MAX20343 Evaluation Kit

Evaluates: MAX20343/MAX20344

General Description

The MAX20343 evaluation kit (EV kit) is a fully assembled and tested circuit that evaluates the MAX20343/MAX20344 3.5W, buck-boost regulator. The MAX20343 is designed for low-noise, battery-powered applications that require long runtimes. The EV kit is compatible with both the I²C controlled and single-pin-enabled versions of the MAX20343/MAX20344.

Refer to the *MAX20343/MAX20344 IC data sheet* for detailed information regarding the operation and features of the device.

Features

- RoHS Compliant
- Proven PCB Layout
- Fully Assembled and Tested
- USB Controllable for I²C Configured Devices

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

MAX20343 EV Kit Files

FILE	DESCRIPTION
MAX20343EVKitSetupV140.zip	MAX20343 Evaluation Kit Tool

Quick Start

Required Equipment

The following equipment is required to verify the functionality of this EV kit. The list assumes the EV kit is used with the I²C-controlled version of MAX20343.

- USB-A to Micro-USB Cable
- Host PC with One USB Port and the MAX20343 Evaluation Kit Tool Installed
- Adjustable Power Supply with 5.5V Capability
- Voltmeter

Optional Equipment

The following equipment can be used for more complete evaluation of the EV kit:

- Two (2) Ammeters
- Load (Electronic or Passive)

Procedure

The EV kit is fully assembled and tested. Follow the steps below to verify board operation when using the I²C controlled version of MAX20343:

1) Install the MAX20343 Evaluation Kit Tool on the host PC.
2) Connect the USB cable from the host PC to the MAX20343EVKIT and run the GUI.
3) Verify that the shunt jumpers are installed in their default positions.
4) Set the voltage on the power supply to 3.3V, then connect the positive terminal to V_{IN} and the common/negative terminal to GND.
5) Verify that the GUI has detected and connected to the EV kit and that LED D5 on the EV kit is illuminated.
6) On the General tab of the GUI, uncheck the boxes for Output Voltage Interrupt Mask and Input UVLO Interrupt Mask.
7) Press the Read button to read the interrupt states. Verify that LED D2 is off.
8) Switch to the Buck-Boost tab of the GUI and verify that the Output Voltage slider is set to 5.5V, then enable the regulator using the Buck-Boost Enable radio button.
9) Verify that LED D2 is illuminated.

319-100335; Rev 1; 12/20

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10) Use the voltmeter to measure V_{OUT} and confirm that it is 5.5V ± 3%.

To measure the efficiency of the MAX20343:

11) Remove the shunt jumpers from J1 and J2.
12) Connect the first ammeter in series to the input supply by attaching the input terminal to pin 1 of J1 and the output terminal to pin 2 of J1.
13) Connect the second ammeter in series to output load by attaching the input terminal to pin 1 of J2 and the output terminal to pin 2 of J2.
14) Attach the load to V_{OUT} and measure the input voltage, input current, output voltage, and output current.

Detailed Description of Software

The MAX20343 Evaluation Kit Tool is a GUI that provides a simple and quick way to test different configuration settings for the I²C-controlled version of the MAX20343. The GUI contains several tabs to configure different parameters of the MAX20343 and a register map to access all registers.

Connecting to the Hardware

When the GUI is first opened, a splash screen appears. The splash screen displays the GUI software revision and links to the Maxim Integrated main website and support website. It can be disabled by checking the box “Disable Splash.”

After the splash screen closes, the main window opens to the General tab of the GUI. The GUI starts up assuming all configuration bits are set to 0, so the information displayed might not match the values stored in the MAX20343 until the device is read manually or automatically through polling.



Figure 1. Initial Splash Screen

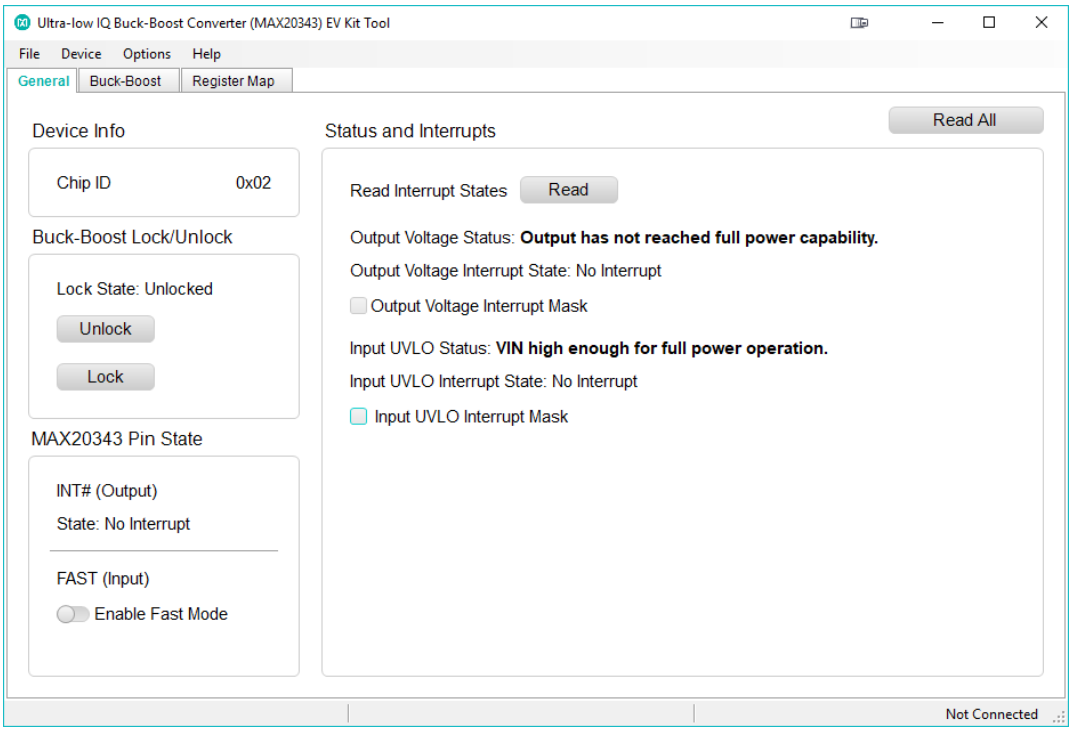


Figure 2. GUI Main Tab on Startup

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If the EV kit is not connected to the host PC, the connection status in the bottom right corner reads, “Not Connected.”

When the EV kit is connected to the host PC, but power is not applied to V_{IN}, the status instead reads, “MAX20343 Not Found.”

When power is supplied to the MAX20343 and the EV kit is connected to the host PC, the status reads, “Connected.” At this point, the GUI is successfully communicating with the EV kit and evaluation can begin.

If the connection status still shows that the device is not connected or found, but EV kit is connected to the host PC and power is supplied to V_{IN}, it might be necessary to manually connect to the EV kit. Under the Device menu, find and press on the Connect button.

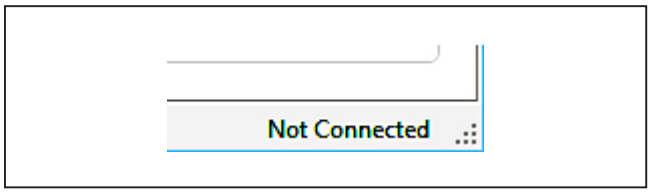


Figure 3. Connection Status when EV Kit is Disconnected

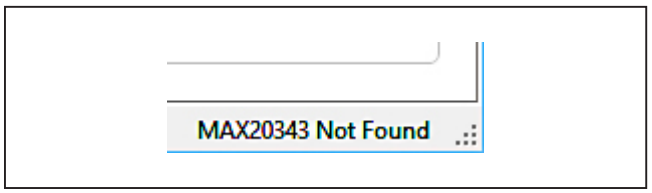


Figure 4. Connection Status when the MAX20343 is Not Powered

Interacting with the GUI

There are five types of controls in the GUI main page: Buttons, Radio Buttons, Toggle Switches, Drop Downs, and Sliders.

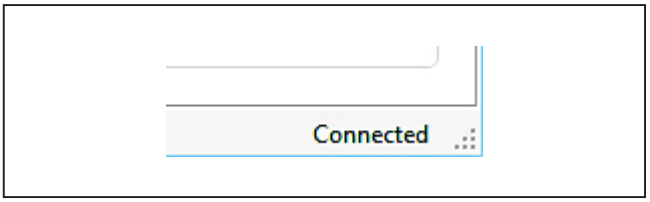


Figure 5. Connection Status when the GUI Detects the MAX20343

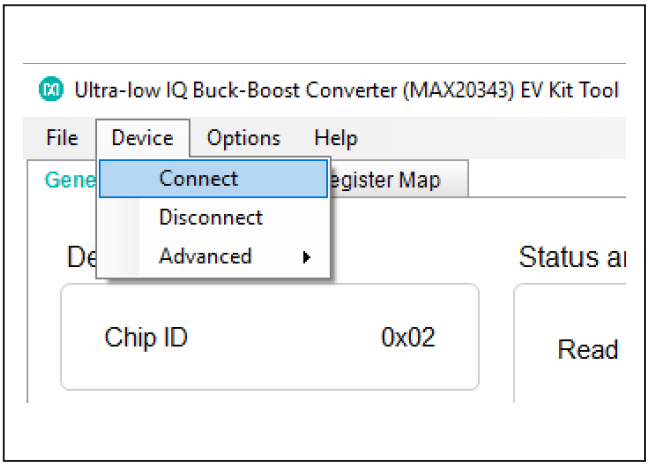


Figure 6. Manually Connecting to the Device

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Buttons

Buttons are used to perform one-time functions such as reading or writing bits. All tabs include a Read All button that reads the MAX20343 registers and updates all the fields on the current tab with the contents. Pressing a button performs the function of the button once. For example, the Set button in the Buck-Boost tab writes the value selected by the Output Voltage slider to BBstVSet.

