EDIMAX 訊舟科技 NETWORKING PEOPLE TOGETHER

Report No.：_____

- Document: **Reliability Test Report**
- Model: EW-7822ULC
- Tested Period: 09/27/2016 ~ 10/06/2016
- Tested by: Testing Group/RD Department
- Prepared by: Ben
- Reviewed by: Phil
- Approved by: Phil
- Date issued: 10/06/2016

1. This test report applies only to the specific samples tested under the stated test conditions. This report will be considered as an internal beta-final procedure before the product shipping.
2. All details must be listed as a standard sheet and placed in the appendices.
3. All reports must be certified and approved by the responsible manager.
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Summary of Test Items：

ID	Test Item	Test Description	Result
1	**Temperature Measurement Test**	-Maximum mode operation。 -Measure the following temperature： Case surface、Major chip surface、Other element。	**Pass**
2	**Temperature/Humidity cycle operating test**	-Operating temperature/humidity spec (High/Low) -5℃+45.0℃ /0.0%~93%。 -Device condition and keep 16 hours or more。 -Confirm device condition and case condition in high temperature and humidity。	**Pass**
3	**Temperature cycle storage test**	-Storage temperature/Humidity spec (High/Low) -20℃~+65.0℃。 -Packing condition and keep 10 hours or more。 -Confirm device condition and case condition in normal temperature and humidity。	**Pass**
4	**High temperature oprating test**	-Operating temperature/humidity spec (High) +45.0℃/0.0%。 -Device condition and keep 8 hours or more。 -Confirm device condition and case condition in high temperature and humidity。	**Pass**
5	**Low temperature oprating test**	-Operating temperature/humidity spec (Low) -10.0℃/0.0%。 -Device condition and keep 8 hours or more。 -Confirm device condition and case condition in low temperature and humidity。	**Pass**

EDIMAX 訊舟科技

Report No.：_____

Customer	EDiMAX			Test Date
				08/24/2016
DUT Name	EW-7822ULC	Test Name	Temperature Measurement Test	
		Test Standard	EN/IEC 60068-2-38	
Condition of test	Temperature	25.0℃	Humidity	0.0%

Test Equipment (Hardware)

Equipment	MGF/Model No.	Serial No./Internal No.
Temperature Recorder	Agilent (34970A)	TR002
Router	BR-6877AC	S-01
PC	GAGABYTE (Model：GA-G31M-S2L)	PC-03&04

Test Software

Software	Amount
Chariot Console 5.4	1
Chariot Endpoint 6.2	1

Test Result：Pass。

Driver Version: Realtek_1030.10.0401.2016_ISS_1.00.0286

The test results judge by Acelink engineers and please refer to the attachment content。

Remark：

(DUT = Device Under Test。)

※Acelink Technology Co., Ltd. hereby certifies that the equipments are traceable to the NML/ROC or other countries。

※Reproduced test report in partial is not effective。This test report is valid only to the items tested。

ENGINEER	Ben 10/06/2016	APPROVAL	Phil 10/06/2016

TITLE：**EW-7822ULC** _Temperature Measurement Test。	**Room Environment**：26.0℃-40.0%RH。
PURPOSE： To verify the **EW-7822ULC** comply with the test condition as follow，after Temperature Measurement Test。	**EQUIPMENT**： Temperature/Humidity Test Chamber。 < KSON (Model：THS-S4T-150) >

1.TEST QUANTITY：1 Unit。

2.TEST CONDITION：

2.1 Purpose：

Purpose of the operating temperature test is to ensure that the DUT fulfills the specification over the whole operating area。This is alternate method of temperature/ humidity。

2.2 Procedure：

The DUT will be installed in temperature/humidity chamber and operated within the following psychometric envelope：Measurements will be carried out at ambient temperature/humidity。 At each test point once stabilization has occurred，the DUT will be checked for performance against the values in the functional specification。

2.3 Measurement the following temperature：

-Case surface。

-Mayor chip surface。

-Other element。

2.4 Judgment Criteria :

- Any change of product specification。
- There shall be no cosmetic changes in plastic parts。

