

MAXIM

MAX3620 Evaluation Kit

General Description

The MAX3620 evaluation kit (EV kit) is an assembled demonstration board that provides for complete evaluation of the MAX3620 high speed clock delay line.

The EV kit comes assembled with a MAX3620A (0.75ns delay). Samples of MAX3620B (1.00ns delay), MAX3620C (1.25ns delay), and MAX3620D (1.50ns delay) are also included to be installed by the user.

Ordering Information

PART	TEMPRANGE	ICPACKAGE
MAX3620AEVKIT	-40°C to +85°C	6 TDFN
MAX3620BEVKIT	-40°C to +85°C	6 TDFN
MAX3620CEVKIT	-40°C to +85°C	6 TDFN
MAX3620DEVKIT	-40°C to +85°C	6 TDFN

Selector Guide

PART	PKG CODE	TOP MARK
MAX3620A	T633-2	AJX
MAX3620B	T633-2	AIY
MAX3620C	T633-2	AIZ
MAX3620D	T633-2	AJA

Component List

DESIGNATION	QTY	DESCRIPTION
J1, J2, J3, J4, J5, J6	6	SMA connectors, edge mount
U1	1	MAX3620AETT 3mmX3mm 6 TDFN
—	1	MAX3620BETT 3mmX3mm 6 TDFN
—	1	MAX3620CETT 3mmX3mm 6 TDFN
—	1	MAX3620DETT 3mmX3mm 6 TDFN

Features

- ◆ Fully Assembled and Tested
- ◆ Additional samples of MAX3620B, MAX3620C, and MAX3620D Devices Included.

MAX3620 Quick Start

The MAX3620 EV Kit can be configured to evaluate either single-ended or differential signals. For single-ended operation, leave the unused input open. The EV Kit has a calibration trace equal in length to the signal line. If matched cables are used, delay can accurately be determined by measuring the timing between the signal at the calibration strip output and the signal at the output of the MAX3620. The evaluation kit has a 50Ω interface, 50Ω test equipment should be used.

To evaluate the MAX3620A:

- 1) Using matched 50Ω SMA cables, connect one output of a differential clock or pulse generator, set up for 300MHz operation, to IN1. Connect the other differential output to the calibration strip (J6).
- 2) Using another set of matched 50Ω SMA cables, connect OUT1 and the output of the calibration strip (J5) to the inputs of a 50Ω oscilloscope.

Note: The timing skew between oscilloscope channels will affect delay measurements. Be sure to perform a skew calibration before applying signals to the oscilloscope.
- 3) Measure the delay from the output of the calibration strip to OUT1 at the signal mid-points. Because the two polarities of a single differential signal are used as two separate signals, the output of the delay line will be 180° out of phase from the output of the calibration strip. Measure the delay from the calibration-strip rising edge to the lagging-delay-line falling edge (or from the calibration-strip falling edge to the lagging-delay-line rising edge).

If evaluation of MAX3620B, MAX3620C, or MAX3620D is desired, see Table 1 in the MAX3620 datasheet for the recommended operating conditions of each device. When changing between versions, be sure to connect the exposed pad to the EV Kit GND.