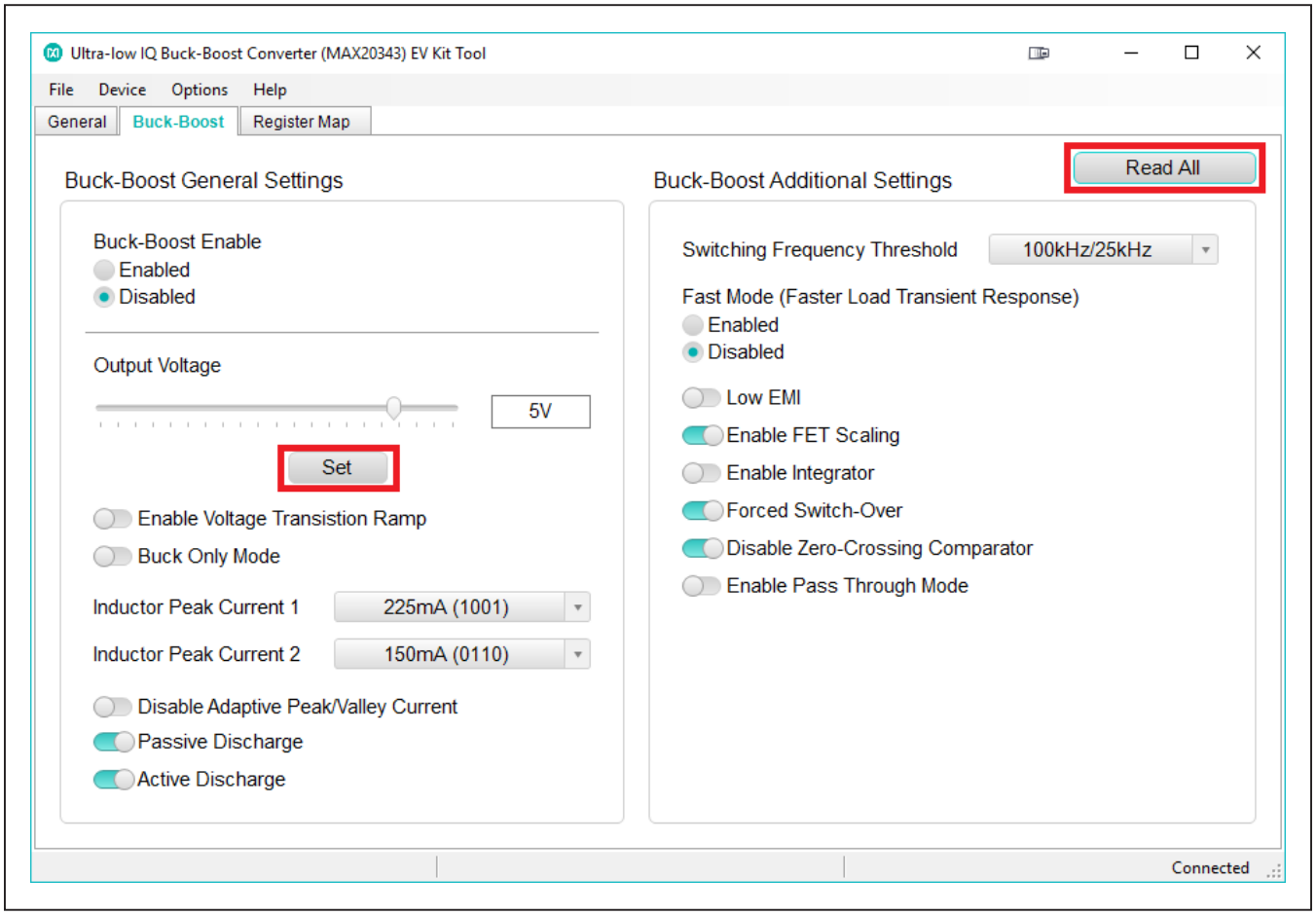


Figure 7. Buttons on the Buck-Boost Tab

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Radio Buttons

Radio buttons are similar to buttons, but come in sets and are latched. Only one button from a set can be enabled at a time. Data is written to the MAX20343 when a radio button is pressed. A radio button with a blue fill is considered "pressed" and indicates the corresponding bit is set to 1. For example, the Buck-Boost Enable radio buttons control the BBstEn bit. The bit has two options, but can hold only one value.

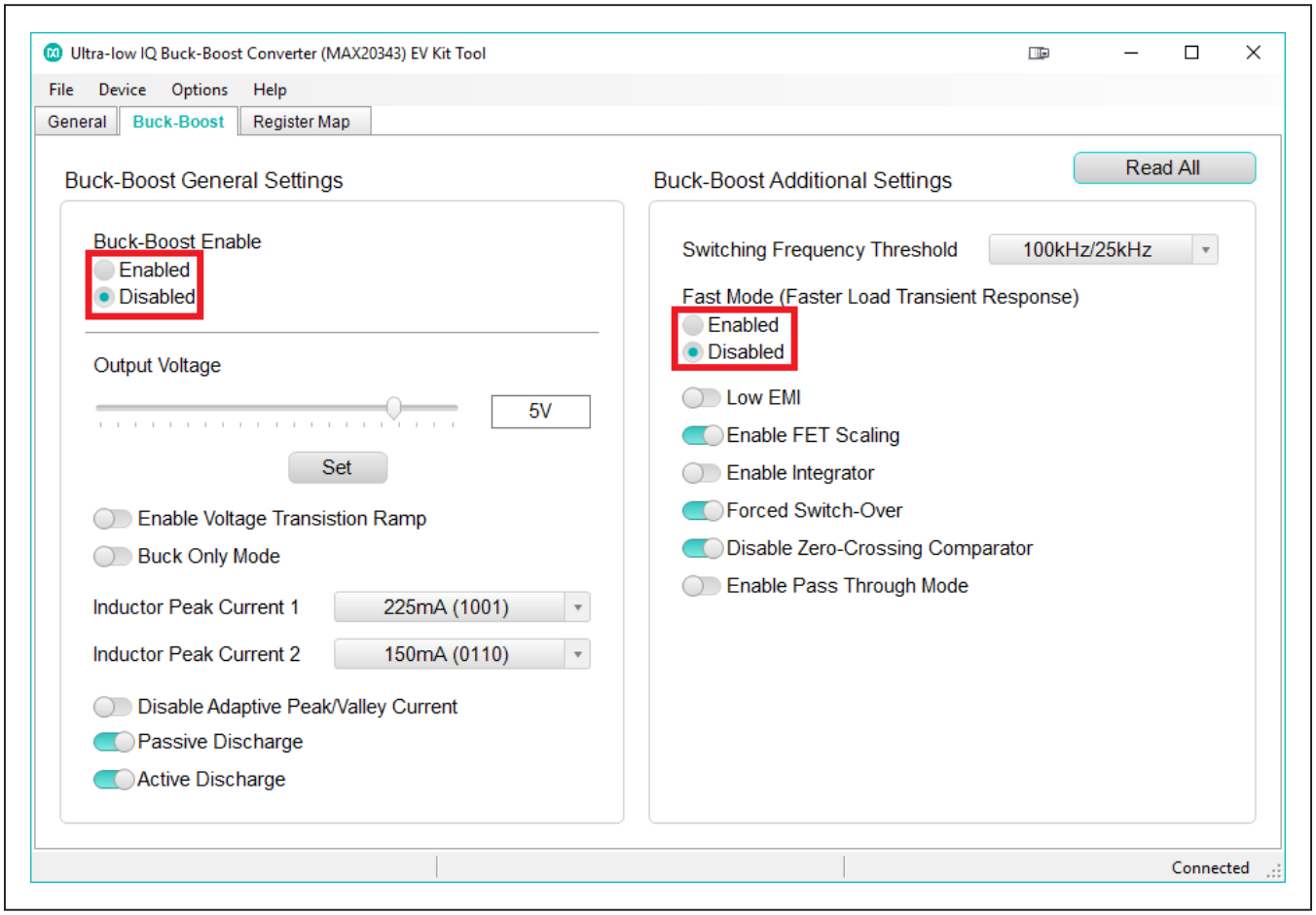


Figure 8. Radio Buttons on the Buck-Boost Tab

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Toggle Switches

Toggle switches set individual bits and latch to indicate the bit state. The GUI writes data when the toggle switch is pressed. Unlike radio buttons, toggle switches can be enabled in any combination. A toggle switch with a blue fill indicates the corresponding bit is set to 1.

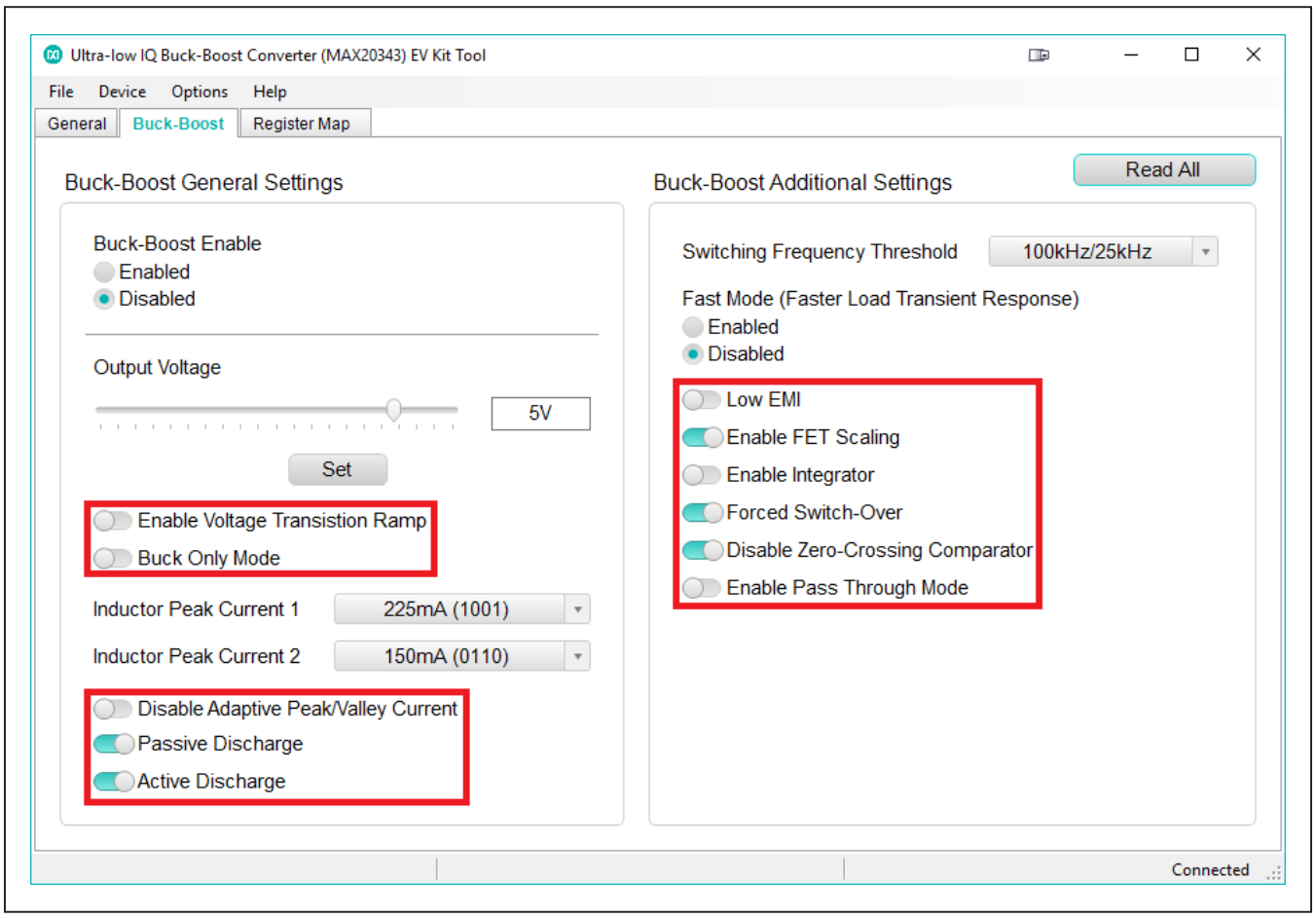


Figure 9. Toggle Switches in the Buck-Boost Tab

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Drop Downs

Drop down lists allow a bitfield value to be selected from a list of all possible values. To expand a list, click on the downward arrow on the right of the displayed value. The GUI writes data when the value is selected from the list.

