

General Description

The MAX14662 evaluation kit (EV Kit) provides a convenient way to evaluate the MAX14662 Beyond-the-Rails 8x, single-pole, single-throw (SPST) switch. All PCB signal traces are 50Ω controlled-impedance to allow easy impedance matching. The MAX14662 is capable of both I²C and SPI programming modes, set by the SPI/I²C pin. Refer to the MAX14662 IC data sheet for detailed information regarding the operation of the IC.

Features

- 50Ω Controlled-Impedance Signal Traces
- PMOD Connector for Easy Interfacing
- RoHS Compliant
- Proven PCB Layout
- Full Assembled and Tested

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

Detailed Description

The MAX14662 evaluation kit (EV Kit) provides a convenient way to evaluate the MAX14662 Beyond-the-Rails 8x SPST switch. All PCB signal traces are 50Ω controlled-impedance to allow easy impedance matching. The MAX14662 is capable of both I²C and SPI programming modes, set by the SPI/I²C pin. Use any common I²C or SPI programmer to program the MAX14662 switches.

Operation Mode (SPI/I²C Pin)

The MAX14662 can be programmed through the I²C and SPI interfaces. Set the SPI/I²C pin high for SPI mode and low for I²C mode. In I²C mode, the I²C slave address of the IC can be set to one of four different values. To select the slave address, connect A0 and A1 to GND or VCC through the DOUT/AD1 and CS/AD0 signals of JU3, as indicated in [Table 1](#).

Table 1. Slave Address Configuration

LOGIC INPUTS		I ² C SLAVE ADDRESS									
A1	A0	B7	B6	B5	B4	B3	B2	B1	R/W	READ ADD	WRITE ADD
0	0	1	0	0	1	1	0	0	1/0	0x99	0x98
0	1	1	0	0	1	1	0	1	1/0	0x9B	0x9A
1	0	1	0	0	1	1	1	0	1/0	0x9D	0x9C
1	1	1	0	0	1	1	1	1	1/0	0x9F	0x9E

Table 2. Connector JU1

PIN	SIGNAL	DESCRIPTION
1	B1	B connection to switch 1
2	B2	B connection to switch 2
3	B3	B connection to switch 3
4	B4	B connection to switch 4
5	B5	B connection to switch 5
6	B6	B connection to switch 6
7	B7	B connection to switch 7
8	B8	B connection to switch 8

Table 3. Connector JU2

PIN	SIGNAL	DESCRIPTION
1	A1	A connection to switch 1
2	A2	A connection to switch 2
3	A3	A connection to switch 3
4	A4	A connection to switch 4
5	A5	A connection to switch 5
6	A6	A connection to switch 6
7	A7	A connection to switch 7
8	A8	A connection to switch 8

Table 4. Connector JU3

PIN	SIGNAL		DESCRIPTION
	SPI/I ² C = 1	SPI/I ² C = 0	
1	AD0	CS	I ² C address bit 0/SPI CS signal
2	SDA	DIN	I ² C serial data/SPI data input
3	AD1	DOUT	I ² C address bit 1/SPI data output
4	SCL	SCLK	I ² C serial clock/SPI serial clock
5	GND	GND	Ground
6	VCC	VCC	Power Supply Input
7	N.C.	N.C.	Not connected
8	\overline{SD}	\overline{SD}	Active-low shutdown (low power mode, turns all switches off)
9	SPI/I ² C	SPI/I ² C	Serial mode select SPI (high) or I ² C (low), supply Input for DOUT.
10	N.C.	N.C.	Not connected
11	GND	GND	Ground
12	VCC	VCC	Power supply input

Ordering Information

PART	TYPE
MAX14662EVKIT#	EV Kit

#Denotes RoHS compliant.

