

Report Details

Products tested	VCCR300-xx
Products Description	300W DC-DC power supply.
Design Phase	3 – Verification
Product Serials	
Test Goals	Test according to EN50155:2021 cl. 13.4.13 (Salt Mist Test)
Test dates	1 ST to 25 TH April 2023
Report date	28 TH April 2023

Authorisation

Jorge Almendros

28/4/23

Test performed by (Print)

Date

Brian McDonald

28/4/23

Test report written by (Print)

Date

1. Objective

Salt Mist testing is an optional test requirement to comply with EN50155 standard. The objective of this report is to show compliance with the requirements of EN50155 clause 13.4.13 for Salt Mist test.

2. Executive summary

Performance tests were carried out on a number of product samples at the Vox Power R&D laboratory and the results recorded. The units were then shipped to a specialist external laboratory to perform the salt mist test according to the relevant EN50155 standard. The samples were then returned to the Vox Power R&D laboratory and the performance tests were repeated and compared with the original results. A visual inspection was also carried out to ensure no mechanical damage had occurred during testing.

The details of the performance tests before and after testing are shown in appendix 1.

The details of the visual inspection are shown in appendix 2.

The details of the external salt mist testing are shown in appendix 3.

3. Conclusions

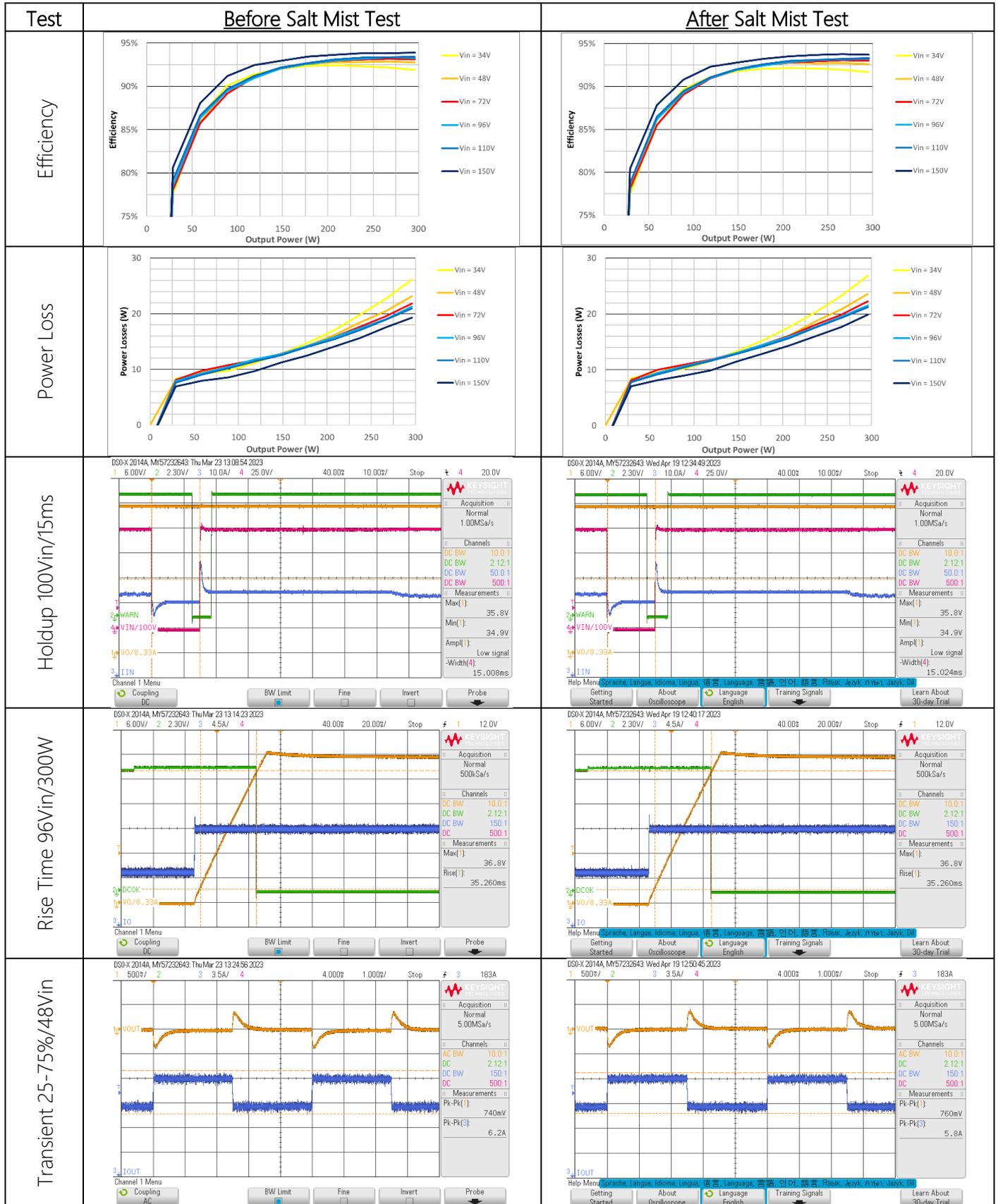
The performance test results for the tested samples before and after the salt mist test show no variation in performance.