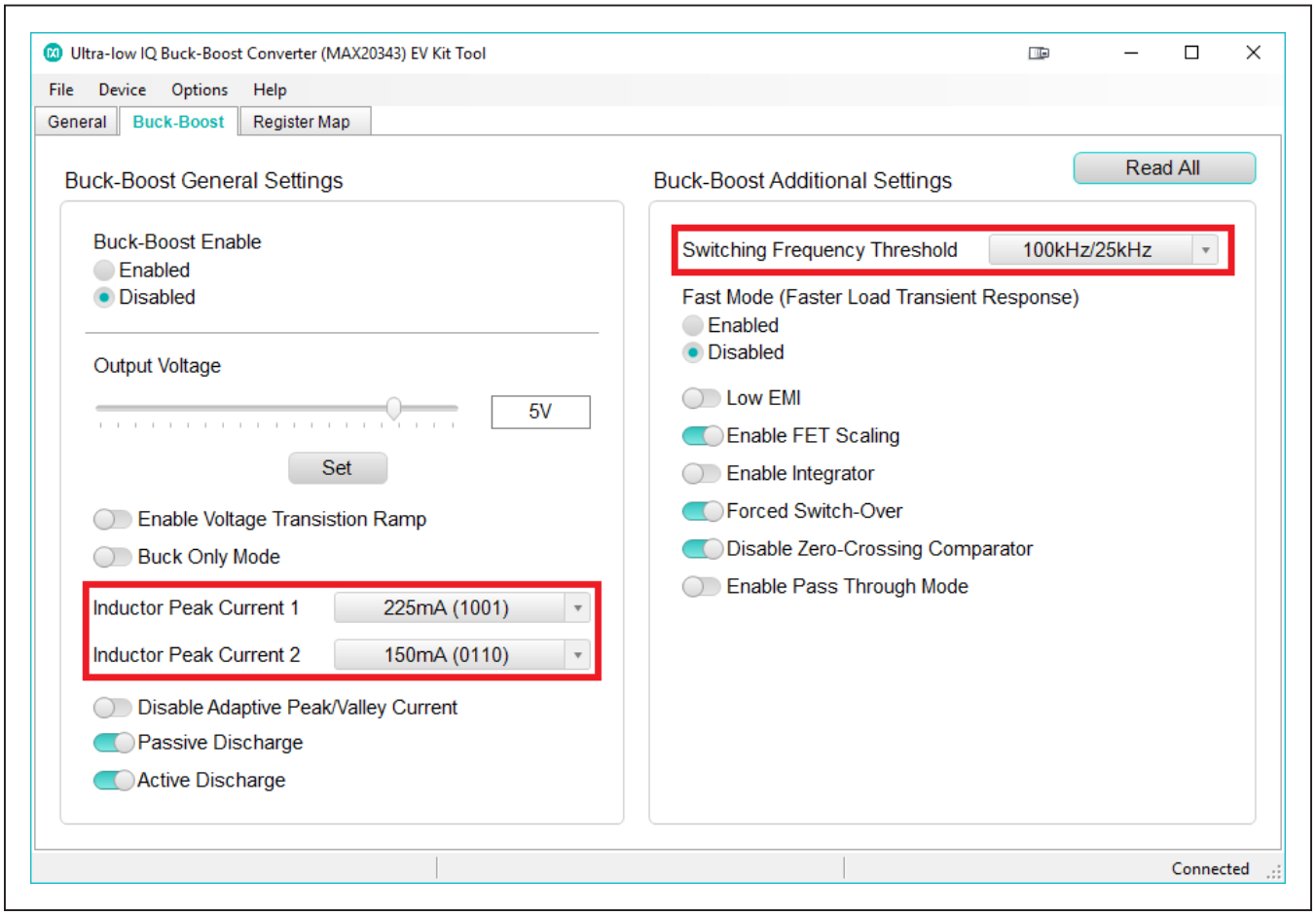


Figure 10. Drop Down lists in the Buck-Boost Tab

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Sliders

Sliders select a specific value when there is a large number of potential values. For example, the Output Voltage slider in the Buck-Boost tab selects the BBstVSet value out of the 64 possible values. The value selected by a slider is displayed in the text box to the right of the slider. Note that selecting a value on the slider **does not** write the value to the MAX20343. To write slider data, press the button that corresponds to the slider.

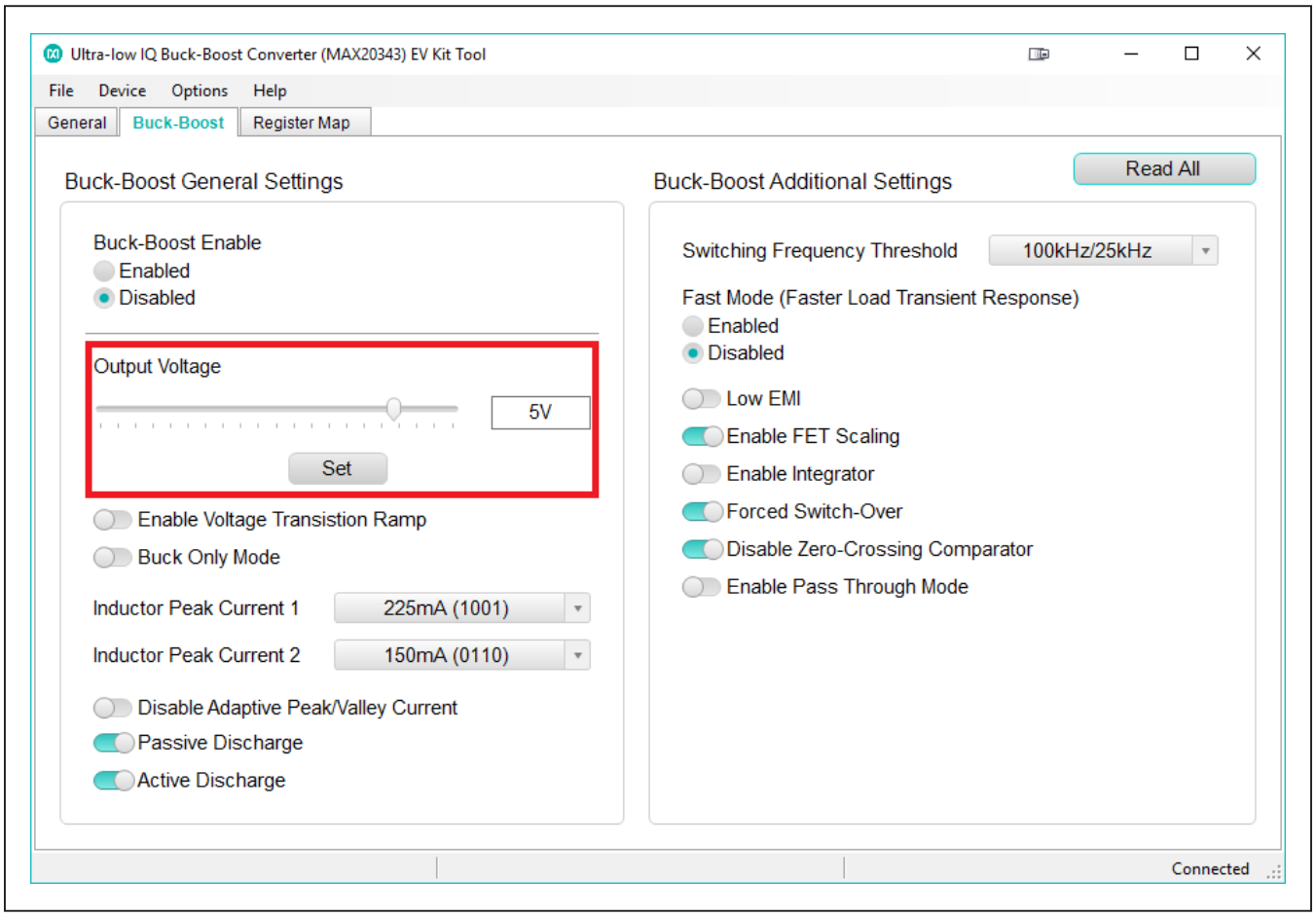


Figure 11. Slider in the Buck-Boost Tab

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GUI Tabs

The MAX20343 GUI is organized into three tabs: General, Buck-Boost, and Register Map. Clicking on a tab name opens the tab.

General Tab

The General tab configures and reads data that is mostly independent of the buck-boost performance. This includes reading back the status bits, locking and unlocking the output voltage setting, enabling FAST mode through the FAST pin, and masking and unmasking interrupts from the $\overline{INT}$ pin.

To use the FAST and $\overline{INT}$ functions, shunt jumpers must be installed on J5 and J7, respectively, to connect the pins to the USB bridge.

