

Evaluates: MAX20480/ MAX20481

MAX20480 Evaluation Kit

General Description

The MAX20480 evaluation kit (EV kit) is a fully assembled and tested application circuit for the MAX20480 seven-input automotive power supply monitor. The test point taps allow for routing to other subsystems for monitoring. Connectors are provided for I²C communication.

The MAX20480 EV kit can also evaluate the MAX20481 IC. Simply replace the installed MAX20480 with the MAX20481 IC.

The MAX20481 does not have an I²C interface, so there is no requirement for the MINIQUSB+.

Benefits and Features

- Easy access inputs
 - IN1-IN5 provided
 - IN6, IN7 provided, with INM pin for remote ground connection
- ADDR pin and jumper for different address settings
- EN0, EN1 jumpers added for easy interface connections
- RC footprints on monitoring pins
- I²C connector

Ordering Information appears at end of data sheet.

Quick Start

Required Equipment

- MAX20480 EV kit
- MINIQUSB EV kit
- Latest version of the MINIQUSB command module firmware (optional, USB cable included) available from www.maximintegrated.com/evkitsoftware
- Latest version of the MAX20480 EV kit software, available from www.maximintegrated.com/evkitsoftware
- Two adjustable DC supplies
- Digital multimeter (DMM)
- Oscilloscope

Procedure

The EV kit is fully assembled and tested.

Contact the factory for detailed testing.

Detailed Description

Register Settings

Register details are found in the *MAX20480 or MAX20481 data sheet*.

Address Setting

Address details are found in the *MAX20480 or MAX20481 data sheet*.

Table 1. MAX20480 EV Kit Default Jumper Settings

JUMPER	DEFAULT SHUNT POSITION	FUNCTION
J6	Shunt on pin 1 to pin 2	EN0 remains available for testing
J7	Shunt on pin 1 to pin 2	EN1 remains available for testing
J10	Shunt on pin 2 to pin 3	Shorts ADDR to ground for default address
J11	Shunt installed	Bypass the series 100kΩ on the ADDR pin
J16	Shunt installed	Connects INM to PCB Ground