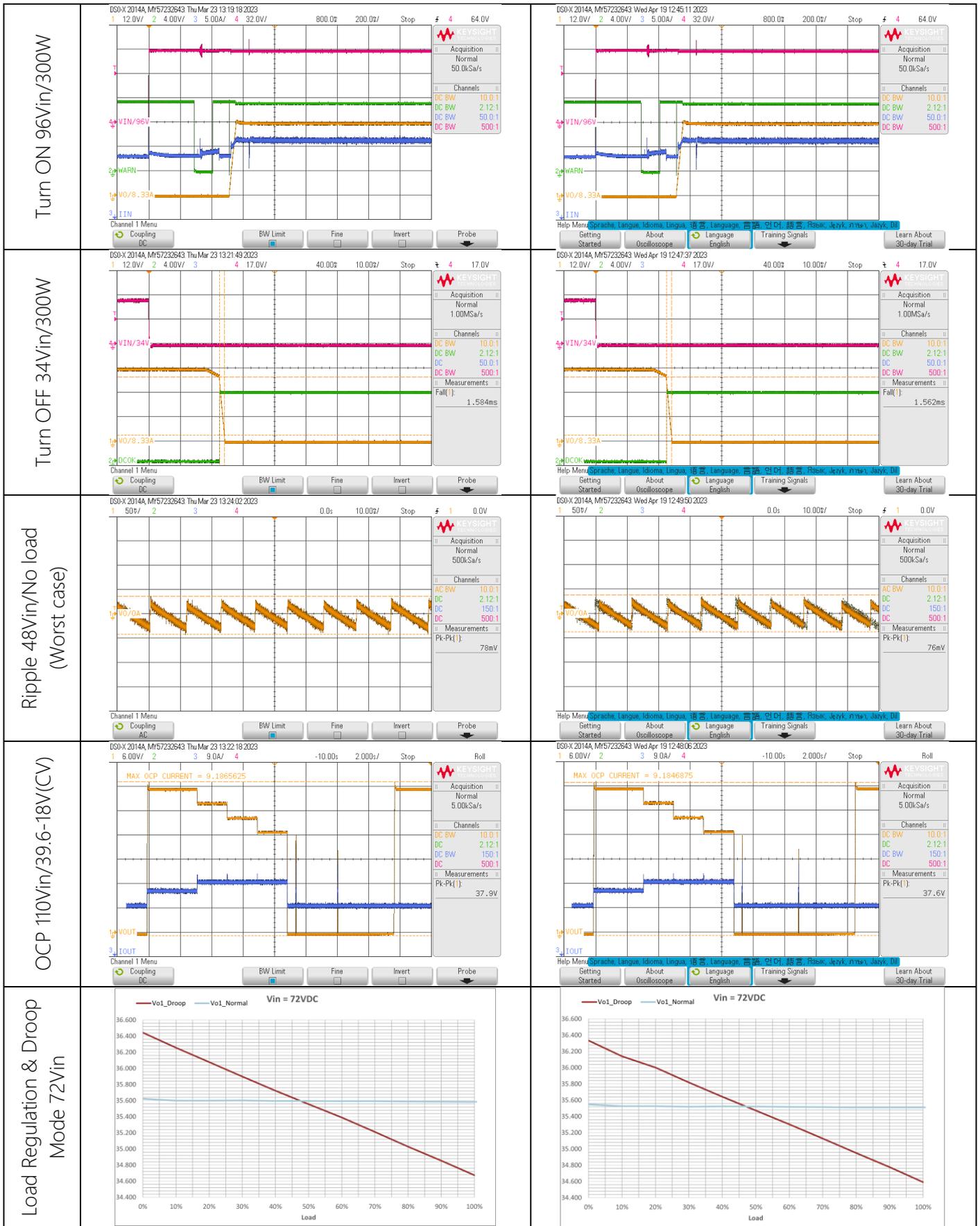
The visual inspection does not show any damage or issues.