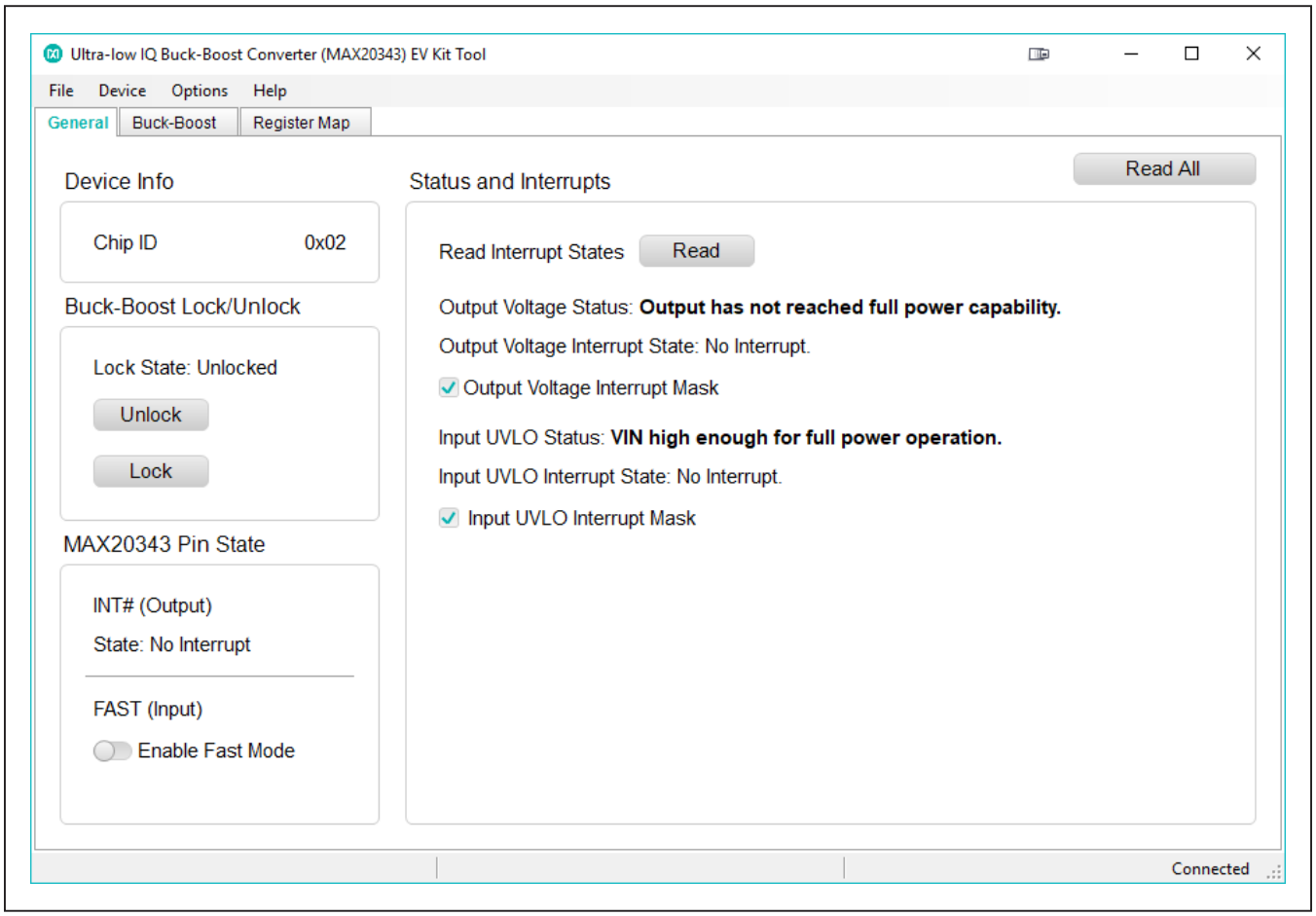


Figure 12. General Tab

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Buck-Boost Tab

The Buck-Boost tab reads and configures settings that directly affect the buck-boost performance and output. Refer to the *MAX20343/MAX20344 IC data sheet* for more information regarding the functions and settings.

Note that the Fast Mode control in the Buck-Boost tab writes the BBstFast bit instead of toggling the FAST pin as in the General tab.

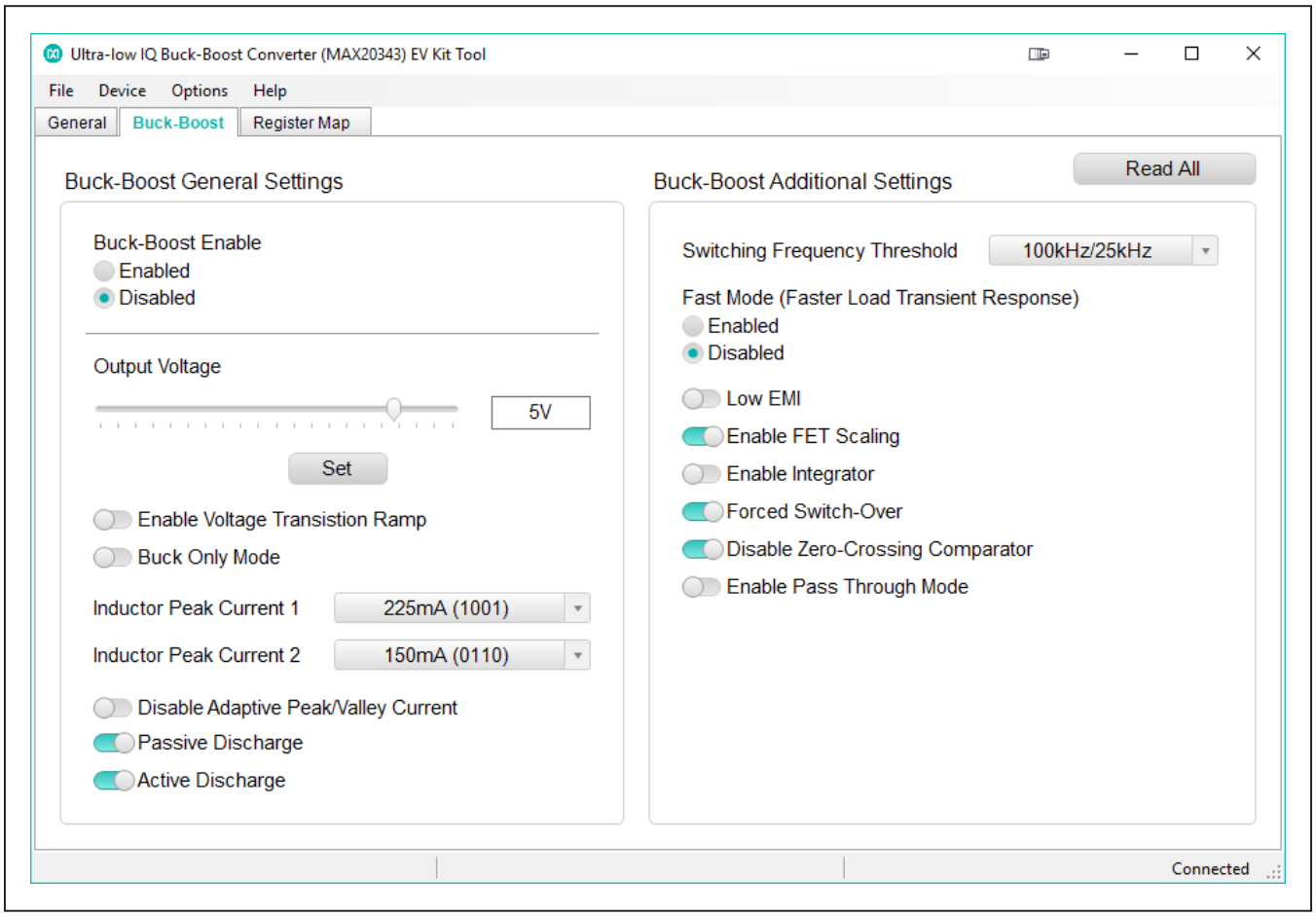


Figure 13. Buck-Boost Tab

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Register Map Tab

The Register Map tab presents the full MAX20343 register map for reading and configuring bit settings.

To open a register, click on the register in the left section of the tab. Register values are updated automatically when that register is selected. Registers can be read manually by pressing the Read button in the bottom right section, or by pressing Read All in the top left.

To write data to a register, set the bit values and press the Write button. Bits are set by clicking on the bit name in the bottom section of the tab. A boldface bit is 1 while a regular face bit is 0.

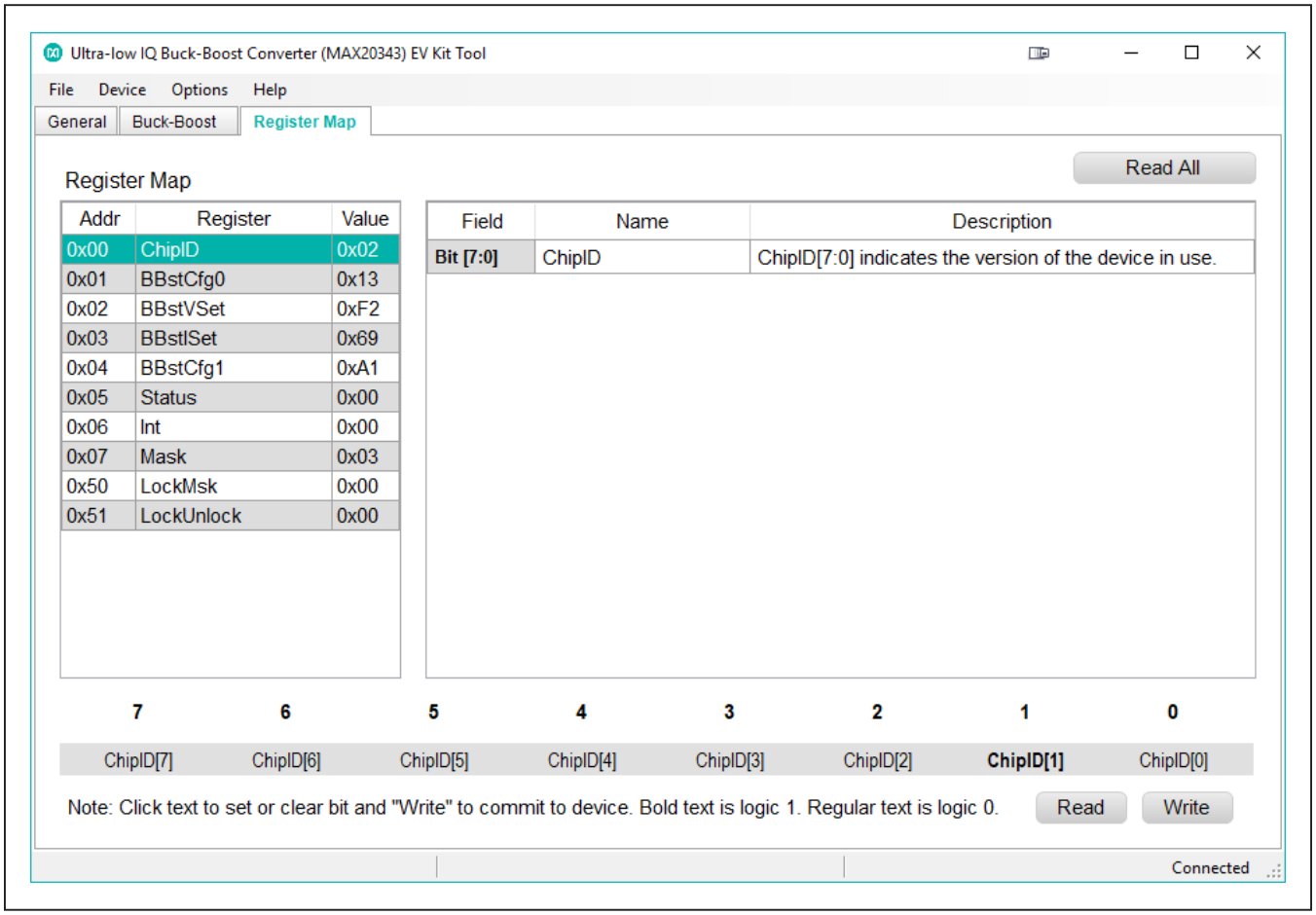


Figure 14. Register Map Tab

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Detailed Description of Hardware