Evaluates: MAX3620

MAX3620 Evaluation Kit

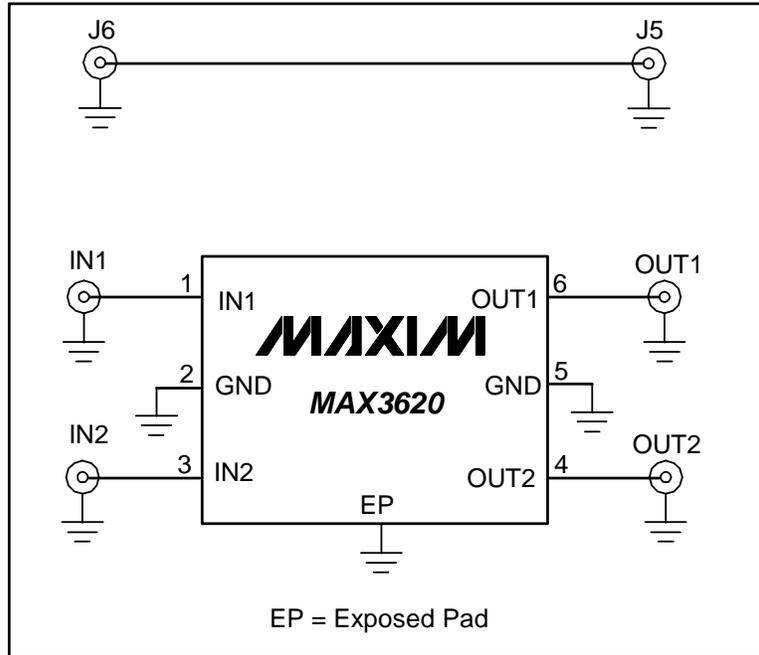


Figure 1. MAX3620 EV Kit Schematic

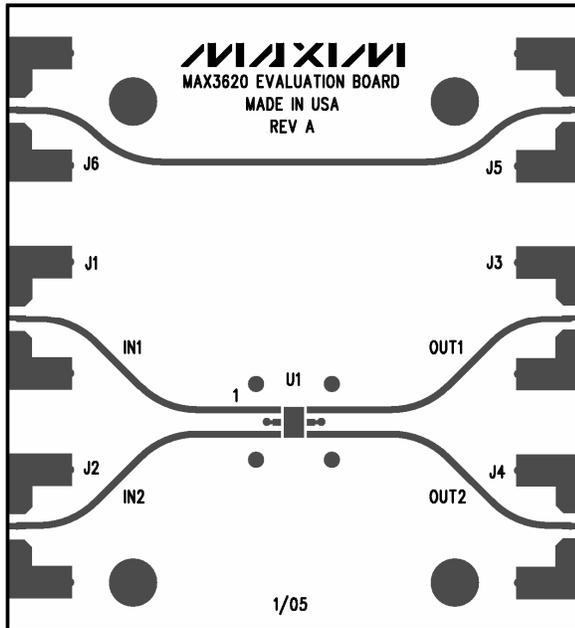


Figure 2. MAX3620 EV Kit PC Board Layout—Component Side

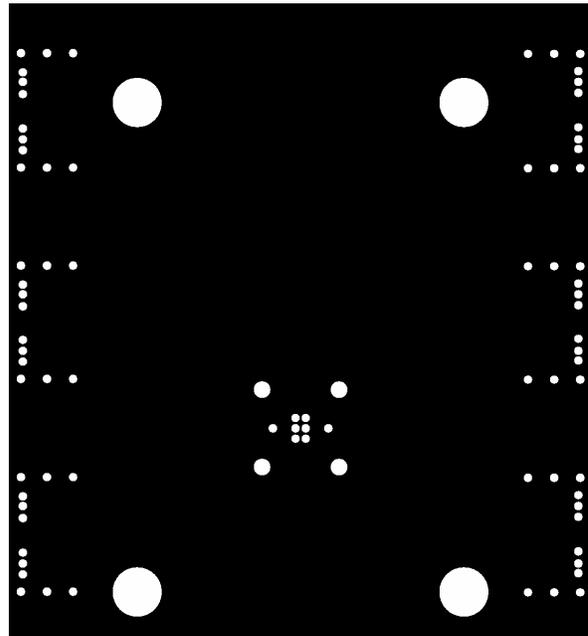


Figure 3. MAX3620 EV Kit PC Board Layout Power Plane

MAX3620 Evaluation Kit

Evaluates: MAX3620

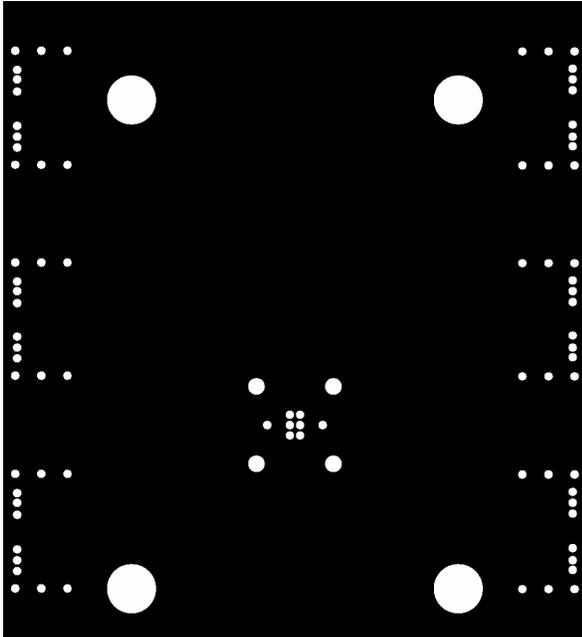


Figure 4. MAX3610 EV Kit PC Board Layout Ground Plane

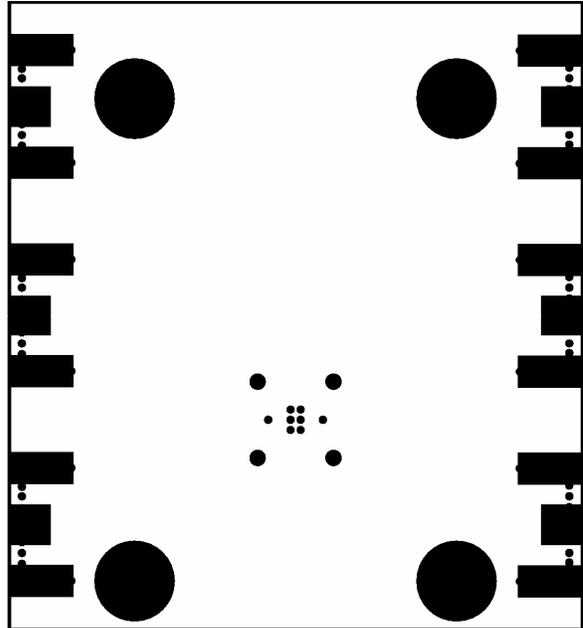


Figure 5. MAX3610 EV Kit Component Placement Guide, Solder Side

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Maxim Integrated Products, 120 San Gabriel Drive, Sunnyvale, CA 94086 408-737-7600 _____ 3

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