Ordering Information

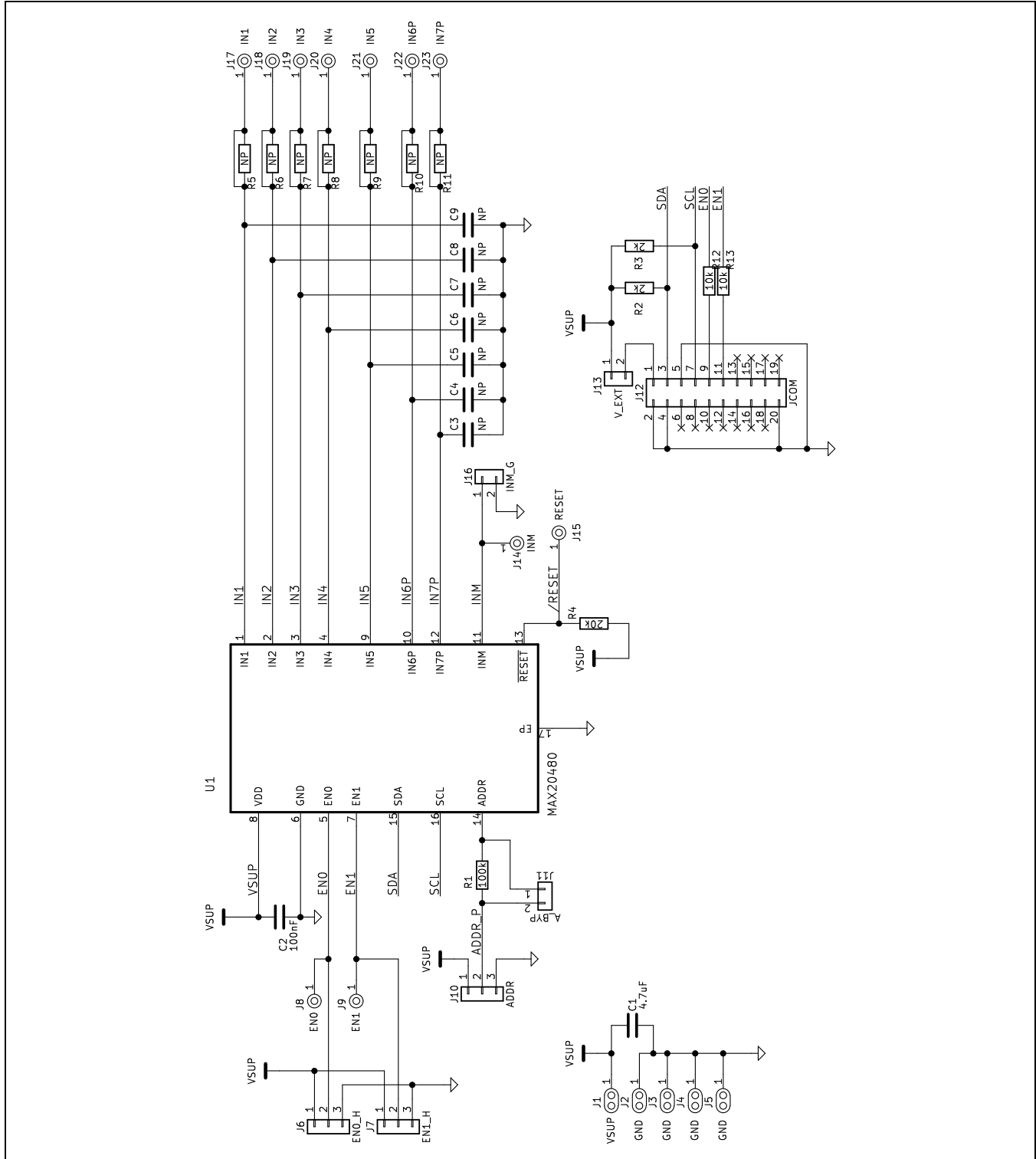
PART	TYPE
MAX20480EVKIT#	EV Kit
MINIUSB+	Comm Interface