It can be concluded that the salt mist test was passed successfully.

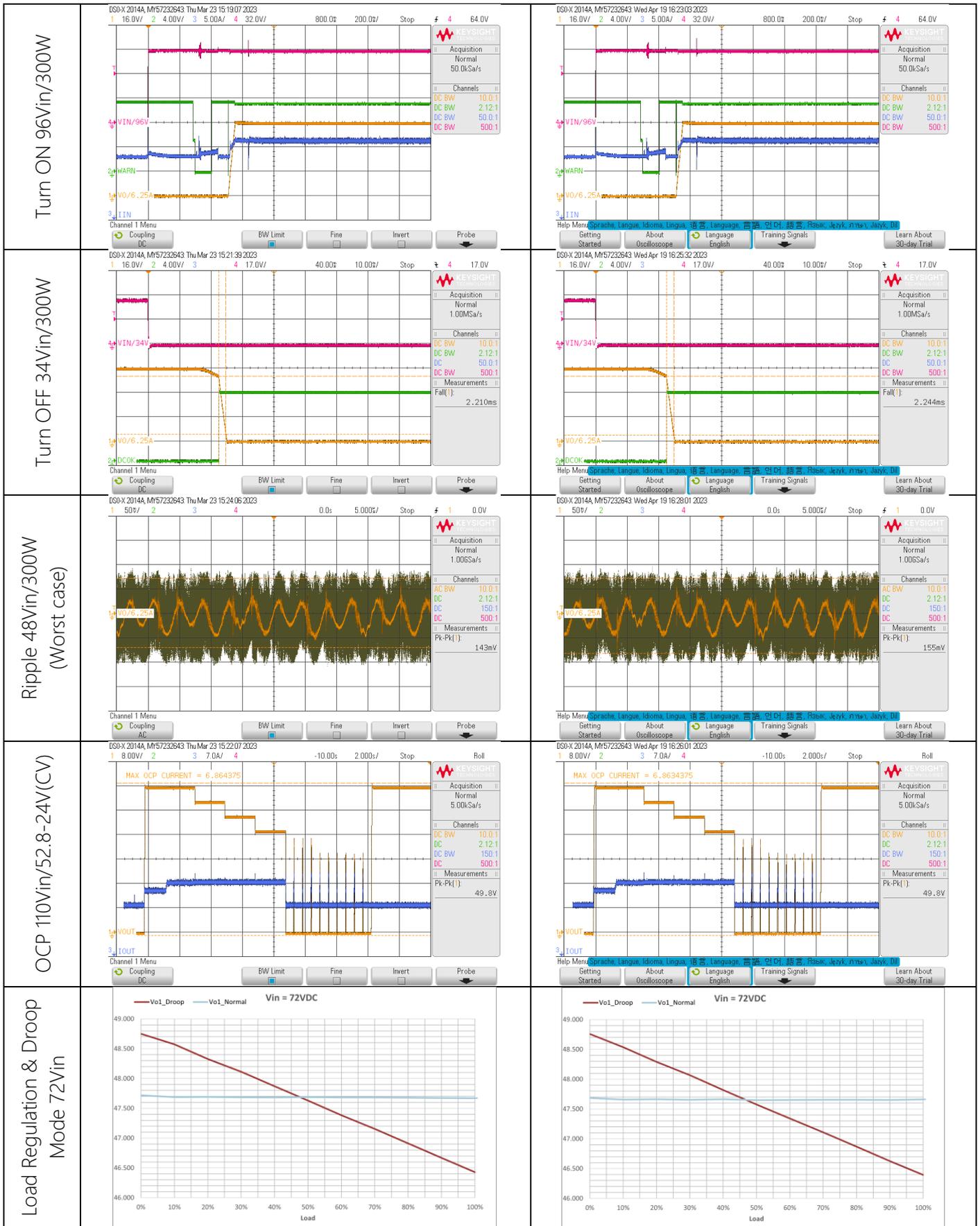
Appendix 1 - Performance Test Results

VCCR300-36 Engineering Sample (Salt Mist: Horizontal Axis) S/N: 2313C080001



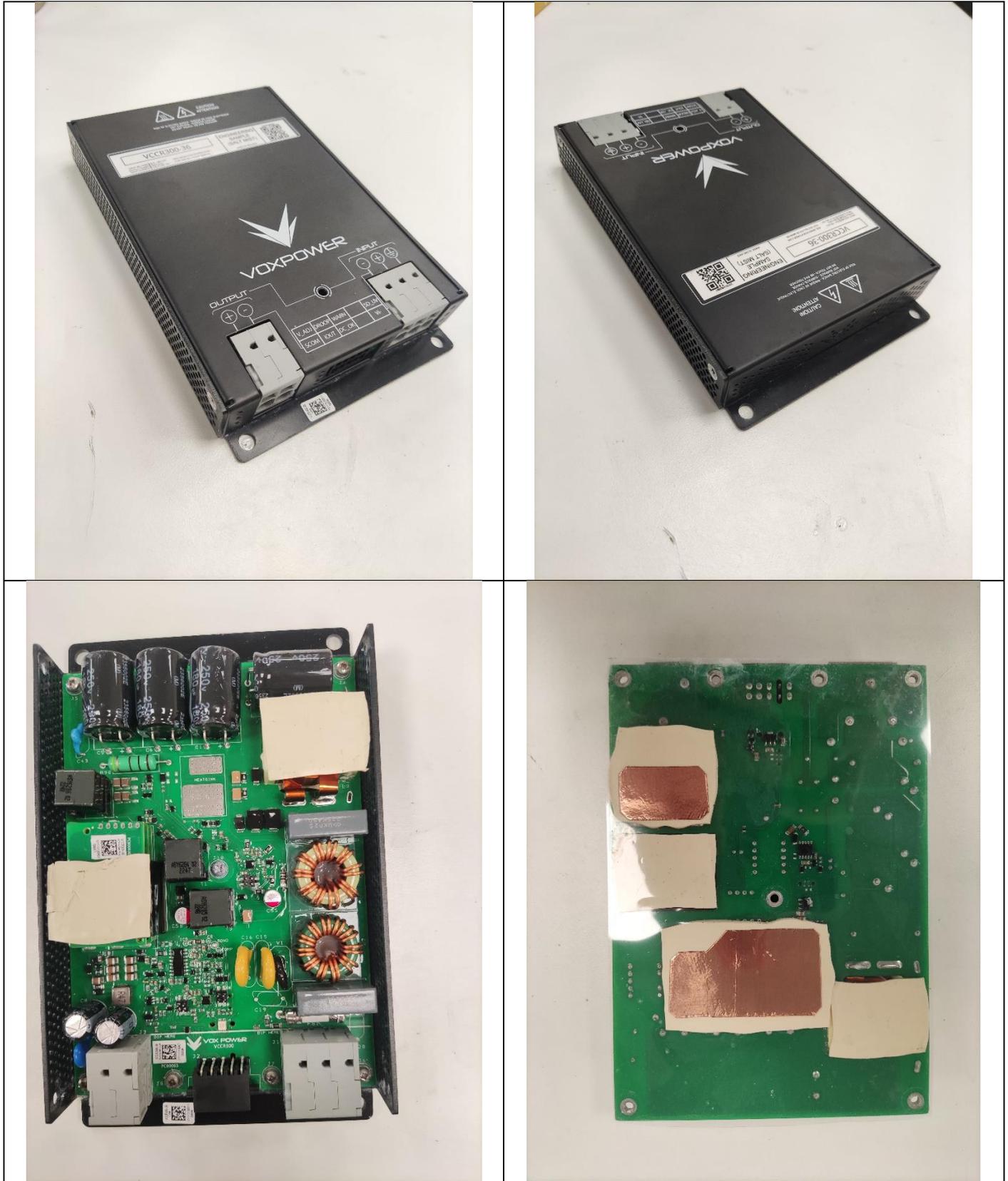


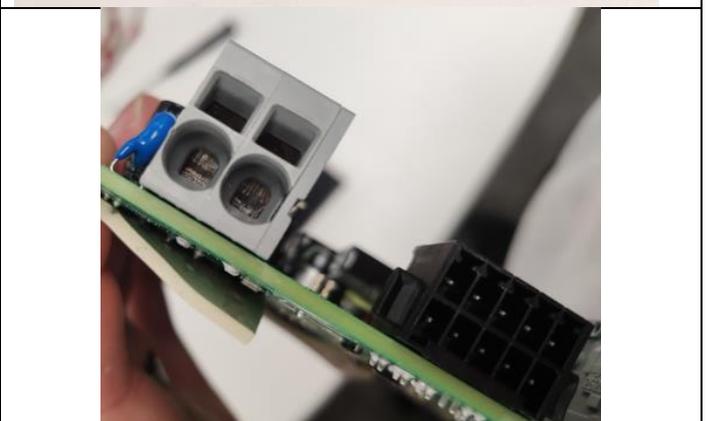
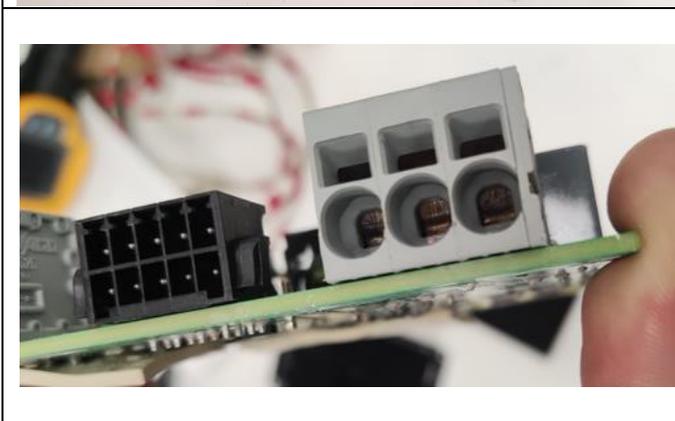