2.5 Internal software setting：

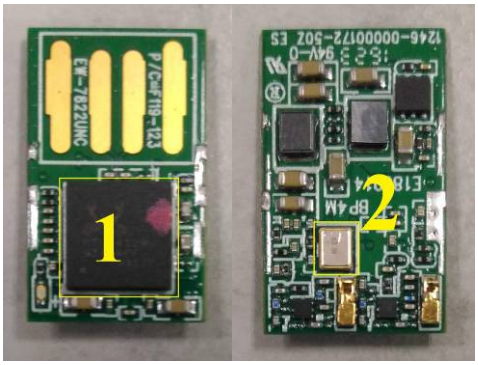
※Connection Method：Wireless。

※Chariot-Script：Throughput。

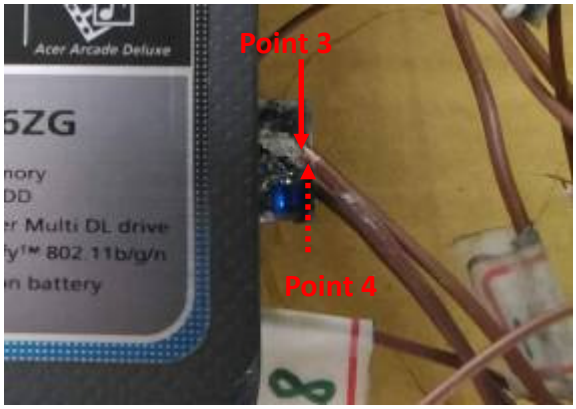
3.TEST PROCEDURE：

Item	Description	Expected Result
1	Connecting PC and Wireless Card to DUT。	Take initial pictures。
2	Put DUT into the Temperature/Humidity Test Chamber。	Take initial pictures。
3	Run Chariot with Throughput script。	DUT function work correctly。
4	Temperature/Humidity Test Chamber (Model：THS-S4T-150) run script as above temperature and humidity condition。	Record measurement point temperature。
5	After 4 hours，stop test。	Take final pictures。
6	Check DUT main board、cover and function work。	DUT function work correctly。

4. TEST PICTURE：



DUT measurement points。



Put DUT into the Shielding Room。

Temperature Measurement：

Temperature	25.0℃	40.0℃ (Δt)	40.0℃ Tj TEMP.	Tj or OP Temperature	Results
Point 1(RTL8812BU)	84	98.9	100.5	125	Pass
Point 2 (XTAL)	72.7	87.6		105	Pass
Point 3 (Case Top)	44.8	59.7		65	Pass
Point 4 (Case Bottom)	47.6	62.5		65	Pass
Point 5 (Environment Temperature)	25.1	40		--	--

P.S.< Point 1(IC)- - Maximum Junction Temperature 125℃。

Tj = TC1 + (Theta Jc * Pd)= 98.9+(0.63*2.5) =100.5 < **125 *0.9=113**℃

Junction Temperature	0	125	°C

5.TEST RESULT：

Model	Abnormal Phenomenon	Result	Remark
EW-7822ULC	N/A	Pass	Normal operation and good condition。

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Report No.：_____

Customer	**EDiMAX**			**Test Date**	
				09/30/2016	
DUT Name	**EW-7822ULC**	**Test Name**	**Temperature Humidity cycle test**		
		Test Standard	EN/IEC60068-2-14		
Condition of test	**Temperature**	-5 ~ 45℃	**Humidity**	0 ~ 93%	

Test Equipment (Hardware)

Equipment	**MGF/Model No.**	**Serial No./Internal No.**
Temperature/Humidity Test Chamber	YGHT(Model: 040P)	CH-004
PC	ASUS(CM1730/CM1830 Series)	PC-18~PC19
Router	BR-6877AC	S-01

Test Product (Software)

Product	**Amount**
Chariot Console 5.4	1
Chariot Endpoint 6.2	1

Test Result：Pass。

The test results judge by Acelink engineers and please refer to the attachment content。

Remark：

Driver Version: Realtek_1030.10.0401.2016_ISS_1.00.0286

(DUT = Device Under Test。)

※acelink Technology Co., Ltd. hereby certifies that the equipments are traceable to the NML/ROC or other countries。

※Reproduced test report in partial is not effective。This test report is valid only to the items tested。

