

General Description

The MAX14690 evaluation kit (EV kit) is a fully assembled and tested circuit for evaluating the MAX14690 wearable charge-management solution with I²C capability for low-power wearable application. The device includes a linear battery charger, Smart Power Selector™, two ultra-low quiescent current buck regulators, and three low-dropout (LDO) linear regulators.

Refer to the MAX14690 IC data sheet for detailed information regarding the operation and features of the devices.

Features

- RoHS Compliant
- Proven PCB Layout
- Full Assembled and Tested
- I²C Serial Interface

Detailed Description of Hardware

The MAX14690 evaluation kit (EV Kit) evaluates the MAX14690 wearable charge-management solution.

See [Table 1](#) through [Table 3](#) for pin descriptions of the three connectors (J1–J3).

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

Smart Power Selector is a trademark of Maxim Integrated Products, Inc.

Table 1. Connector J1

PIN	MAX14690	DESCRIPTION
1	GND	Ground
2	MON	Voltage Monitor Output
3	N.C.	Not Connected
4	$\overline{\text{INT}}$	Open-Drain, Active-Low Interrupt Output
5	$\overline{\text{RST}}$	Power-On Reset Output.
6	SDA	I ² C Serial Data Input/Output
7	SCL	I ² C Serial Clock Input
8	MPC1	Multipurpose Configuration Input 1
9	MPC0	Multipurpose Configuration Input 0
10	PFN2	Power Function Control Input/Output
11	PFN1	Power Function Control Input
12	GND	Ground

Table 2. Connector J2

PIN	SIGNAL	DESCRIPTION
1	L3IN	LDO3 Input
2	L3OUT	LDO3 Output
3	L2OUT	LDO2 Output
4	L1OUT	LDO1 Output
5	B2OUT	Buck Regulator 2 Output
6	B1OUT	Buck Regulator 1 Output
7	L2IN	LDO2 Input
8	L1IN	LDO1 Input

