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Document # 730004135

WORK INSTRUCTION

Title: **Installation Qualification Protocol**

Version # 02

Page 4 of 11

Test Script # IQ-01	IQ Test Name: Associated Documentation Verification		
Equipment # TE0084018-1	Equipment Name: 2690/2790 Alliance Heater Cooler Test System		
Installation Site: Flextronics, Singapore			
Purpose: To verify that supporting documentation is available prior to the completion of qualification.			
Test Execution: - List all applicable documents (Preventive Maintenance, Calibration, Operating Procedures, Test Specification Procedures, Manufacturing Procedures, etc.) under the Document type header, then complete the table below. Rows may be added/removed as needed. - All applicable documents must have a status of Ready, Pre-Rel-Prod, or Release General in SAP. If applicable documents are unavailable in SAP state why in the comments section.			
Objective Evidence: - Completed IQ-01 Test Script Data Sheet - SAP screenshots of below available document(s)			
Document Type	Title, Doc. #, Version/Revision #	Status in SAP	Initial & Date
TSP	Alliance Heater Cooler Test Procedure 735004582 (Version 00, Revision A)	RE	JMD 04 MAR 2019
CAL	Alliance Heater Cooler Cal/PM Procedure 735004597 (Version 00, Revision A)	RE	04 MAR 2019
Comments: N/A			
Overall Test Conclusion		Document No.: _____ Iteration No.: _____ Attachment: _____ Page: ____ of ____	
☐ Pass ☐ Fail			

Test Script # IQ-01
TSP - Alliance Heater Cooler Test Procedure
735004582 (Version 00, Revision A)

Waters

Back Forward History Favorites Personalize View Help

Supplier Portal Product Navigator

Welcome Product Navigator

Product Navigator > Product Navigator > DIR Search

DIR Search

Material:

Search by: ☐ Material ☒ DIR Data

Number: 735004582 Lab / Office:

Type: Cad Indicator: ☐

Version: ECN Number:

Description: Status:

☐ Current Version Only ☒ All Versions

Search Reset

Records: 1

Details	Type	Rev	Number	Ver	Description	Status	ECNumber	Validity
Details	TSP	-	735004582	00	Alliance Heater Cooler Test Procedure	RE		

CAL - Alliance Heater Cooler Cal/PM Procedure
735004597 (Version 00, Revision A)

Waters

Back Forward History Favorites Personalize View Help

Supplier Portal Product Navigator

Welcome Product Navigator

Product Navigator > Product Navigator > DIR Search

DIR Search

Material:

Search by: ☐ Material ☒ DIR Data

Number: 735004597 Lab / Office:

Type: Cad Indicator: ☐

Version: ECN Number:

Description: Status:

☐ Current Version Only ☒ All Versions

Search Reset

Records: 1

Details	Type	Rev	Number	Ver	Description	Status	ECNumber	Validity
Details	TSP	-	735004582	00	Alliance Heater Cooler Test Procedure	RE		



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Document # 730004135

WORK INSTRUCTION

Title: Installation Qualification Protocol

Version # 02

Page 5 of 11

Test Script #	IQ -02	IQ Test Name:	Site Verification		
Equipment #	TE0084018-1	Equipment Name:	2690/2790 Alliance Heater Cooler Test System		
Installation Site: Flextronics, Singapore					
Purpose: To verify the location in which the test equipment is to be installed is suitable for use. Test Execution: - List additional applicable environmental/input parameters in the Parameters column. Rows may be added as needed. - Using the applicable equipment documentation, define the specification(s) in the Acceptance Criteria column, as appropriate. - Verify and/or measure the applicable parameters and complete the table below. Do not delete any of the listed defined parameters. Enter N/A for any parameter or cell that is not used or applicable. The reason for why the parameter is not used or applicable shall be explained within the corresponding Installation Qualification Report. Objective Evidence: - Completed IQ-02 Test Script Data Sheet - Photo(s) of the work area, as applicable - The source of each Acceptance Criterion shall be referenced in the IQR if stored in SAP. If not in SAP objective evidence specifying the Acceptance Criterion shall be provided in or as an attachment to the IQR. - Copies of calibration certificates for measurement tools, if applicable					
Parameters	Acceptance Criteria	As Found	Pass/Fail	Initial & Date	
Ambient Temperature	4 °C to 40 °C*	20 °C	PASS	JMD 04 MAR 2019	
Relative Humidity	20 % to 80 %, Non-Condensing*	61	PASS	JMD 04 MAR 2019	
Workspace	Sufficient room for the test station, UUT and service	TEST STATION HAS BEEN VERIFIED WITH SUFFICIENT SPACE FOR UUT and SERVICE	PASS	JMD 04 MAR 2019	
Test Station Bench	Large and strong enough to support the station	TEST STATION HAS BEEN VERIFIED LARGE and STRONG TO SUPPORT STATION	PASS	JMD 04 MAR 2019	
Electrical Supply	100 VAC to 240 VAC, 50 Hz/60 Hz	237.6 VAC, 50 Hz	PASS	JMD 04 MAR 2019	
Electrical Outlets	Minimum of 3 dedicated outlets	TEST STATION HAS BEEN VERIFIED WITH 4 DEDICATED OUTLET	PASS	JMD 04 MAR 2019	
Network Available	Minimum of 1 dedicated network	TEST STATION HAS BEEN VERIFIED WITH DEDICATED NETWORK	PASS	JMD 04 MAR 2019	
Comments: *Ambient Temperature / Relative Humidity requirement is based of the performance specification (WAT270801) of the UUT (refer to SAP). **Electrical Supply requirement is based on the AC power requirements listed in the drawing for the power supply WAT270471 (refer to SAP).					
Overall Test Conclusion			Document No.: _____		
☐ Pass ☐ Fail			Iteration No.: _____		
			Attachment: _____ Page: ____ of ____		

