User's Guide
TCA9536EVM User's Guide

TEXAS INSTRUMENTS

ABSTRACT

This document walks through how to use the TCA9536EVM and the features the evaluation module includes.

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1 Introduction

The TCA9536 evaluation module provides the user with options to test both the TCA9536 and TCA9537. The evaluation module allows for adjustable pull-up resistors on SDA/SCL as well as LED indicators on power up and the GPOs.

2 Features

The TCA9536 evaluation module includes:

- TCA9536DTM package populated on the board
- Adjustable pull-up resistors on I2C bus
- TCA9536 footprint for D package supported but NOT populated
- TCA9537DGS populated on the board
- Optional LED connections (J5 and J13)to the GPIO ports of both TCA9536 and TCA9537
- #INT LED indicator on TCA9537 INT pin (Shunt J15)
- #RESET toggle on TCA9537 using J14 shunt
- Connection to external processor through SDA/SCL on J5 (male) and J17 (female)

3 Adjustable pull-up resistors

TCA9536EVM comes with adjustable pull-up resistors which allows for the user to select from a 4.7 kΩ down to a ~515 Ω resistor. The pull-up resistor selectors (J4 and J8)are shown in Figure 3-1.

Table 3-1. Effective pull-up resistor values table

Pull-up resistor (Ω)	Equivalent pull-up resistance (Ω)
4.7 k || 2 k	1.4 k
4.7 k || 820	~699
2k || 820	~580
4.7 k || 2k || 820	~515
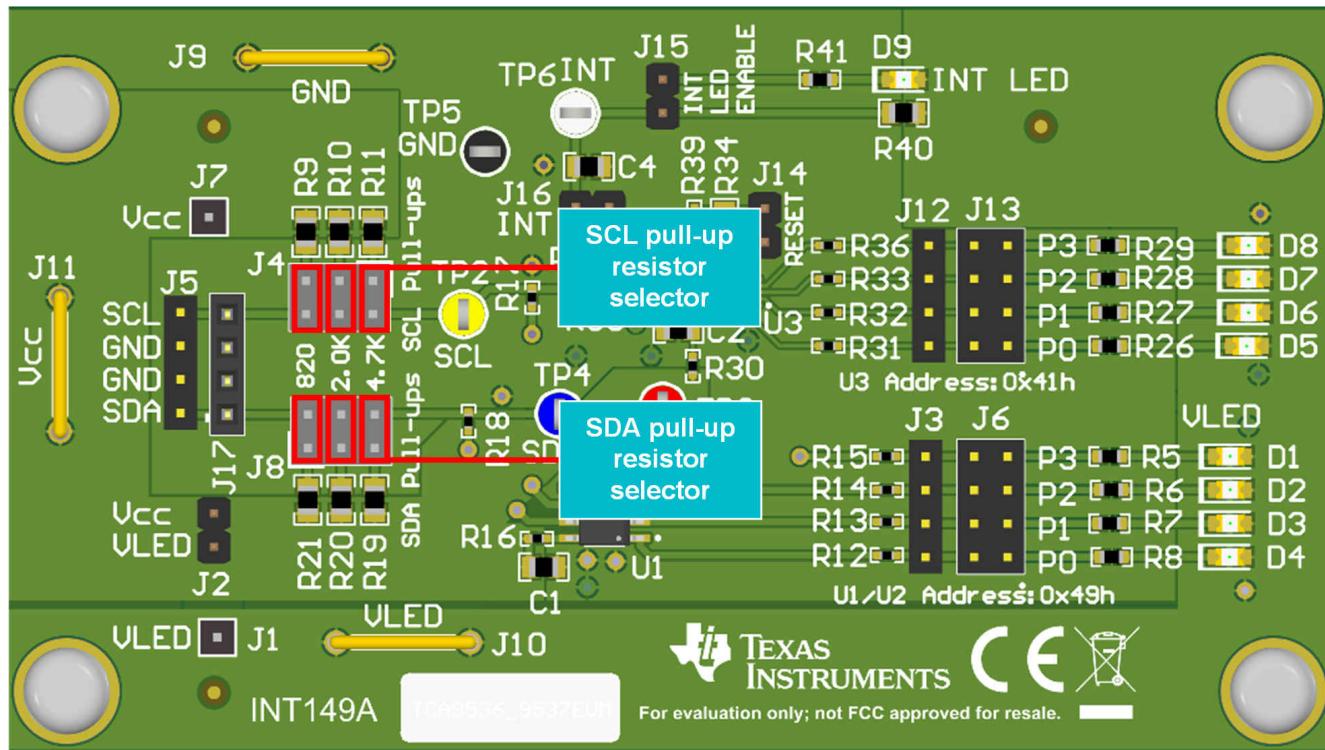
Figure 3-1. Adjustable pull-up resistors

