

TEST PRODUCT CORRELATION REPORT

TITLE:

ADuM1280W/ADuM1281W/ADuM1285W/
ADuM1286W SOIC_N High Voltage Test Correlation
Report

PCN NUMBER:

17_0003

REVISION:

B

DATE: May 22, 2018

SUMMARY

The ADuM1280/ADuM1281/ADuM1285/ADuM1286 are dual-channel digital isolators based on Analog Devices, Inc., *iCoupler*® technology. Combining high speed CMOS and monolithic air core transformer technology, these isolation components provide outstanding performance characteristics superior to alternatives, such as optocoupler devices. In accordance with UL and VDE standards, these products are high voltage tested using the Harris-Tuvey 9464 test platform, an aging and limited manufacturing test platform. The proposed change is to add new high voltage test capability using the MPS PD test platform manufactured by MPS Mess-& Prüfsysteme GmbH.

This report documents the result of the evaluation done to qualify the MPS PD tester as an additional high voltage test platform for the ADuM1280/ADuM1281/ADuM1285/ADuM1286.

Test product qualification was performed according to Analog Devices Specifications (TST00094/TST00095 – Test Platform Migration Specification).

TEST AND PRODUCT INFORMATION

| | | |
|-------------------|--|--|
| Device(Generic): | ADuM1280/ADuM1281/ADuM1285/ADuM1286 | |
| Package: | SOIC_N | |
| Leads: | 8 | |
| Parts Affected: | ADuM1280WARZ ADuM1280WARZ-RL7 ADuM1280WBRZ ADuM1280WBRZ-RL7 ADuM1280WCRZ ADuM1280WCRZ-RL7 ADuM1281WARZ ADuM1281WARZ-RL7 ADuM1281WBRZ ADuM1281WBRZ-RL7 ADuM1281WCRZ ADuM1281WCRZ-RL7 | ADuM1285WARZ ADuM1285WARZ-RL7 ADuM1285WBRZ ADuM1285WBRZ-RL7 ADuM1285WCRZ ADuM1285WCRZ-RL7 ADuM1286WARZ ADuM1286WARZ-RL7 ADuM1286WBRZ ADuM1286WBRZ-RL7 ADuM1286WCRZ ADuM1286WCRZ-RL7 |
| Current Platform: | Harris-Tuvey with Atrium 5050FHV handler | |
| New Platform: | MPS with Atrium VMAX handler | |

Description and Test Results

The Harris-Tuvey high voltage test platform does not provide data logs for units tested; only a pass or fail result is provided. The MPS test platform will provide data logs for leakage current and partial discharge measurements that will be recorded and maintained over time.

The **ADuM1280/ADuM1281/ADuM1285/ADuM1286** use the same package, coil and isolation process. The three lots listed below, along with additional test results from multiple products using the 8-lead SOIC_N package, were used to qualify the four generics on the MPS test platform.

Table 1: Shows results of the qualification lot run for the ADuM128x family. The qualification lots have undergone high voltage testing on both Harris-Tuvey and MPS test platforms. Any deviation on the lot qualification run criteria without further analysis and data to prove a passing qualification would be considered a failed qualification lot run.

All units that passed on the Harris-Tuvey platform also passed on the MPS platform and all units rejected by the Harris-Tuvey platform were also rejected by the MPS test platform thereby demonstrating correlation of both good and bad units between platforms.

Table 1: Test Product Qualification Lot Run

| Generic | Package | Lot number | Lot Size | Good units passed on both test platforms? | Reject units failed on the same test parameter for both test platforms? |
|----------|---------|------------|----------|---|---|
| ADuM1285 | SOIC_N | AN79318.3 | 100 | Yes | Yes |
| ADUM1281 | SOIC_N | AN79317.7 | 100 | Yes | Yes |
| ADUM1280 | SOIC_N | AN79316.4 | 100 | Yes | Yes |

Approvals

Product Line Manager
Test Development Manager
Test Product Manager
Quality Manager

Supporting Document

Technical Review Board: TRB #32074 - ADuM1280/81/85/86W MPS Migration

Additional Information

Homepage: <http://www.analog.com/en/index.html>

Datasheet: http://www.analog.com/media/en/technical-documentation/data-sheets/ADuM1280_1281_1285_1286.pdf