#Denotes RoHS compliant

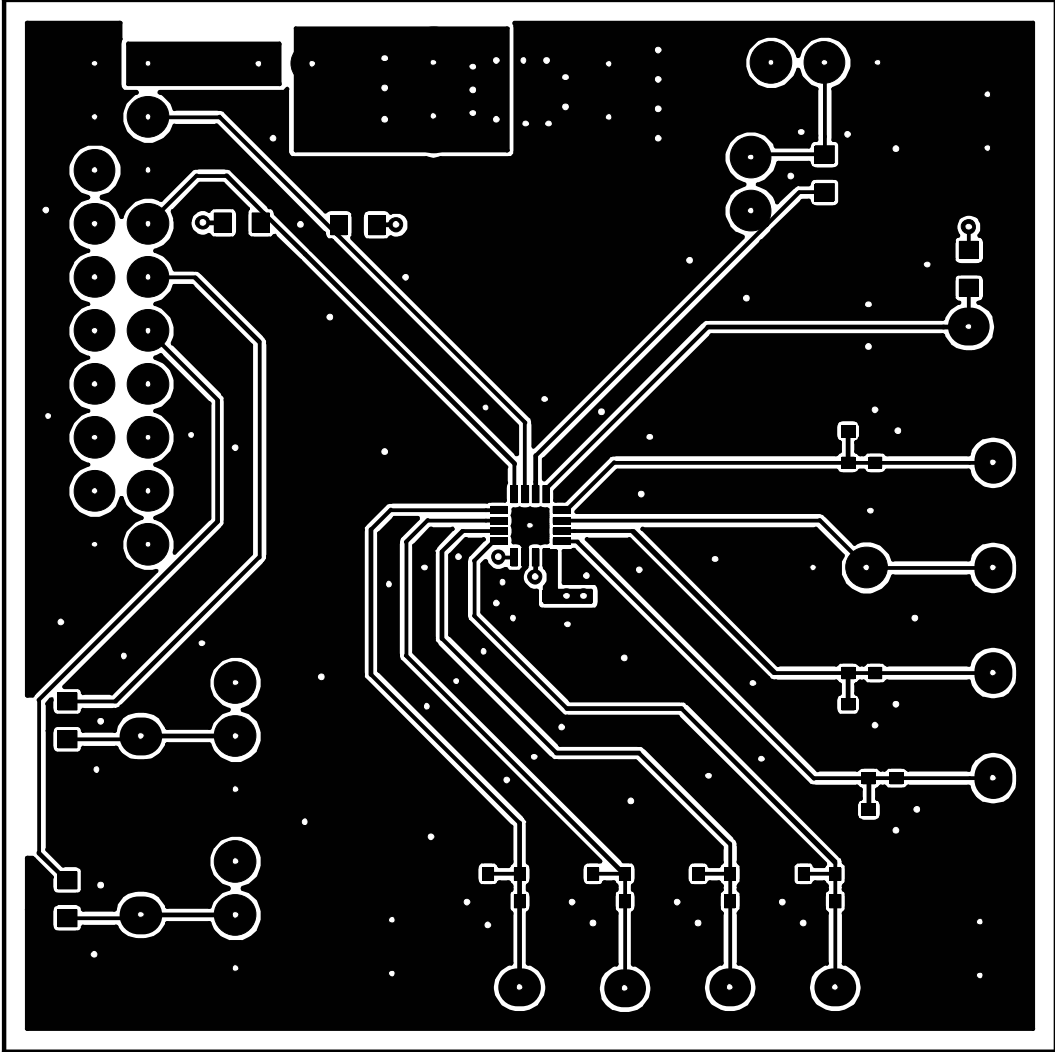
MAX20480 EV Kit Bill of Materials

QTY	REF DES	VALUE	DESCRIPTION	MFG PART #	MANUFACTURER
1	C1	4.7µF	Capacitor; SMT (0603); Ceramic; 4.7µF; 10V; Tol = 10%; Model = CGA Series; TG = -55°C TO +125°C; TC = X7R	CGA4J3X7R1A475K125AB	TDK
1	C2	0.1µF	Capacitor; SMT (0402); Ceramic Chip; 0.1µF; 10V; Tol = 10%; TG = -55°C to +125°C; TC = X7R	C0402X7R500-392KNE; GRM155R71H392KA01	VENKEL LTD./ MURATA
2	J1, J2	MAXIMPAD	EV Kit Parts; MAXIM Pad; Wire; Natural; Solid; Weico Wire; Soft Drawn Bus Type-S; 20AWG	9020 BUSS	WEICO WIRE
2	J11, J16	PCC03SAAN	Header; Male; Through Hole; Breakaway; Straight Angle; 2-Pin	PCC03SAAN	SULLINS ELECTRONICS CORP
1	J12	SSW-110-02-S-D-RA	Connector; Through Hole; SSW Series; Dual Row; Right Angle; 20-Pin; -55°C to +105°C	SSW_100-02-S-D-RA	SAMTEC
3	J6, J7, J10	PCC03SAAN	Header; Male; Through Hole; Breakaway; Straight Angle; 3-Pin	PCC03SAAN	SULLINS ELECTRONICS CORP.
11	J8, J9, J14, J15, J17, J18, J19, J20, J21, J22, J23	N/A	Test Point; Pin Dia = 0.015in; Total Length = 0.35in; Total Length = 0.063in; White; Phosphor Bronze Wire Silver Plate Finish; Recommended For Board Thickness = 0.062in; Not for Cold Test	5007	KEYSTONE
1	R1	100k	Resistor; 0603; 100kΩ; 1%; 100ppm; 0.1W; Thick Film	CRCW0603100KFKE	VISHAY DALE
2	R12, R13	10k	Resistor; 0603; 10kΩ; 1%; 100ppm; 0.1W; Thick Film	RC0603FR-0710KL	YAGEO
2	R2, R3	2k	Resistor; 0603; 2kΩ; 1%; 100ppm; 0.1W; Thick Film	CRCW06032K00FK	VISHAY DALE
1	R4	20k	Resistor; 0606; 20kΩ; 1%; 100ppm; 0.1W; Thick Film	CRCW060320K0FKKE	VISHAY DALE
1	U1	MAX20480	EV Kit Part-IC; Seven-Input Automotive Power-System Monitor Family; QFN16-EP; Package Code: T1633Y+5	MAX20480DATEA/VY+	MAXIM