4 Device locations

Figure 4-1 shows the location of the TCA9536DTM and TCA9537DGS.
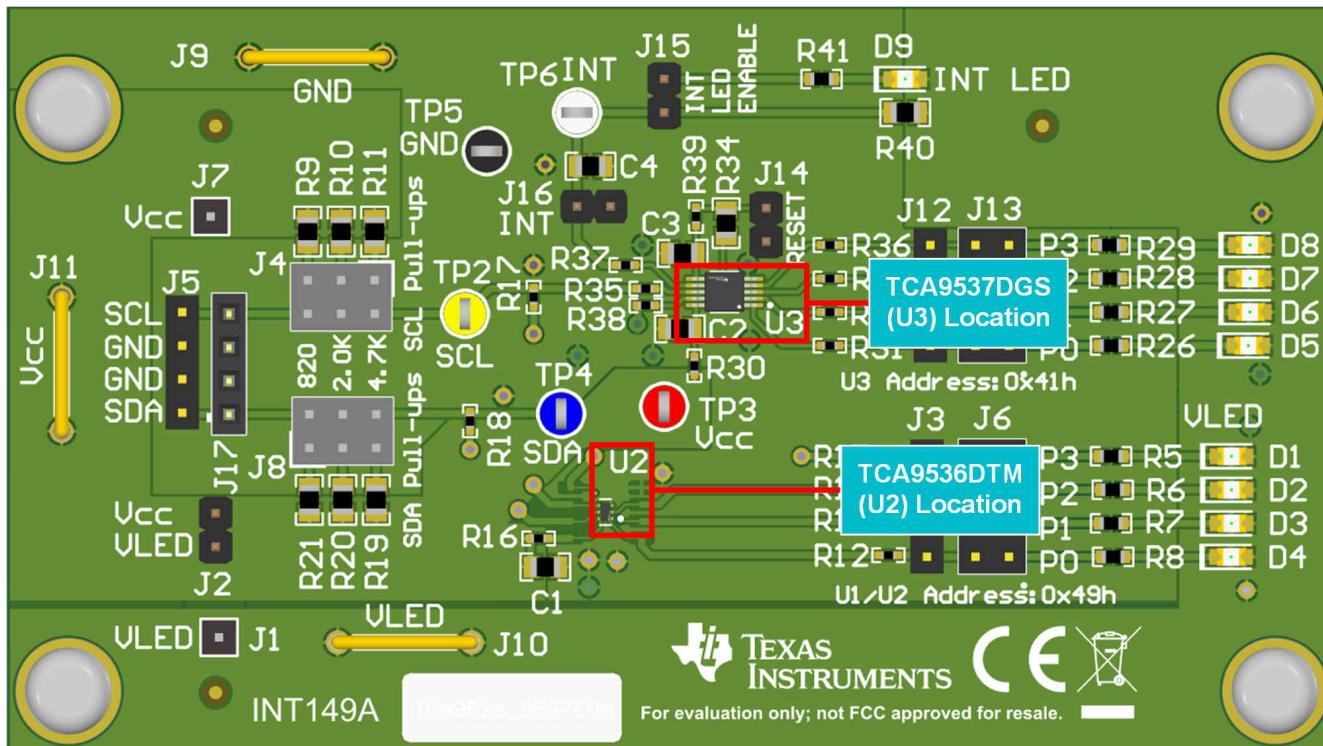
Figure 4-1. Location of TCA9537DGS (U3) and TCA9536DTM (U2)

