



**QUANTA
LABORATORIES**

3199 De La Cruz Boulevard • Santa Clara, CA 95054-2483
TEL: (408) 988-0770 FAX: (408) 988-0762
E-MAIL: test@quantalabs.com

Certificate of Conformance

This is to certify that the results from the test(s) requested by

FACEBOOK are on file under
Quanta Laboratories Job No. QL-17-0834 and conform
to the specification(s) stated in P.O. No. 1074159

These results apply to the following equipment and are available for review upon request.

Model No: OPEN CELLULAR-CONNECT-1

S/N: (See Report)

*** Sine Sweep, Random Vibration, Shock Tests ***

*** Earthquake Test ***

*** Temperature Cycling, HALT and HASS Tests ***

*** Water, Dust Ingress (IP65) and Salt Fog Tests ***

Soil Testing, Soil Tests, and Soil Test Results

Robert Andris 8/27/17
Quanta Laboratories Date

Quanta Laboratories

Date _____

EARTHQUAKE WAVEFORM TEST

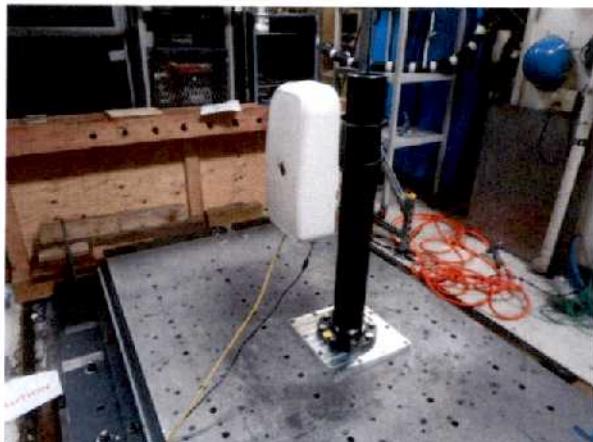


3199 De La Cruz Blvd, Santa Clara, CA 95054
 Phone: (408) 988-0770 FAX: (408) 988-0762
 test@quantalabs.com www.quantalabs.com

CLIENT: Facebook				P.O. NO: 1074159
PART NO. Open Cellular – Connect - 1				JOB NO: QL-17-0834
SPECIFICATION: Per Facebook's OpenCellular-Connect-1 Environmental Test Spec., refer to GR-63-CORE zone 2 spectra				PAGE 1 OF 1
DATE	S/N	AXIS	FREQUENCIES & LEVELS	REMARKS
07/26/2017	N/A	X	Sweep before earthquake test: 1 –50 Hz @ 0.2 G Sweep Rate: 1 Oct/Min 1 Sweep up	Test unit was powered on during tests. The test completed to the specification requirements.
		Y	Earthquake test based on BELLCORE zone 2: For event calibration to SRS requirement -6 db 3 times -3 db 3 times	
		Z	Qualification run 0 db 1 time for each direction	
SEE PHOTO PAGE DEFINITION OF AXES		TEST CONDUCTOR:		DATE: 07/26/2017
		TEST ENGINEER:		DATE: 07/26/2017
		WITNESS:		DATE:
		Q. A. ENGINEER:	 Robin Gardiner Quanta Laboratories	DATE: 07/26/2017



Facebook Earthquake Test



X--Axis



Y--Axis



Z--Axis

JOB NO. : QL-17-0834

07/26/2017

SINE SWEEP VIBRATION TEST



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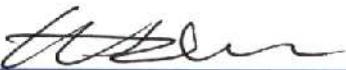
CLIENT: Facebook				P.O. NO: 1074159
PART NO. Open Cellular – Connect - 1				JOB NO: QL-17-0834
SPECIFICATION: Per Facebook's OpenCellular-Connect-1 Environmental Test Spec., refer to ETSI 300 019-2-4, IEC 60721 3-4 class 4M5				PAGE 1 OF 1
DATE	S/N	AXIS	FREQUENCIES & LEVELS	REMARKS
07/27/2017	N/A	X	<p>Sine Sweep Vibration Test:</p> <p>5 – 9 Hz @ 1.2 mm disp. 9 – 200 Hz @ 4 m/s²</p> <p>Sweep Rate: 3 Min/Cycle</p> <p>5 Sweep Cycles for each direction</p>	Test unit was powered on during tests. The test completed to the specification requirements.
		Y		
		Z		
SEE PHOTO PAGE		TEST CONDUCTOR:	<i>Lechner</i> Leo	DATE: 07/27/2017
		TEST ENGINEER:	<i>Gesner</i>	DATE: 07/27/2017
DEFINITION OF AXES		WITNESS:		DATE:
		Q. A. ENGINEER:	 Robin Gardner Quanta Laboratories	DATE: 07/27/2017

 Robin Gardiner
Quanta Laboratories

RANDOM VIBRATION TEST DATA



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CLIENT: Facebook				P.O. NO: 1074159
SPECIMEN: Open Cellular – Connect - 1				JOB NO: QL-17-0834
SPECIFICATION: Per Facebook's OpenCellular-Connect-1 Environmental Test Spec., refer to ETSI 300 019-2-4, IEC 60721 3-4 class 4M5				PAGE 1 OF 1
DATE	S/N	AXIS	FREQUENCIES & LEVELS	REMARKS
07/27/2017	N/A	X Y Z	Random Vibration Test : 5 – 10 Hz @ +12 dB/Oct 10 – 50 Hz @ 0.04 m ² /s ³ 50 – 100 Hz @ -12 dB/Oct Overall RMS: 1.506 m/s ² Duration: 30 Min/Direction	Test unit was powered on during tests. The test completed to the specification requirements.
SEE PHOTO PAGE		TEST CONDUCTOR:	 Leo	DATE: 07/27/2017
DEFINITION OF AXES		TEST ENGINEER:		DATE: 07/27/2017
WITNESS:				DATE:
Q. A. ENGINEER:		 Robin Gardiner Quanta Laboratories		DATE: 07/27/2017



SHOCK TEST DATA

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CLIENT: Facebook				P.O. NO: 1074159
SPECIMEN: Open Cellular – Connect - 1				JOB NO: QL-17-0834
SPECIFICATION: Per Facebook's OpenCellular-Connect-1 Environmental Test Spec., refer to ETSI 300 019-2-4, IEC 60721 3-4 class 4M5				PAGE 1 OF 1
DATE	S/N	AXIS	SHOCK SPEC.	REMARKS
07/27/2017	N/A	+X -X +Y -Y +Z -Z	HALF SINE WAVE SHOCK TEST: 50 m/s ² , 11 MS 100 Shocks/Direction	Test unit was powered on during tests. Test Completed to The Specification Requirements.
SEE PHOTO PAGE	TEST CONDUCTOR:		Leo	DATE: 07/27/2017
	TEST ENGINEER:			DATE: 07/27/2017
	WITNESS:			DATE:
	Q. A. ENGINEER:		 Robin Gardiner Quanta Laboratories	DATE: 07/27/2017



Facebook Sine, Random Vibration & Shock Tests



X--Axis



Y--Axis



Z--Axis

JOB NO. : QL-17-0834

07/27/2017

QUANTA LABORATORIES EQUIPMENT LIST



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Client:	Facebook	P.O. NO:	1074159
		JOB NO.:	QL-17-0834

DIGITAL SYSTEM LIST

Device Type	Description	Make & Model	Range	Asset #	Series #	Due Date
Shaker Control System	VC-07	JAC VICO-8 8 inputs	0.1Hz - 3 KHz RES. 0.1dB	QL-0786	177247011	06/26/2018
Current Source	VC-07	Dytran 4123 8 Inputs		QL-0218	119	05/04/2018
Shaker Control System	VC-09 Seismic	Dactron LDS Laser USB	0.1Hz - 3 KHz RES. 0.1dB	QL-0738	5963740	01/09/2018

