NOTIFICATION OF ELECTRICAL VERIFICATION RESULTS

2019-02-18

QEM-CCR-1901-00691

DELTA ELECTRONICS INC

BMC **TI Device: TPS65910A31A1RSLR**

Notification of Electrical Verification Results:

Texas Instruments' BMC business entity has completed electrical verification for QEM-CCR-1901-00691 . Verification results and next actions follow:

Customer Name:	DELTA ELECTRONICS INC	Customer Contact:	Carl Lin
Customer Site:	CHUNGLI INDUSTRIAL ZONE (TAIWAN)	Contact e-mail:	CARL.CK.LIN@deltaww.com
Customer Part #:		TI Device Type:	TPS65910A31A1RSLR
Customer Job #:		TI QEM Event #:	QEM-CCR-1901-00691
Event Type / Origin of Detection:	Prototype	Quantity of units returned:	1
Cust. Sent Date:		Event Open Date:	2019-01-17
Elect. Verification Complete Date:	2019-02-18	Current Task:	Publish Verification Report

TI QEM-CCR-1901-00691 includes 1 TI device(s) as follows:

The following returned TI device(s) were evaluated per the standard return flow process across the specified operating voltage and temperature ranges.

Identification of TI's Material						
TI's Part Number:	TPS65910A31A1RSLR					
Unit ID	**Customer Unit ID**	**LTC**	**Assembly Lot #**	**Assembly Site**	**Fab Lot #**	**Fab Site**
1						

Customer Problem Description:

Customer reported issue at: **Prototype**

The following customer provided issue description was extracted from the information submitted by the customer with the returned TI devices and was entered into TI's Quality Event Management System (QEM):

> Issue type: Electrical | Issue type details: Pin48 output is abnormal. This pin in the datasheet is set to 11 for 3.3V, but the output is 4V.
> DELTA prototype failure, returned from their end customer for pin48 output abnormal. This pin in the datasheet is set to 11 for 3.3V; for failure unit, output from pin48 is 4V. Failure rate: 1/30. Per check with customer, they copy their schematic from our reference design in http://www.ti.com/lit/ug/swcu093f/swcu093f.pdf.

TI Problem Description:

The customer return was tested at TI utilizing the production test program suite to attempt to confirm the reported noncompliance and the following findings were noted:

ATE Verification: The customer unit passed 10X loop testing at 25C on the VLCT18 tester

Bench Testing: The customer unit passed bench testing for pin 48 (VAUX2) output function. No abnormal output behavior was noticed during the bench analysis