ENGINEER	Ben 10/06/2016	**APPROVAL**	Phil 10/06/2016

TITLE：**EW-7822ULC** _ Temperature Humidity cycle test。	**Room Environment**：24.8℃-45.0%RH。
PURPOSE： To verify the DUT comply with the test condition as follow，after Temperature Humidity cycle test。	**EQUIPMENT**： Temperature / Humidity Test Chamber。 < YGHT(Model:040P)>

1.TEST QUANTITY：1 Unit。

2.TEST CONDITION：

2.1 Purpose :

Purpose of the Temperature cycle operating test is to ensure that the DUT fulfills the specification over the whole environmental area。This is alternate method of temperature/ humidity test。

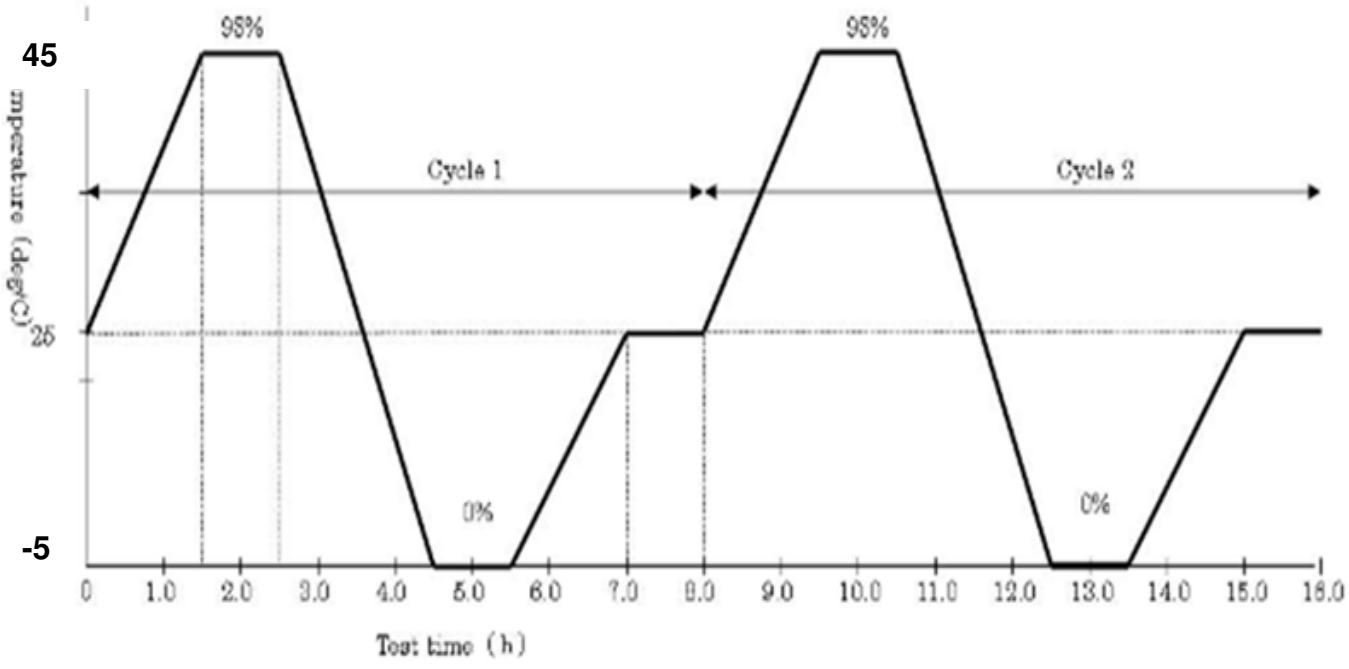
2.2 Procedure：

The DUT will be installed in an environmental chamber and operated within the following psychometric envelope。After the test sequence the DUT should have normal operation and good appearance。。

2.3 Judgment Criteria：

After the test sequence DUT shall undergo complete diagnostics。The units shall be examined for any type of shifting of DUT。And the DUT mechanical and plastic part shall be examined for (gap、color、print、etc.)。