Test Script # IQ-02

Ambient Temperature: 20°C

flex
SKW-MFG4018-00
Temperature and Humidity Monitoring Record

Rev: A

Form B

(1) Month / Year : Mar 19 (4) Equipment Used : HOBO (7) EQ ID : 1494
(2) Floor Level : 5th Floor (5) Serial Number : 10715936 (8) Temperature Range : 18°C to 30°C
(3) Area : Production (6) Calibration due date : 13 Jun 19 (9) Humidity Range : 25%RH to 85%RH

Date Check	(18) Time Check	Measurement		(15) Within Spec.	(16) Out of Control Record				(21) Name / Signature	(22) NCMR
		(24) Temperature (°C)	(25) Humidity (%RH)		(17) Temperature (°C)	(18) Humidity (%RH)	(19) Date Out	(20) Time Out		
1	0706	20	61	(Yes) No	NA	NA	NA	NA	Yep Thim Wah g	NA
2	0705	21	59	(Yes) No	NA	NA	NA	NA	Yep Thim Wah g	NA
3	X	X	X	Yes / No	X	X	X	X	Yep Thim Wah g	X
4	0725	20	61	(Yes) No	NA	NA	NA	NA	Yep Thim Wah g	NA

Relative Humidity : 61

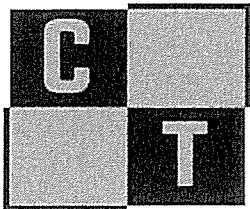
flex
SKW-MFG4018-00
Temperature and Humidity Monitoring Record

Rev: A

Form B

(1) Month / Year : Mar 19 (4) Equipment Used : HOBO (7) EQ ID : 1494
(2) Floor Level : 5th Floor (5) Serial Number : 10715936 (8) Temperature Range : 18°C to 30°C
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Date Check	(18) Time Check	Measurement		(15) Within Spec.	(16) Out of Control Record				(21) Name / Signature	(22) NCMR
		(24) Temperature (°C)	(25) Humidity (%RH)		(17) Temperature (°C)	(18) Humidity (%RH)	(19) Date Out	(20) Time Out		
1	0706	20	61	(Yes) No	NA	NA	NA	NA	Yep Thim Wah g	NA
2	0705	21	59	(Yes) No	NA	NA	NA	NA	Yep Thim Wah g	NA
3	X	X	X	Yes / No	X	X	X	X	Yep Thim Wah g	X
4	0725	20	61	(Yes) No	NA	NA	NA	NA	Yep Thim Wah g	NA



CALTEK PTE. LTD.

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601
Tel: (65) 64520300 Fax: (65) 64520500
Email: info@caltekgroup.com Website: www.caltekgroup.com

CALIBRATION CERTIFICATE

CERTIFICATE NUMBER :	CTT-111-2497-18	JOB NUMBER	: CTJ18-4213
RECEIVED DATE	: 08-Jun-18	ISSUE DATE	: 13-Jun-18

INSTRUMENT	: DATA LOGGER	Ambient Temperature	: (23 ± 5) °C
MANUFACTURER	: HOBO	Relative Humidity	: (55 ± 10) % r.h.
MODEL NO	: U14-001	Date of Calibration	: 13-Jun-18
PART NO	: -	Recommended Due Date	: 13-Jun-19
SERIAL NO	: 10715936	Instrument Code	: CT7426
CUSTOMER	: FLEXTRONICS MANUFACTURING (SINGAPORE) PTE LTD.	Range	: -
		Asset/Tag/Id/Code	: -/-/1494/-
		Page No	: 1 of 3
		Status	: As Found
		JR No	: JR-10438

The described instrument has been calibrated at Caltek laboratory under the ambient conditions stated above.

This certificate provides traceability of measurement to the International System of Units (SI) and/or to units of measurement realised at the National Metrology Centre (NMC), Singapore or other recognized national metrology institutes.

