2	0667-0-15-01-30-27-10-0	MILL-MAX	N/A	PIN RECEPTACLE; PIN DIA=0.025IN; TOTAL LENGTH=0.161IN; BOARD HOLE=0.057IN; GOLD OVER NICKEL PLATE FINISH	
79	C2, C3, C18, C53, C54, C56-C59, C61, C62	DNP	0	N/A	N/A	OPEN	CAPACITOR; SMT (0402); OPEN; FORMFACTOR	
80	C5	DNP	0	N/A	N/A	OPEN	CAPACITOR; SMT (0603); OPEN; FORMFACTOR	
81	R15, R260	DNP	0	N/A	N/A	OPEN	RESISTOR; 0402; OPEN; FORMFACTOR	
82	R30	DNP	0	N/A	N/A	OPEN	RES; THROUGH HOLE-RADIAL LEAD; OPEN; N/A; N/A; N/A	
TOTAL			305					

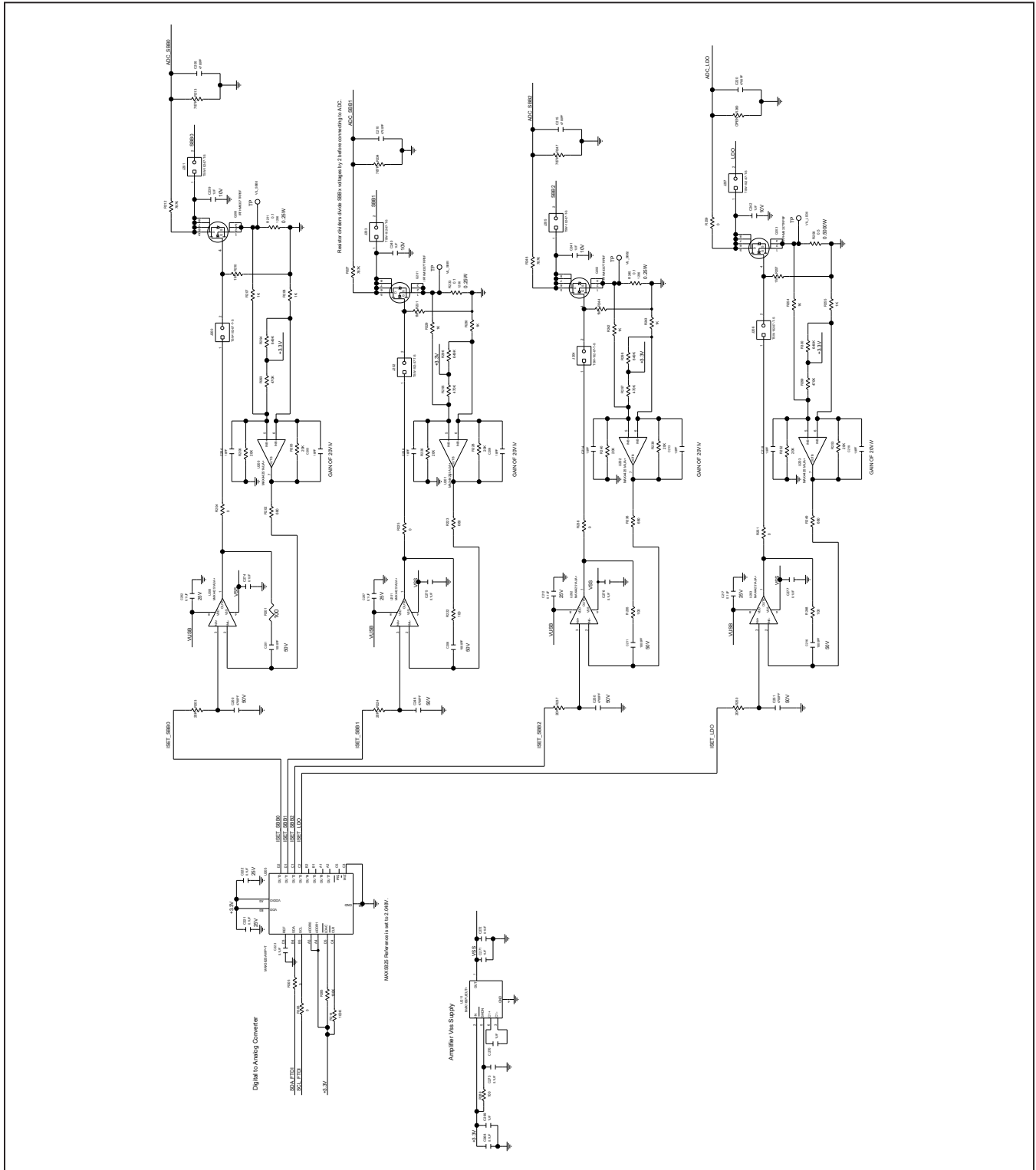
MAX77646 EV Kit Schematic



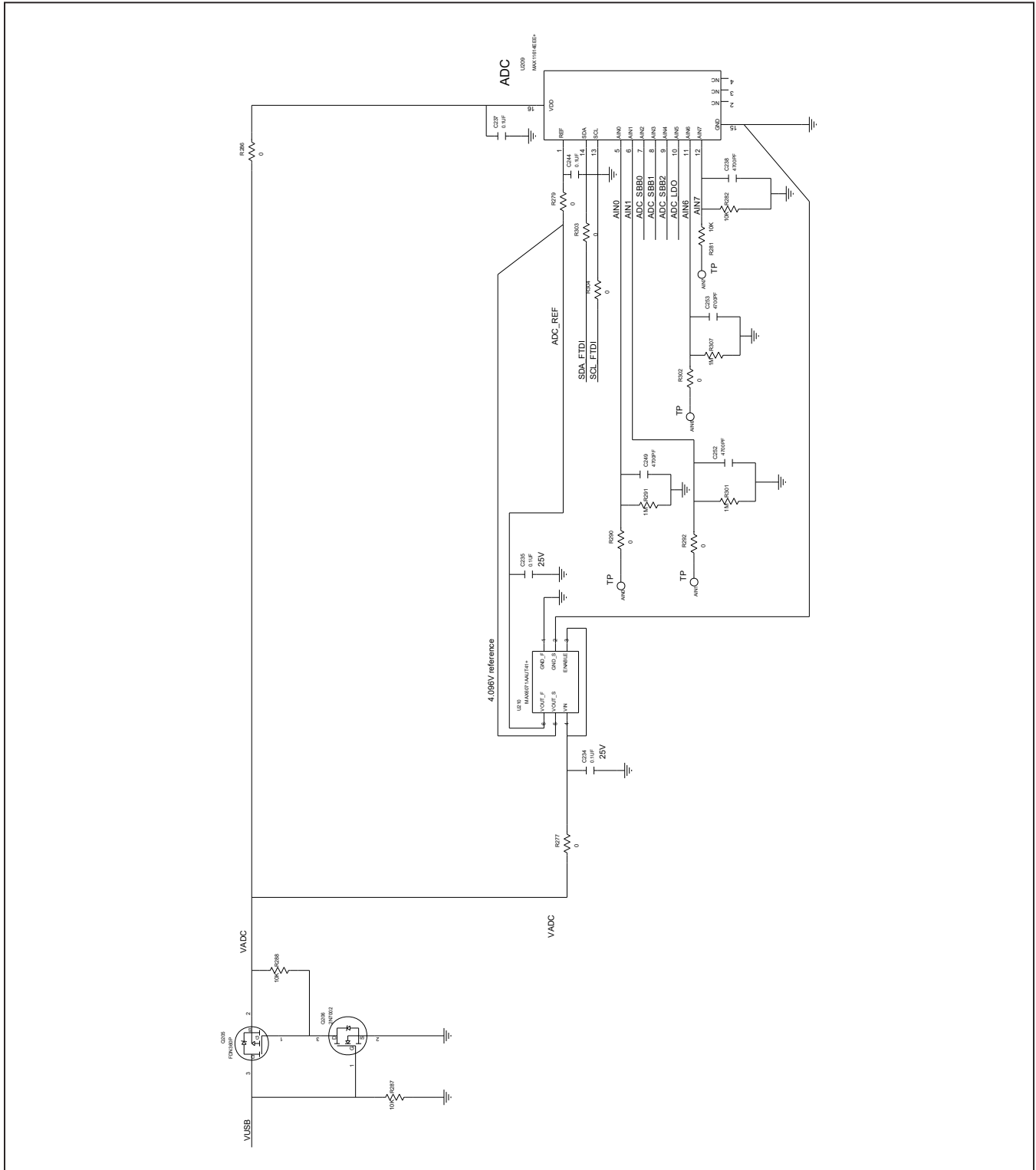
MAX77646 EV Kit Schematic (continued)