2.4 Test Profile：



2.5 Internal software setting：

※Connection Method：Wireless。

※Chariot-Script：Throughput。

3.TEST PROCEDURE：

Item	Description	Expected Result
1	Check DUT main board、cover and function work。	DUT function work correctly。
2	Put DUT into the Temperature/Humidity Test Chamber。	Take initial pictures。
3	Temperature/Humidity Test Chamber (Model：040P) run script as above temperature and humidity condition。	NIL。
4	Chariot run throughput script DUT。	DUT function work correctly。
5	After 16 hours，stop test。	Take final pictures。
6	Check DUT main board、cover and function work。	DUT function work correctly。

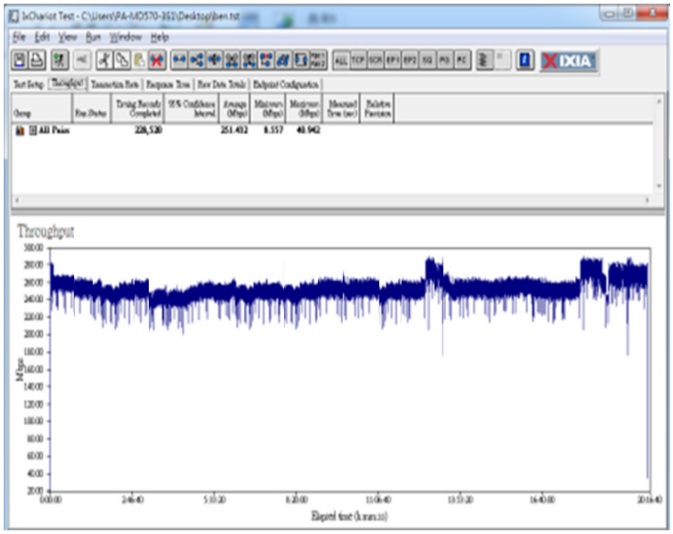
4.TEST PICTURE：

Initial Pictures：



Put DUT into the Temperature/Humidity Test Chamber。

Final Pictures：



Run Chariot with throughput script 。

5.TEST RESULT：

Model	Abnormal Phenomenon	Result	Remark
EW-7822ULC	NIL	Pass	Normal operation and good surface。

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Report No.：_____

Customer	**EDiMAX**			**Test Date**	
				10/03/2016	
DUT Name	**EW-7822ULC**	**Test Name**	**Temperature cycle storage Test**		
		Test Standard	EN/IEC60068-2-78		
Condition of test	**Temperature**	-20.0 ~ 65℃	**Humidity**	0.0%	

Test Equipment (Hardware)

Equipment	MGF/Model No.	Serial No./Internal No.
Temperature/Humidity Test Chamber	YGHT(Model: 040P)	CH-004
PC	ASUS(CM1730/CM1830 Series)	PC-18~PC19
Router	BR-6877AC	S-01

Test Product (Software)

Product	Amount
Chariot Console 5.4	1
Chariot Endpoint 6.2	1

Test Result：Pass。

The test results judge by Acelink engineers and please refer to the attachment content。

Remark：

Driver Version: Realtek_1030.10.0401.2016_ISS_1.00.0286

(DUT = Device Under Test。)

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ENGINEER	Ben 10/06/2016	**APPROVAL**	Phil 10/06/2016

TITLE：**EW-7822ULC** _ Temperature cycle storage Test。	**Room Environment**：24.8℃-45.0%RH。
PURPOSE： To verify the DUT comply with the test condition as follow，after Temperature cycle storage Test。	**EQUIPMENT**： Temperature / Humidity Test Chamber。 < YGHT(Model:040P)>

1.TEST QUANTITY：1 Unit。

2.TEST CONDITION：

2.1 Purpose :

Purpose of the Temperature cycle storage test is to ensure that the DUT fulfills the specification over the whole environmental area。This is alternate method of temperature/ humidity test。