MECHANICAL SYSTEM LIST

Device Type	Description	Make & Model	Range	Asset #	Series #	Due Date
Shaker Amplifier	Gold 335	Ling PP60/100		QL-0014	22	Time of Test
Electrodynamic Shaker	Gold 335	Ling B-335	5Hz - 3 KHz	QL-0135	153	Time of Test
Shaker Amplifier	Blue 300	Ling PP35/70		QL-0150	34	Time of Test
Electrodynamic Shaker	Blue 300	Ling B-300	5Hz - 3 KHz	QL-0152	52	Time of Test
Hydraulic Shaker	Seismic	TEAM Shaker 812/5.5	1 - 500Hz, 12", 45 IPS,	QL-0522	533	Time of Test
Hydraulic Manifold	Seismic	TEAM Mainfold HCM350		QL-0540	159	Time of Test
Hydr. Valve Driver	Seismic	TEAM Voice Coil Valve Driver 2200		QL-0516	1299	Time of Test
Hydr. Slip Table	Seismic	TEAM Slip Table 326800		QL-0523	485	Time of Test
Hydr. Valve	Seismic	Pilot Valve & Slave Valve		QL-0528	1231	Time of Test
Hydr. Power Supply	Seismic	01 MTS 501.30A	3000 PSI 30 GPM	QL-0515	153127	Time of Test
Hydr. Power Supply	Seismic	02 MTS 501.30A	3000 PSI 30 GPM	QL-0514	152316	Time of Test

SENSOR LIST

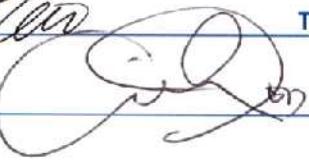
Device Type	Description	Make & Model	Range	ASSET #	SERIAL #	DUE DATE
Accelerometers	Single-Axial	DYTRAN 3256A2	5~2000 Hz 50 G	QL-0647	10356	02/03/2018

Accelerometers	Seismic	PCB	1~2000 Hz 50 G	QL-0797	147465	05/18/2018
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TEMPERATURE CYCLING TEST DATA

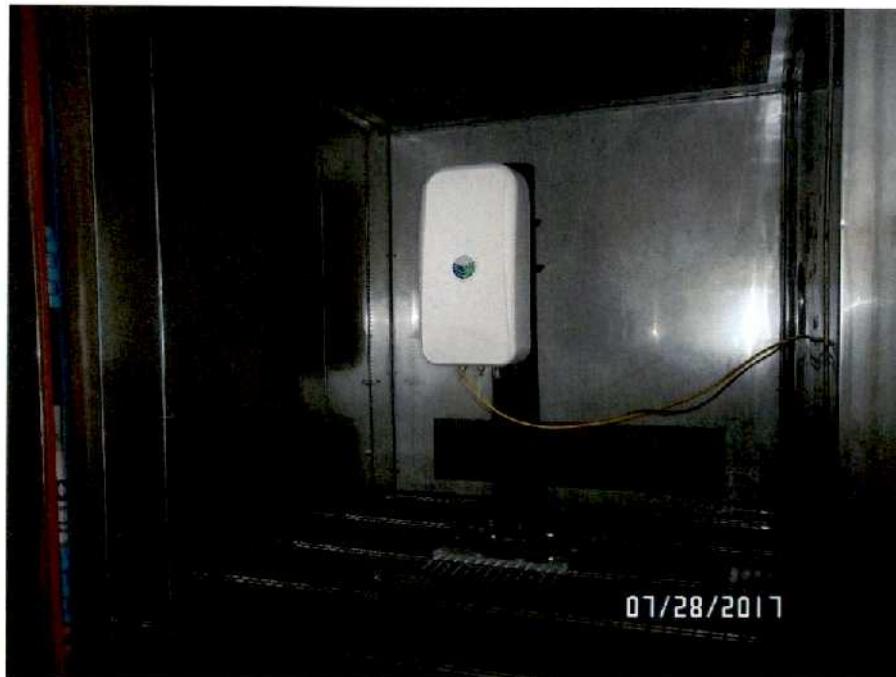


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CLIENT: FACEBOOK				P.O. NO: 1074159			
SPECIMEN: OPEN CELLULAR-CONNECT-1				JOB NO: QL-17-0834			
SPECIFICATION: Per Facebook's OpenCellular-Connect-1 Environmental Test Spec. Document 3.8.3.6		CHAMBER: Thermodynamic #44		PAGE 1	OF 1		
DATE	S/N	TIME	TEMP	TEMP. GRADIENT (°C/MIN)	OPER.		
07/28/17 ~ 07/29/17	N/A		25°C	---	1		
			-10°C	1.4 °C/MIN	2		
			-25°C	0.6 °C/MIN	3		
			-40°C	0.6 °C/MIN	4		
			20°C	2.4 °C/MIN	5		
			40°C	0.8 °C/MIN	6		
			50°C	0.4 °C/MIN	7		
			55°C	0.6 °C/MIN	8		
			25°C	1.0 °C/MIN	9		
					10		
					TEST CYCLED TWICE		
					25°C		
					11		
					SOAK AT 25°C FOR 30 MIN AND TEST STOPPED.		
NOTE:							
<ol style="list-style-type: none"> 1. Operational test, test completed to specification requirements. 2. Unit worked normally during and after test. 							
TEST CONDUCTOR:	 TED LIU			DATE: 07-31-2017			
TEST ENGINEER:	 Robin Gardiner Quanta Laboratories			DATE: 07-31-2017			
WITNESS:							
Q. A. ENGINEER:							