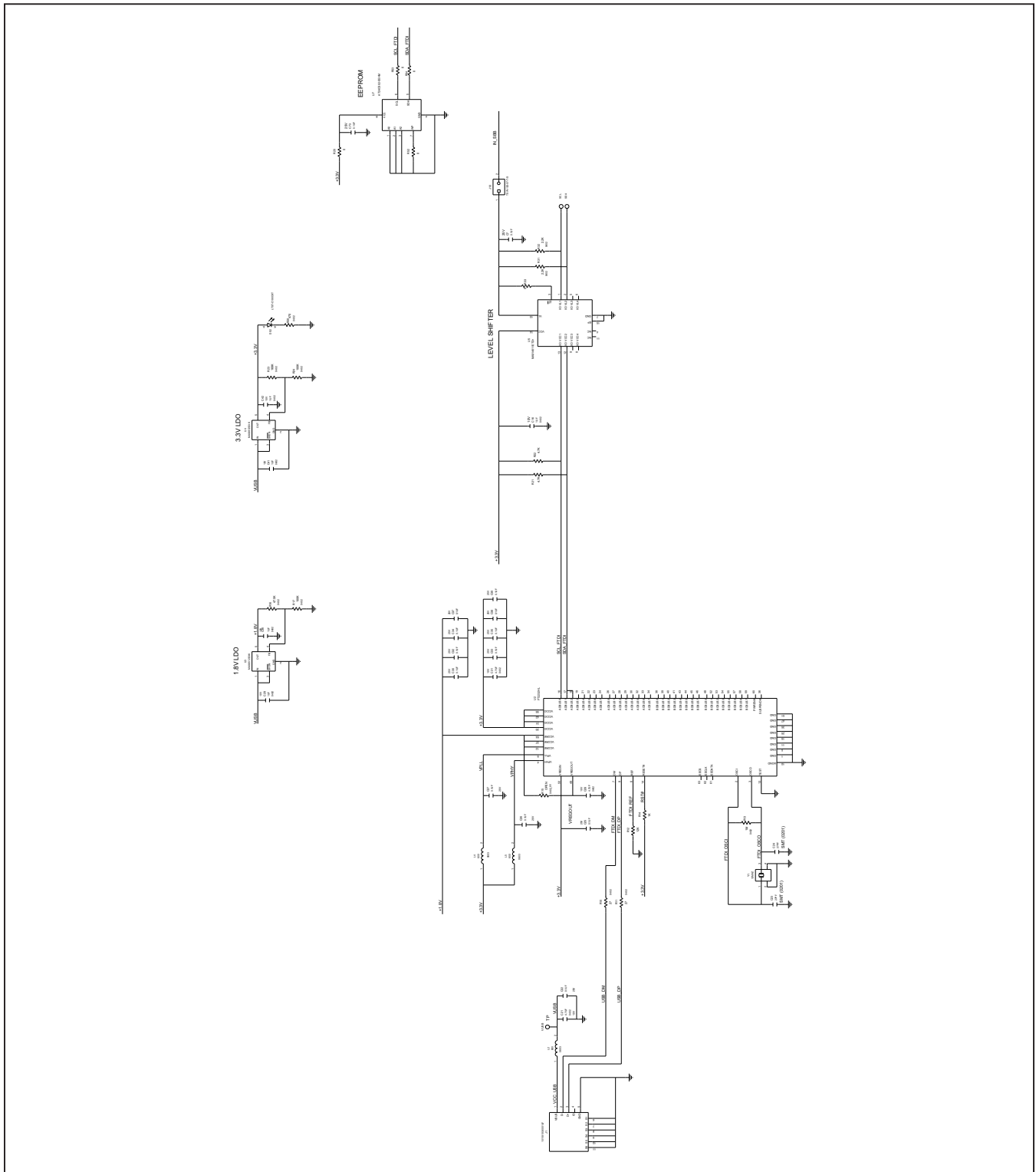
MAX77646 EV Kit Schematic (continued)