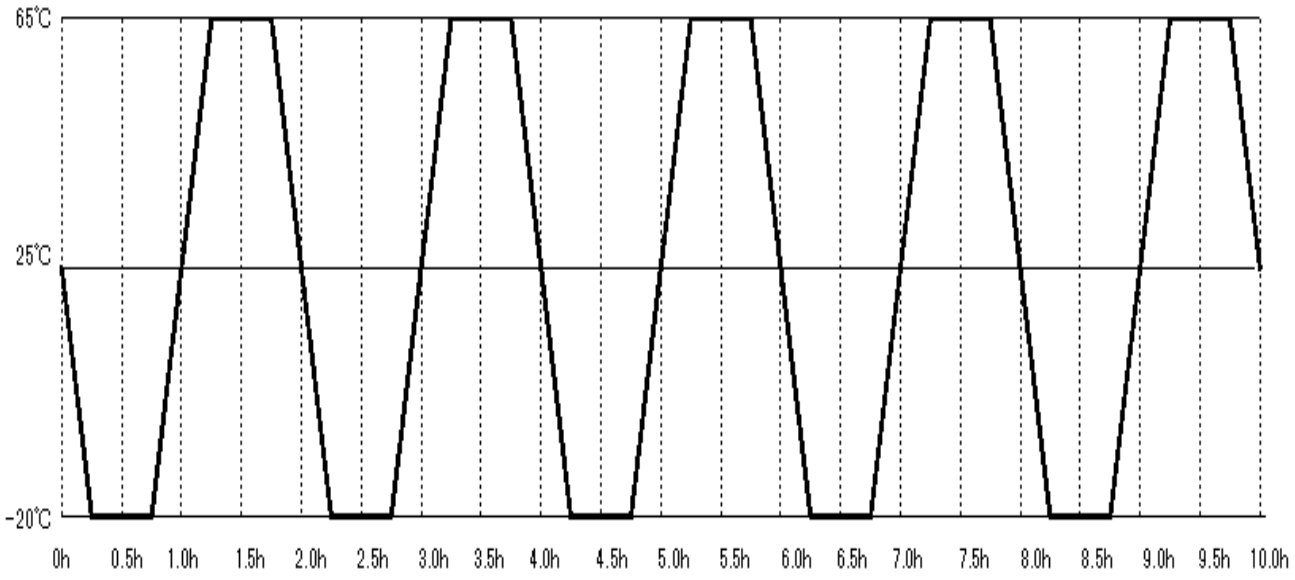
2.2 Procedure：

The DUT will be installed in an environmental chamber and operated within the following psychometric envelope。After the test sequence the DUT should have normal operation and good appearance。。

2.3 Judgment Criteria：

After the test sequence DUT shall undergo complete diagnostics。The units shall be examined for any type of shifting of DUT。And the DUT mechanical and plastic part shall be examined for (gap、color、print、etc.)。