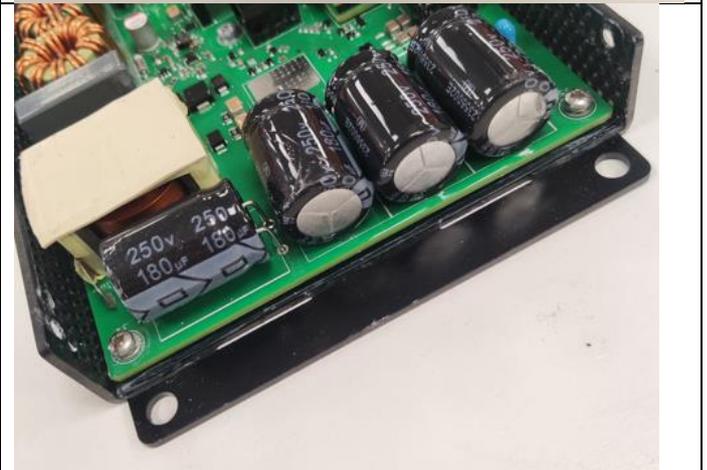
Test	Before Salt Mist Test	After Salt Mist Test
Efficiency		
Power Loss		
Holdup 100Vin/15ms		
Rise Time 96Vin/300W		
Transient 25-75%/48Vin		