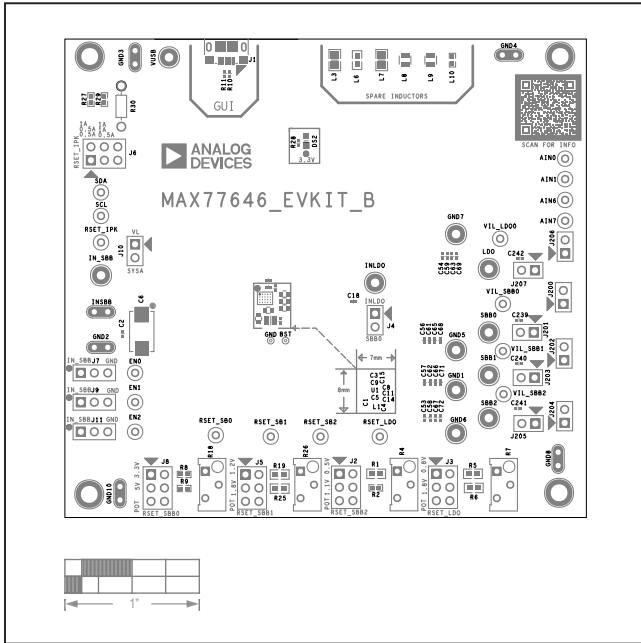
MAX77646 EV Kit Schematic (continued)



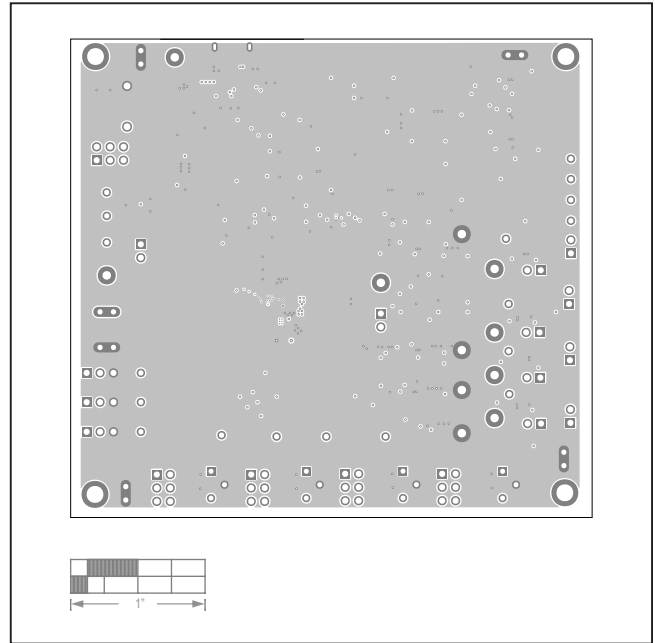
MAX77646 EV Kit Schematic (continued)



