Current Data Sheet Propagation Delay Limits				
ADuM1280, ADUM1281, ADuM1285, ADuM1286 (C grade only)				
5V Operation (From :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	13	18	24	ns

Revised Data Sheet Propagation Delay Limits				
ADuM1280, ADUM1281, ADuM1285, ADuM1286 (C grade only)				
5V Operation (To :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	20	23	29	ns

3V Operation (From :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	20	25	33	ns

3.3V Operation (To :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	22	27	35	ns

Mixed 5V/3V Operation (From :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	13	20	26	ns

Mixed 5V/3.3V Operation (To :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	20	25	31	ns

Mixed 3V/5V Operation (From :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	16	24	30	ns

Mixed 3.3V/5V Operation (To :)				
Specification	Min	Typ	Max	Unit
Propagation Delay	20	27	33	ns

Automotive Qualification Results Summary for ADuM1280W/ADuM1281W/ADuM1285W/ADuM1286W Die Revision, Data Sheet Change, Test Platform Migration and Assembly Site Transfer

QUALIFICATION PLAN / STATUS			
TEST	**SPECIFICATION**	**SAMPLE SIZE**	**RESULTS**
High Temperature Operating Life (HTOL)*	JEDEC *JESD22-A108*	**3x77**	**Pass**
Highly Accelerated Stress Test (HAST)*	JEDEC *JESD22-A110*	**9x77**	**Pass**
Temperature Cycle (TC)*	JEDEC *JESD22-A104*	**9x77**	**Pass**
Autoclave (AC)*	JEDEC *JESD22-A102*	**9x77**	**Pass**
High Temperature Storage Life (HTSL)	JEDEC *JESD22-A103*	**9x77**	**Pass**
Solder Heat Resistance (SHR)*	JEDEC/IPC *J-STD-020*	**1x30**	**Pass**
Latch-Up	JEDEC *JESD78*	**1x9**	**Pass** ±200mA @ +8.25V
Electrostatic Discharge *Human Body Model*	ESDA/JEDEC *JS-001*	**1x18**	**Pass** ±4000V
Electrostatic Discharge *Field-Induced Charged Device Model*	JEDEC *JESD22-C101*	**1x18**	**Pass** ±1250V

* Pre- and post-stress electrical test was performed at room and hot temperatures. These samples were subjected to preconditioning (per J-STD-020 Level 3) prior to the start of the stress test. Level 3 preconditioning consists of the following: Bake: 24 hrs @ 125°C, Unbiased Soak: 192 hrs @ 30°C, 60%RH, Reflow: 3 passes through an oven with a peak temperature of 260°C.

Material Set Comparison:

Package Material Set		From: Carsem	To: ASE Chungli
SOIC_N	Die Attach	Ablestik 84-1 LMISR4	Hitachi EN4900GC
	Mold Compound	Sumitomo G600C	Sumitomo G700LY
	Wire	1.3 mil Gold Wire	1.3mil Gold Wire

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., *i*Coupler® 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 ADuM1286WBRZ ADuM1286WBRZ-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