2.4 Test Profile：



2.5 Internal software setting：

※Connection Method：Wireless。

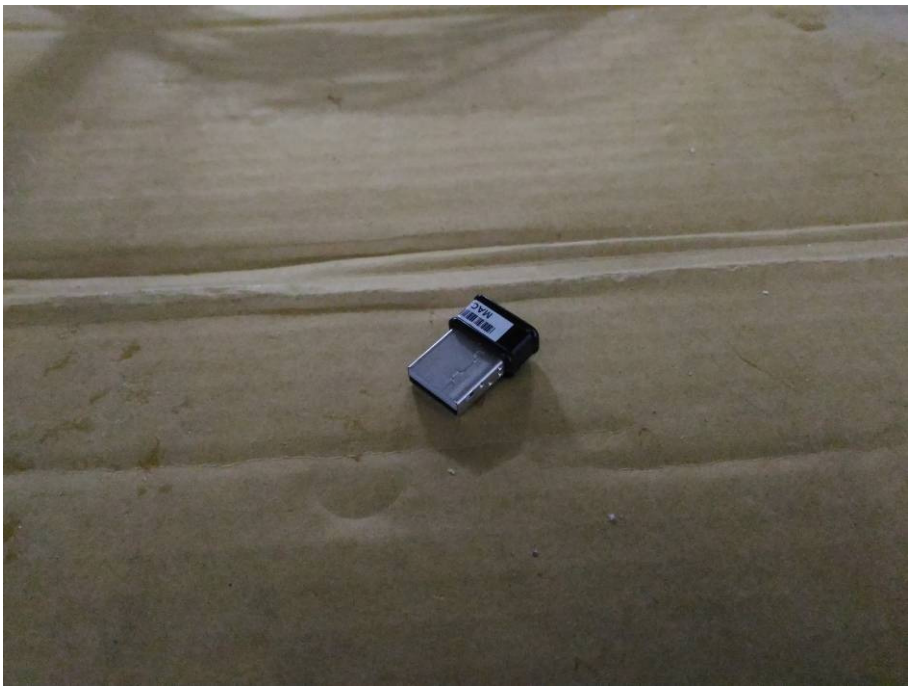
※Chariot-Script：Throughput。

3.TEST PROCEDURE：

Item	Description	Expected Result
1	Check DUT main board、cover and function work。	DUT function work correctly。
2	Put DUT into the Temperature/Humidity Test Chamber。	Take initial pictures。
3	Temperature/Humidity Test Chamber (Model：040P) run script as above temperature and humidity condition。	NIL。
4	Chariot run throughput script DUT。	DUT function work correctly。
5	After 10 hours，stop test。	Take final pictures。
6	Check DUT main board、cover and function work。	DUT function work correctly。

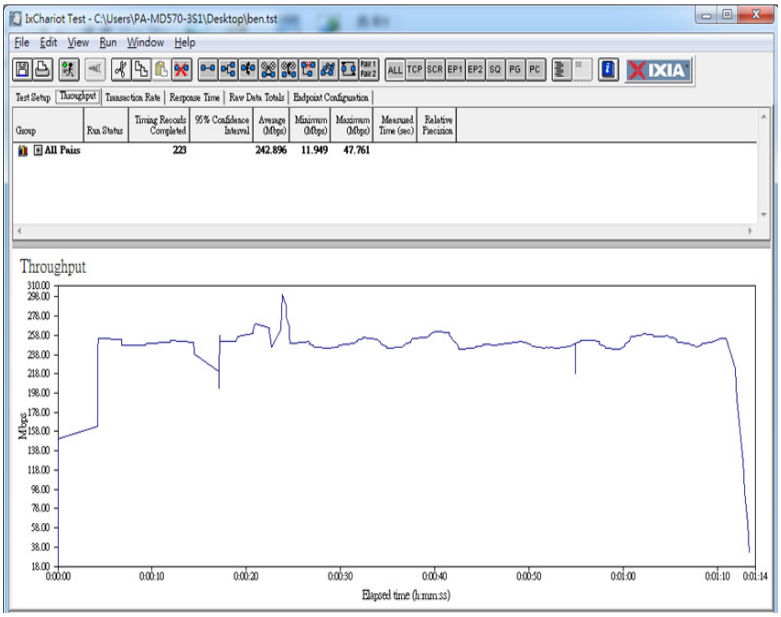
4.TEST PICTURE：

Initial Pictures：



Put DUT into the Temperature/Humidity Test Chamber。

Final Pictures：



Run Chariot with throughput script 。

5.TEST RESULT：

Model	Abnormal Phenomenon	Result	Remark
EW-7822ULC	NIL	Pass	Normal operation and good surface。

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Report No.：_____

Customer	**EDiMAX**			**Test Date**	
				10/04/2016	
DUT Name	**EW-7822ULC**	**Test Name**	**Operation High Temperature Test**		
		Test Standard	EN/IEC60068-2-2		
Condition of test	**Temperature**	45.0℃	**Humidity**	0.0%	

Test Equipment (Hardware)

Equipment	**MGF/Model No.**	**Serial No./Internal No.**
Temperature/Humidity Test Chamber	YGHT(Model: 040P)	CH-004
PC	ASUS(CM1730/CM1830 Series)	PC-18~PC19
Router	BR-6877AC	S-01

Test Product (Software)

Product	**Amount**
Chariot Console 5.4	1
Chariot Endpoint 6.2	1

Test Result：Pass。

The test results judge by Acelink engineers and please refer to the attachment content。

Remark：

Driver Version: Realtek_1030.10.0401.2016_ISS_1.00.0286

(DUT = Device Under Test。)

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ENGINEER	Ben 10/06/2016	**APPROVAL**	Phil 10/06/2016

