

## General Description

The MAX14713 evaluation kit (EV kit) is a fully assembled and tested circuit board that demonstrates the MAX14713 power path selector. To evaluate the MAX14714, request a sample from Maxim and replace the MAX14713 with the MAX14714.

## EV Kit Contents

- MAX14713 EV Kit Board

## Features

- 1.6V to 5.5V Operating Voltage Range
- Proven PCB Layout
- Fully Assembled and Tested

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

## Quick Start

### Required Equipment

- MAX14713 EV kit
- 3V DC power supply
- Two 5V DC power supplies
- Multimeter

### Procedure

The MAX14713 EV kit is fully assembled and tested. Follow these steps to verify board operation:

- 1) Verify that all jumpers are in their default positions.
- 2) Connect 3V DC supply to VIO. Turn on the power supply.
- 3) Connect one 5V DC supply to IN1. Connect one 5V DC supply to IN2.
- 4) Turn on IN1 supply. Verify LED1 is on and OUT is 5V.
- 5) Turn off IN1 supply. Verify LED1 is off.
- 6) Turn on IN2 supply. Verify LED1 is on and OUT is 5V.
- 7) Turn off IN2 supply. Verify LED1 is off.
- 8) Set IN1 to 4V and IN2 to 3.5V, and turn on both power supplies. Verify OUT goes to 4V.
- 9) Increase IN2 to 4.1V. Note that OUT is still 4V.
- 10) Slowly increase IN2. Verify OUT = IN2 when IN2 reaches ~4.2V.
- 11) After OUT = IN2. Decrease IN2 to 3.9V. Verify OUT = IN2 still.
- 12) Slowly decrease IN2. Verify OUT = IN1(4V) when IN2 reaches ~3.8V.

### Detailed Description of Hardware

The MAX14713 EV kit is a fully assembled and tested circuit board demonstrating the MAX14713 power path selector IC in a 15-bump, surface-mount, wafer-level package (WLP).

The MAX14713 EV kit features an LED to indicate that input is powered from either channel 1 or 2.

#### Enable Inputs

Use JU1 and JU2 to enable the device. See [Table 1](#) for jumper settings.

**Table 1. Enable Input Jumper Settings**

JUMPER	SHUNT POSITION	DESCRIPTION
JU1	1-2	$\overline{EN1}$ is connected to VIO (TP6) through R1, channel 1 is disabled.
	2-3*	$\overline{EN1}$ is connected to GND through R1, channel 1 is enabled.
JU2	1-2	$\overline{EN2}$ is connected to VIO (TP6) through R2, channel 2 is disabled.
	2-3*	$\overline{EN2}$ is connected to GND through R2, channel 2 is enabled.

\*Default position.

**Table 2. Output Load Jumper Settings**

JUMPER	SHUNT POSITION	DESCRIPTION
JU3	Installed	OUT is connected to R5, 10Ω.
	Not installed*	OUT is not connected to R5.
JU5	Installed	OUT is connected to R3, 1kΩ.
	Not installed*	OUT is not connected to R3.
JU7	Installed	OUT is connected to C4 and C5.
	Not installed*	OUT is not connected to C4 and C5.

\*Default position.

#### Output Load

Use JU3, JU5, and JU7 to select output load. See [Table 2](#) for jumper settings.

#### VIO Power Source

Use JU6 to select the VIO power source. See [Table 3](#) for jumper settings.

#### LED Indicator

Use JU8 to enable the LED indicator. See [Table 4](#) for jumper settings.

**Table 3. VIO Power Source Jumper Settings**

JUMPER	SHUNT POSITION	DESCRIPTION
JU6	Installed	VIO is powered from either IN1 or IN2. Do not connect power on VIO (TP6) if shunt is installed.
	Not installed*	VIO is powered from TP6.

\*Default position.

**Table 4. LED Indicator Jumper Settings**

JUMPER	SHUNT POSITION	DESCRIPTION
JU8	Installed*	LED1 is enabled. LED1 turns on when either IN1 or IN2 is powered.
	Not installed	LED1 is disabled.

\*Default position.

