MIXIM

MAX2753 Evaluation Kit

Evaluates: MAX2753

General Description

The MAX2753 evaluation kit (EV kit) simplifies evaluation of the MAX2753 VCO. This kit enables testing of the device's RF performance and requires no additional support circuitry. The signal outputs use two SMA connectors to facilitate the connection to RF test equipment.

Component List

DESIGNATION	QTY	DESCRIPTION
C2, C3, C4	3	220pF ±5% ceramic capacitors (0603) Murata GRM39COH0G221J50
C1, C5	2	0.1µF ±5% ceramic capacitors (0603) Taiyo Yuden EMK107BJ104KA
R1, R2	2	1kΩ ±5% resistors (0603)
OUTP, OUTN	2	SMA connector (PC edge-mount) EFJohnson 142-0701-801
JU1	4	3-pin headers
U1	1	MAX2753EUA

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 MAX2753 when contacting these component suppliers.*

Quick Start

The MAX2753 EV kit is fully assembled and factory tested. Follow the instructions in the *Connections and Setup* section for proper device evaluation.

Test Equipment Required

This section lists the recommended test equipment to verify operation of the MAX2753. 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 MAX2753, as well as a few harmonics

Features

♦ **Easy Evaluation of MAX2753**

♦ **+2.7V to +5.5V Single-Supply Operation**

♦ **RF Outputs Matched to 50Ω**

♦ **All Critical Peripheral Components Included**

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX2753EVKIT	-40°C to +85°C	8 µMAX

* A 50Ω SMA cable

* A 50Ω SMA termination

* A 50Ω balun (optional)

Connections and Setup

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

1) Connect 50Ω SMA termination to OUTN.

2) Connect a DC supply set to +3V (through an ammeter, if desired) to the V_{CC} and GND terminals on the EV kit.

3) Apply +3V to the $\overline{SHDN}$ control input.

4) Turn on the DC supply. The supply current should read about 9mA.

5) Connect the VCO output, OUTP, to a spectrum analyzer with a 50Ω coaxial cable (minimize length). To measure differential output power, a 50Ω balun is required.

6) Apply a variable DC voltage to the TUNE input (+0.4V to +2.4V).

7) Check f_{MIN} and f_{MAX} on the spectrum analyzer by varying the tuning voltage.

8) Check the output power level (-11dBm typ single-ended, -8dBm differential).

9) Connect the 50Ω termination to OUTP

10) Repeat steps 5 through 8.

For price, delivery, and to place orders, please contact Maxim Distribution at 1-888-629-4642, or visit Maxim's website at www.maxim-ic.com.
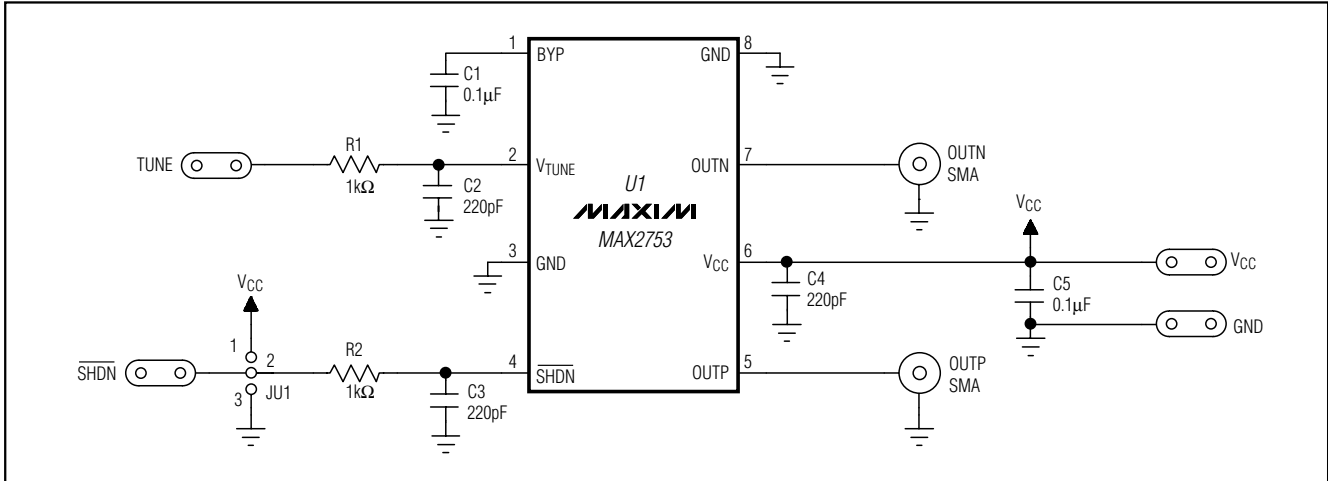
MAX2753 Evaluation Kit
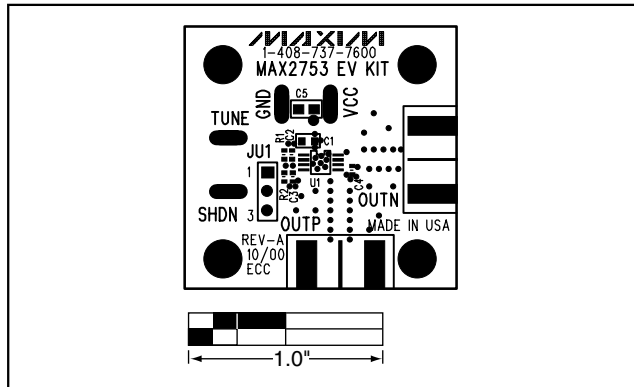
Figure 1. MAX2753 EV Kit Schematic