FACEBOOK TEMPERATURE CYCLING TEST



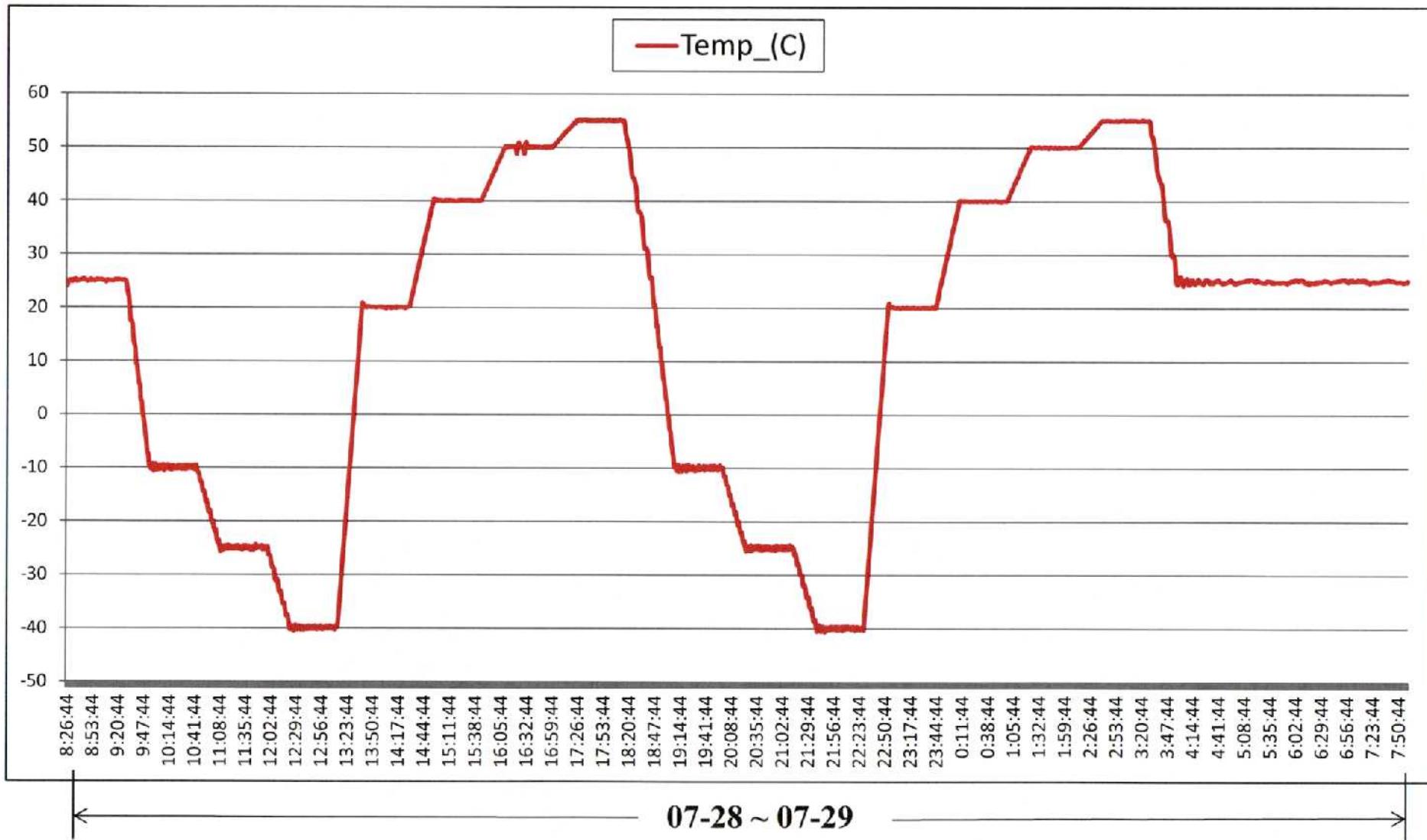
UNIT IN THE CHAMBER #44

JOB NO. : QL-17-0834

07-28-2017



FACEBOOK TEMPERATURE CYCLING TEST



TEST IN THE CHAMBER #44
JOB NO. : QL-17-0834

07-31-2017

TEMPERATURE TEST DATA



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CLIENT: FACEBOOK				P.O. NO: 1074159		
SPECIMEN: OPEN CELLULAR-CONNECT-1				JOB NO: QL-17-0834		
SPECIFICATION: Per Facebook's Open cellular-connect-1 Environmental Test spec. Doc. 3.9.1.5 HALT		CHAMBER: THERMOTRON #33		PAGE 1	OF 2	
DATE	S/N	TIME	TEMP	TEMP. GRADIENT (°F/HR)	OPER.	
08/01/17	10002		20°C		1	
			10°C		2	
			0°C		3	
			-10°C		4	
			-20°C		5	
			-25°C		6	
			-30°C		7	
			-35°C		8	
			-40°C		9	
			-45°C		10	
					UNIT FAILED AT -45°C AND COLD STEP STOPPED.	
TEST CONDUCTOR:				TED LIU	DATE: 08-01-2017	
TEST ENGINEER:					DATE: 08-01-2017	
WITNESS:					DATE:	
Q. A. ENGINEER:				Robin Gardner Quanta Laboratories	DATE: 08-01-2017	

TEMPERATURE TEST DATA



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CLIENT: FACEBOOK				P.O. NO: 1074159		
SPECIMEN: OPEN CELLULAR-CONNECT-1				JOB NO: QL-17-0834		
SPECIFICATION: Per Facebook's Open cellular-connect-1 Environmental Test spec. Doc. 3.9.1.5 HALT		CHAMBER: THERMOTRON #33		PAGE 2	OF 2	
DATE	S/N	TIME	TEMP	TEMP. GRADIENT (°F/HR)	OPER.	
08/02/17	10002		30°C		11	
			40°C		12	
			50°C		13	
			55°C		14	
			60°C		15	
			65°C		16	
			70°C		17	
			75°C		18	
			75°C			
			20°C		19	
Note: 1. Operational test, customer checked unit after 30 minutes soak at each temperature level. 2. Unit failed at -45°C and 75°C.						
TEST CONDUCTOR:				TED LIU	DATE: 08-02-2017	
TEST ENGINEER:					DATE: 08-02-2017	
WITNESS:					DATE:	
Q. A. ENGINEER:				Robin Gardner Quanta Laboratories	DATE: 08-02-2017	



FACEBOOK HALT



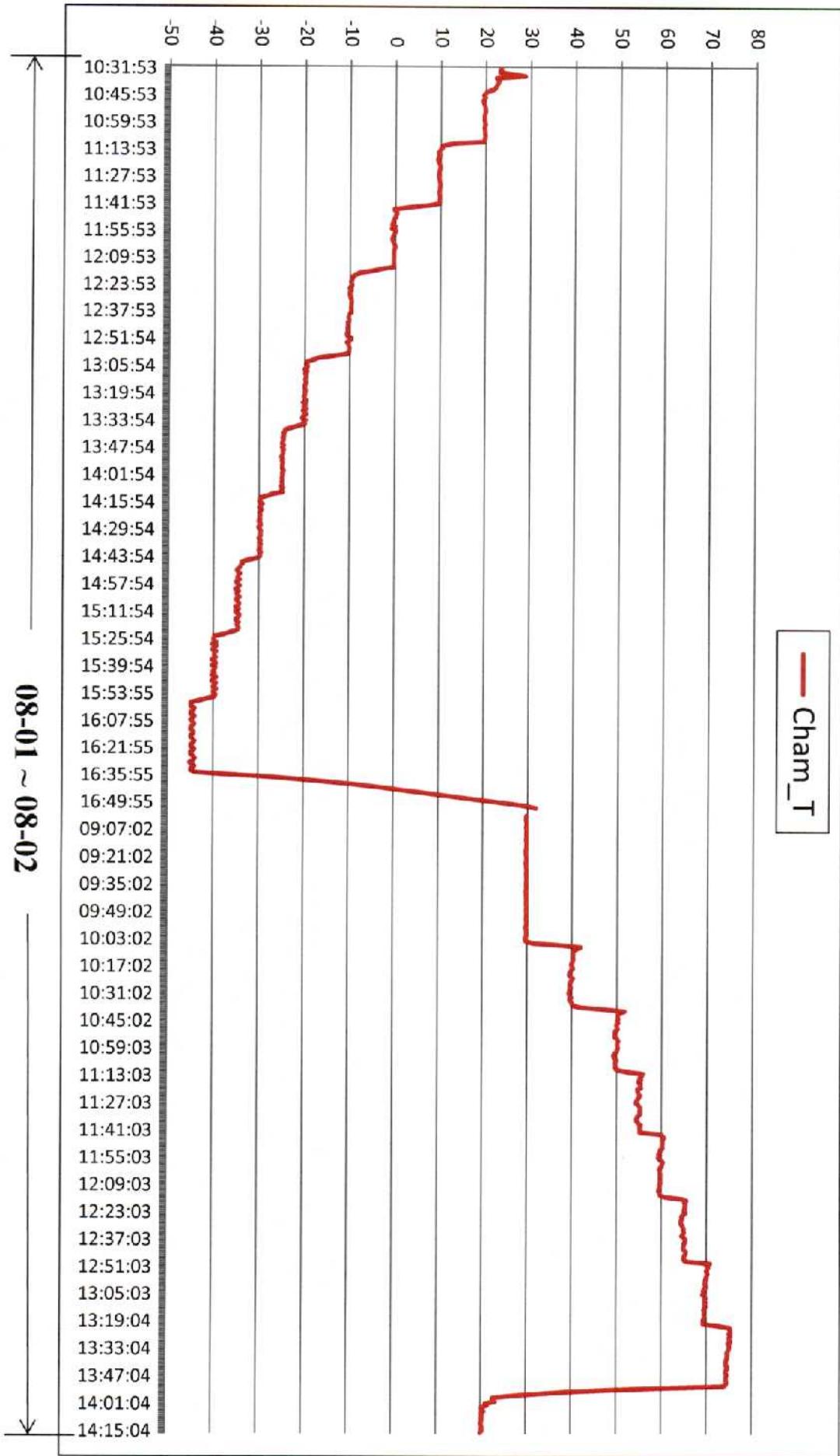
UNIT IN THE CHAMBER #33

JOB NO. : QL-17-0834

08-01-2017



FACEBOOK TEMPERATURE TEST



TEST IN THE CHAMBER #33

JOB NO. : QL-17-0834

08-02-2017

RANDOM VIBRATION TEST DATA



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CLIENT: FACEBOOK				P.O. NO: 1074159
SPECIMEN: OPEN CELLULAR-CONNECT-1				JOB NO: QL-17-0834
SPECIFICATION: Per facebook's Open cellular-connect-1 Environmental Test spec. Doc. 3.9.1.5 HALT				PAGE 1 OF 1
DATE	S/N	AXIS	FREQUENCIES & LEVELS	REMARKS
08/03/17	10019	skewed	<p>Random Vibration Step Test:</p> <p>5-500 Hz @ 0.5 Grms 5-500 Hz @ 1.0 Grms 5-500 Hz @ 2.0 Grms 5-500 Hz @ 3.0 Grms 5-500 Hz @ 4.0 Grms 5-500 Hz @ 5.0 Grms 5-500 Hz @ 6.0 Grms</p> <p>Duration: 15 min/each level</p>	<ul style="list-style-type: none"> 1. Operational test, Test completed to the spec. Requirements. 2. Unit failed at 6.0 grms after 5 minutes vibration. Test stopped.
 DEFINITION OF AXES	TEST CONDUCTOR:		 Hardy	DATE: 08-03-2017
	TEST ENGINEER:			DATE: 08-03-2017
	WITNESS:			DATE:
	Q. A. ENGINEER:		 Robin Gardner Quanta Laboratories	DATE: 08-03-2017