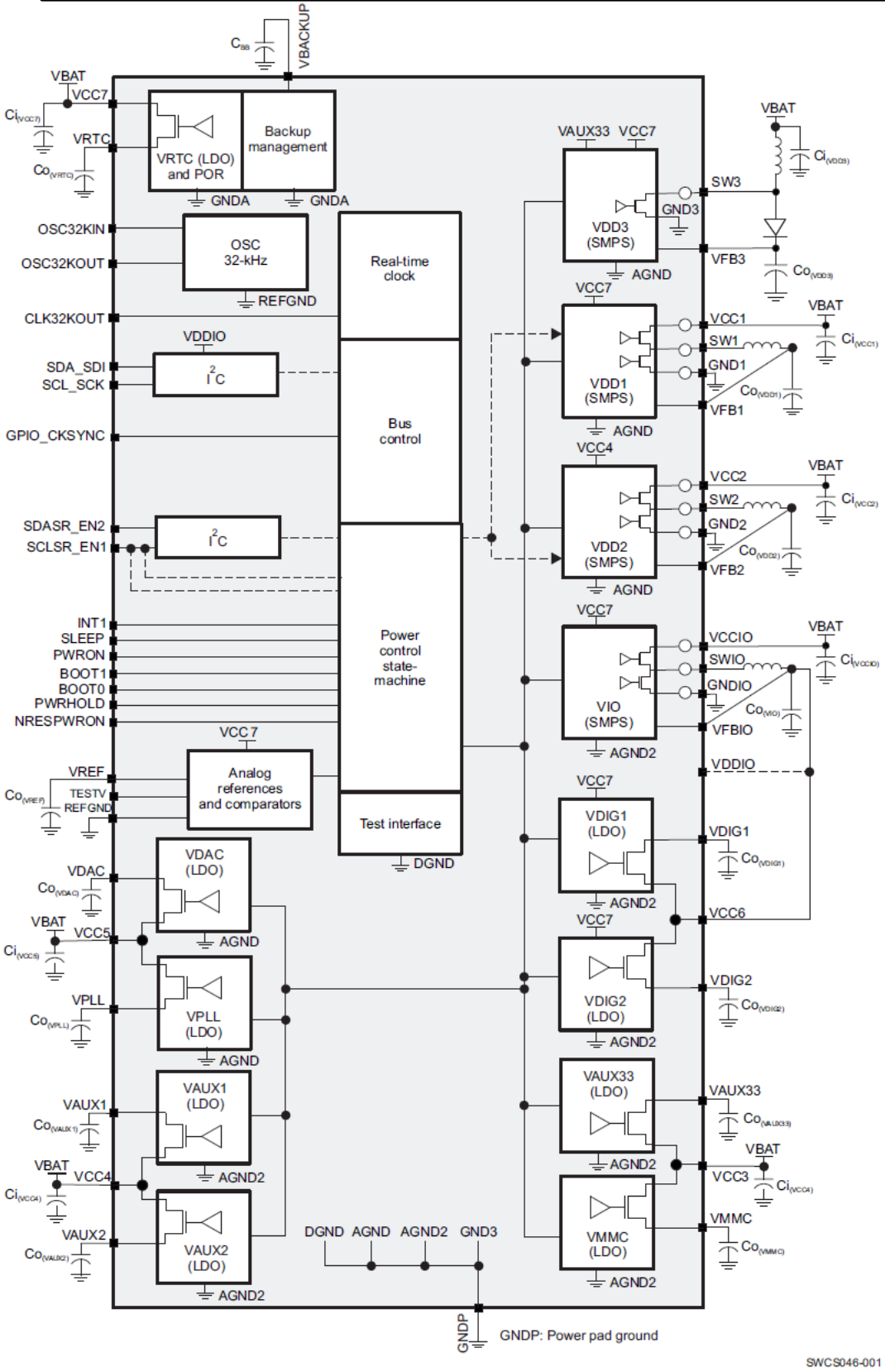


Figure 1-1. 48-QFN Top-Level