The TCA9536EVM provides the option to use the TCA9536 in the VSSOP package. The location of this device is can be in the figure below (not populated out of the box).
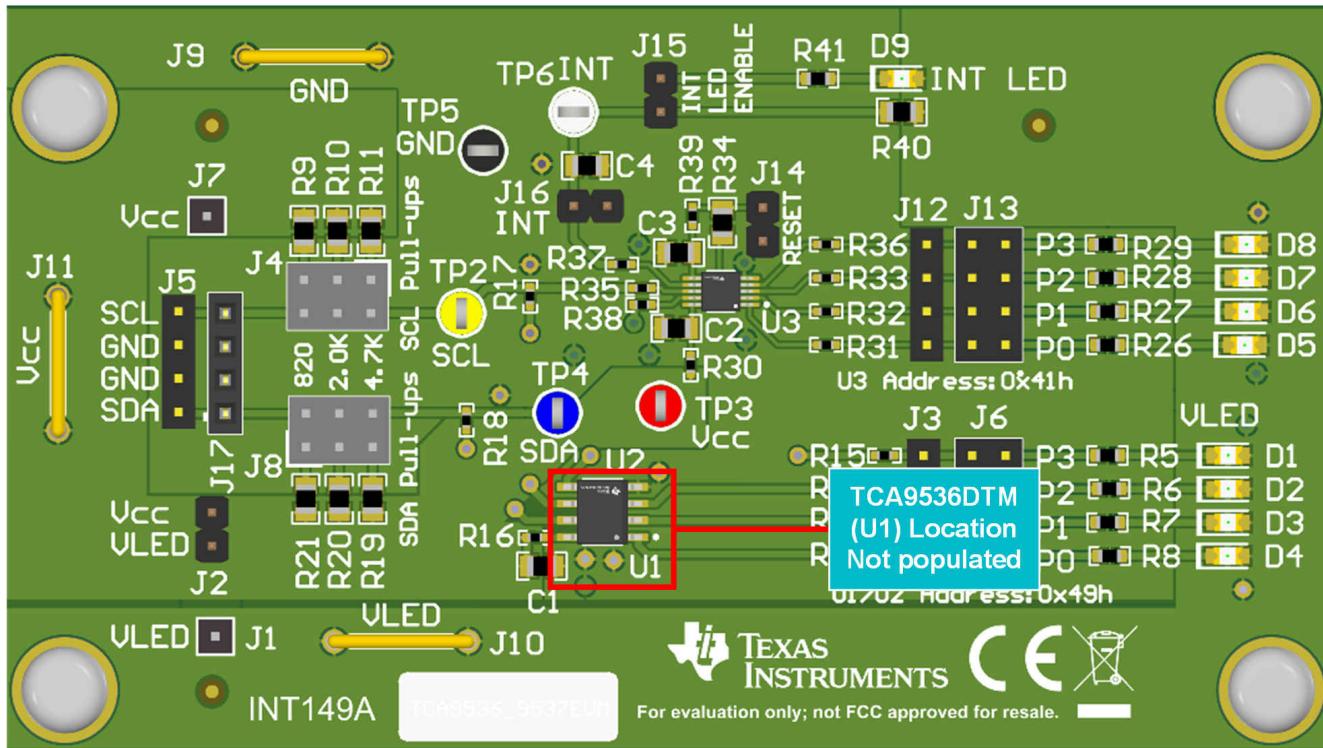

Figure 4-2. Location of TCA9536D package (U1)