MAX20480 EV Kit Schematic

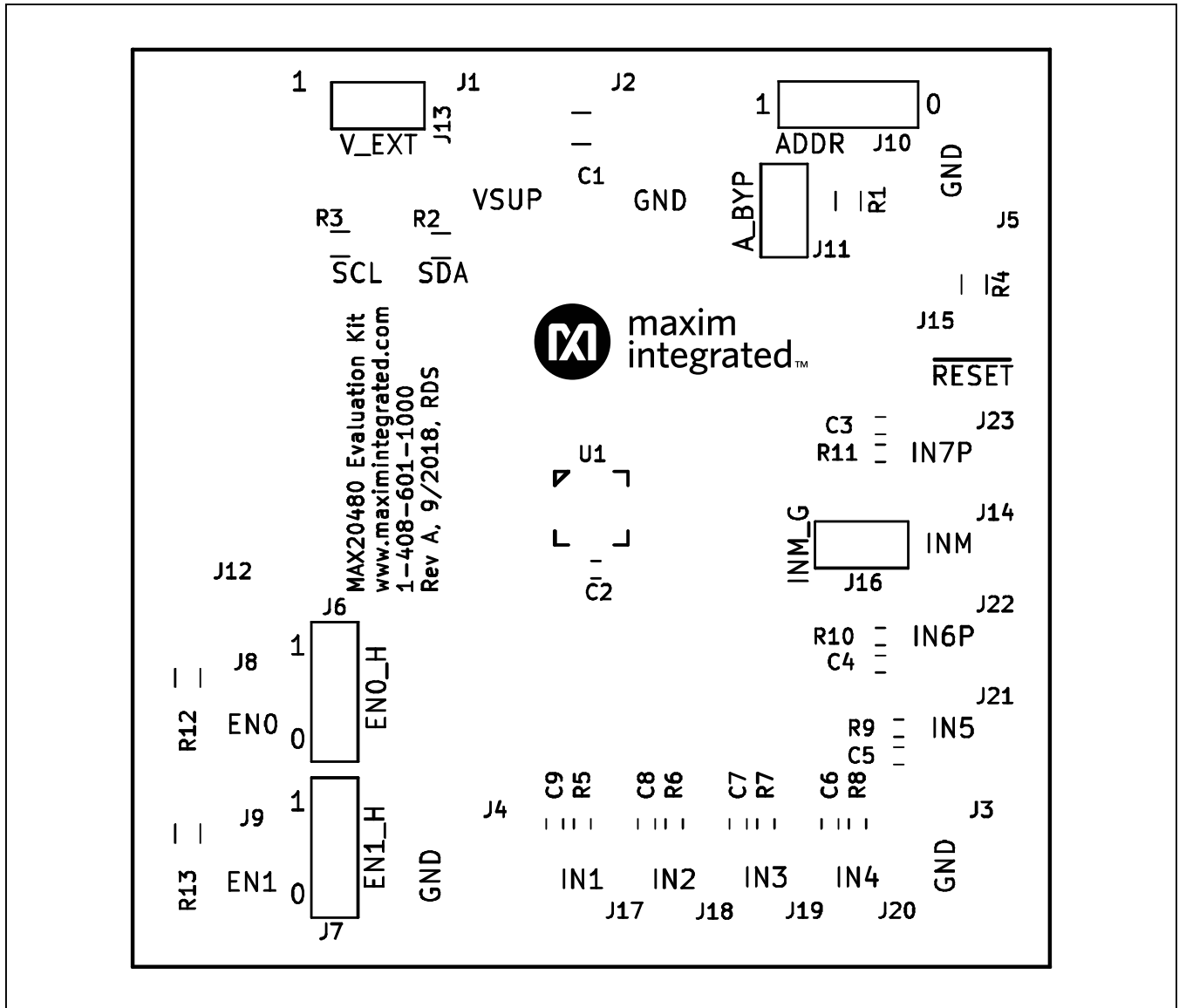


MAX20480 EV Kit PCB Layouts



