



# MAX2622/MAX2623/MAX2624 Evaluation Kits

## General Description

The MAX2622/MAX2623/MAX2624 evaluation kits (EV kits) simplify evaluation of the MAX2622/MAX2623/MAX2624 VCOs. These kits enable testing of the devices' RF performance and require no additional support circuitry. The signal output uses an SMA connector to facilitate the connection to RF test equipment.

## Component List

DESIGNATION	QTY	DESCRIPTION
C2, C3, C4, C8	4	220pF $\pm$ 5% ceramic capacitors (0603) Murata GRM39COH0G221J50
C6	1	0 $\Omega$ resistor (0603)
C7	1	0.1 $\mu$ F $\pm$ 5% ceramic capacitor (0603) Taiyo Yuden EMK107BJ104KA
R1, R2	2	1k $\Omega$ $\pm$ 5% resistors (0603)
OUT	1	SMA connector (PC edge mount) EFJohnson 142-0701-801 or Digi-Key J502-ND
JU1	4	3-pin headers
U1	1	MAX2622EUA, MAX2623EUA, or MAX2624EUA

## Component Suppliers

SUPPLIER	PHONE	FAX
Murata Electronics	800-831-9172	814-238-0490
Taiyo Yuden	408-573-4150	408-573-4159

**NOTE:** Please indicate that you are using the MAX2622, MAX2623, or MAX2624 when contacting these component suppliers.

## Quick Start

The MAX2622/MAX2623/MAX2624 EV kits are fully assembled and factory tested. Follow the instructions in the *Connections and Setup* section for proper device evaluation.

## Features

- ◆ Easy Evaluation of MAX2622/MAX2623/MAX2624
- ◆ +2.7V to +5.5V Single-Supply Operation
- ◆ RF Output Matched to 50 $\Omega$
- ◆ All Critical Peripheral Components Included

## Ordering Information

PART	TEMP. RANGE	IC-PACKAGE
MAX2622EVKIT	-40°C to +85°C	8 $\mu$ MAX
MAX2623EVKIT	-40°C to +85°C	8 $\mu$ MAX
MAX2624EVKIT	-40°C to +85°C	8 $\mu$ MAX

## Test Equipment Required

This section lists the recommended test equipment to verify operation of the MAX2622/MAX2623/MAX2624. It is intended as a guide only, and some substitutions are possible.

- A two-channel power supply at +2.7V to +5.5V
- An ammeter (optional)
- An RF spectrum analyzer (HP 8561E, for example) that covers the operating frequency range of the MAX2622/MAX2623/MAX2624, as well as a few harmonics
- A 50 $\Omega$  SMA cable

## Connections and Setup

This section provides a step-by-step guide to the functions and operation of these EV kits.

- 1) Connect a DC supply set to +3V (through an ammeter, if desired) to the VCC and GND terminals on the EV kit.
- 2) Apply +3V to the SHDN control input.
- 3) Turn on the DC supply. The supply current should read about 8mA.
- 4) Connect the VCO output to a spectrum analyzer with a 50 $\Omega$  coaxial cable.
- 5) Apply a variable DC voltage to the TUNE input (+0.4V to +2.4V).
- 6) Check f<sub>MIN</sub> and f<sub>MAX</sub> on the spectrum analyzer by varying the tuning voltage.
- 7) Check the output power level (-3dBm typ).

**Evaluate: MAX2622/MAX2623/MAX2624**



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## **MAX2622/MAX2623/MAX2624 Evaluation Kits**