The MAX20343 EV kit is a fully assembled and tested PCB for evaluating the MAX20343/MAX20344 buck-boost regulator. Although the I²C version of the MAX20343 is installed on the EV kit, the buck-boost function is identical in the single-pin-enable version of MAX20343/MAX20344 and the EV kit can be used to identify the optimal settings for an application. The GUI cannot be used to evaluate the single-pin-enabled MAX20343/MAX20344.

PC to I²C USB Bridge

To simplify evaluation using the MAX20343 EV kit GUI, the MAX20343 EV kit has an on-board USB to I²C bridge. An FTDI FT2232 translates communication from the host PC into I²C to control the MAX20343. Additionally, the FT2232 reads the $\overline{INT}$ status and toggles the FAST pin.

To connect the MAX20343 I²C pins to the FT2232, install shunt jumpers in the 1-2 positions of J3 and J4.

Status Indicators

Several status indicators for LEDs on the EV kit communicate the board and MAX20343 states. LEDs that correspond to MAX20343 signals are driven by the U2 and U3 buffers. These signals are $\overline{INT}$/PGOOD, INGOOD, and EN. Signals can be connected or disconnected from the buffers using 0Ω resistors. Because the I²C version of MAX20343 installed on the EV kit replaces INGOOD and EN with SCL and SDA, these signals are not connected by default. Table 1 lists the LED indicators and their corresponding signals.

Note that the U2 buffer that drives the $\overline{INT}$/PGOOD LED is inverting. If the EV kit is used with a single-pin-enabled device, U2 should be replaced with NC7WZ125K8X.

Table 1. LED Status Signals

LED	SIGNAL/FUNCTION
D1	FAST Control. Indicates the state of the external FAST control pin when controlled by the FT2232.
D2	$\overline{INT}$/PGOOD. Indicates when an unmasked interrupt is triggered (I²C version) or that the output voltage is high enough to support full load operation (single-pin-enabled version).
D3	Enable. Indicates the state of the EN pin (single-pin-enabled version).
D4	INGOOD. Indicates that the input voltage is high enough to support full load operation (single-pin-enabled version).
D5	Device Connected. Indicates that the GUI is connected to the EV kit.

Test Points

Test points enable easy probing and measuring of voltages and signals. See Table 2 for a list of all test points and their corresponding signals.

The uninstalled test points TP16-TP19 can be used to make an oscilloscope probe point for probing the buck-boost output voltage. TP16 connects to V_{OUT} and TP17-TP19 connect to GND. By attaching a ground spring to any of the three GND test points and probing TP16, an easily accessible, low-inductance probe point becomes available.

Table 2. Test Point Assignments

TEST POINT	SIGNAL
TP1	External V_{IN} Supply. Select the external supply by placing a shunt jumper on J1 in the 2-3 position.
TP2	GND
TP3	Jumper J2 Connection. Connect to output load if a shunt jumper is installed on J2.
TP4	GND
TP5	V_{IN}. Connect to input voltage to bypass J1.
TP6	GND
TP7	SDA (I²C version) or EN (single-pin-enabled version)
TP8	GND
TP9	SCL (I²C version) or INGOOD (single-pin-enabled version)
TP10	GND
TP11	$\overline{INT}$ (I²C version) or PGOOD (single-pin-enabled version)
TP12	GND
TP13	FAST Control (I²C version)
TP14	External Logic Supply. Select the external supply by placing a shunt jumper on J8 in the 1-2 position.
TP15	GND
TP16	V_{OUT}
TP17	GND
TP18	GND
TP19	GND

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Jumpers

Table 3. Jumper Configurations

JUMPER	SHUNT POSITION	DESCRIPTION
J1	1-2	Connects V_{IN} of the MAX20343 to the Board 3.3V Supply.
	2-3*	Connects V_{IN} of the MAX20343 to TP1.
J2	Installed*	Connects V_{OUT} of the MAX20343 to TP3.
	Not Installed	V_{OUT} of the MAX20343 disconnected from TP3.
J3	1-2*	Connects SDA of the MAX20343 to the FT2232. If a shunt jumper is also installed in the 1-2 position of J4, the GUI can communicate with the MAX20343.
	2-3	Connects EN of the MAX20343 to J6.
J4	1-2*	Connects SCL of the MAX20343 to the FT2232. If a shunt jumper is also installed in the 1-2 position of J3, the GUI can communicate with the MAX20343.
	2-3	Connects a 10kΩ pullup resistor from INGOOD to 3.3V.
J5	Installed*	Connects FAST to the output of U2 for GUI FAST control.
	Not Installed	FAST not controllable by the GUI.
J6	Installed	Connects pin 3 of J3 to 3.3V.
	Not Installed*	Pin 3 of J3 connected to a 10kΩ pulldown resistor to GND.
J7	Installed*	Connects $\overline{INT}$ to the FT2232. The GUI can read the $\overline{INT}$ state.
	Not Installed	$\overline{INT}$ not connected to the FT2232. The GUI cannot read the $\overline{INT}$ state.
J8	1-2	MAX20343 logic voltage connected to TP14.
	2-3*	MAX20343 logic voltage connected to board 3.3V supply.
J9	Installed*	Connects the board 3.3V Supply to U2.
	Not Installed	U2 Unpowered
J10	Installed	Connects the Board 3.3V Supply to U3.
	Not Installed*	U3 Unpowered

**Default position.*

Component Suppliers

SUPPLIER	WEBSITE
Murata Americas	www.murata.com/en-us

Note: *Indicate that you are using the MAX20343 when contacting these component suppliers.*

Ordering Information

PART	TYPE
MAX20343EVKIT#	EV Kit

#Denotes a RoHS-compliant device that may include lead(Pb) that is exempt under the RoHS requirements.

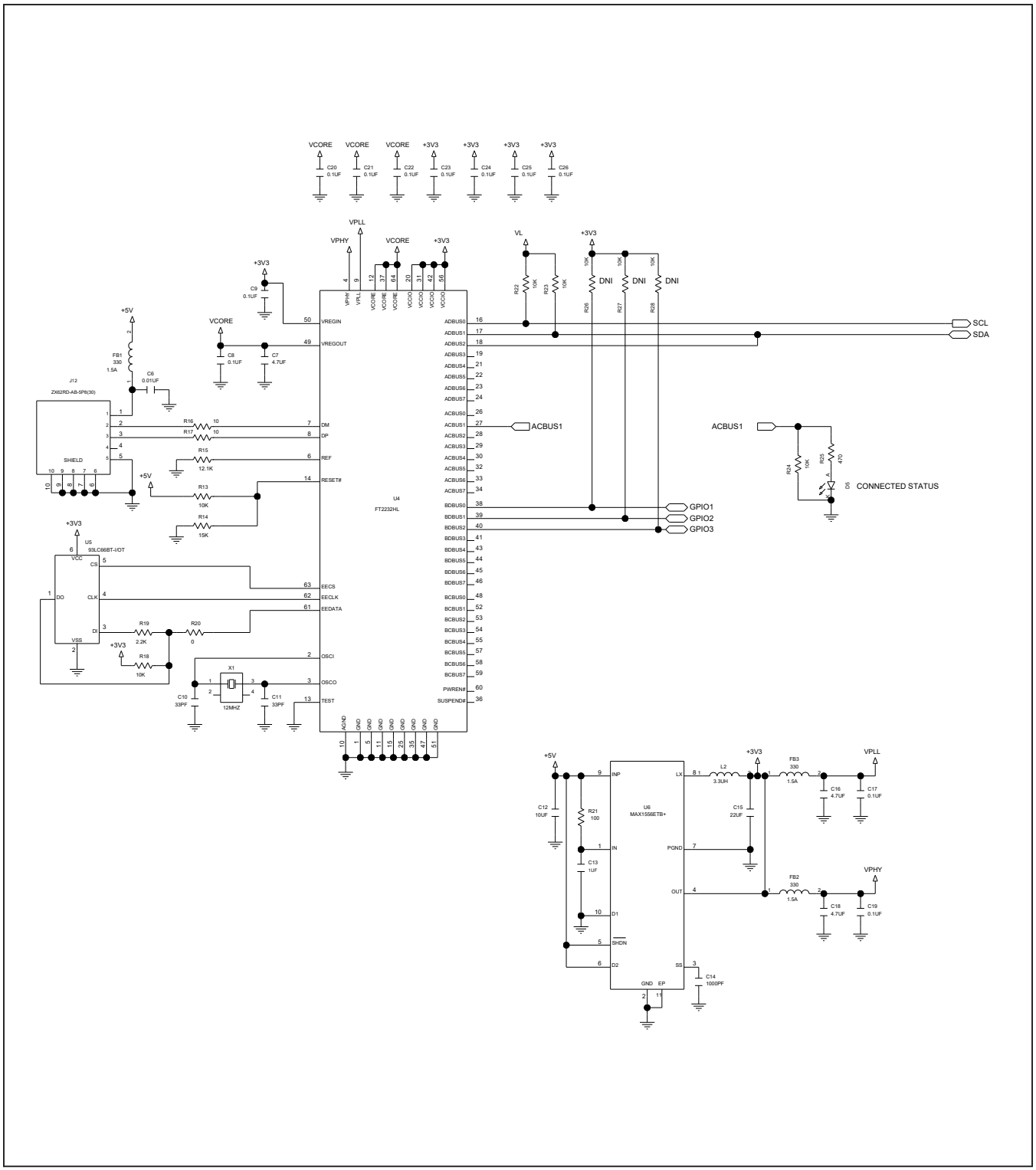
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MAX20343 EV Kit Bill of Materials