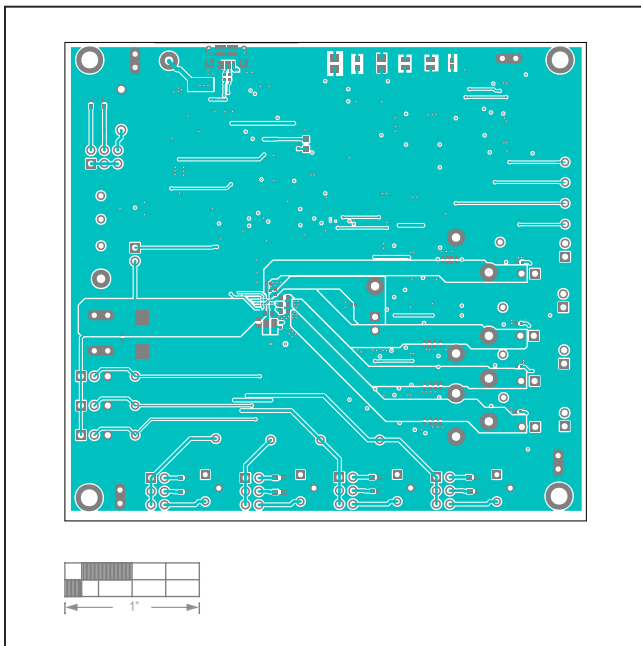
MAX77646 EV Kit PCB Layouts



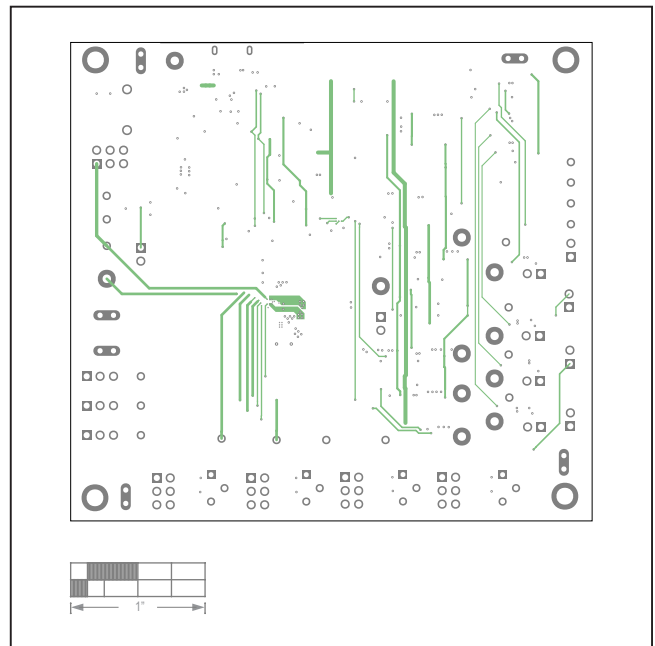
MAX77646 EV Kit Component Placement Guide—Top Silkscreen



MAX77646 EV Kit PCB Layout—Internal 2

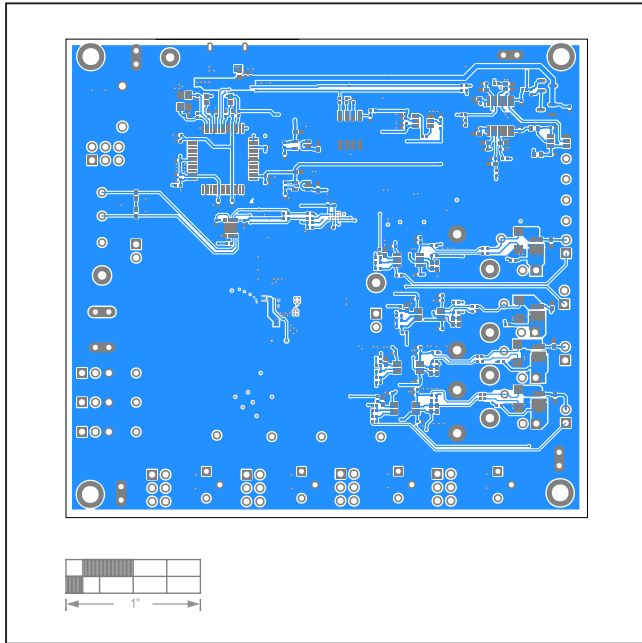


MAX77646 EV Kit PCB Layout—Top View

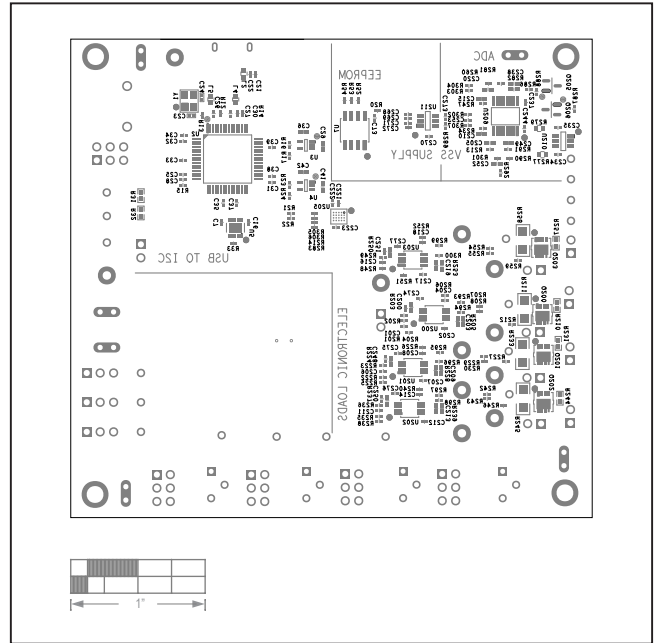


MAX77646 EV Kit PCB Layout—Internal 3

MAX77646 EV Kit PCB Layouts (continued)



MAX77646 EV Kit PCB Layout—Bottom View



MAX77646 EV Kit Component Placement Guide—Bottom Silkscreen

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	5/23	Initial release	—