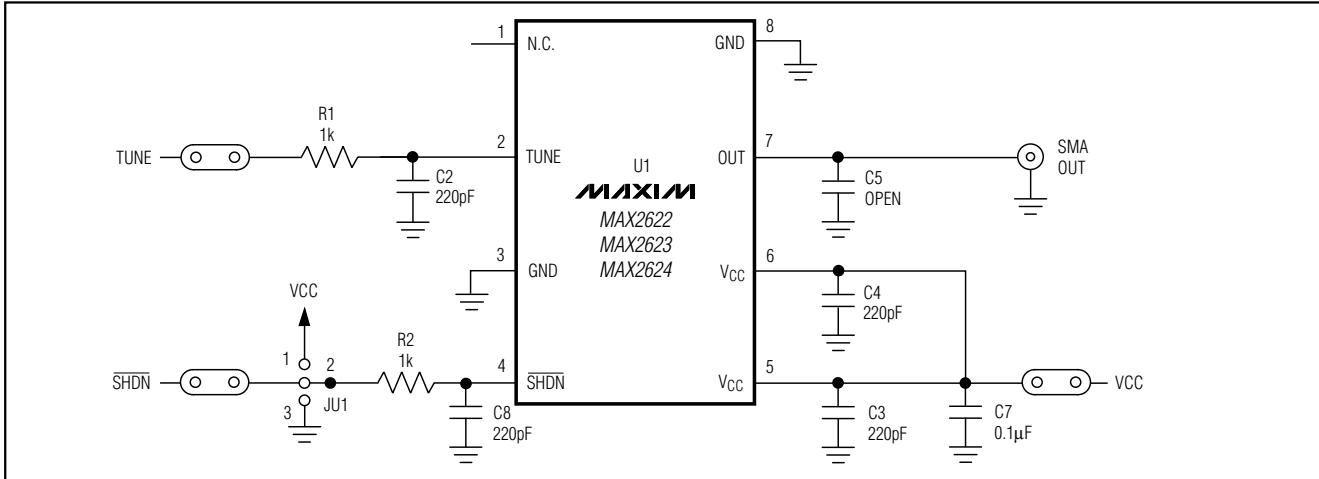


Figure 1. MAX2622/MAX2623/MAX2624 EV Kits Schematic

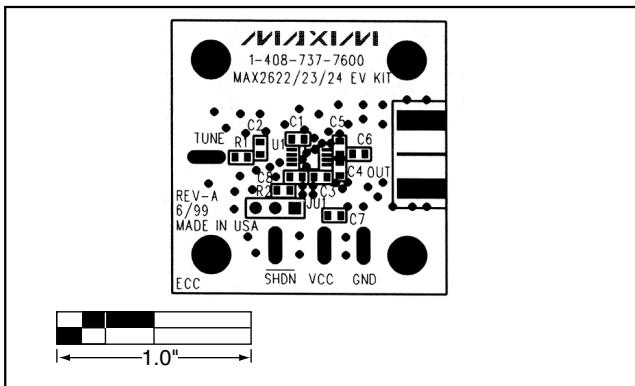


Figure 2. MAX2622//MAX2623/MAX2624 EV Kits Component Placement Guide—Component Side

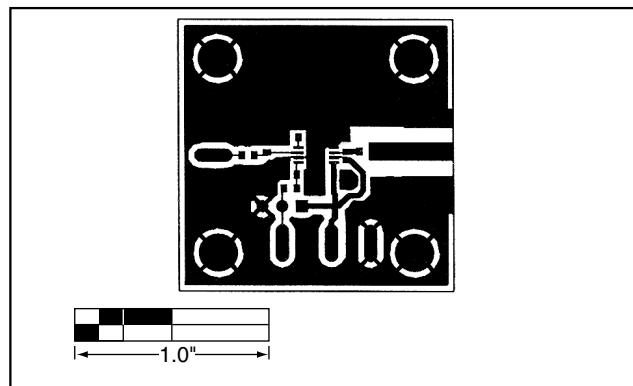


Figure 3. MAX2622//MAX2623/MAX2624 EV Kits PC Board Layout—Component Side

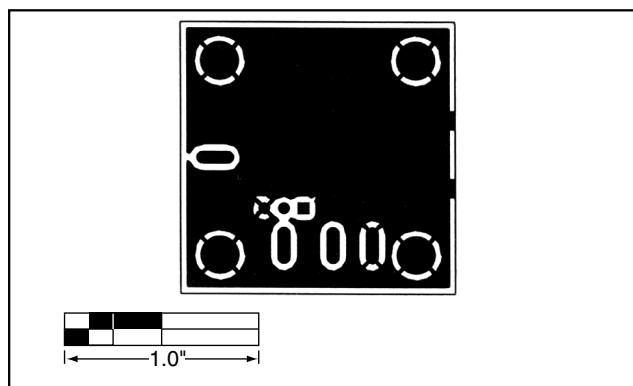


Figure 4. MAX2622/MAX2623/MAX2624 EV Kits PC Board Layout—Ground Plane

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