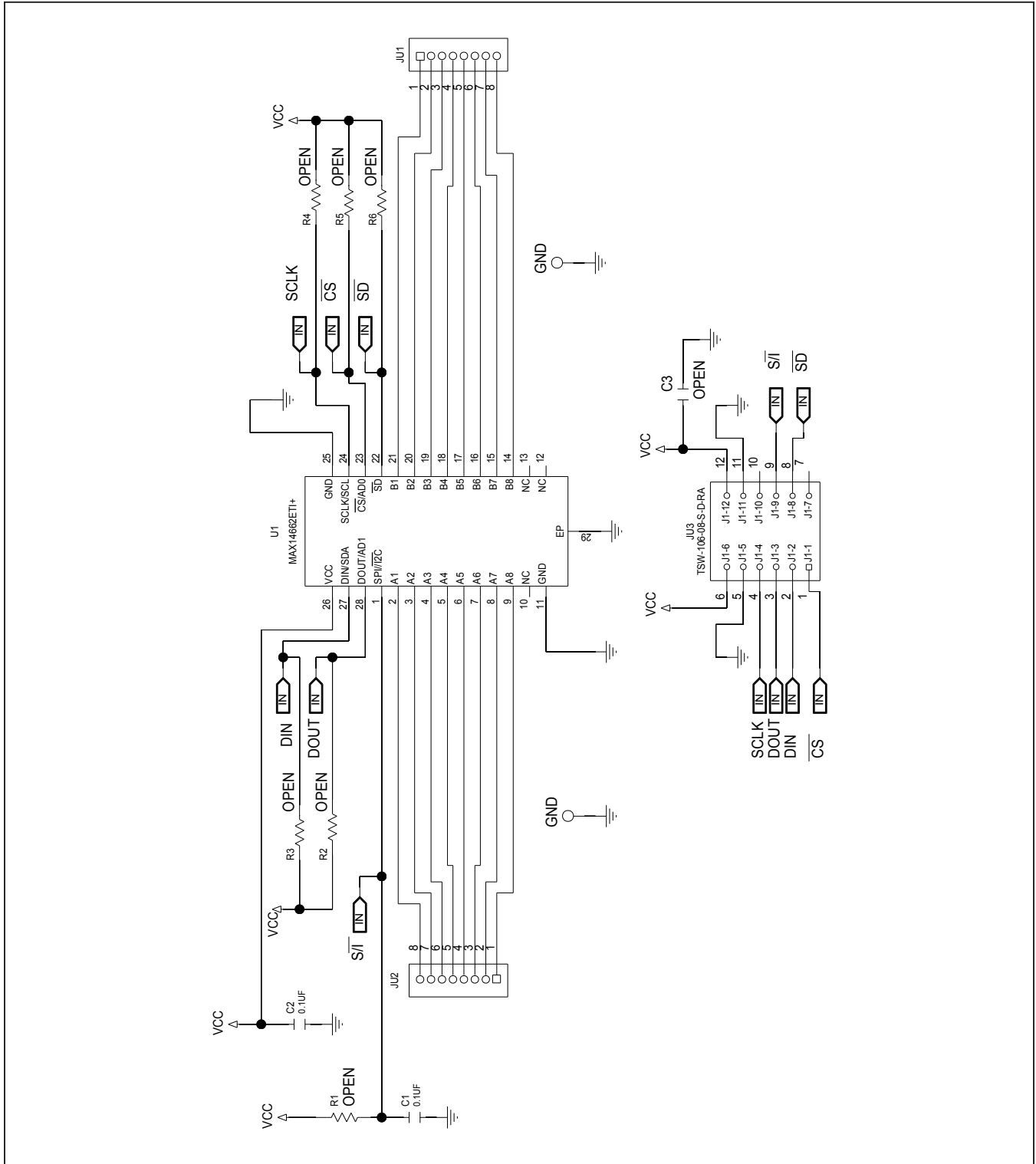
Component Suppliers

SUPPLIER	WEBSITE
Murata Electronics North America, Inc.	www.murata.com

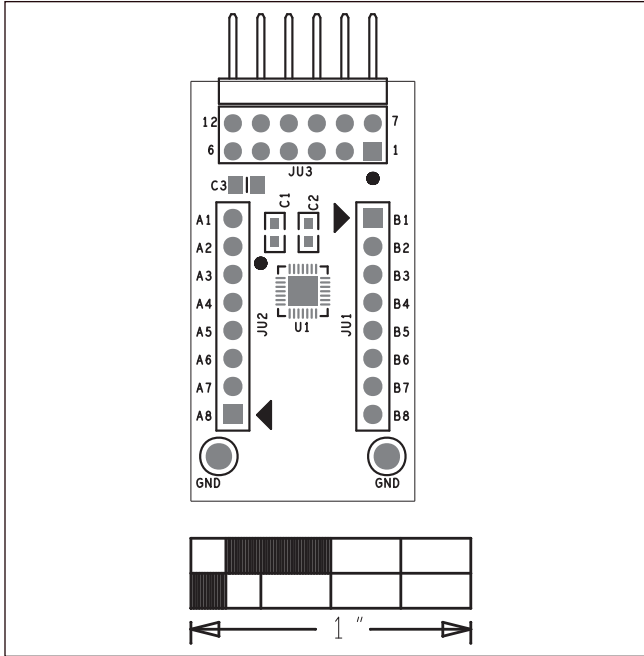
MAX14662 EV Kit Bill of Materials

ITEM	REF DES	DNI/ DNP	QTY	Mfr P/N	MANUFACTURER	VALUE	DESCRIPTION
1	C1, C2	-	2	C0603C104K5RAC; C1608X7R1H104K	KEMET; TDK	0.1UF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.1UF; 50V; TOL=10%; TG=-55 DEGC TO +125 DEGC; TC=X7R;
2	JU1, JU2	-	2	PBC08SAAN	ELECTRONICS CORP.	PBC08SAAN	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 8PINS; -65 DEGC TO +125 DEGC
3	JU3	-	1	TSW-106-08-S-D-RA	SAMTEC	TSW-106-08-S-D-RA	CONNECTOR; THROUGH HOLE; DOUBLE ROW; RIGHT ANGLE; 12PINS;
4	TP1, TP2	-	2	5010	KEYSTONE	N/A	TESTPOINT WITH 1.80MM HOLE DIA, RED, MULTIPURPOSE;
5	U1	-	1	MAX14662ETI+	MAXIM	MAX14662ETI+	IC; SPST; BEYOND-THE-RAILS 8 X SPST; TQFN28-EP 4X4
6	PCB	-	1	MAX14662	MAXIM	PCB	PCB:MAX14662
7	C3	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 0805 NON-POLAR CAPACITOR
8	R1-R6	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 0603 RESISTOR
TOTAL			9				