The calibration method was carried out according to In-house Technical Calibration Procedure CTTM-T17-2007, as guide.

S.No.	REFERENCE INSTRUMENT(S)	SERIAL NO	DUE DATE
1.	Hydrogen	0061445393	22-Aug-18

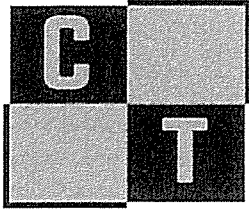
RESULTS OF CALIBRATION :

1. The expanded uncertainty of measurement associated with the calibration is estimated at a confidence level of approximately 95 % with a coverage factor of $k=2.00$.
2. The results of calibration are given on the attached calibration data sheet(s).
3. The user should determine the suitability of the instrument for its intended use.
4. No Adjustments done.

Calibrated by : Kyaw Zin Thant EMP ID : 1068		Approved by : Anoop Ummappilly EMP ID : 1039	
---	---	---	---

This certificate may not be reproduced other than in full, except with the prior written approval of the issuing Laboratory.

REVIEWED & ACCEPTED
SIGN: <u>CHANG MEI LAN</u>
DATE: <u>25 JUN 18</u>
REMARKS: <u>EQ ID 1494</u>
<u>25 JUN 18</u> <u>POWELL CHEONG CHUAN HIN</u>



CALTEK PTE. LTD.

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601
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Email: info@caltekgroup.com Website: www.caltekgroup.com

CALIBRATION CERTIFICATE

CERTIFICATE NUMBER : CTT-111-2497-18

JOB NUMBER : CTJ18-4213

ISSUE DATE : 13-Jun-18

PAGE NUMBER : 2 of 3

Calibration Results:RELATIVE HUMIDITY MEASUREMENT @ FIXED TEMPERATURE OF 23°C

Mean Reference Reading	Mean Instrument Reading - Before Adjustment	Error	Expanded Uncertainty
%rh	%rh	%rh	%rh
23.0	24	1.0	2
40.0	41	1.0	2
60.0	61	1.0	2
80.0	79	-1.0	2
86.0	85	-1.0	2

Calibrated by :

Kyaw Zin Thant

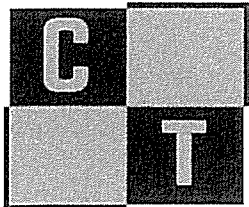
EMP ID : 1068

Approved by :

Anoop Ummappilly

EMP ID : 1039

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CALTEK PTE. LTD.

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CALIBRATION CERTIFICATE

CERTIFICATE NUMBER : CTT-111-2497-18

JOB NUMBER : CTJ18-4213

ISSUE DATE : 13-Jun-18

PAGE NUMBER : 3 of 3

Calibration Results: TEMPERATURE MEASUREMENT @ NOMINAL RELATIVE HUMIDITY OF 50%r.h.

Mean Reference Reading	Mean Instrument Reading - Before Adjustment	Error	Expanded Uncertainty
°C	°C	°C	°C
16.00	16.1	0.10	0.4
18.00	18.2	0.20	0.4
22.00	22.2	0.20	0.4
27.00	27.1	0.10	0.4
30.00	29.9	-0.10	0.4

Calibrated by :