Diagram

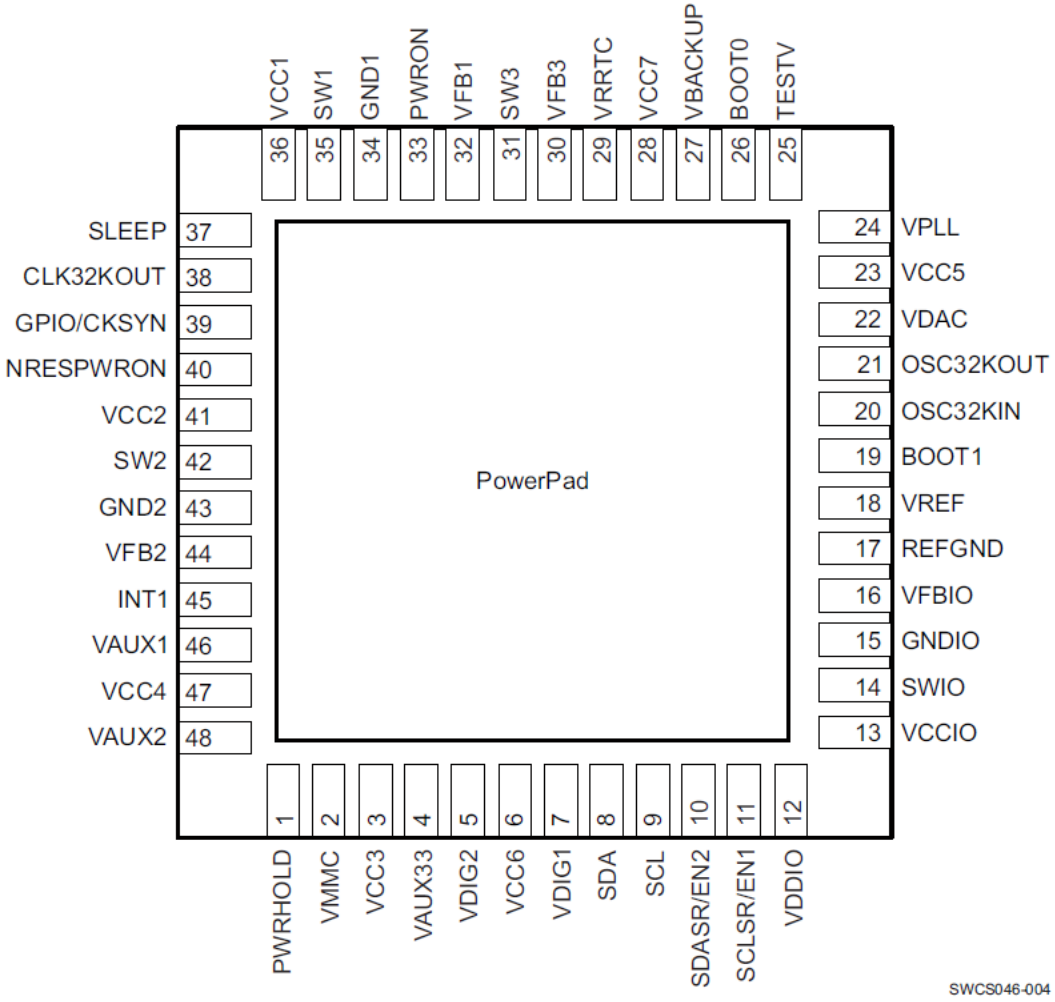