ESS/HALT TEST DATA



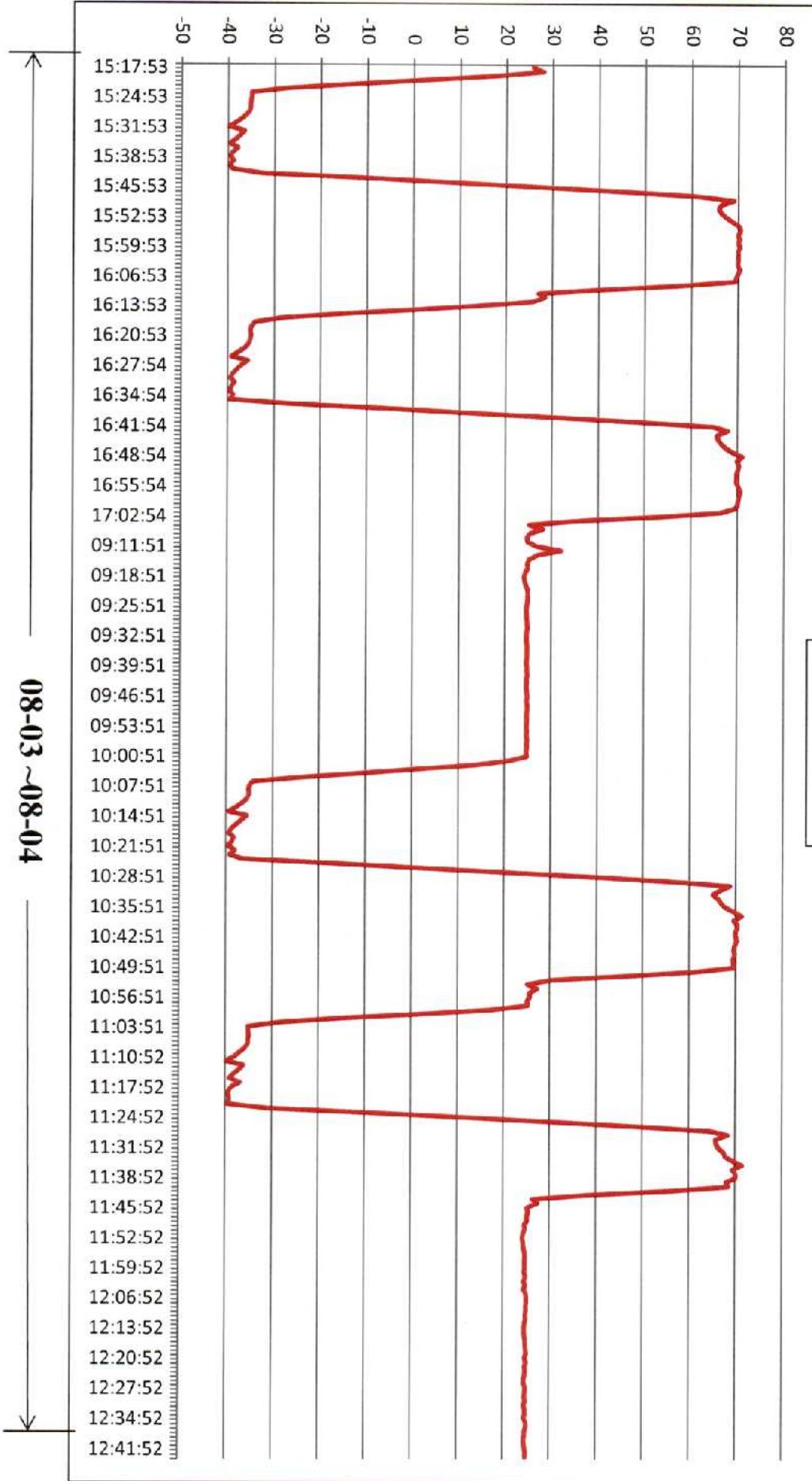
3199 De La Cruz Blvd, Santa Clara, CA 95054
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CLIENT: FACEBOOK			P.O. NO: 1074159
SPECIMEN: OPEN CELLULAR-CONNECT-1			JOB NO: QL-17-0834
SPECIFICATION: Per facebook's Open cellular-connect-1 Environmental Test spec. Doc. 3.9.1.5 HALT			PAGE 1 OF 1
DATE	S/N	AXIS	TEMPERATURE; FREQUENCIES; LEVELS
08/03/17 08/04/17	10019	SKEWED	<p>TEMPERATURE CYCLE PROFILE:</p> <p>SOAK AT 25°C FOR 5 MIN; RAMP TEMPERATURE DOWN TO -40°C IN 3 MIN 15 SEC (20°C /MIN); SOAK AT -40°C FOR 20 MIN; RAMP TEMPERATURE UP TO 70°C IN 5 MIN 30 SEC (20°C /MIN); SOAK AT 85°C FOR 20 MIN; RAMP TEMPERATURE DOWN TO 25°C IN 2 MIN 15 SEC (20°C /MIN) CYCLED FOR 5 TIMES.</p> <p>RAN THE FOLLOWING RANDOM VIBRATION DURING THE WHOLE CYCLE.</p> <p>5-500 Hz @ 1.0 G RMS ON THE 1ST CYCLE 5-500 Hz @ 2.0 G RMS ON THE 2ND CYCLE 5-500 Hz @ 3.0 G RMS ON THE 3RD CYCLE 5-500 Hz @ 4.0 G RMS ON THE 4TH CYCLE 5-500 Hz @ 5.0 G RMS ON THE 5TH CYCLE</p>
 DEFINITION OF AXES	TEST CONDUCTOR:		 TED LIU
	TEST ENGINEER:		 DATE: 08-04-2017
	WITNESS:		 DATE:
	Q. A. ENGINEER:		 Robin Gardiner Quanta Laboratories