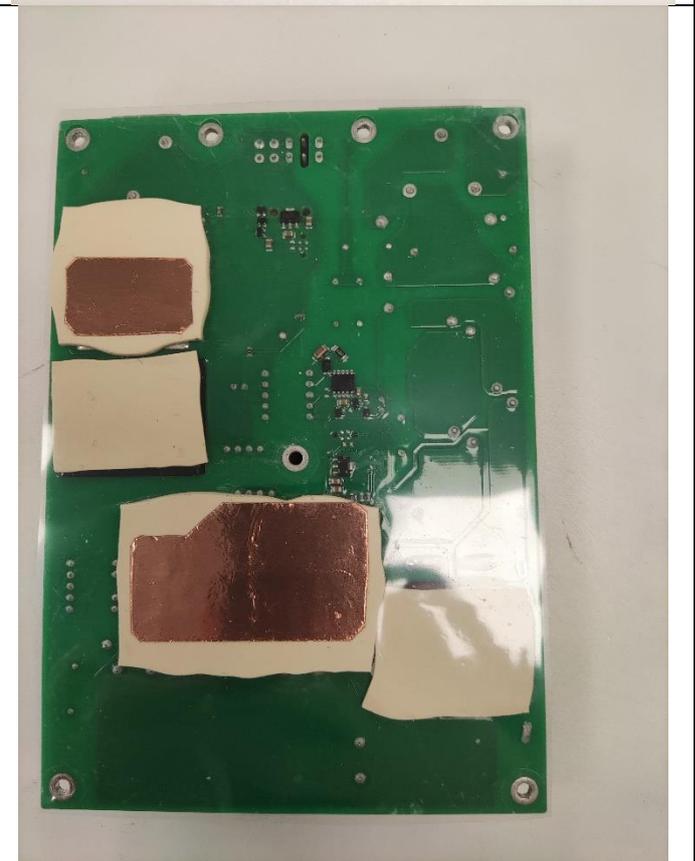


Appendix 2 - Visual Inspection

VCCR300-36 Engineering Sample (Salt Mist: Horizontal Axis) S/N: 2313C080001









Appendix 3 – Salt Mist Test

SALT SPRAY TEST

TEST REPORT

Author: (Name)	Author: (Signature)	Date:
Abbey Brady		2023-04-24
Approver: (Name)	Approver: (Signature)	Date:
Mary Dowey		2023-04-24

Customer:	Vox Power		
Customer Address:	Unit 2, Red Cow Interchange Estate, Ballymount, Dublin, Ireland		
PO Number:	10914		
Test Specimen:	Single Output Conduction Cooled PSU Part IDs: VCCR300-48 Engineering Sample (Salt Mist) S/N: 2313C080002 and VCCR300-36 Engineering Sample (Salt Mist) S/N: 2313C080001		
Specimen Receipt Date:	2023-03-30		
Test Area:	Salt spray	UKAS Accredited: (Delete as appropriate)	Yes/No
Test Started:	2023-04-04	Test Finished:	2023-04-06
Test Specification:	IEC/EN60068-2-11 Test Ka; 35°C ±2°K, 48h		
Accredited Specification: (If non UKAS test N/A)	Ref. No: IEC/EN60068-2-11:1999 Part 2: Tests – Test Ka: Salt Mist		
Any Deviation from Test Method:	N/A		
Test Remarks:	Test was carried out as required with no deviations from the test specification. Parts to be returned to customer for any post-test review/inspections.		
Declared or observed deviations of test/test item (s) prior to test:	N/A		

All testing is carried out in compliance with the requirements and specifications detailed above, and the results apply to the specimen tested. Opinions and interpretations are not given by Resonate Testing Ltd.

Testing was carried out on this test specimen only and provides no verification for the performance of other items in the same batch, or production run.