Kyaw Zin Thant

EMP ID : 1068

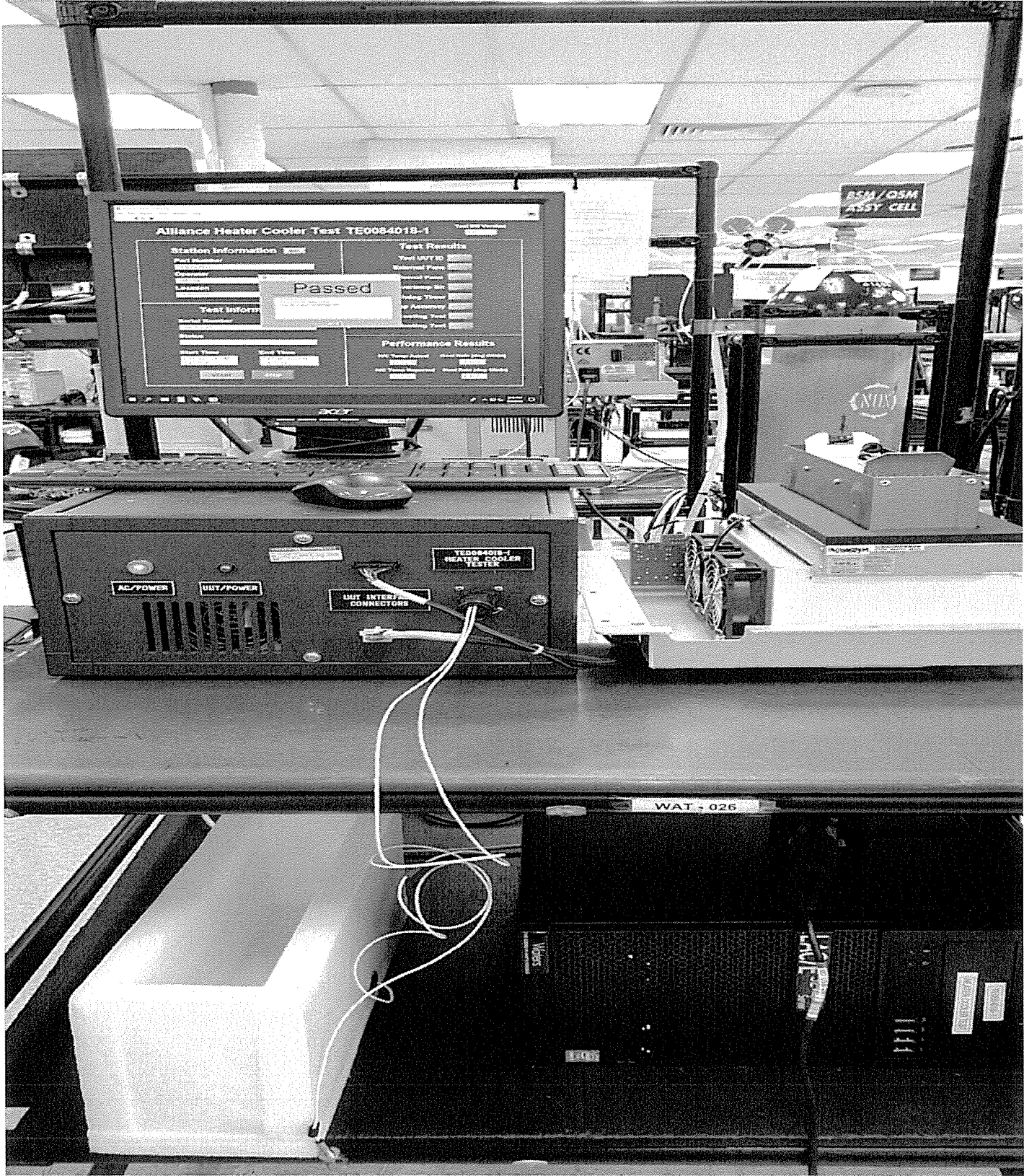
Approved by :

Anoop Ummappilly

EMP ID : 1039

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Test Script # IQ-02
Workspace

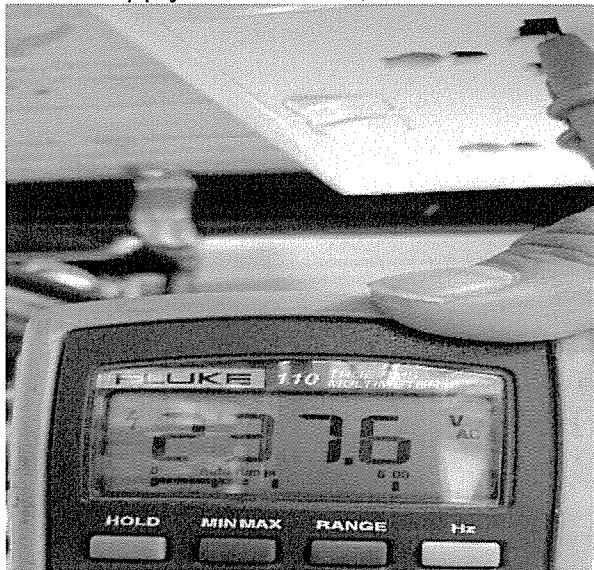


Test Script # IQ-02
Test Station Bench



Test Script # IQ-02

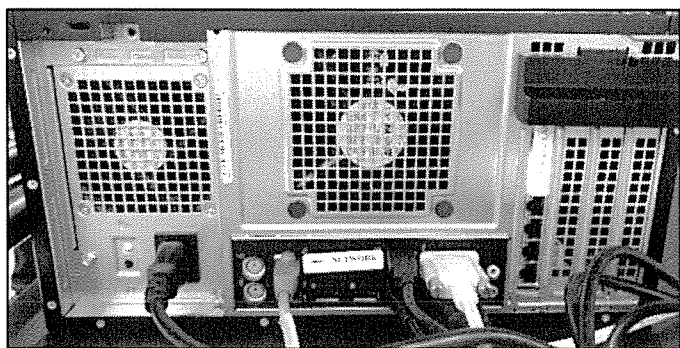
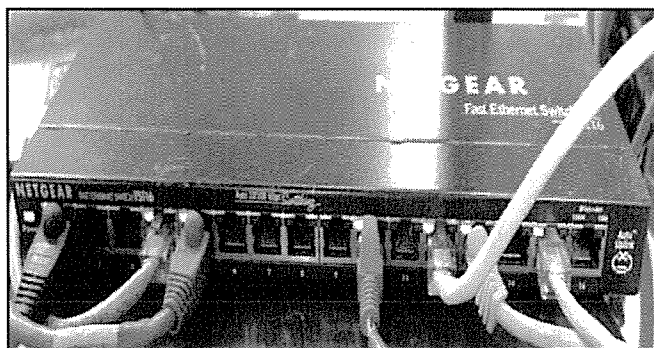
Electrical Supply: 237.6 VAC , 50 Hz