FACEBOOK
HALT

— Cham_T



TEST IN THE CHAMBER #33

JOB NO. : QL-17-0834

08-04-2017

08-03 ~08-04

ESS/HALT TEST DATA

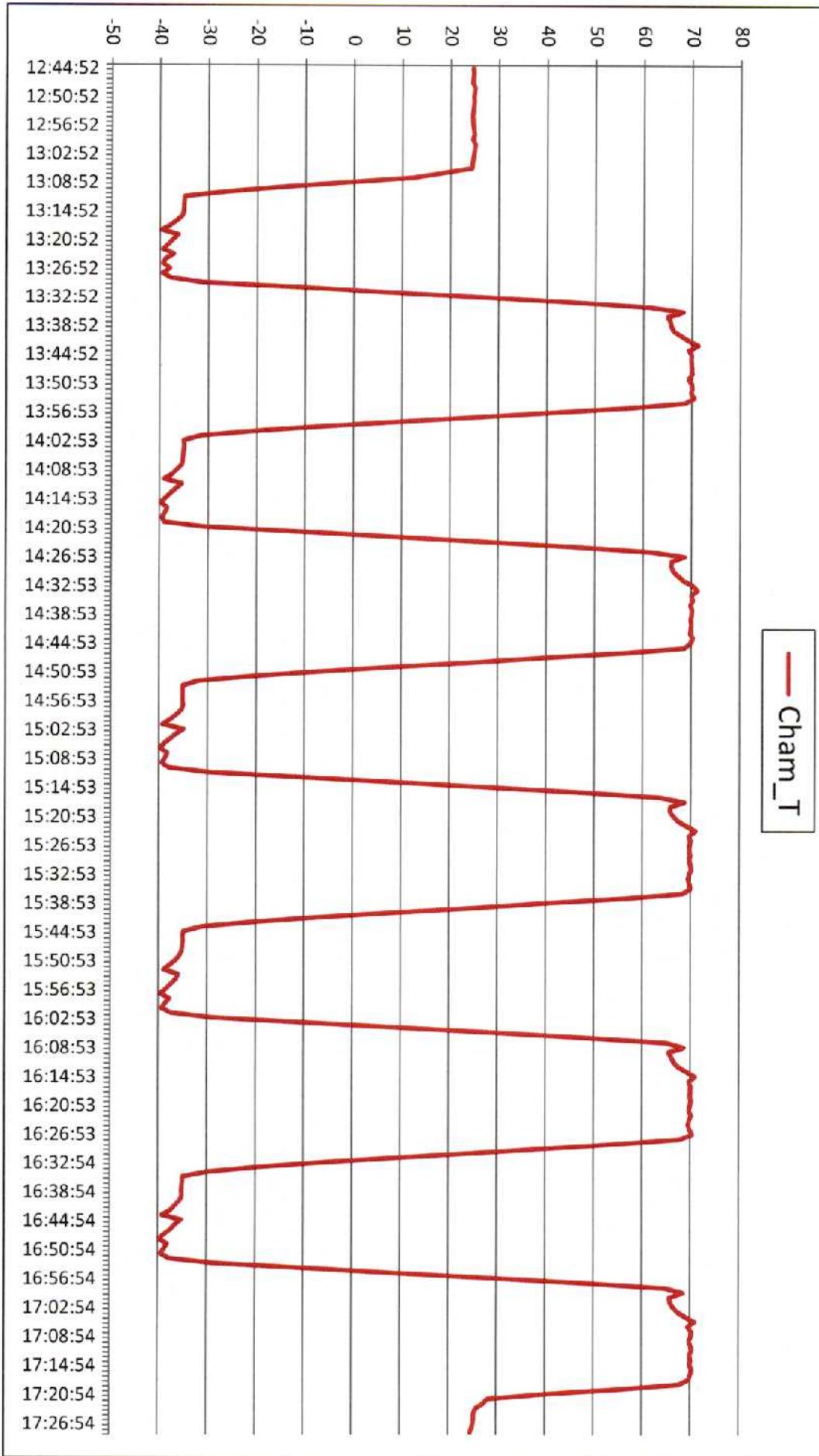


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CLIENT: FACEBOOK			P.O. NO: 1074159
SPECIMEN: OPEN CELLULAR-CONNECT-1			JOB NO: QL-17-0834
SPECIFICATION: Per facebook's Open cellular-connect-1 Environmental Test spec. Doc. 3.10.1.5 HASS			PAGE 1 OF 1
DATE	S/N	AXIS	TEMPERATURE; FREQUENCIES; LEVELS
08/04/17	10019	SKEWED	<p>TEMPERATURE CYCLE PROFILE:</p> <p>SOAK AT 25°C FOR 5 MIN; RAMP TEMPERATURE DOWN TO -40°C IN 3 MIN 15 SEC (20°C /MIN); SOAK AT -40°C FOR 20 MIN; RAMP TEMPERATURE UP TO 70°C IN 5 MIN 30 SEC (20°C /MIN); SOAK AT 85°C FOR 20 MIN; RAMP TEMPERATURE DOWN TO 25°C IN 2 MIN 15 SEC (20°C /MIN) CYCLED FOR 5 TIMES.</p> <p>RAN THE FOLLOWING RANDOM VIBRATION DURING ALL THE FIVE CYCLES.</p> <p>5-500 Hz @ 1.0 G RMS</p>
 DEFINITION OF AXES	TEST CONDUCTOR:		 TED LIU DATE: 08-04-2017
	TEST ENGINEER:		 JOHN DATE: 08-04-2017
	WITNESS:		 DATE:
	Q. A. ENGINEER:		 Robin Gardner Quanta Laboratories DATE: 08-04-2017



FACEBOOK
HASS



TEST IN THE CHAMBER #33

JOB NO. : QL-17-0834

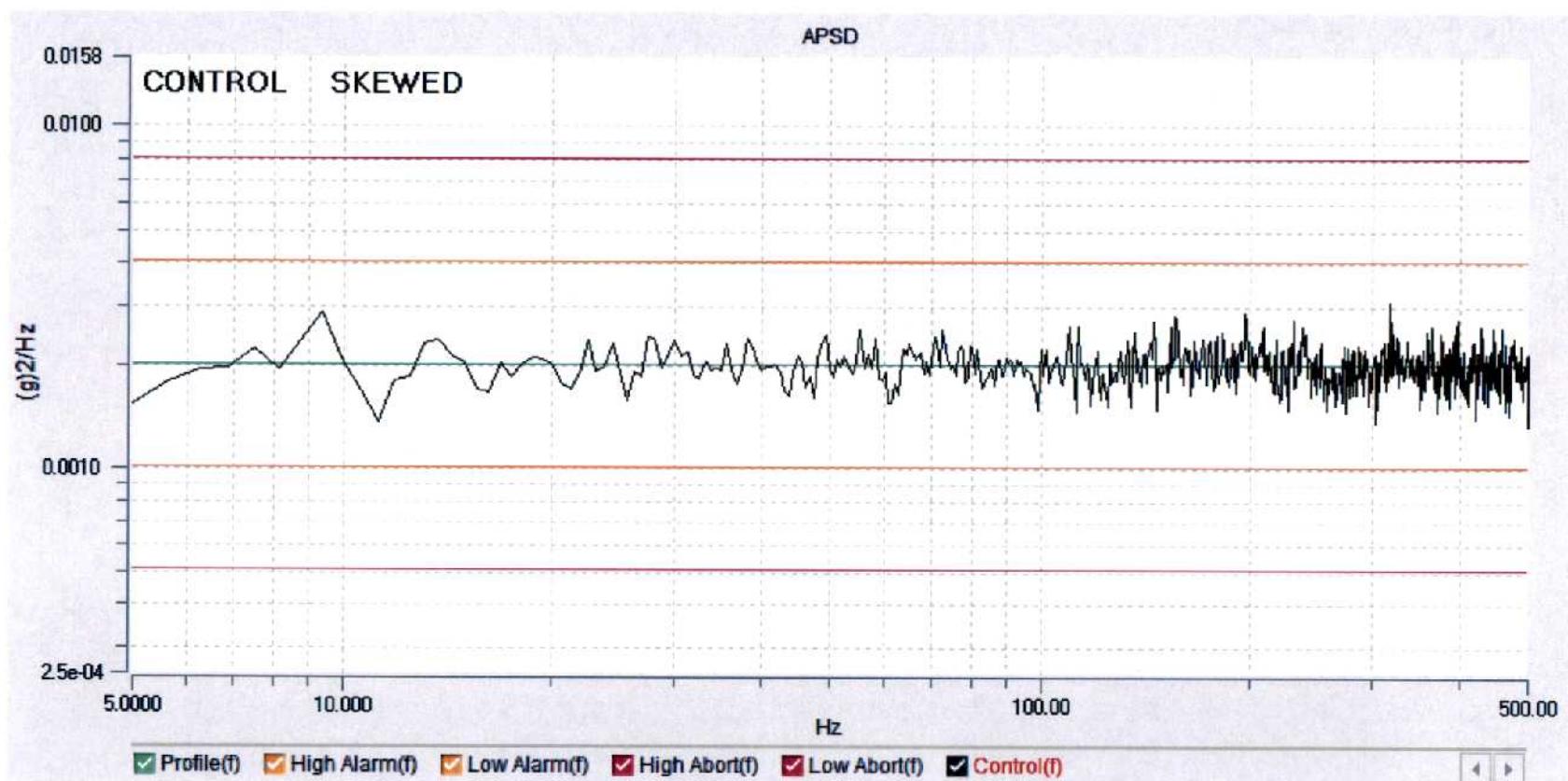
08-04-2017

Test Name: QL-17-0834 FACEBOOK 5-500 HZ @25C

Object name:

Object Type:

Test type: Random Test Project Name: 5-500 HZ.ucn



Current Level: 100.00 %

Demand RMS: 1.000 g

Control RMS: 0.997 g

Frame Time: 1.6000 (s)

Lines: 800

dF: 0.6 Hz

DOF: 120

Current Level Time: 04:14:59

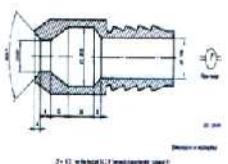
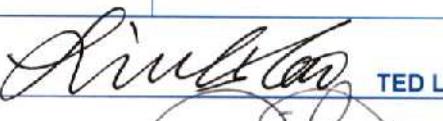
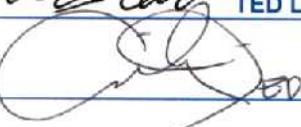
Remaining Time: 00:00:00