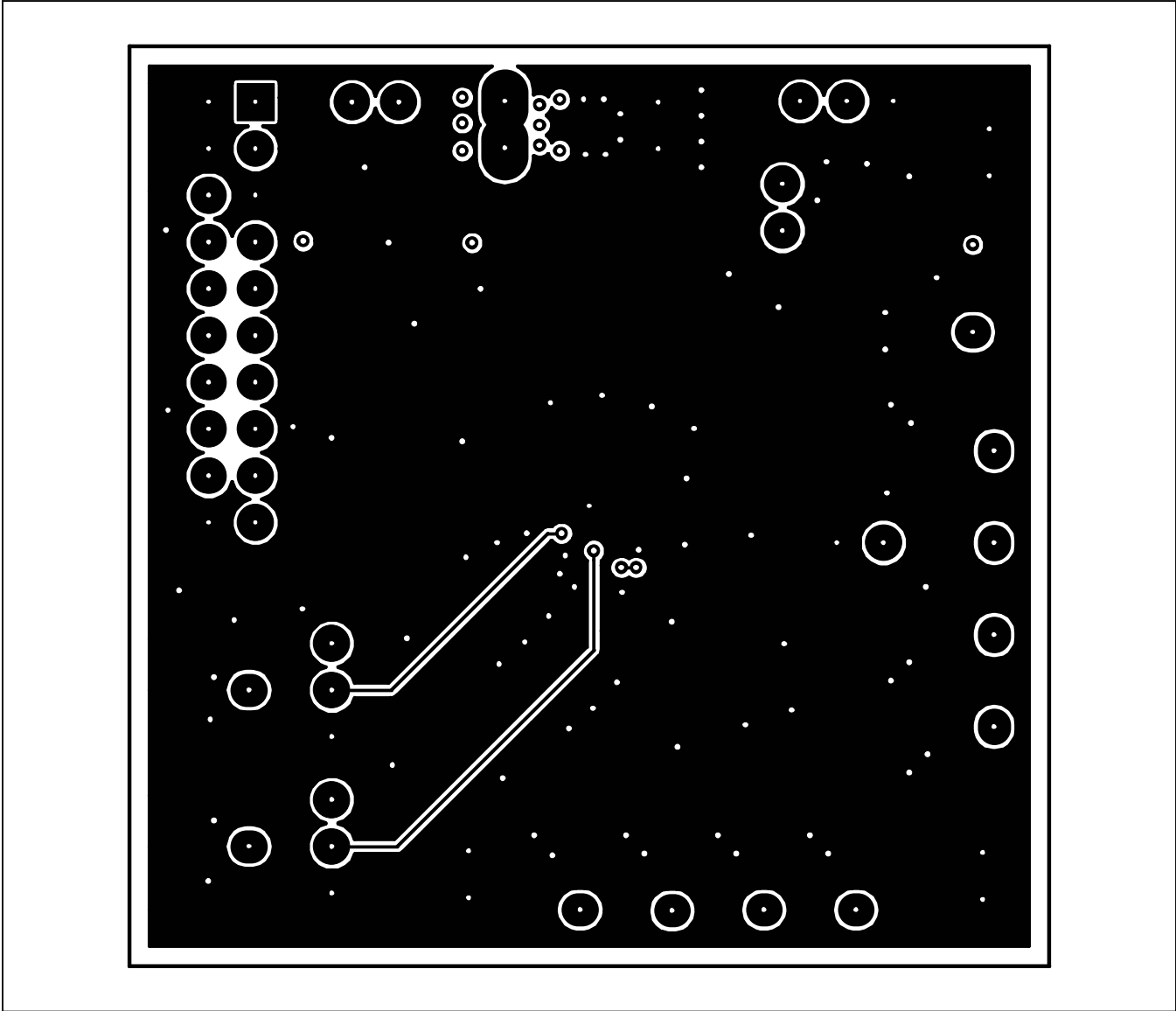
MAX20480 EV Kit Component Placement Guide – Top