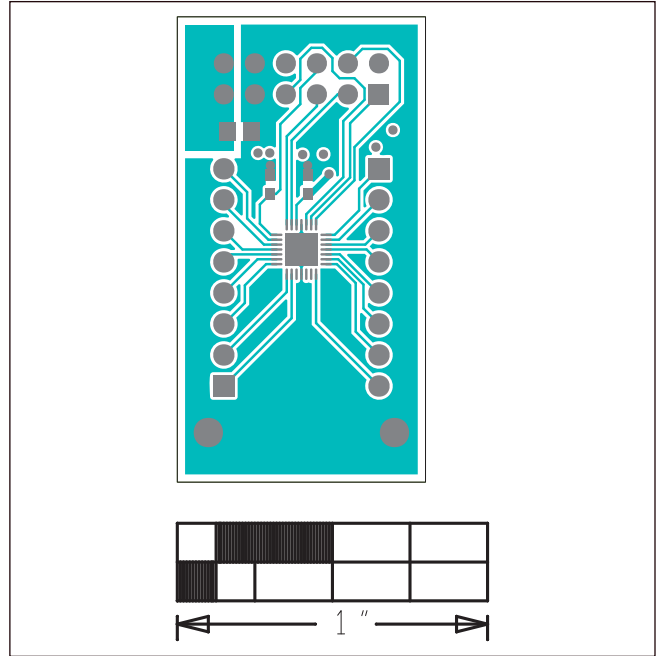
MAX14662 EV Kit Schematic



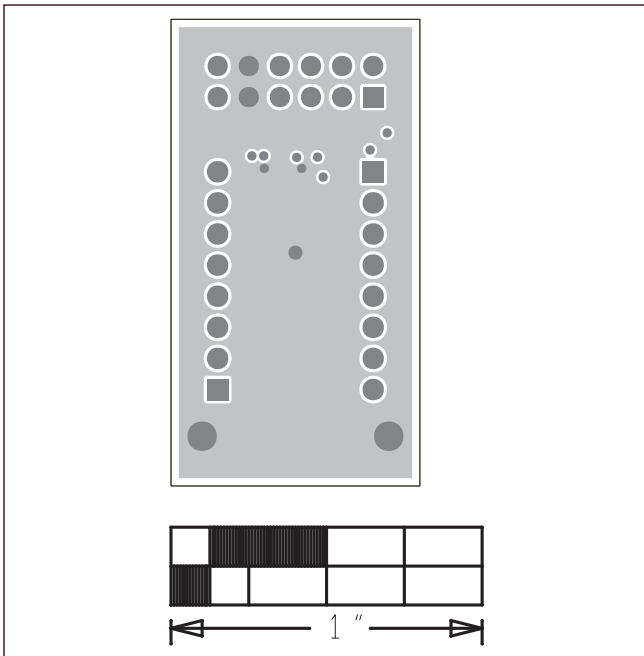
MAX14662 EV Kit PCB Layout Diagrams



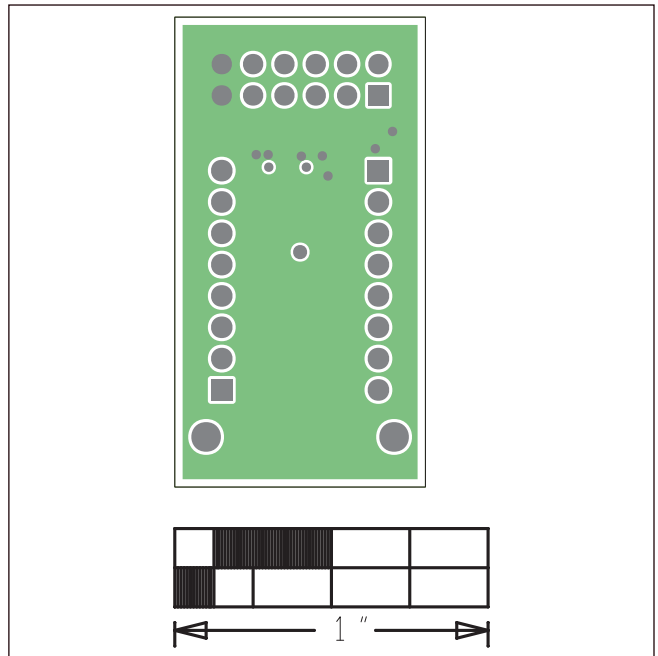
MAX14662 EV Kit—Top Silkscreen



MAX14662 EV Kit—Top

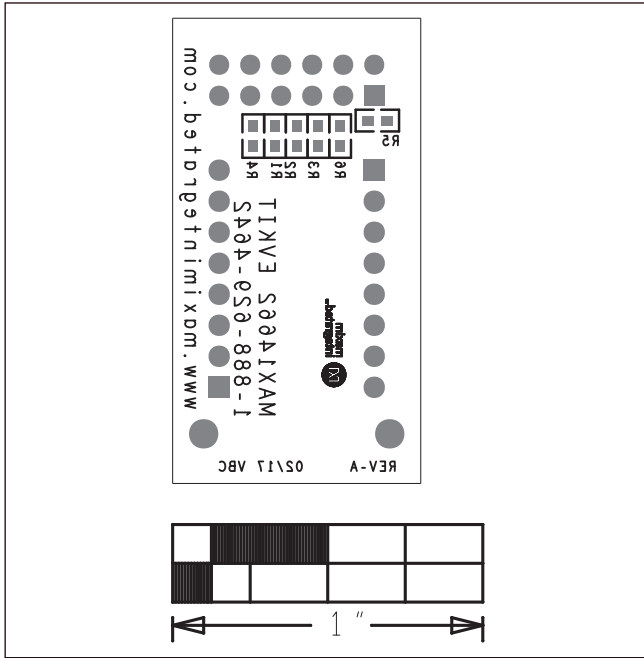


MAX14662 EV Kit—Layer 2