Data was saved as a file at time: 2017-8-4 PM 05:18:22

WATER INGRESS TEST DATA

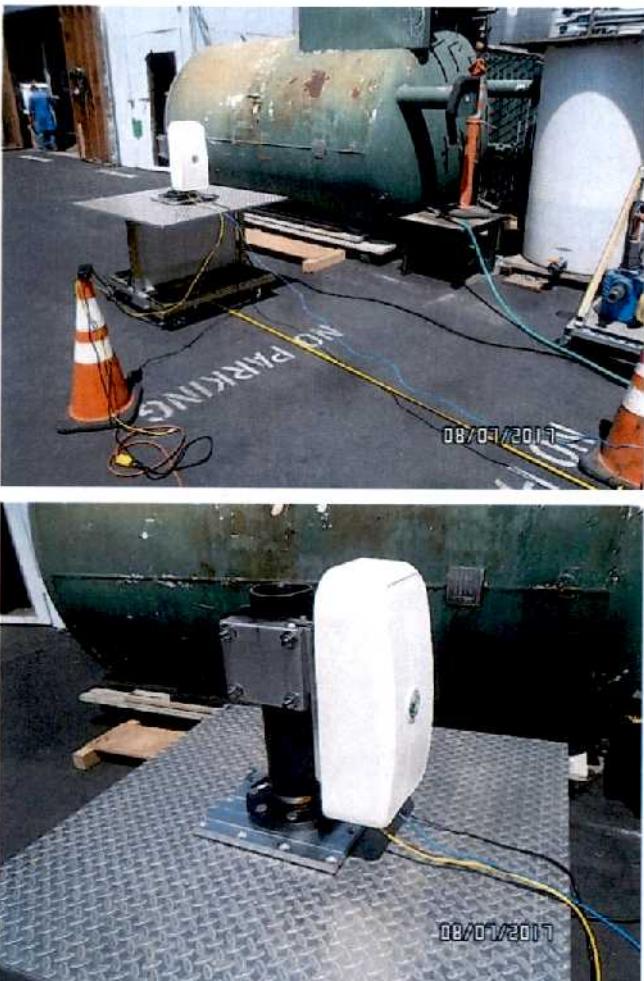


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CLIENT: FACEBOOK				P.O. NO:	1074159
SPECIMEN: OPEN CELLULAR-CONNECT-1				JOB NO:	QL-17-0834
SPECIFICATION: PER IEC 60529, IPX5.				PAGE	1 OF 1
DATE	S/N	WATER FLOW RATE	DISTANCE	DURATION	REMARKS
08/07/17	10002	12.5 LPM ± 5% OR 3.3 GPM ± 5%	2.5 M to 3 M	1 MIN/M ² AT LEAST DURATION: 3 MIN	<p>WATER JET NOZZLE 6.3MM DIAMETER</p> <ul style="list-style-type: none"> 1. Operational test, test completed to specification requirements. 2. Unit worked normally before, during and after test. 3. No water observed in the unit after test.
	TEST CONDUCTOR:	 TED LIU		DATE: 08-07-2017	
	TEST ENGINEER:			DATE: 08-07-2017	
	WITNESS:			DATE:	
	Q. A. ENGINEER:	 Robin Gardner Quanta Laboratories		DATE: 08-07-2017	



FACEBOOK WATER INGRESS (IPX5) TEST



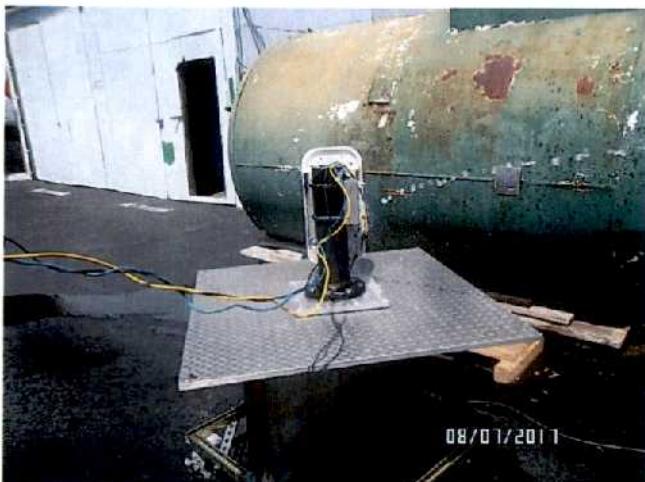
TEST SETUP

JOB NO. : QL-17-0834

08-07-2017



FACEBOOK WATER INGRESS (IPX5) TEST



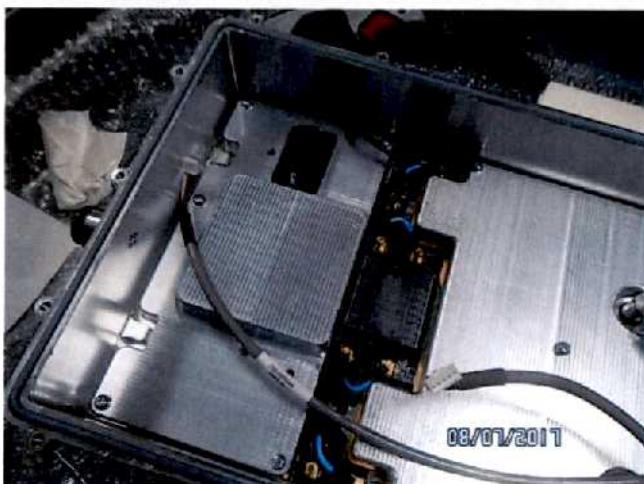
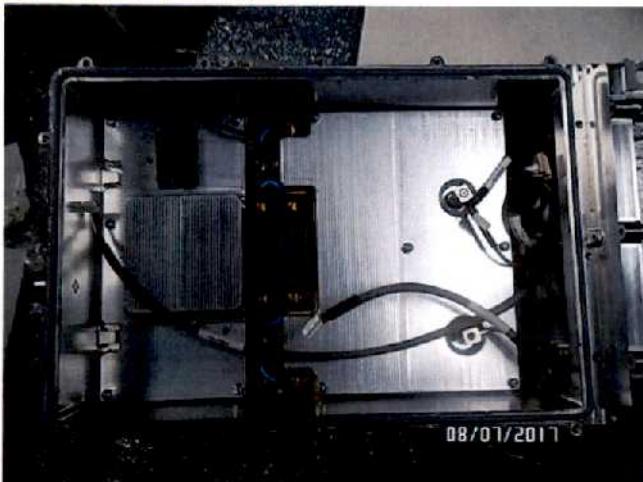
TEST ONGOING

JOB NO. : QL-17-0834

08-07-2017



FACEBOOK WATER INGRESS (IPX5) TEST



AFTER TEST

JOB NO. : QL-17-0834

08-07-2017

EQUIPMENT LIST FOR WATER INGRESS TEST



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Phone: (408) 988-0770 FAX: (408) 988-0762
test@quantalabs.com www.quantalabs.com

CLIENT: FACEBOOK		P.O. No.: 1074159			
JOB NO: QL-17-0834					
MFGR	DESCRIPTION	FLOW RATE/ RANGE	SERIAL NO.	ASSET NO.	CALIBRATION DUE DATE
QUANTA	WATER INGRESS CART	N/A	Q006	QL-0495	TIME OF TEST
QUANTA	IPX5 SPRAY NOZZLE	6.3mmØ 12.5 l/min	N/A	QL-0502	TIME OF TEST
OMEGA	FLOW METER FTB691A-NPT-1/2"	1 -10 GPM	KF2449	QL-0493	1/17/2018

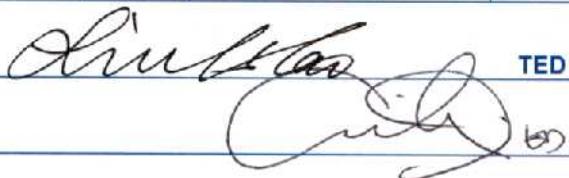
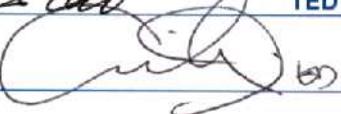
Notes:

1. All Calibrations have been performed using standards having an accuracy traceable to NIST or derived from acceptable values of natural physical constants and complies with ISO-17025 and A2LA requirements.
2. Measurement uncertainty are calculated using a confidence level of 95% with a coverage factor of 2 (K = 2).