MAX20480 EV Kit PCB Layouts (continued)



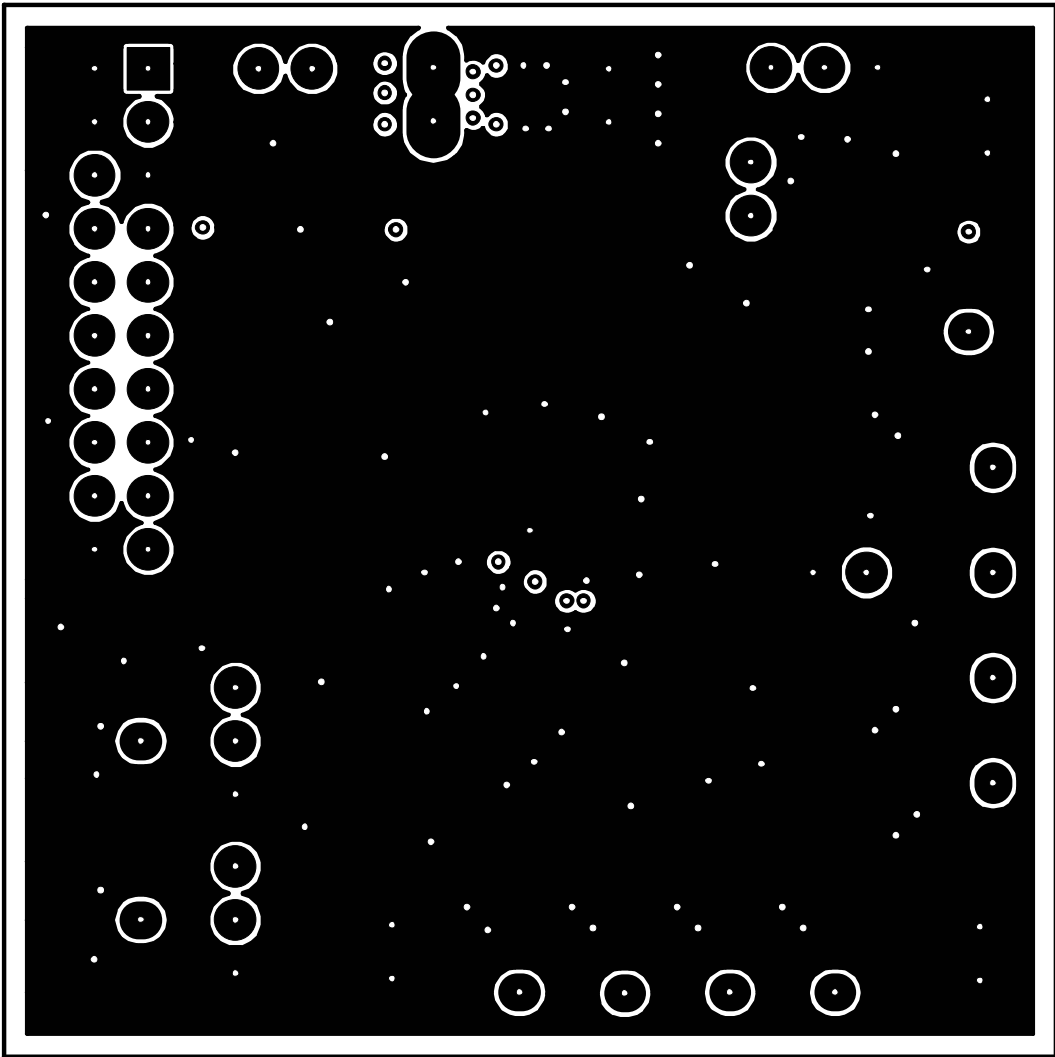
MAX20480 EV Kit Component Placement Guide – Silkscreen

MAX20480 EV Kit PCB Layouts (continued)