Date & Time		2023-04-03	2023-04-04	2023-04-05	2023-04-06	
		10:50	10:50	11:24	11:50	
Measurement	Quadrant					
1	Fallout Measurement (ml)	Q1	N/A	48	40	25
		Q2	N/A	25	32	37
		Q3	N/A	49	24	48
		Q4	N/A	21	22	24
2	Fallout pH Measurement	Q1	N/A	7.03	7.13	7.05
		Q2	N/A	7.05	7.07	7.03
		Q3	N/A	7.07	6.98	6.89
		Q4	N/A	6.92	7.01	6.91
3	Specific Gravity of Fallout Samples	N/A	1.034	1.035	1.034	
4	Chamber Conditions	35°C as per IEC/EN60068-2-11, test Ka. Salt Mist ON				
5	Test Observations					
	2023-04-03 10:50	<p>Start of test.</p> <p>Initial 24-hour verification.</p> <p>Test item not placed in chamber.</p> <p>Salt solution pre-test verification complete. Solution collection cylinders placed in chamber</p>				
	2023-04-04 10:50	<p>10:21 A second and third tub of premixed salt solution was added to the reservoir.</p> <p>Initial fallout checks complete. Measurements for Q1 and Q2 verified to be within limits of the specification</p> <p>Test specimens placed in Q1 and Q2. (Figure 3, Figure 4 and Figure 5)</p> <p>Test started at 11:24</p>				

	<p>2023-04-05 11:24</p>	<p>Chamber paused for 24-hour fallout/pH check.</p> <p>Measurements for Q1 and Q2 verified to be within limits of the specification.</p> <p>(Figure 6 and Figure 7)</p> <p>Jug 4 added to reservoir</p> <p>Test resumed at 11:50</p>
	<p>2023-04-06 11:50</p>	<p>Test completed at 11:50.</p> <p>Photographs taken</p> <p>White powder observed around screws on both units (likely salt residue)</p> <p>Test units were rinsed, dunked and placed into recovery chamber at 12:18</p> <p>13:40 Units removed from recovery chamber and are awaiting collection.</p>