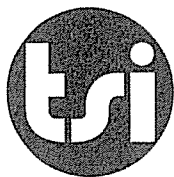


Electrical Outlets



Network Available: Test Station has been verified with dedicated network (Green Ethernet to station CPU)





Techsystems Services & Integration Asia Pte Ltd

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CALIBRATION CERTIFICATE

Ref. No. : FMS / 1942

Page : 1 of 5

Customer : Flextronics Manufacturing (Singapore) Pte Ltd
Address : 1 Kallang Place
Singapore 339211

REVIEWED & ACCEPTED
SIGN: <u>CHANG MEI LAN</u>
DATE: <u>07 JAN 19</u>
REMARKS: <u>PAID 0245</u>
<u>JOEL MANA LATED</u>
<u>DEDUDED</u> <u>07 JAN 19</u>

Equipment ID : 0245
Description : Multimeter
Model : 110
Manufacturer : Fluke
Serial No. : 85730619

Co-ordinator : Neo Hui Hui
Telephone : 6543 2855
Ext : 207

Date Calibrated : 02 Jan 2019
Next Due Date : 02 Jan 2020
Location : Electrical Laboratory

Temperature : (23 ± 3) °C
Humidity : (35 ~ 65) %rh

The above instrument has been tested in general accordance with its manufacturer's published specifications and Performance Test Procedure in Calibration Information PN1608592.

The measurement report attached to this certificate indicates all the test results obtained at the time of testing.
The intended use of the instrument shall be ascertained based on the end user's requirement.
Recalibration interval was determined based on end user's requirements.

As Found : ☒ In / ☐ Out Tolerance
As Left : In Tolerance
Adjustment Done : ☐ Yes / ☒ No

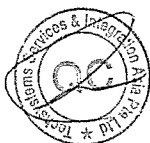
The measurement standards are traceable to SI Units through National Metrology Centre (NMC), Singapore; National Institute of Standards and Technology (NIST), USA; National Physical Laboratory (NPL), UK or other recognised National Standard Laboratories.

The Laboratory's Quality System is in accordance with the Quality Standard ISO 9001:2015.

Conformance terms of "In Tolerance" and "Out of Tolerance" used in this certificate are determined by comparison of measured values against warranted specifications and do not take measurement uncertainties into account.

Test Performed By

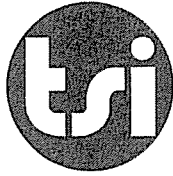
Muhammad Azuan Bin Ali
Engineer



Approved By

Lim Beng Soon
Senior Manager
02-Jan-2019

nhh



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MEASUREMENT REPORT

Date : 02 Jan 2019

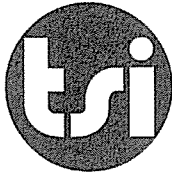
Ref. No. : FMS / 1942

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Test			Specified Limits		Results	Comments
AC Voltage Test						
Range (V)	Freq (Hz)	Input (V)	Min (V)	Max (V)	Reading (V)	
6	50	300 m	0.294	0.306	0.300	
6	500	300 m	0.294	0.306	0.301	
6	50	5	4.947	5.053	5.004	
6	500	5	4.947	5.053	5.003	
60	500	50	49.47	50.53	50.27	
600	500	600	593.7	606.3	602.4	
Frequency Test						
Voltage : 5 V						
Range (kHz)	Input (kHz)	Min (kHz)	Max (kHz)	Reading (kHz)		
50	50	49.93	50.07	49.98		
DC Voltage Test						
Range (V)	Input (V)	Min (V)	Max (V)	Reading (V)		
6	0	-0.002	0.002	0.000		
6	5	4.963	5.037	5.001		
60	-50	-50.37	-49.63	-50.05		
600	600	595.6	604.4	600.5		
Continuity Test						
Beeper On @ 20 Ω			Pass / Fail		Pass	
Beeper Off @ 250 Ω			Pass / Fail		Pass	
Resistance Test						
Range (Ω)	Input (Ω)	Min (Ω)	Max (Ω)	Reading (Ω)		
600	0	-0.2	0.2	0.1		
600	500	495.3	504.7	500.2		
6 k	5 k	4.954 k	5.046 k	5.000 k		
60 k	50 k	49.54 k	50.46 k	49.97 k		
600 k	500 k	495.4 k	504.6 k	500.2 k		
6 M	5 M	4.954 M	5.046 M	4.993 M		
40 M	30 M	29.52 M	30.48 M	29.79 M		