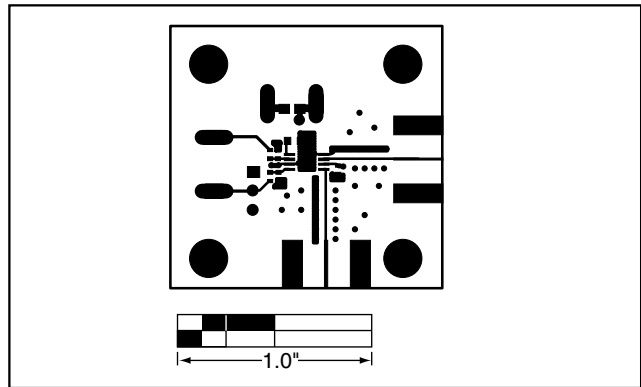Figure 2. MAX2753 EV Kit Component Placement Guide—Component Side

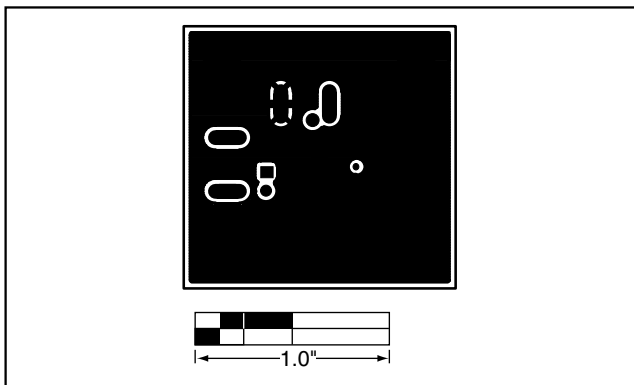Figure 3. MAX2753 EV Kit PC Board Layout—Component Side

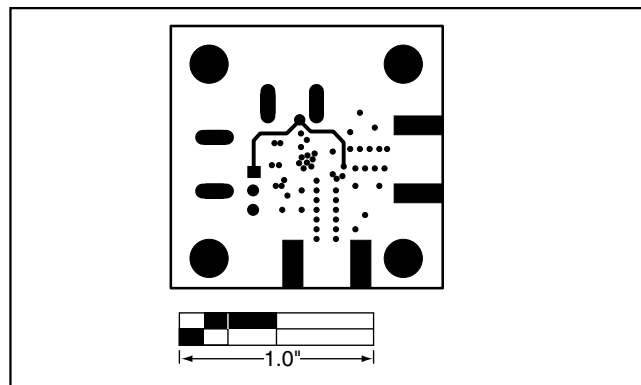Figure 4. MAX2753 EV Kit PC Board Layout—Ground Plane

Figure 5. MAX2753 EV Kit PC Board Layout—Solder Side

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