TITLE：EW-7822ULC _ Operation High Temperature Test。	Room Environment：24.8℃-45.0%RH。
PURPOSE： To verify the DUT comply with the test condition as follow，after Operation High Temperature Test。	EQUIPMENT： Temperature / Humidity Test Chamber。 < YGHT(Model:040P)>

1.TEST QUANTITY：1 Unit。

2.TEST CONDITION：

2.1 Purpose :

Purpose of the operation high temperature test is to ensure that the DUT fulfills the specification over the whole environmental area。This is alternate method of temperature/ humidity test。

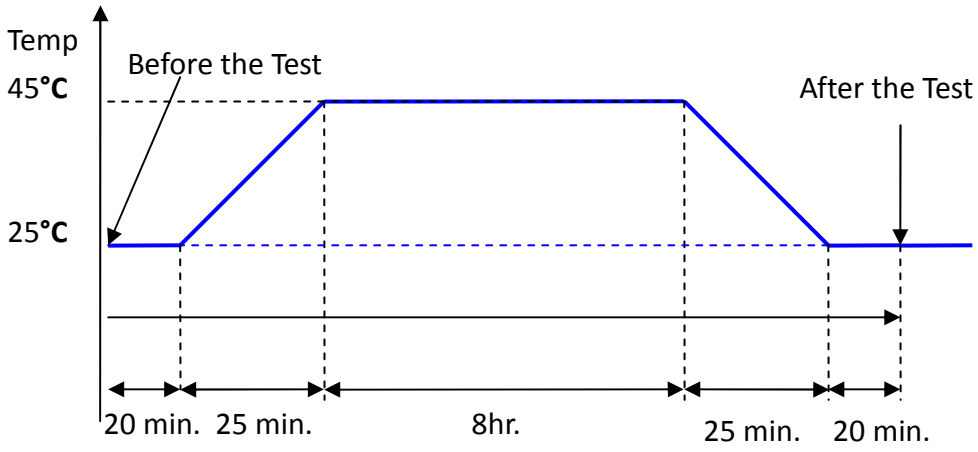
2.2 Procedure：

The DUT will be installed in an environmental chamber and operated within the following psychometric envelope。After the test sequence the DUT should have normal operation and good appearance。 。

2.3 Judgment Criteria：

After the test sequence DUT shall undergo complete diagnostics。The units shall be examined for any type of shifting of DUT。And the DUT mechanical and plastic part shall be examined for (gap、color、print、etc.)。