Test Performed By

Muhammad Azuan Bin Ali



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MEASUREMENT REPORT

Date : 02 Jan 2019

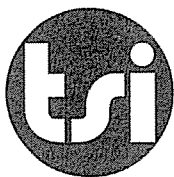
Ref. No. : FMS / 1942

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Test		Specified Limits		Results	Comments
Diode Test					
Range (V)	Input (V)	Min (V)	Max (V)	Reading (V)	
2.2	2	1.980	2.020	2.001	
Capacitance Test					
Range (nF)	Input (nF)	Min (nF)	Max (nF)	Reading (nF)	
1000	800	783	817	800	
					***** Test Completed

Test Performed By

Muhammad Azuan Bin Ali



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MEASUREMENT REPORT

Date : 02 Jan 2019

Ref. No. : FMS / 1942

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The Expanded Uncertainties of measurement (excluding the uncertainties of the Unit Under Test) for the results given in this report, with a confidence level of approximately 95% at Coverage Factor $k = 2$, are as follows:

Parameters	Range		Uncertainty
AC Voltage Generation	33 ~ 329.999 mV	45 Hz ~ 10 kHz	0.0058 % + 23 μ V
	3.3 ~ 32.9999 V	45 Hz ~ 10 kHz	0.05 % + 693 μ V
	33 ~ 329.999 V	45 Hz ~ 1 kHz	0.06 % + 8 mV
	330 ~ 1000 V	45 Hz ~ 1 kHz	0.06 % + 92 mV
Frequency Generation	1.2 ~ 11.999 kHz		29 ppm + 1 mHz
DC Voltage Generation	0 ~ 32.99999 V		0.0058 % + 50 μ V
	30 ~ 329.9999 V		0.0064 % + 500 μ V
	100 ~ 1000 V		0.0064 % + 1.5 mV
Resistance Generation	330 ohm ~ 1.09999 k Ω		0.17 % + 0.07 Ω
	3.3 ~ 10.9999 k Ω		0.010 % + 0.7 Ω
	33 ~ 109.999 k Ω		0.013 % + 7 Ω
	330 k Ω ~ 1.09999 M Ω		0.017 % + 63 Ω
	3.3 ~ 10.9999 M Ω		0.07 % + 635 Ω
	11 ~ 32.9999 M Ω		0.12 % + 635 Ω
Capacitance Generation	0.33 ~ 1.0999 μ F		0.29 % + 1.2 nF

Muhammad Azuan Bin Ali

Test Script # IQ-03	IQ Test Name: Instrumentation Calibration Verification		
Equipment # TE0084018-1	Equipment Name: 2690/2790 Alliance Heater Cooler Test System		
Installation Site: Flextronics, Singapore			
Purpose: To verify that all critical instruments are in the calibration database and that a calibration and/or a preventive maintenance has been performed, as appropriate.			
Test Execution: - List all critical instruments/components and/or sub-systems that require calibration and/or preventive maintenance in the Description column. Rows may be added as needed. - Verify that all listed critical instruments/components have had a preventive maintenance and/or calibration performed in accordance with the PM and/or Calibration procedure(s) or by an outside source, and are listed within the associated calibration database, then complete the table below.			
Objective Evidence: - Completed IQ-03 Test Script Data Sheet - Copies of calibration and/or maintenance certificates - Screen captures from the associated Calibration database			
Description	Asset #	Cal/PM Dates	Initial & Date
TE0084018 Test Box	TE0084018-1	Last Cal/PM: 09 JAN 2019 Cal/PM Due: 09 JAN 2020	JMD 04 MAR 2019
Comments: N/A			
Overall Test Conclusion		Document No.: _____ Iteration No.: _____ Attachment: _____ Page: ____ of ____	
☐ Pass ☐ Fail			