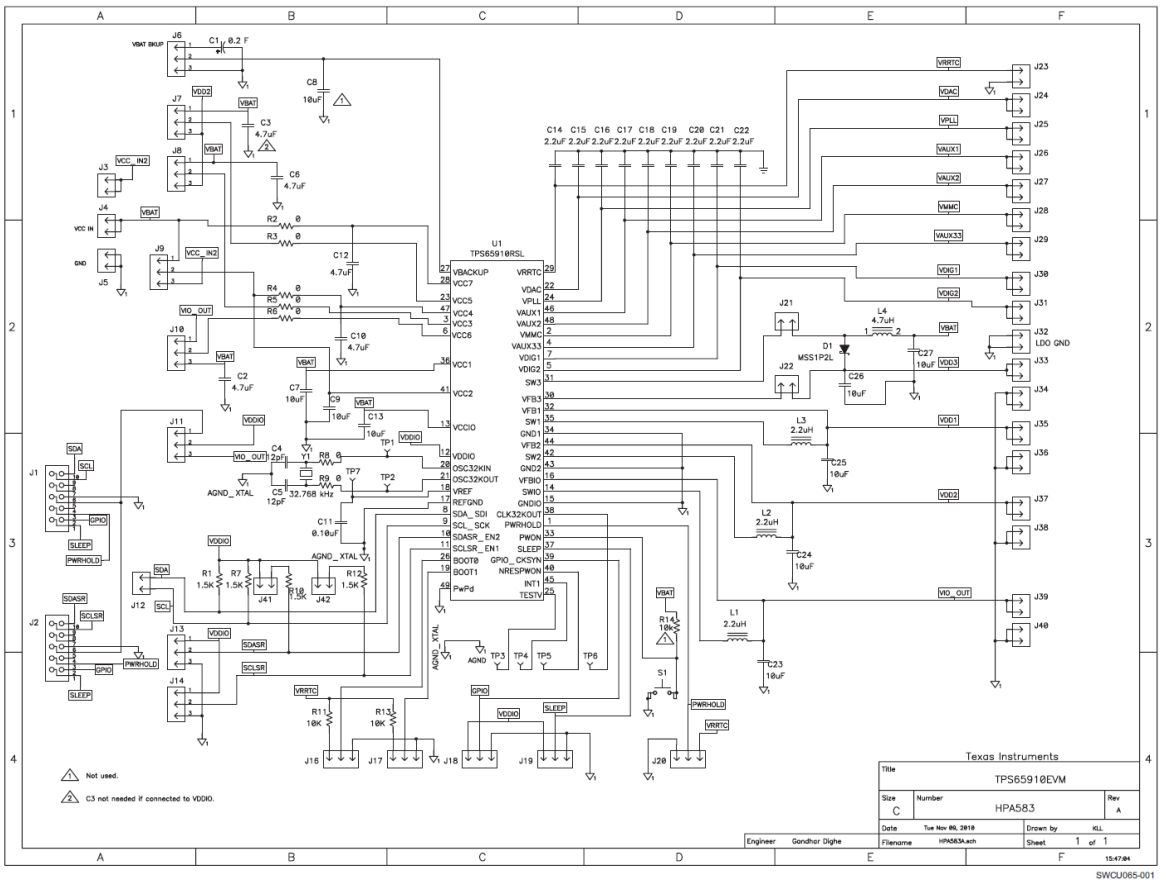
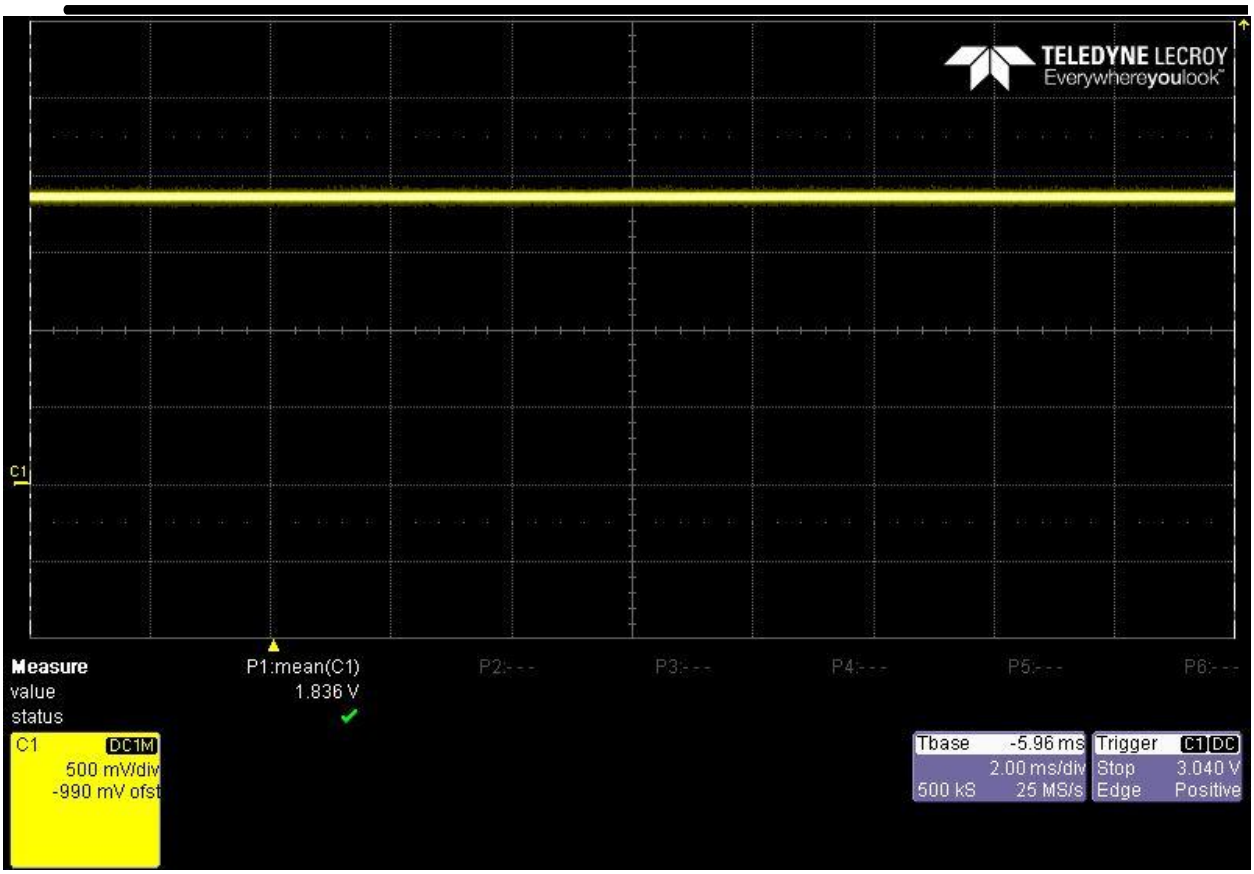