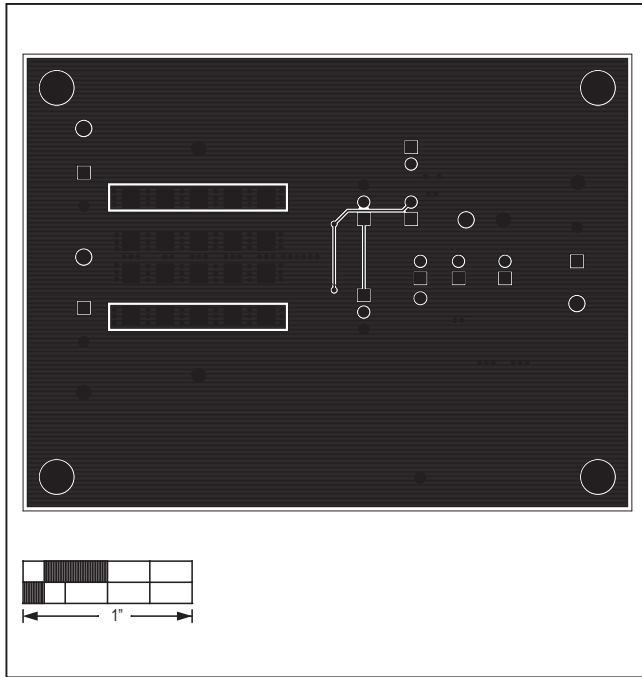
**MAX14713 EV Kit Bill of Materials**

DESIGNATION	QTY	DESCRIPTION
C1–C3	3	1 $\mu$ F $\pm$ 10%, 50V X5R ceramic capacitors (0805)
C4, C5	2	47 $\mu$ F $\pm$ 10%, 16V tantalum capacitors
C6, C7	2	10 $\mu$ F $\pm$ 10%, 25V X5R ceramic capacitors (1206)
C8–C27	20	DNI (2917)
D1, D2	2	75V 0.15A diodes, Diodes Incorporated 1N4148WS-7-F
JU1, JU2	2	3-pin single-row headers
JU3, JU5–JU8	5	2-pin single-row headers
LED1	1	Green LED
R1–R3, R6	4	1k $\Omega$ $\pm$ 1% resistors (0805)
R5	1	10 $\Omega$ $\pm$ 1% 5W resistor, Ohmite WNE10RFET
TB1–TB3	3	Terminal block
TP1, TP3, TP7–TP9	5	Black test points
TP2, TP4–TP6	4	Red test points
U1	1	Power path selector (15 WLP), Maxim MAX14713EWL+
—	7	Shunts
—	1	PCB: MAX14713 EVKIT

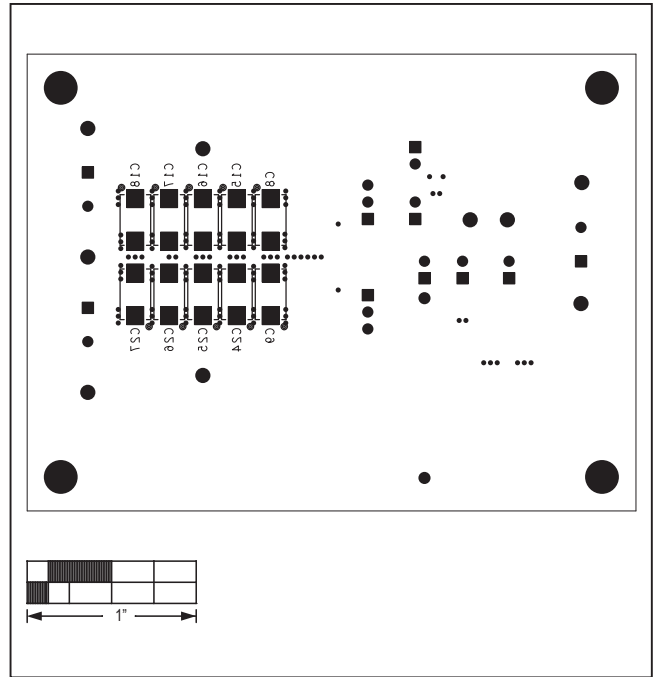




MAX14713 EV Kit PCB Layout Diagrams (continued)



MAX14713 EV Kit PCB Layout—Solder Side



MAX14713 EV Kit Component Placement Guide—Solder Side

Ordering Information

PART	TYPE
MAX14713EVKIT#	EV Kit

#Denotes lead(Pb)-free and RoHS compliant.

## Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	2/17	Initial release	—
1	8/17	Added MAX14714 to data sheet title	1–7

*Maxim Integrated cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a Maxim Integrated product. No circuit patent licenses are implied. Maxim Integrated reserves the right to change the circuitry and specifications without notice at any time.*