Title: Installation Qualification Protocol

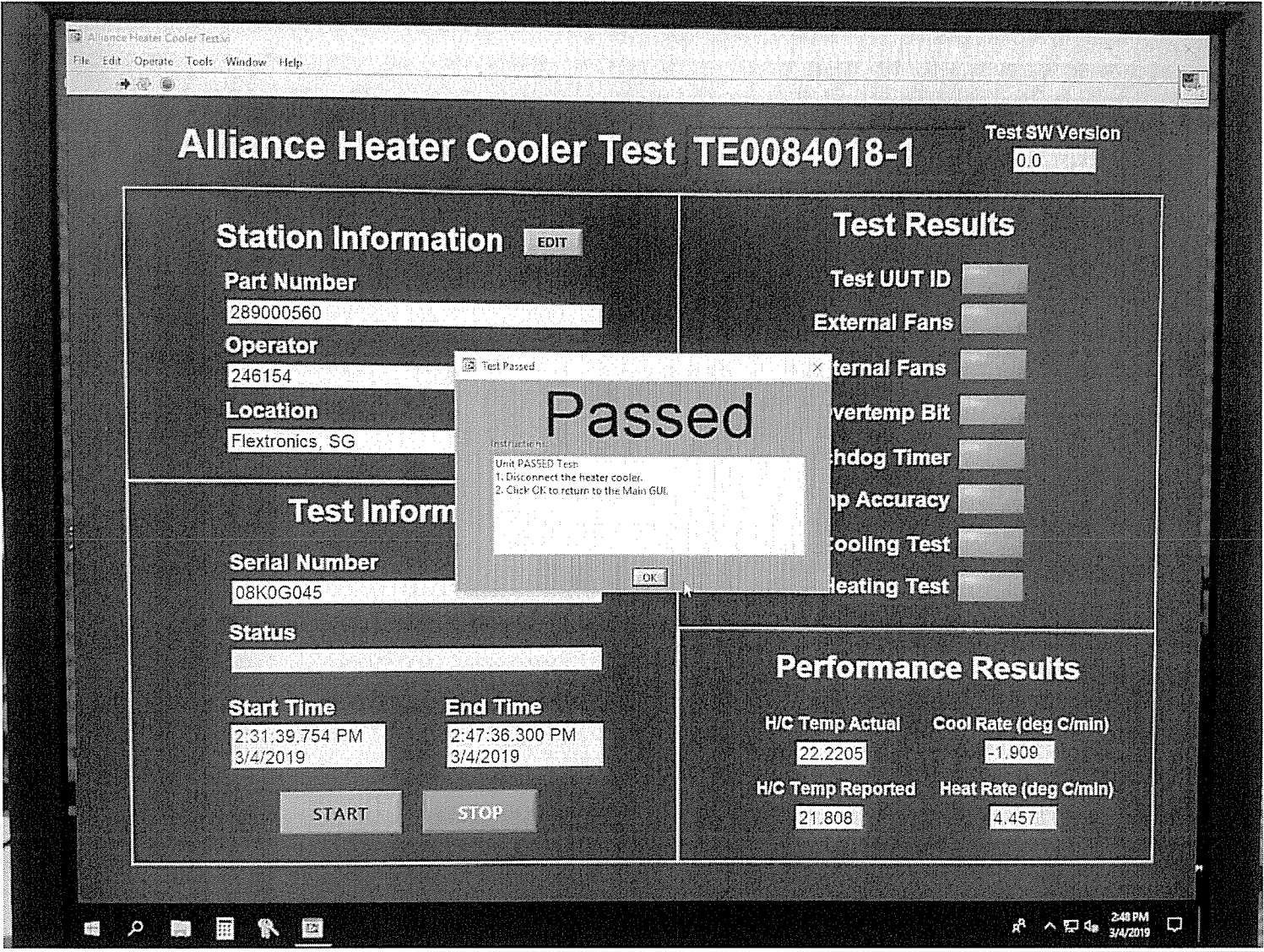
Version # 02

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Test Script # IQ-04	IQ Test Name: Test Software and Instrument Firmware Version			
Equipment # TE0084018-1	Equipment Name: 2690/2790 Alliance Heater Cooler Test System			
Installation Site: Flextronics, Singapore				
Purpose: To verify that the installed software/firmware is correct per the applicable design and/or operational document(s). Test Execution: - List all relevant Equipment software and/or instrument firmware in the Description column. Specify the associated part number for the instrument firmware, if applicable. Rows may be added/removed as needed. - List the associated required equipment software and/or critical instrument/internet connection sharing firmware version(s), as defined in the applicable design/operational document(s), in the Acceptance Criteria column. - Verify that the software version displayed on the Operator Interface of the program and/or the firmware loaded on the instruments/PC match the acceptance criteria identically, if applicable, then complete the table below. Objective Evidence: - Completed IQ-04 Test Script Data Sheet - Identify and/or provide a screen capture/print out/copy of the applicable design/operational document that defines the required software/firmware version(s) within or as an attachment to the associated Installation Qualification Report. - Screen capture and/or test record displaying/indicating the software and/or firmware version(s), as applicable				
Description	Acceptance Criteria	As Found	Pass/Fail	Initial & Date
Equipment Test Software	Version: 0.0	Version:	0.0	JMD 04 MAR 2019
Comments: N/A				
Overall Test Conclusion		Document No.: _____ Iteration No.: _____ Attachment: _____ Page: ____ of ____		
☐ Pass ☐ Fail				