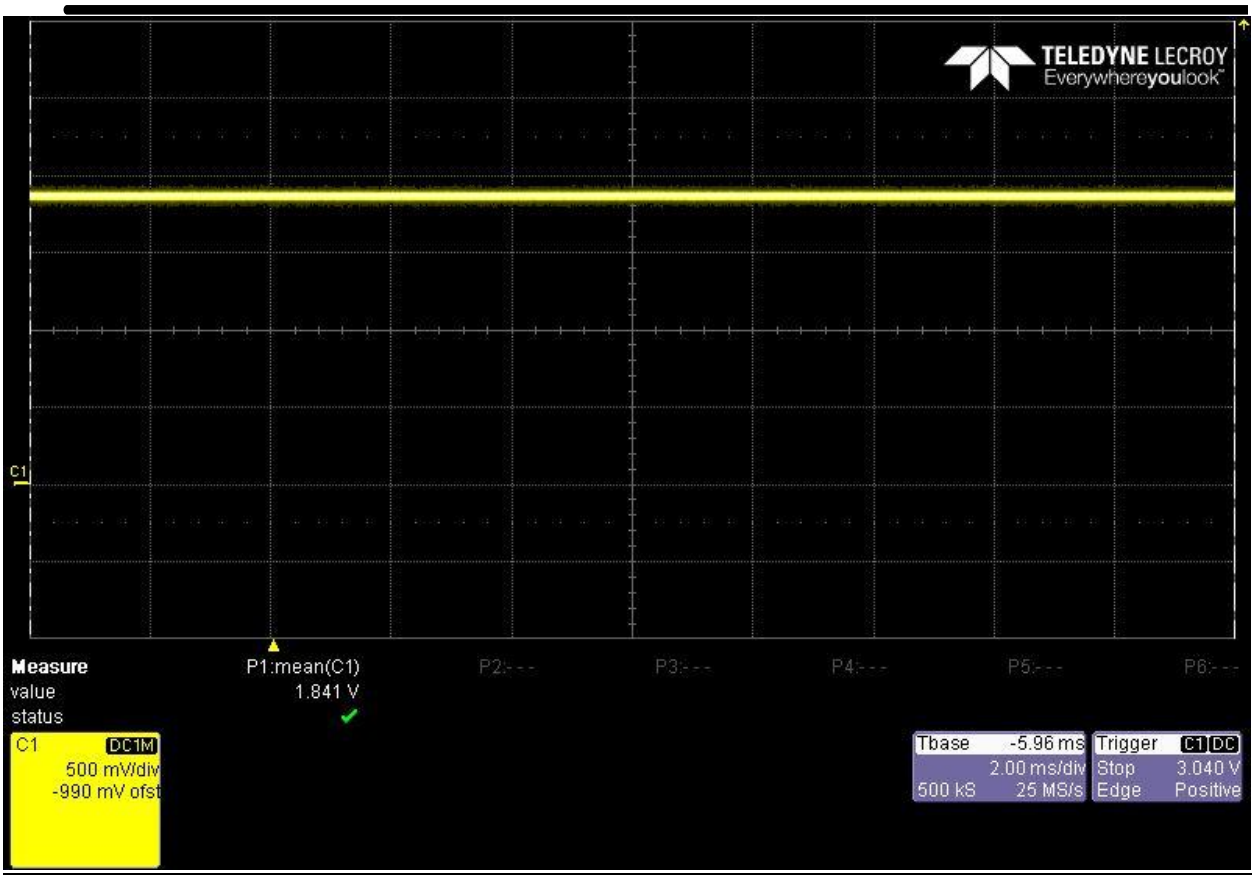
Figure 4-1. 48-QFN Top-View Pin Assignment

Figure 1. TPS65910 EVM Schematic





Good unit VAUX2 output waveform capture at 25C.



Customer unit VAUX2 output waveform capture at 25C.

Actions / Disposition:

The reported fail signature was not verified, the unit passed ATE testing and no output abnormalities were noted during bench testing; Trouble Not Identified (TNI).

Contacts:

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Joe Nunez	Test Engineering	