DUST INGRESS TEST DATA

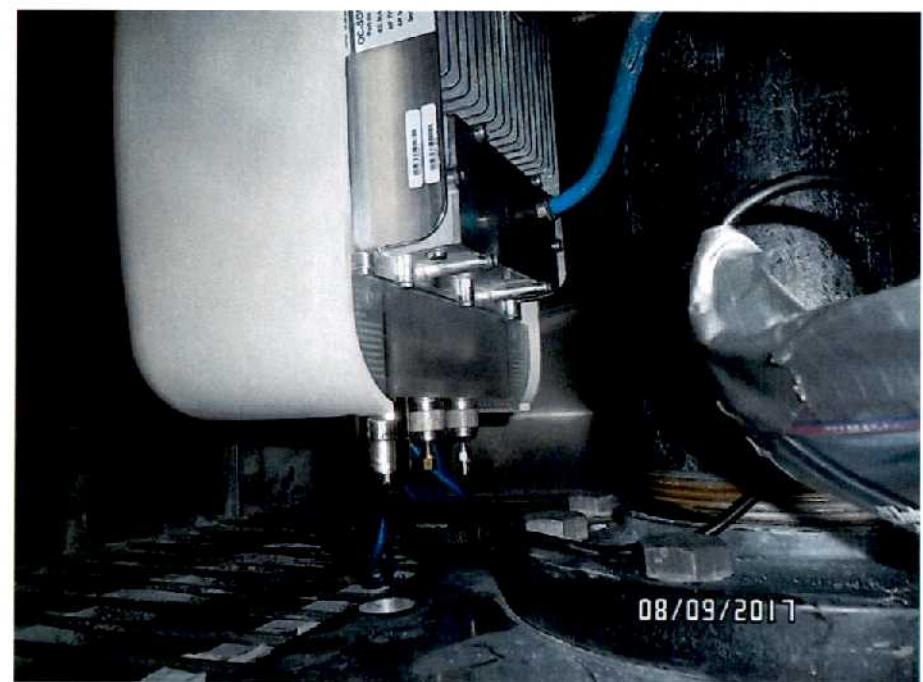


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 Phone: (408) 988-0770 FAX: (408) 988-0762
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CLIENT: FACEBOOK					P.O. NO: 1074159
SPECIMEN: OPEN CELLULAR-CONNECT-1 (QTY: 1)					JOB NO: QL-17-0834
SPECIFICATION: PER IEC60529 IP6X SPEC.				CATEGORY 1 <input checked="" type="checkbox"/> CATEGORY 2 <input type="checkbox"/>	PAGE 1 OF 1
DATE	S/N	DURATION	TEMP.	DUST CONCENTRATION	REMARKS
08/09/17 ~ 08/10/17	10002	8 HOURS	35°C	2Kg/m ³	<p>TEST COMPLETED TO SPECIFICATION.</p> <p>NOTE:</p> <ul style="list-style-type: none"> • PRESSURE INSIDE THE ENCLOSURE OF THE UNIT WAS MAINTAINED AT DEPRESSION RATE OF 2KPA (20 MBAR) AS COMPARED TO THE SURROUNDING ATMOSPHERIC PRESSURE BY A VACUUM PUMP CONNECTED TO THE UNIT (REFER TO IEC60529 SPEC.). • NO DEPOSIT OF DUST/TALCUM POWDER WAS OBSERVED INSIDE THE ENCLOSURE AFTER THE TEST.
TEST CONDUCTOR:  TED LIU					DATE: 08-11-2017
TEST ENGINEER: 					DATE: 08-11-2017
WITNESS:					DATE:
Q. A. ENGINEER:  Robin Gardner Quanta Laboratories					DATE: 08-11-2017



FACEBOOK DUST INGRESS (IP6X)TEST



UNIT IN THE CHAMBER #46

JOB NO. : QL-17-0834

08-09-2017



FACEBOOK DUST INGRESS (IP6X) TEST



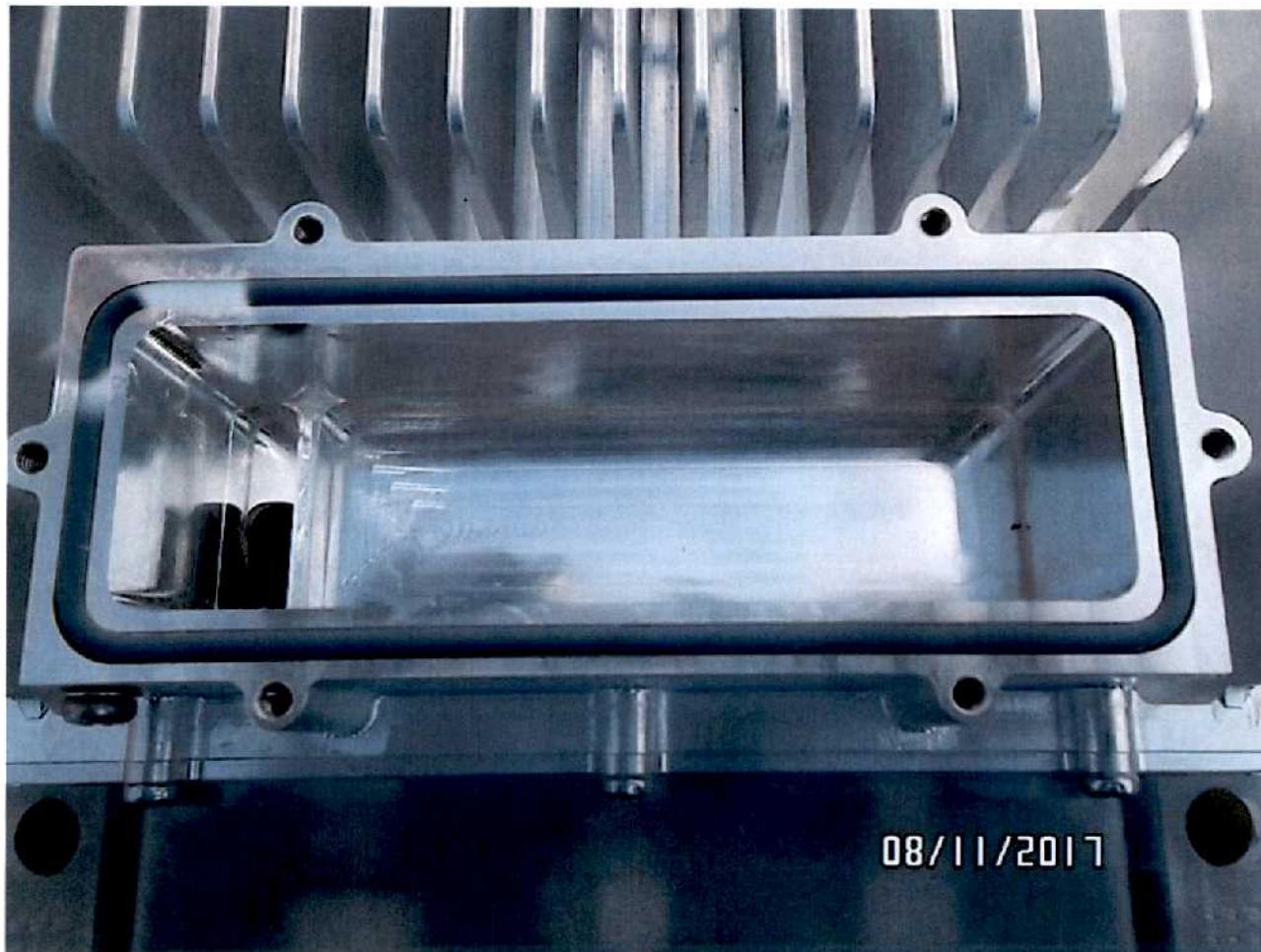
AFTER TEST

JOB NO. : QL-17-0834

08-10-2017



**FACEBOOK
DUST INGRESS (IP6X)TEST**



AFTER TEST

JOB NO. : QL-17-0834

08-11-2017

EQUIPMENT LIST FOR INGRESS/INTRUSION TEST



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CLIENT: FACEBOOK			P.O. No.:	1074159	
			JOB NO:	QL-17-0834	
MFGR	DESCRIPTION	RANGE	SERIAL NO.	ASSET NO.	CALIBRATION DUE DATE
WUXI NANYA SCI-TECH CO., LTD.	DUST CHAMBER #46	N/A	G90060	QL-0862	TIME OF TEST
CHENGFENG FLOWMETER	AIR FLOWMETER	0.25 ~ 2.5 m ³ /Hr	4000118	QL-0863	REFERENCE
Dwyer Instrument	LIQUID FILLED MANOMETER	0 ~ 304.8 mmH ₂ O	2662409	QL-1071	8/30/2021
OMEGA	DIGITAL MANOMETER		30600010 2176	QL-1078	9/12/2017
KULITE SEMICONDUCTOR	PRESSURE TRANSDUCER	0 ~ 50 PSIA	8003028	QL-0865	REFERENCE

Notes:

1. All Calibrations have been performed using standards having an accuracy traceable to NIST or derived from acceptable values of natural physical constants and complies with ISO-17025 and A2LA requirements.
2. Measurement uncertainty are calculated using a confidence level of 95% with a coverage factor of 2 (K = 2).