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5 Schematic

illustrates the EVM schematic.
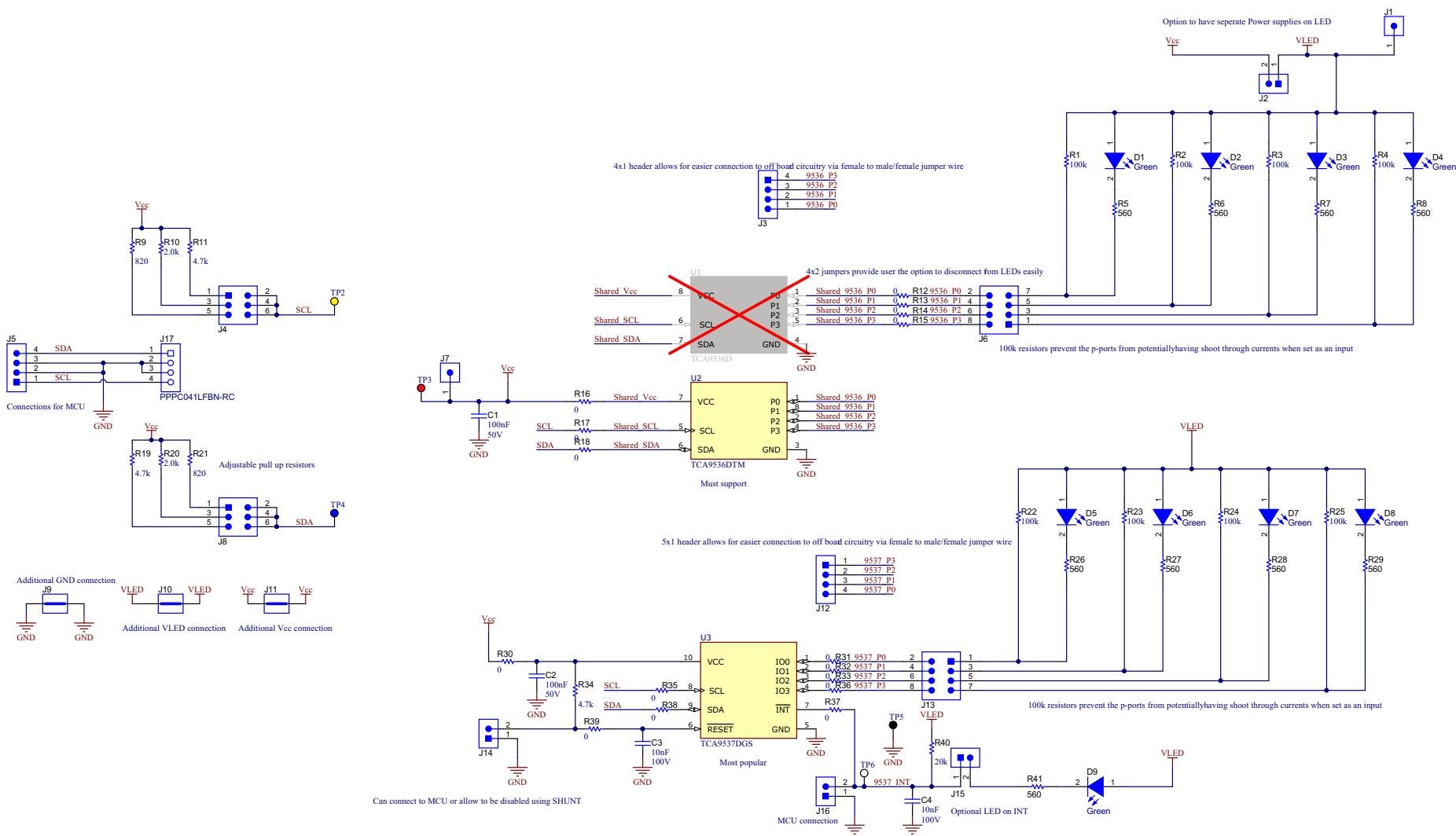
Figure 5-1. TCA9536EVM Schematic

6 Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

DATE	REVISION	NOTES
September 2021	*	Initial Release

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