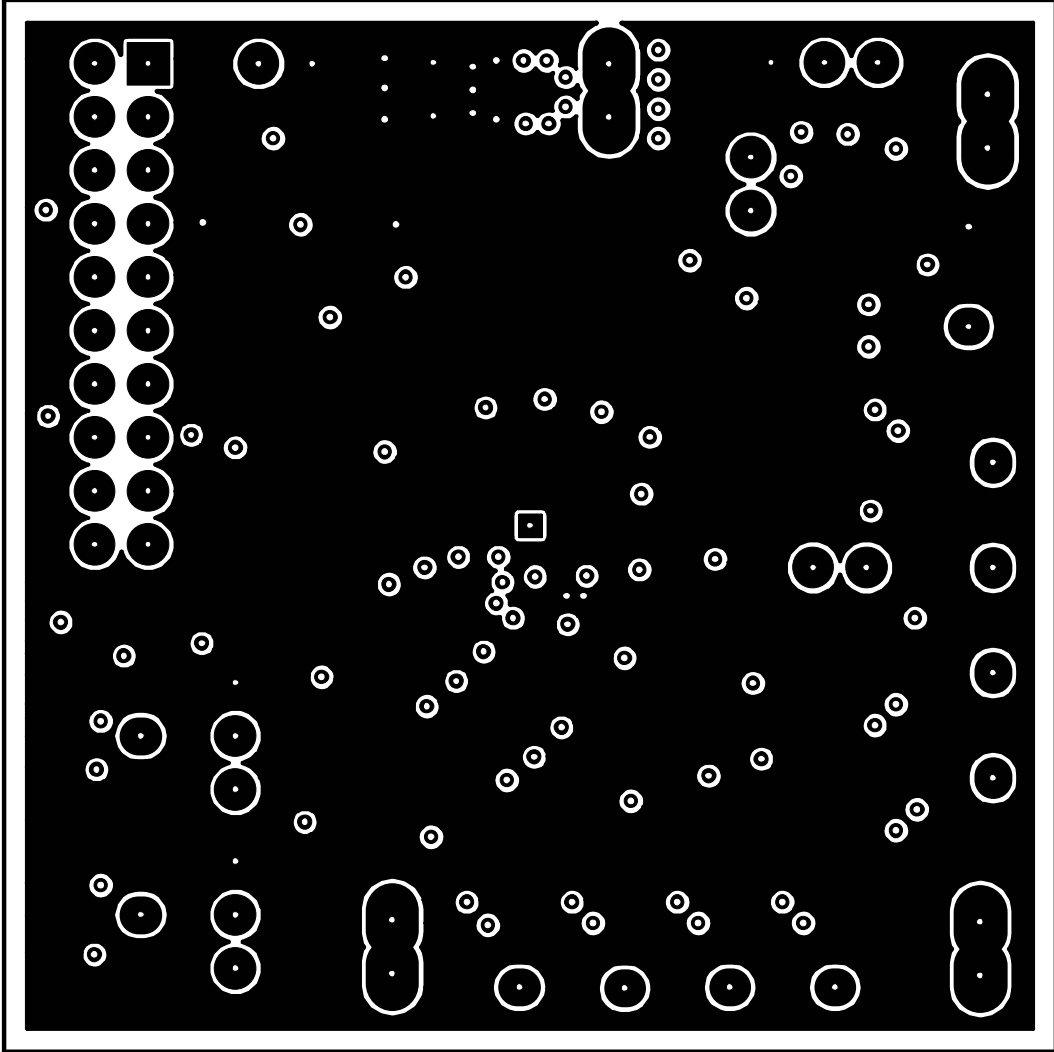
MAX20480 EV Kit Component Placement Guide – Bottom

MAX20480 EV Kit PCB Layouts (continued)



MAX20480 EV Kit Component Placement Guide – Internal 2

MAX20480 EV Kit PCB Layouts (continued)



MAX20480 EV Kit Component Placement Guide – Internal 3

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	3/19	Initial release	—
1	4/19	Updated Ordering Information and MAX20480 EV Kit Bill of Materials	2
2	9/21	Updated title, General Description , Detailed Description , MAX20480 EV Kit Bill of Materials	1, 2