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION
1	C1, C2	-	2	GRM155R60J226ME11	MURATA	22UF	CAPACITOR; SMT (0402); CERAMIC CHIP; 22UF; 6.3V; TOL=20%; TC=X5R;
2	C4	-	1	GRM033R61A105ME15	MURATA	1UF	CAPACITOR; SMT (0201); CERAMIC CHIP; 1UF; 10V; TOL=20%; TG=-55 DEGC TO +85 DEGC; TC=X5R
3	C5	-	1	GMK107B105KA; C1608X5R1V105K080AB	TAIYO YUDEN;TDK	1.0UF	CAPACITOR; SMT (0603); CERAMIC CHIP; 1UF; 35V; TOL=10%; TG=-55 DEGC TO +85 DEGC; TC=X5R
4	C6	-	1	C0603C103K5RAC;GRM188R71H103K;C0603X7R500-103KNE	KEMET;MURATA;VENKEL LTD.	0.01UF	CAPACITOR; SMT; 0603 ; CERAMIC; 0.01uF; 50V; 10%; X7R; -55degC to + 125degC
5	C7, C16, C18	-	3	GRM21BR71C475KA73;0805YC475KAT2A	MURATA;AVX	4.7UF	CAPACITOR; SMT (0805); CERAMIC CHIP; 4.7UF; 16V; TOL=±10%; MODEL=GRM SERIES; TG=-55 DEGC TO +125 DEGC; TC=X7R
6	C8, C9, C17, C19-C26	-	11	C0603C104K5RAC;C1608X7R1H104K;EJ-1V81H104K;GRM188R71H104KA93;CG33E2X7R1H104K080AA;C1608X7R1H104K080AA;CL10B104KB8NNNC;CL10B104KB8NFN	KEMET;TDK;PANASONIC;MURATA;TDK;TDK;SAMSUNG ELECTRO-MECHANICS;SAMSUNG ELECTRONICS	0.1UF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.1UF; 50V; TOL=±10%; TG=-55 DEGC TO +125 DEGC; TC=X7R;
7	C10, C11	-	2	C0603C330J5GAC;GRM1885C1H330JA01;ECU-V1H330JCV	KEMET;MURATA;PANASONIC	33PF	CAPACITOR; SMT; 0603 ; CERAMIC; 33pF; 50V; 5%; C0G; -55degC to + 125degC; 0 +/-30PPM/degC
8	C12	-	1	CL21A106KOQNNNC;GRM21BR61C106KE15; EMK212AB106KD	SAMSUNG ELECTRONICS;MURATA;TAIYO YUDEN	10UF	CAPACITOR; SMT (0805); CERAMIC CHIP; 10UF; 16V; TOL=±10%; TG=-55 DEGC TO +85 DEGC; TC=X5R
9	C13	-	1	UMK107B105KA;C1608X5R1H105K080AB;CL10A105KB8NN N;GRM188R61H105KA4AL	TAIYO YUDEN;TDK;SAMSUNG;MURATA	1UF	CAPACITOR; SMT (0603); CERAMIC CHIP; 1UF; 50V; TOL=±10%; MODEL= _MK SERIES; TG=-55 DEGC TO +85 DEGC
10	C14	-	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
11	C15	-	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
12	D1-D5	-	5	150060VS75000	WURTH ELECTRONICS INC	150060VS75000	DIODE; LED; WL-SWCW SMD CHIP LED TOP VIEW MONO-COLOR WATER CLEAR; GREEN; SMT (0603); VF=2V; IF=0.02A
13	FB1-FB3	-	3	BLM21PG331SN1	MURATA	330	INDUCTOR; SMT (0805); FERRITE-BEAD; 330; TOL=+/-25%; 1.5A
14	J1, J3, J4, J8	-	4	"22-28-4033"	MOLEX	"22-28-4033"	CONNECTOR; MALE; THROUGH HOLE; FLAT VERTICAL BREAKAWAY; STRAIGHT; 3PINS
15	J2, J5-J7, J9, J10	-	6	"22-28-4023"	MOLEX	"22-28-4023"	CONNECTOR; MALE; THROUGH HOLE; FLAT VERTICAL BREAKAWAY; STRAIGHT; 2PINS
16	J12	-	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
17	L1	-	1	DFE252012F-2R2M	MURATA	2.2UH	INDUCTOR; SMT (1008); SHIELDED; 2.2UH; 20%; 2.3A
18	L2	-	1	B82432T1332K000	TDK	3.3UH	INDUCTOR; SMT (1812); FERRITE CORE; 3.3UH; TOL=+/-10%; 0.9A
19	R1	-	1	ERJ-2RKF6651	PANASONIC	6.65K	RESISTOR; 0402; 6.65K OHM; 1%; 100PPM; 0.10W; THICK FILM
20	R2-R4, R18, R22-R24	-	7	CRCW0402210KOFK;RC0402FR-07210KL	VISHAY DALE;YAGEO PHICOMP	10K	RESISTOR; 0402; 10K; 1%; 100PPM; 0.0625W; THICK FILM
21	R5-R8, R20	-	5	CRCW040200000Z0EDHP; RC5040Z0000Z0	VISHAY DRALORIC;VISHAY DALE	0	RESISTOR; 0402; 0 OHM; 0%; JUMPER; 0.2W; THICK FILM
22	R9-R12, R25	-	5	ERJ-2GE0471	PANASONIC	470	RESISTOR; 0402; 470 OHM; 5%; 200PPM; 0.10W; THICK FILM
23	R13	-	1	ERJ-2RKF1002	PANASONIC	10K	RESISTOR; 0402; 10K OHM; 1%; 100PPM; 0.10W; THICK FILM
24	R14	-	1	ERJ-2RKF1502	PANASONIC	15K	RESISTOR; 0402; 15K OHM; 1%; 100PPM; 0.1W; THICK FILM
25	R15	-	1	ERJ-2RKF1212	PANASONIC	12.1K	RESISTOR; 0402; 12.1K OHM; 1%; 100PPM; 0.1W; THICK FILM
26	R16, R17	-	2	CRCW0603010R0FK; MCR03EZPFX10R0;ERJ-3EKF10R0	VISHAY DALE;ROHM	10	RESISTOR; 0603; 10 OHM; 1%; 100PPM; 0.10W; THICK FILM
27	R19	-	1	CRCW0402220KFK;RC0402FR-072K2L	VISHAY DALE;YAGEO PHICOMP	2.2K	RESISTOR; 0402; 2.2K OHM; 1%; 100PPM; 0.0625W; THICK FILM
28	R21	-	1	CRCW0603100RFK;ERJ-3EKF1000;RC0603FR-07100RL	VISHAY DALE;PANASONIC	100	RESISTOR; 0603; 100 OHM; 1%; 100PPM; 0.10W; THICK FILM
29	SU1-SU8	-	8	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
30	TP1, TP3, TP5	-	3	5010	KEYSTONE	N/A	TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; RED; PHOSPHOR BRONZE WIRE SIL;
31	TP2, TP4, TP6	-	3	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;
32	TP7, TP14	-	2	5116	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; GREEN; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
33	TP8, TP10, TP12, TP15, TP16	-	5	5001	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
34	TP9	-	1	5004	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; YELLOW; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
35	TP11, TP13	-	2	5002	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; WHITE; PHOSPHOR BRONZE WIRE SILVER;
36	U1	-	1	MAX20343EEWE+	MAXIM	MAX20343EEWE+	EVKIT PART - IC; ULTRA-LOW QUIESCENT CURRENT; LOW NOISE 3.5W BUCK/BOOST REGULATOR; WLP16; PACKAGE OUTLINE: 21-100328; PACKAGE CODE: W161C2+1
37	U2	-	1	NC7WZ240K8X	ON SEMICONDUCTOR	NC7WZ240K8X	IC; BUF; TINYLOGIC UHS DUAL/INVERTING BUFFER WITH 3-STATE OUTPUTS; US8-8
38	U3	-	1	NC7WZ125K8X	ON SEMICONDUCTOR	NC7WZ125K8X	IC; BUF; TINYLOGIC UHS DUAL BUFFER WITH 3-STATE OUTPUT; US8-8
39	U4	-	1	FT232HL	FUTURE TECHNOLOGY DEVICES INTL LTD.	FT232HL	IC; MMRY; DUAL HIGH SPEED USB TO MULTIPURPOSE UART/FIFO; LQFP64
40	U5	-	1	93LC66BT-I/OT	MICROCHIP	93LC66BT-I/OT	IC; EPROM; 4K MICROWIRE SERIAL EEPROM; SOT23-6
41	U6	-	1	MAX15596ETB+	MAXIM	MAX15596ETB+	IC; CONV; PWM STEP-DOWN DC-DC CONVERTER; TDFN10-EP 3X3
42	X1	-	1	ECS-120-20-33	ECS INC	12MHZ	CRYSTAL; SMT; 20PF; 12MHZ; +/-50PPM; +/-50PPM
43	PCB	-	1	MAX20343	MAXIM	PCB	PCB:MAX20343
44	C3	DNP	0	GRM155R60J226ME11	MURATA	22UF	CAPACITOR; SMT (0402); CERAMIC CHIP; 22UF; 6.3V; TOL=20%; TC=X5R ;
45	C27	DNP	0	LLL153C80J104ME01	MURATA	0.1UF	CAPACITOR; SMT (0204); CERAMIC CHIP; 0.1UF; 6.3V; TOL=20%; MODEL=LLL SERIES; TG=-55 DEGC TO +105 DEGC; TC=X6S
46	R26-R28	DNP	0	CRCW0402210KOFK;RC0402FR-07210KL	VISHAY DALE;YAGEO PHICOMP	10K	RESISTOR; 0402; 10K; 1%; 100PPM; 0.0625W; THICK FILM
47	TP17-TP19	DNP	0	5001	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
TOTAL			103				