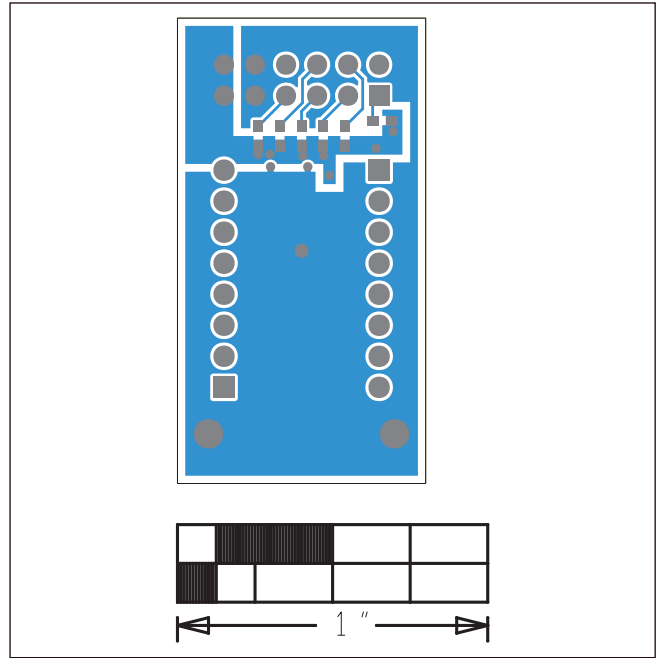


MAX14662 EV Kit—Layer 3

MAX14662 EV Kit PCB Layout Diagrams (continued)



MAX14662 EV Kit—Bottom Silkscreen



MAX14662 EV Kit—Bottom

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	4/17	Initial release	—

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