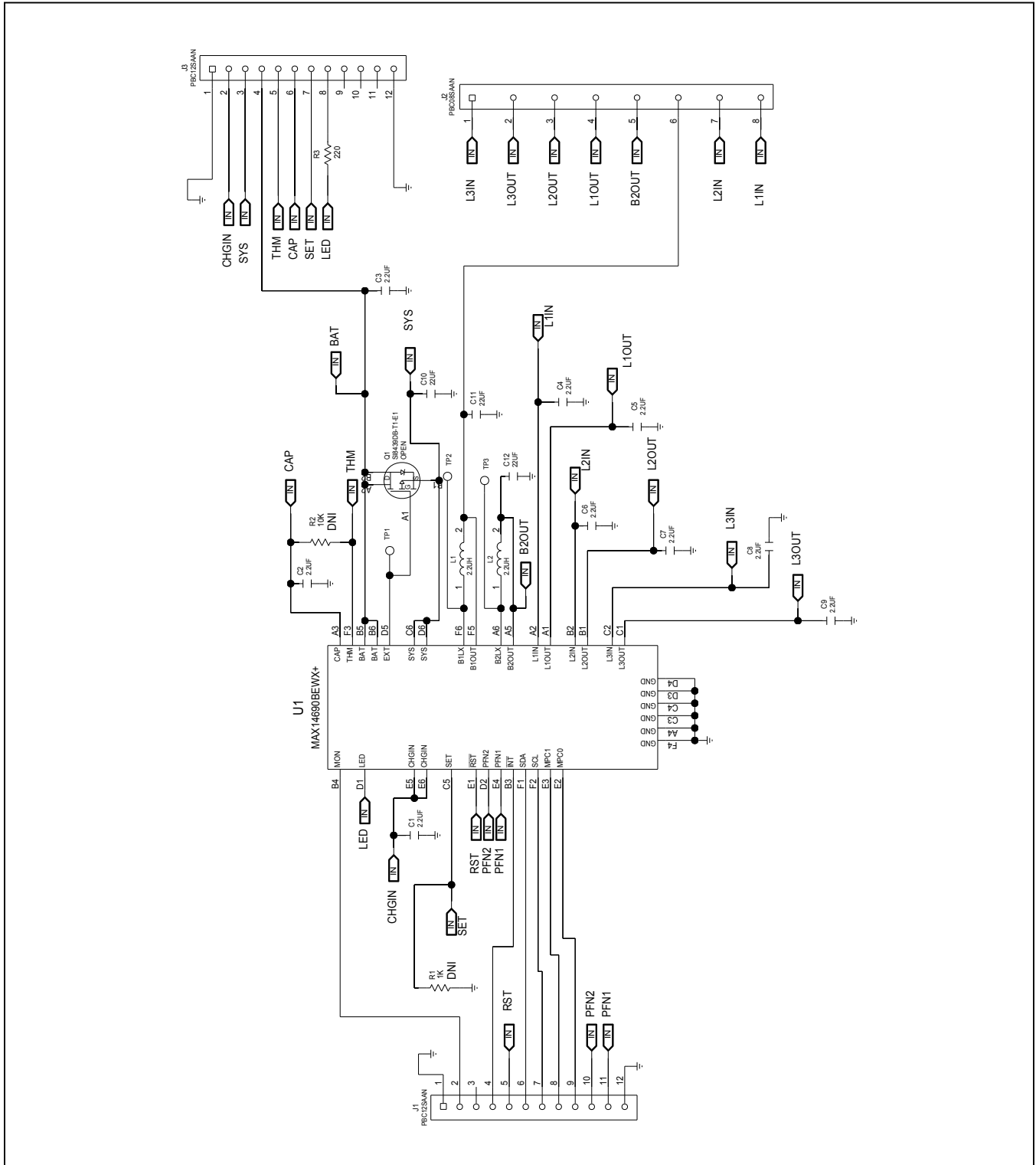
Table 3. Connector J3

PIN	SIGNAL	DESCRIPTION
1	GND	Ground
2	CHRGIN	Charger Input
3	SYS	System Load Connection
4	BAT	Battery
5	THM	Battery Temperature Thermistor Connection
6	CAP	Bypass for Internal LDO
7	SET	External Resistor Connection for Configuring Battery Charge Current
8	LED	LED Current Sink Input
9	N.C.	Not Connected
10	N.C.	Not Connected
11	N.C.	Not Connected
12	GND	Ground

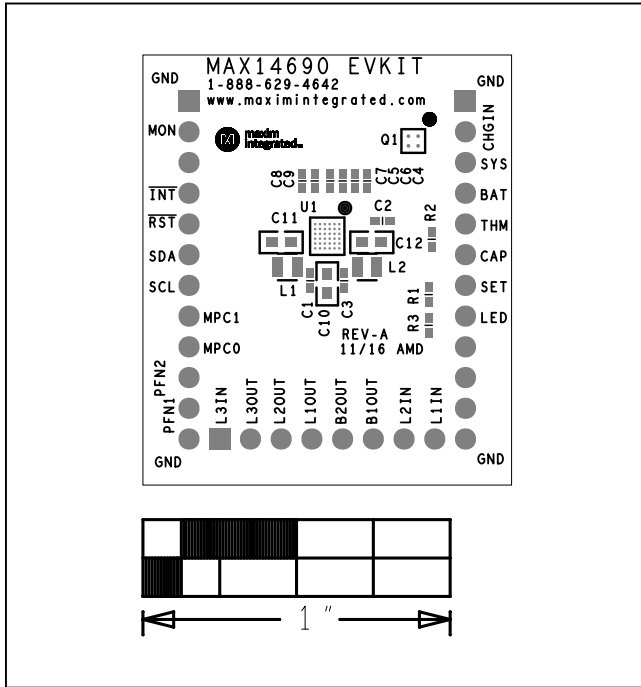
MAX14690 EV Kit Bill of Materials

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE
1	C1-C9	-	9	C1005X5R1V225M050BC	TDK	2.2UF
2	C10-C12	-	3	C1608X5R0J226M080AC	TDK	22UF
3	J1, J3	-	2	PBC12SAAN	SULLINS ELECTRONICS CORP.	PBC12SAAN
4	J2	-	1	PBC08SAAN	SULLINS ELECTRONICS CORP.	PBC08SAAN
5	L1, L2	-	2	DFE201610E-2R2M	TOKO	2.2UH
6	R3	-	1	ERA-2AED221	PANASONIC	220
7	U1	-	1	MAX14690BEWX+	MAXIM	MAX14690BEWX+
8	Q1	DNP	0	SI8439DB-T1-E1	N/A	SI8439DB-T1-E1
9	R1	DNP	0	RG1005P-102-D	SUSUMU CO LTD.	1K
10	R2	DNP	0	CRCW040210K0FK; RC0402FR-0710K	VISHAY DALE; YAGEO PHICOMP	10K
11	PCB	-	1	MAX	MAXIM	PCB
TOTAL			20			