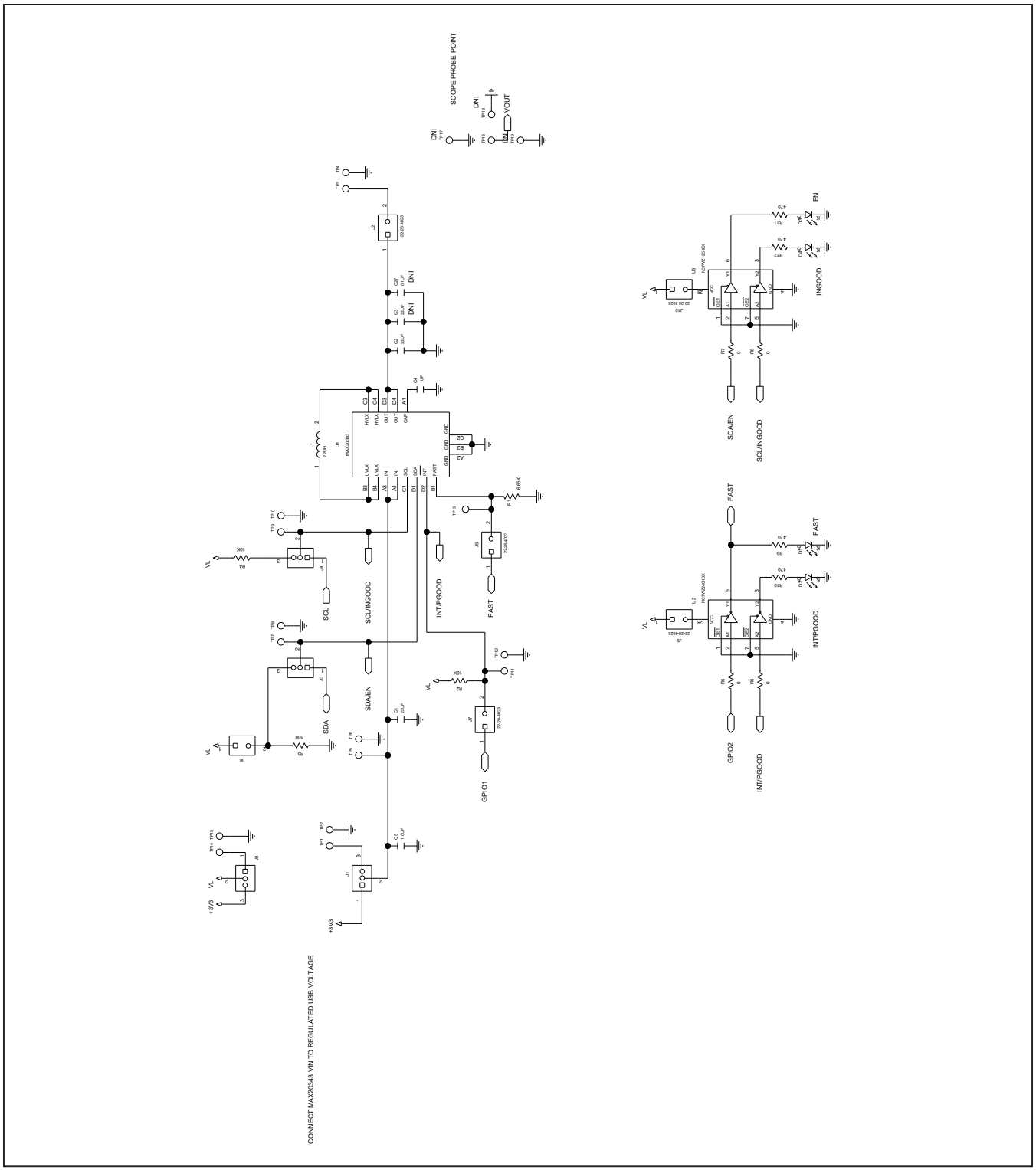
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MAX20343 EV Kit Schematics



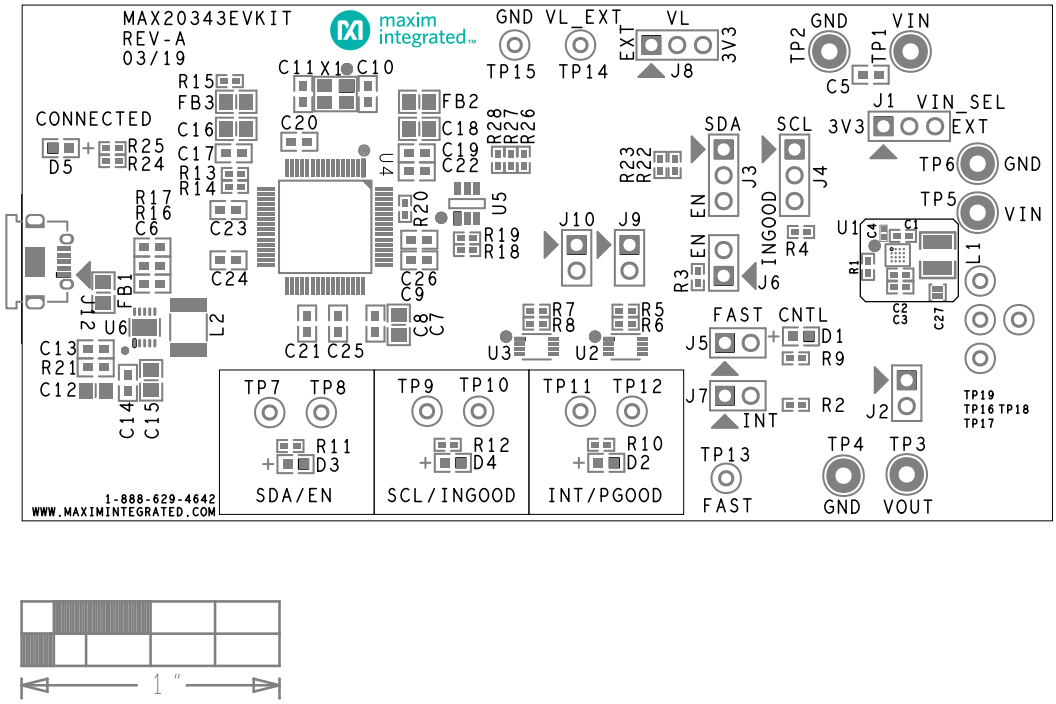
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MAX20343 EV Kit Schematics (continued)



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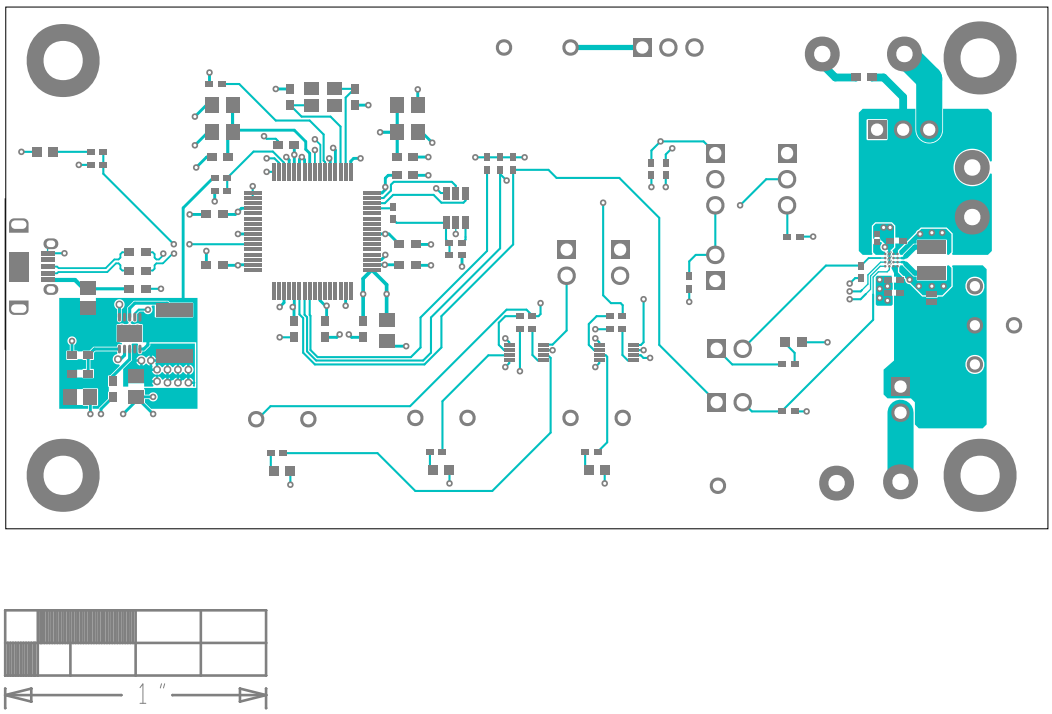
MAX20343 EV Kit PCB Layout Diagrams



MAX20343 EV Kit PCB Layout—Top Silkscreen

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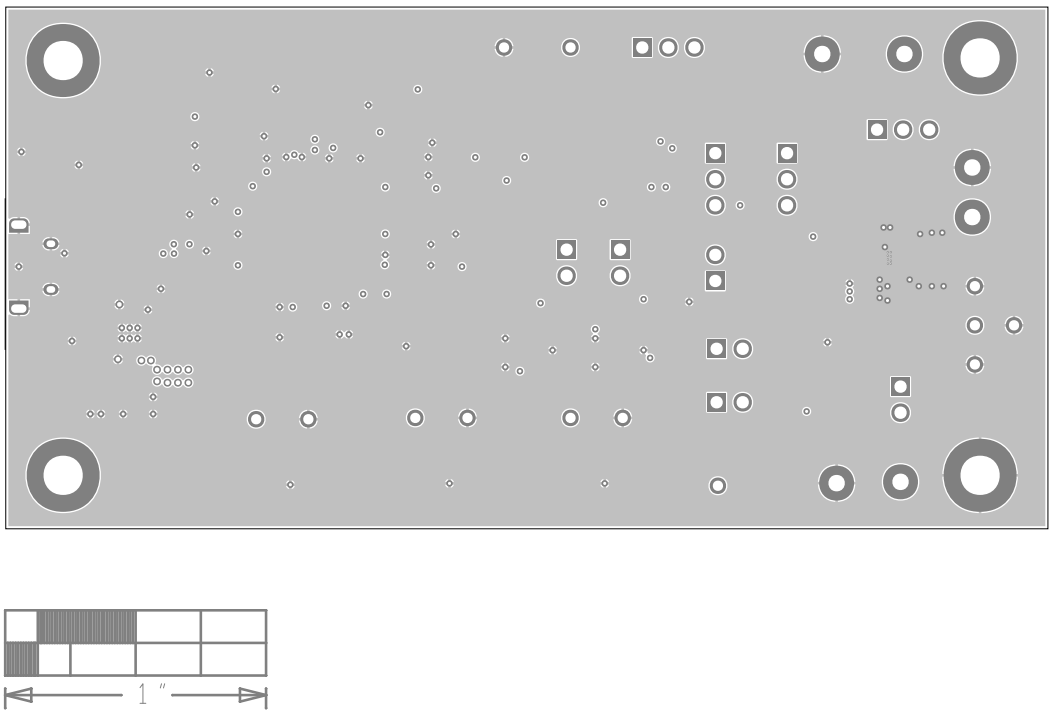
MAX20343 EV Kit PCB Layout Diagrams (continued)