Test Script # IQ-04

Equipment Test Software : Version 0.0





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Document # 730004135

WORK INSTRUCTION

Title: **Installation Qualification Protocol**

Version # 02

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Test Script # IQ-05	IQ Test Name: General Safety and Alarms		
Equipment # TE0084018-1	Equipment Name: 2690/2790 Alliance Heater Cooler Test System		
Installation Site: Flextronics, Singapore			
Purpose: To verify that the equipment can operate in a safe manner, within its designated location.			
Test Execution: - List any additional safety related conditions or alarms in the Safety Inspection column, such as: guarding, interlocks, thermal or mechanical safety, chemical, secured gas tanks, restart or power loss, emergency stop, environmental exhaust, electrical safety, noise, safety labels, etc. Rows may be added as needed. EH&S shall be consulted as necessary. - List the associated safety requirement(s)/specification(s) in the Acceptance Criteria column. - Perform an inspection/test of the equipment to assess its safety related conditions, then complete the table below.			
Objective Evidence: - Completed IQ-05 Test Script Data Sheet - Photo(s) of the secured glass bottles, tanks, etc., if applicable - The source of any applicable Acceptance Criterion shall be summarized in the IQR if stored in SAP. If the source is not stored in SAP, at a minimum the page specifying the applicable Acceptance Criterion shall be provided as an attachment.			
Safety Inspection	Acceptance Criteria	Pass/Fail	Initial & Date
Mechanical Safety/ Pinch Points/Sharp Edges	None Found (or mitigated appropriately)	PASS	JMD 04 MAR 2019
Comments: N/A			
Overall Test Conclusion		Document No.: _____ Iteration No.: _____ Attachment: _____ Page: ____ of ____	
☐ Pass ☐ Fail			



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Document # 730004135

WORK INSTRUCTION

Title: **Installation Qualification Protocol**

Version # 02

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Test Script # IQ-06	IQ Test Name: Functional Verification		
Equipment # TE0084018-1	Equipment Name: 2690/2790 Alliance Heater Cooler Test System		
Installation Site: Flextronics, Singapore			
Purpose: To verify that the system operates as expected.			
Test Execution: - Select the UUT(s) or tests to be performed as defined within the Installation Qualification Section of 730001835. - List the Part Number and Serial Number, if applicable, in the UUT Part Number/Serial Number column. - Define the appropriate Acceptance Criteria within the Acceptance Criteria column. - Perform a test of the UUT(s), verify the Acceptance Criteria, then complete the table below. If an associated Test Record is being used as objective evidence the Header/Footer information should be verified for accuracy.			
Objective Evidence: - Completed IQ-06 Test Script Data Sheet - Copy of the Test Record(s) for the UUT(s), as applicable - The UUT(s) selected for this Test Script and the reasoning for why it/they were selected shall be summarized within the associated Installation Qualification Report. - If this Acceptance Criteria is other than "All required CTQ Specification measurements result in a Pass" then it shall be summarized within the associated VAF, Process Validation Plan, and/or Installation Qualification Report. - For systems that download firmware to product the BOM showing the firmware requirement shall be provided within the IQR.			
UUT Part Number/Serial Number	Acceptance Criteria	Pass/Fail	Initial & Date
Part Number: 289000560 Serial Number: 08K0G045	All required CTQ Specification measurements result in a Pass	PASS	JMD 04 MAR 2019
Comments: N/A			
Overall Test Conclusion		Document No.: _____ Iteration No.: _____ Attachment: _____ Page: ____ of ____	
☐ Pass ☐ Fail			

Test Script # IQ-06

Part Number: 289000560
Serial Number: 08K0G045

Alliance Heater Cooler Test TE0084018-1 Test SW Version 0.0

Station Information [EDIT]

Part Number: 289000560

Operator: 246154

Location: Flextronics, SG

Test Results

Test UUT ID: []

External Fans: []

Internal Fans: []

Overtemp Bit: []

Watchdog Timer: []

Temp Accuracy: []

Cooling Test: []

Heating Test: []

Test Information

Serial Number: 08K0G045

Status: []

Start Time: 2:31:39.754 PM 3/4/2019

End Time: 2:47:36.300 PM 3/4/2019

[START] [STOP]

Performance Results

H/C Temp Actual: 22.2205

Cool Rate (deg C/min): 1.909

H/C Temp Reported: 21.808

Heat Rate (deg C/min): 4.457

Test Passed

Use PASSED Test:

1. Disconnect the heater cooler

2. Click OK to return to the Main GUI

[OK]

2:48 PM 3/4/2019

Title: Installation Qualification Protocol

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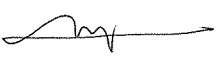
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Appendix A: TRAINING RECORD

Document #	735004582	Document Title	Test Specification and Procedure, Alliance Heater Cooler Test	Version	00
				Revision	A

☒ Read and Understood (If self-trained – If not self-trained this section can be deleted)

By signing you acknowledge that you have reviewed, understand, and agree to comply with the policies and practices of the procedure defined above.

Printed Name	Signature	Initials	Date
JOEL MAMALATEO DEDUYO		JMD	04 MAR 19

Print multiple copies of this Training Record Template as needed

Document No.: _____
Iteration No.: _____
Attachment: _____ Page: ____ of ____