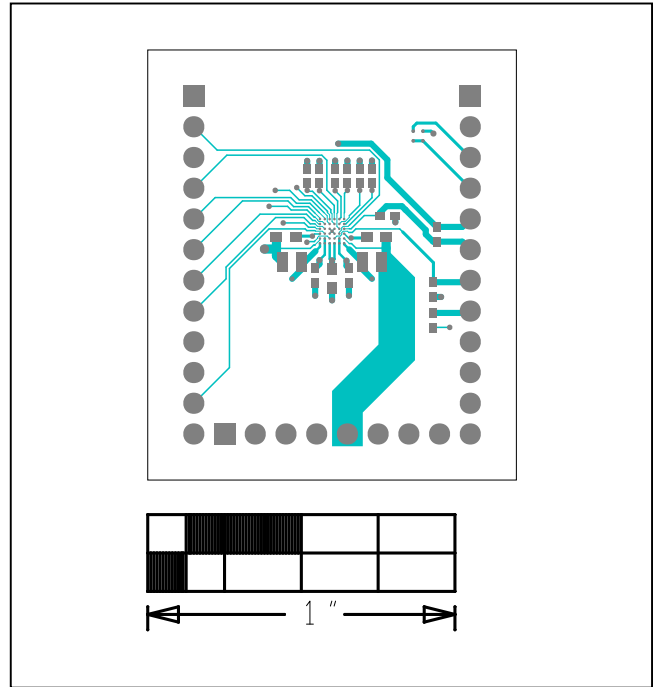
MAX14690 EV Kit Schematic



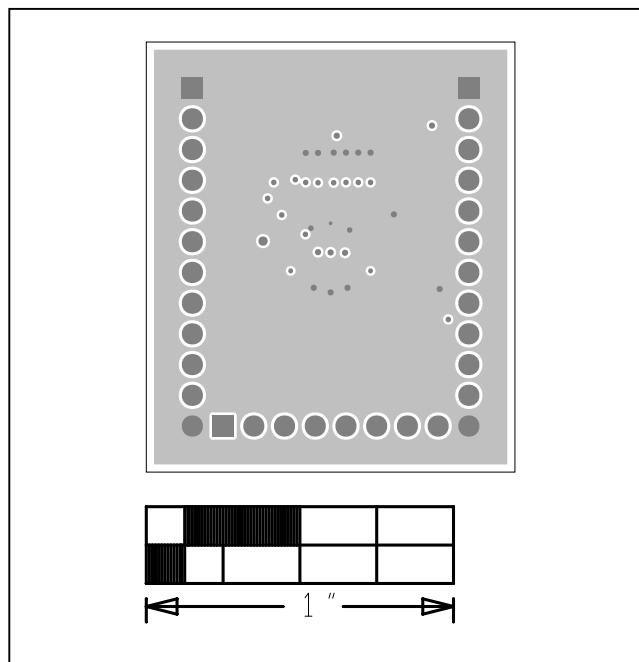
MAX14690 EV Kit PCB Layout Diagrams



MAX14690 EV Kit—Top Silkscreen

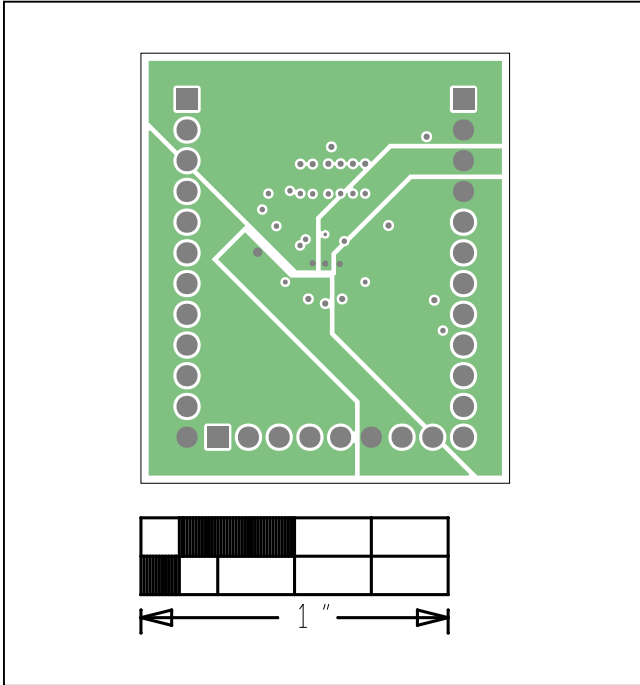


MAX14690 EV Kit—Top

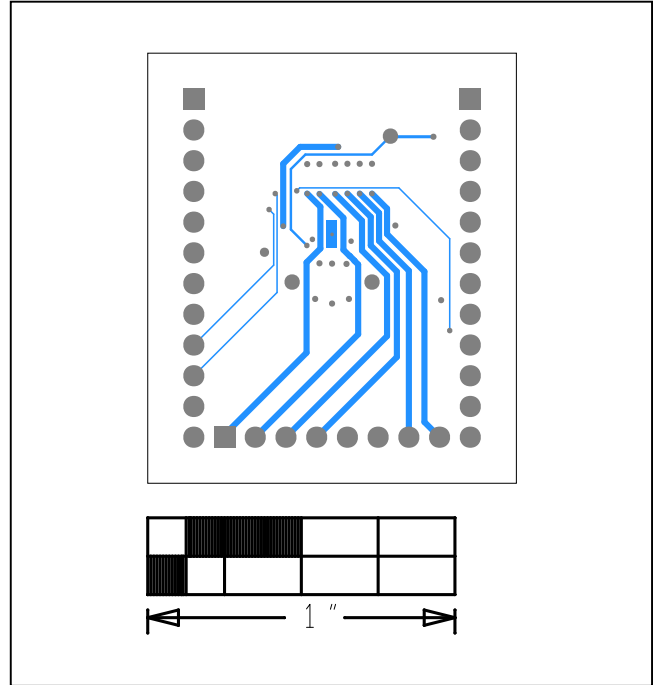


MAX14690 EV Kit—Layer 2

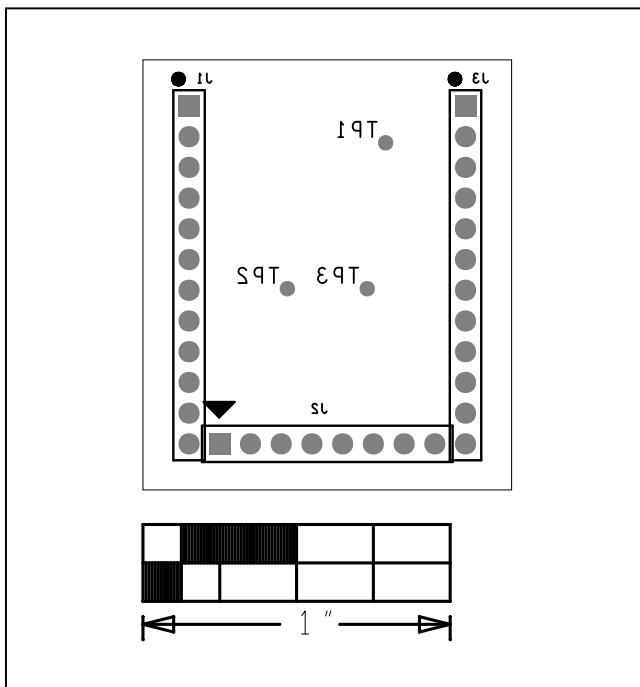
MAX14690 EV Kit PCB Layout Diagrams (continued)



MAX14690 EV Kit—Layer 3



MAX14690 EV Kit—Bottom



MAX14690 EV Kit—Bottom Silkscreen

Ordering Information

PART	TYPE
MAX14690EVKIT#	EV Kit

#Denotes RoHS compliant.

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	12/16	Initial release	—

For pricing, delivery, and ordering information, please contact Maxim Direct at 1-888-629-4642, or visit Maxim Integrated's website at www.maximintegrated.com.

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