MAX20343 EV Kit PCB Layout—Top Layer

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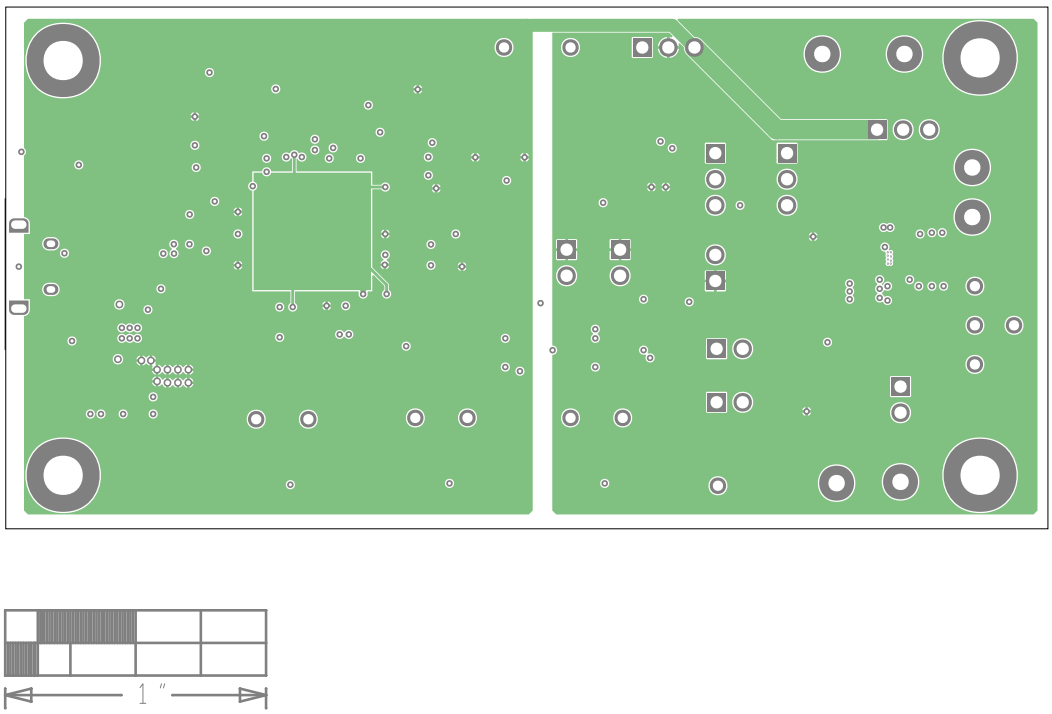
MAX20343 EV Kit PCB Layout Diagrams (continued)



MAX20343 EV Kit PCB Layout—Layer 1

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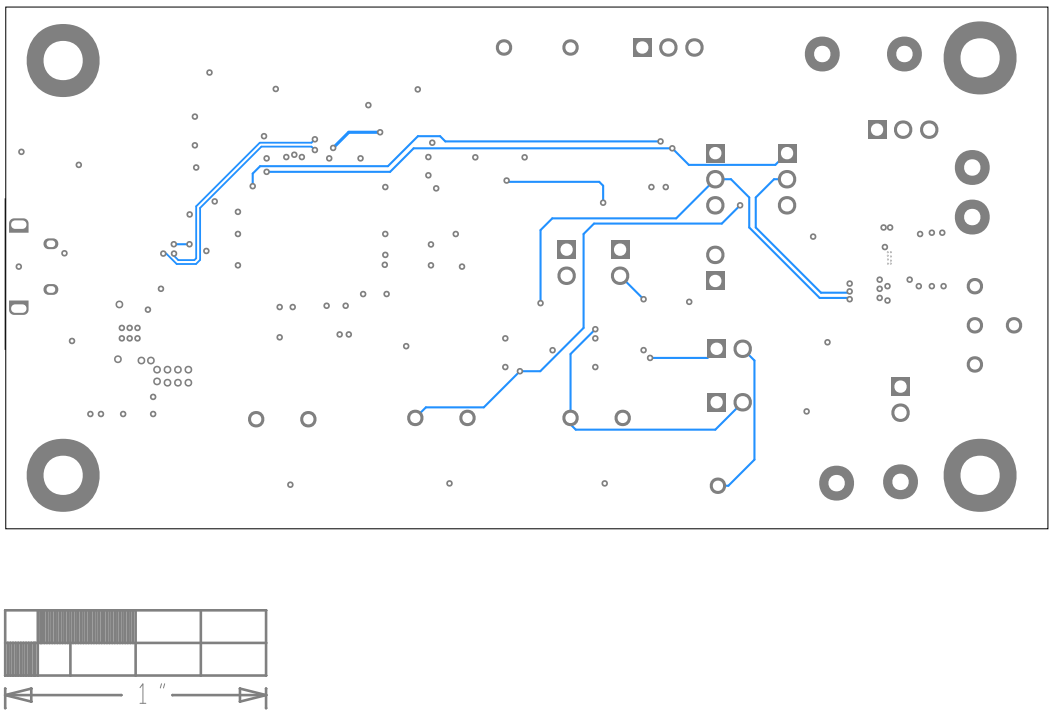
MAX20343 EV Kit PCB Layout Diagrams (continued)



MAX20343 EV Kit PCB Layout—Layer 2

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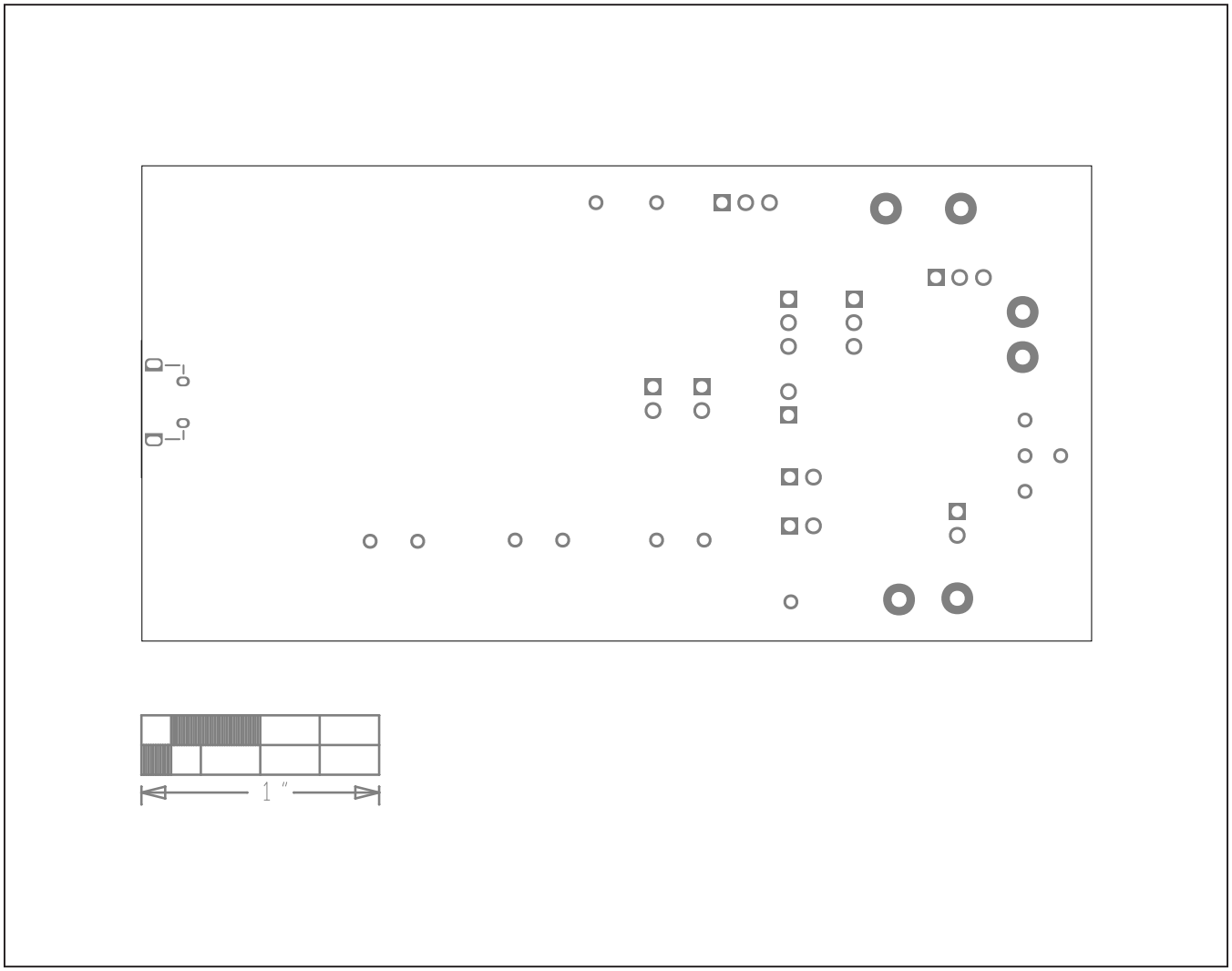
MAX20343 EV Kit PCB Layout Diagrams (continued)



MAX20343 EV Kit PCB Layout—Bottom Layer

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MAX20343 EV Kit PCB Layout Diagrams (continued)



MAX20343 EV Kit PCB Layout—Bottom Silkscreen

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Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	3/19	Initial release	—
1	12/20	Updated the title, *General Description, Quick Start, MAX20343 EV Kit Files, Buck-Boost Tab, Description of Hardware, Status Indicators*, and Table 3; replaced Figures 1–2, and 6–14	1–13

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