SALT FOG TEST DATA



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CLIENT: FACEBOOK							P.O. NO: 1074159	
SPECIMEN: OPEN CELLULAR-CONNECT-1							JOB NO: QL-14-0834	
SPECIFICATION: Per Facebook's Open cellular-connect-1 Environmental Test spec. Doc. 3.6 Salt Fog.							PAGE 1 OF 1	
DATE	S/N	TIME	CHAMBER TEMP.	% NaCl	SPECIFIC GRAVITY OF FALL-OUT	PH @TEMP. OF FALL-OUT	COLLECTION RATE (ml/hr/80cm ²)	REMARKS
08/14/17 ~ 08/18/17	10002	10:30 (08/14)	87°F	5%	1.032	6.64 /22.7°C *	---	Started Test
		10:30 (08/15)	97°F	5%	1.035	7.0 /30.9°C	2.08	Soaked for 24 hrs
		~ 08/16						Air dry for 30 hrs
		16:30 (08/16)	95°F	5%	---	---	---	Restarted Test
		16:30 (08/17)	97°F	5%	1.033	7.08 /30.2°C	2.23	Soaked for 24 hrs
		~ 08/18						Air dry for 24 hrs
		(08/18)						Test stopped
Note: <ul style="list-style-type: none"> * Specific gravity and PH value in the first cells were obtained from solution made before the test at room temperature. Test completed to customers specification. See pictures for detail information after test. 								
TEST CONDUCTOR:					TED LIU	DATE: 08-18-2017		
TEST ENGINEER:						DATE: 08-18-2017		
WITNESS:						DATE:		
Q. A. ENGINEER:	Robin Gardner Quanta Laboratories					DATE: 08-18-2017		



FACEBOOK SALT FOG TEST



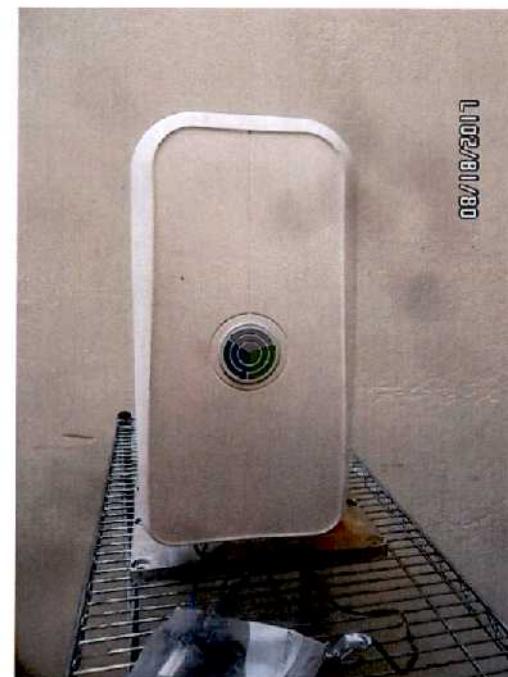
UNIT IN THE CHAMBER #28

JOB NO. : QL-17-0834

08-14-2017



FACEBOOK SALT FOG TEST



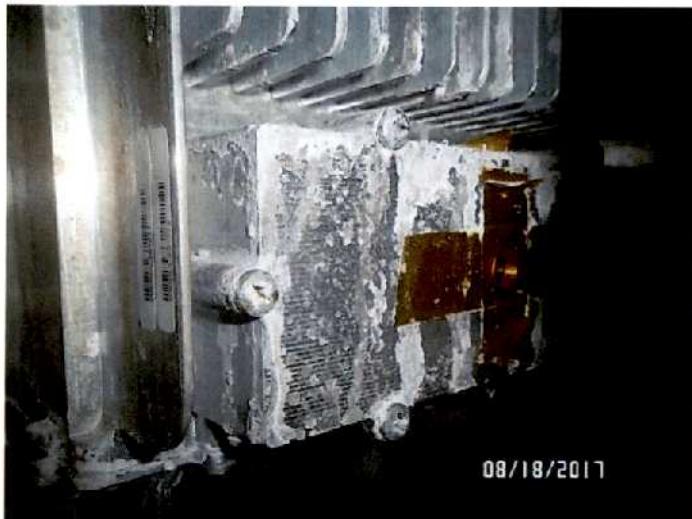
UNIT AFTER TEST

JOB NO. : QL-17-0834

08-18-2017



FACEBOOK SALT FOG TEST



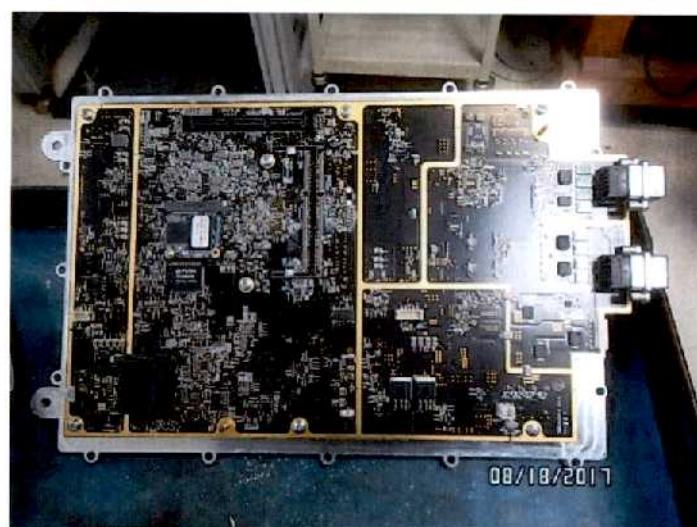
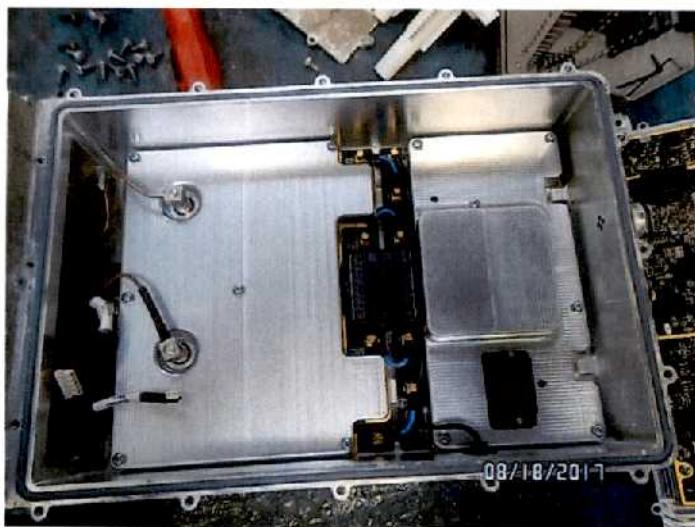
UNIT AFTER TEST

JOB NO. : QL-17-0834

08-18-2017



FACEBOOK SALT FOG TEST



UNIT AFTER TEST

JOB NO. : QL-17-0834

08-18-2017

EQUIPMENT LIST FOR SALT FOG TEST



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CLIENT: FACEBOOK			P.O. No.:	1074159	
			JOB NO:	QL-17-0834	
MFGR	DESCRIPTION	RANGE	SERIAL NO.	ASSET NO.	CALIBRATION DUE DATE
THE GS EQUIPMENT CO.	TEST CHAMBER #28 SALT FOG MODEL: GS-SCH-22	MIL SPEC.	N/A	QL-0533	8/29/2017
WATLOW	TEMP. INDICATER	0 To 200 oF	94AA1DA000R G008645	QL-0959	11/7/2017
OMEGA	TEMP. SENSOR	0 To 200 oF	45	QL-0992	11/7/2017
WESTON GAUGE	DIAL THERMOMETER	0 To 200 oF	29513	QL-0499	REFERENCE
HANNA INSTRUMENTS	PH METER MODEL: HI2212	0 To 14	8646286	QL-0866	9/16/2017
VWR SCIENTIFIC INC.	HYDROMETER 34610-002	1000 To 1220	2	QL-0498	8/25/2017
VWR SCIENTIFIC INC.	HYDROMETER 34610-002	1000 To 1220	1	QL-0737	8/25/2017
MILWAUKEE INSTRUMENTS INC.	REFRACTOMETER FOR SODIUM CHLORIDE MEASUREMENTS	1.000 TO 1.216 SG	D0053599	QL-1061	TIME OF TEST
MORTON	CULINOX 999 FOOD GRADE SALT	N/A	N/A	N/A	N/A

Notes:

1. All Calibrations have been performed using standards having an accuracy traceable to NIST or derived from acceptable values of natural physical constants and complies with ISO-17025 and A2LA requirements.
2. Measurement uncertainty are calculated using a confidence level of 95% with a coverage factor of 2 (K = 2).



QUANTA
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Quanta Laboratories Test Report

Quanta Laboratories submits this report with our Certificate of Conformance to the requirements of the applicable specifications and with appropriate supporting data, but with no other expressed or implied warranty. Customer assumes full responsibility when using or interpreting the data herein for evaluation and/or reporting purposes.

End of Report

QL-17-0834