Test instrumentation and standard solutions

Hydrometer	RA01056		
pH Meter	RA01065		
pH Solutions	RA01047	RA01048	RA01049

Test Technician	Abbey Brady
Test Checked and approved by:	Orla O'Donnell

IMAGES

Prior to testing



Figure 1: VCCR300-36 Prior to testing



Figure 2: VCCR300-48 Prior to testing

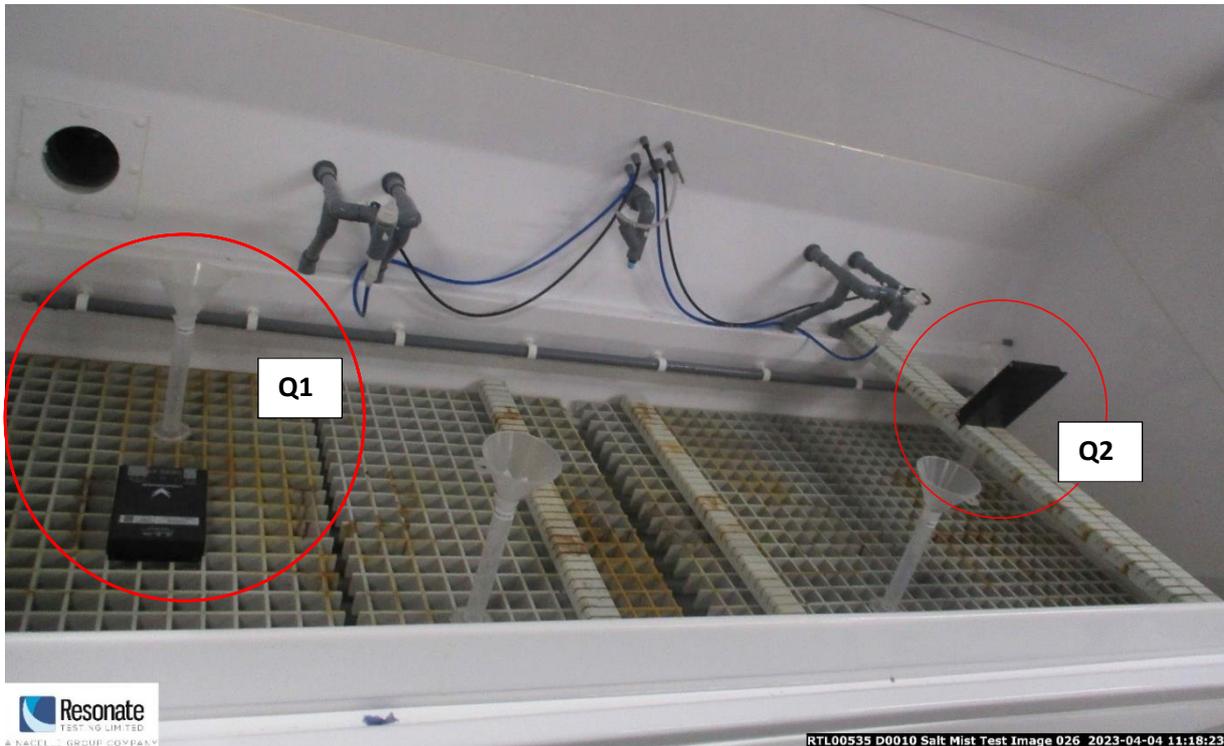


Figure 3: Unit Placement in Chamber



Figure 4: Horizontal unit - VCCR300-36



Figure 5: Vertical unit - VCCR300-48

24-Hour Fallout Check

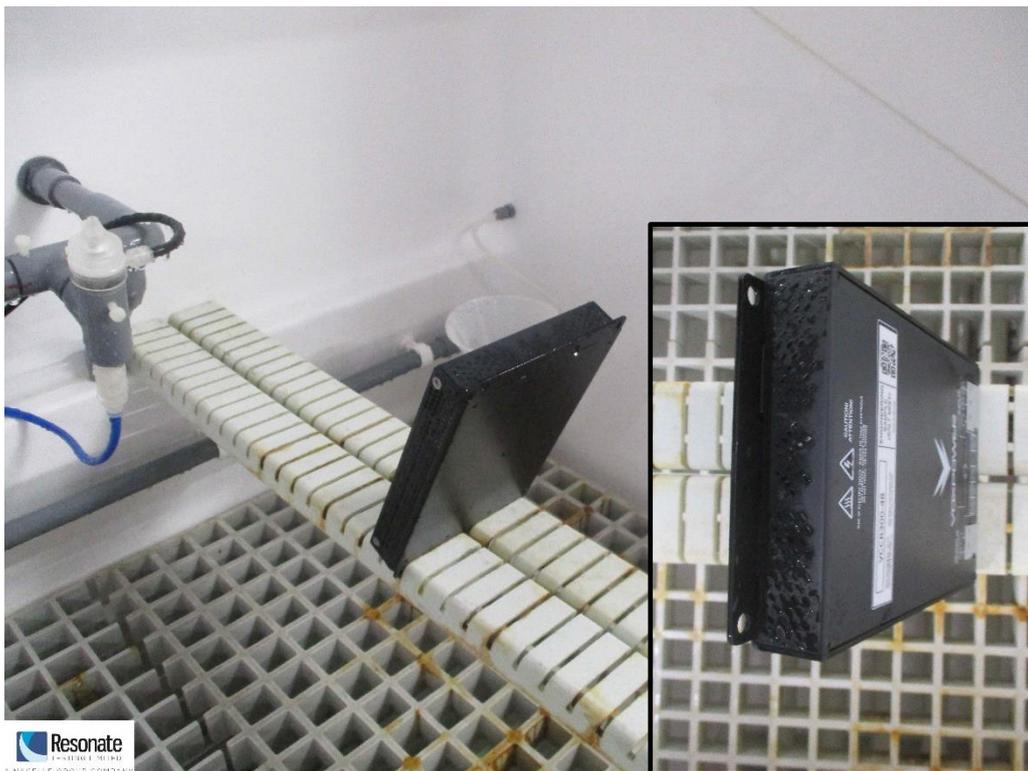


Figure 6: 24-hour fallout check - VCCR300-48



Figure 7: 24-hour fallout check -VCCR300-36

Units After Test



Figure 8: VCCR300-36 after 48-hour test



Figure 9: VCCR300-48 after 48-hour test



Figure 10: Both test units after 'recovery' period

End of report