2.4 Test Profile： Power On



2.5 Internal software setting：

※Connection Method：Wireless。

※Chariot-Script：Throughput。

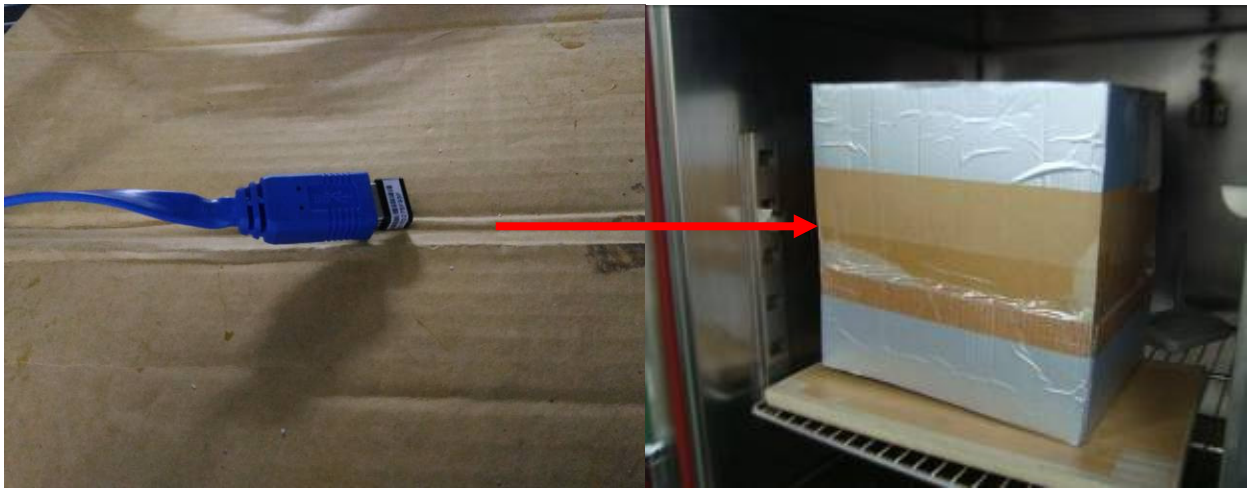
3.TEST PROCEDURE：

Item	Description	Expected Result
1	Check DUT main board、cover and function work。	DUT function work correctly。
2	Put DUT into the Temperature/Humidity Test Chamber。	Take initial pictures。
3	Temperature/Humidity Test Chamber (Model：040P) run script as above temperature and humidity condition。	NIL。

4	Chariot run throughput script DUT。	DUT function work correctly。
5	After 8 hours，stop test。	Take final pictures。
6	Check DUT main board、cover and function work。	DUT function work correctly。

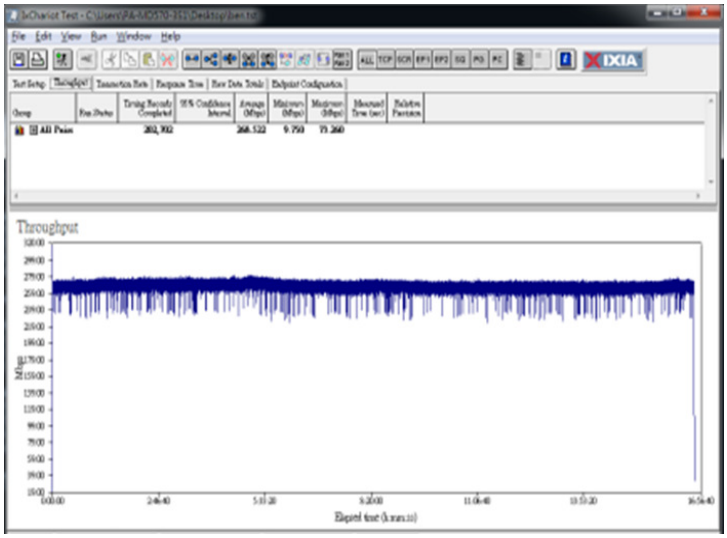
4.TEST PICTURE：

Initial Pictures：



Put DUT into the Temperature/Humidity Test Chamber。

Final Pictures：



Run Chariot with throughput script 。

5.TEST RESULT：

Model	Abnormal Phenomenon	Result	Remark
EW-7822ULC	NIL	Pass	Normal operation and good surface。

EDIMAX 訊舟科技

Report No.：_____

Customer	EDiMAX			Test Date
				10/05/2016
DUT Name	EW-7822ULC	Test Name	Operation Low Temperature Test	
		Test Standard	EN/IEC60068-2-1	
Condition of test	Temperature	-10.0℃	Humidity	0.0%

Test Equipment (Hardware)

Equipment	MGF/Model No.	Serial No./Internal No.
Temperature/Humidity Test Chamber	YGHT(Model: 040P)	CH-004
PC	ASUS(CM1730/CM1830 Series)	PC-18~PC19
Router	BR-6877AC	S-01

Test Product (Software)

Product	Amount
Chariot Console 5.4	1
Chariot Endpoint 6.2	1

Test Result：Pass。

The test results judge by Acelink engineers and please refer to the attachment content。

Remark：

Driver Version: Realtek_1030.10.0401.2016_ISS_1.00.0286

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ENGINEER	Ben 10/06/2016	APPROVAL	Phil 10/06/2016

TITLE：EW-7822ULC _ Operation Low Temperature Test。	Room Environment：24.8℃-45.0%RH。
PURPOSE： To verify the DUT comply with the test condition as follow，after Operation Low Temperature Test。	EQUIPMENT： Temperature / Humidity Test Chamber。 < YGHT(Model:040P)>

1.TEST QUANTITY：1 Unit。

2.TEST CONDITION：

2.1 Purpose :

Purpose of the operation low temperature test is to ensure that the DUT fulfills the specification over the whole environmental area。This is alternate method of temperature/ humidity test。

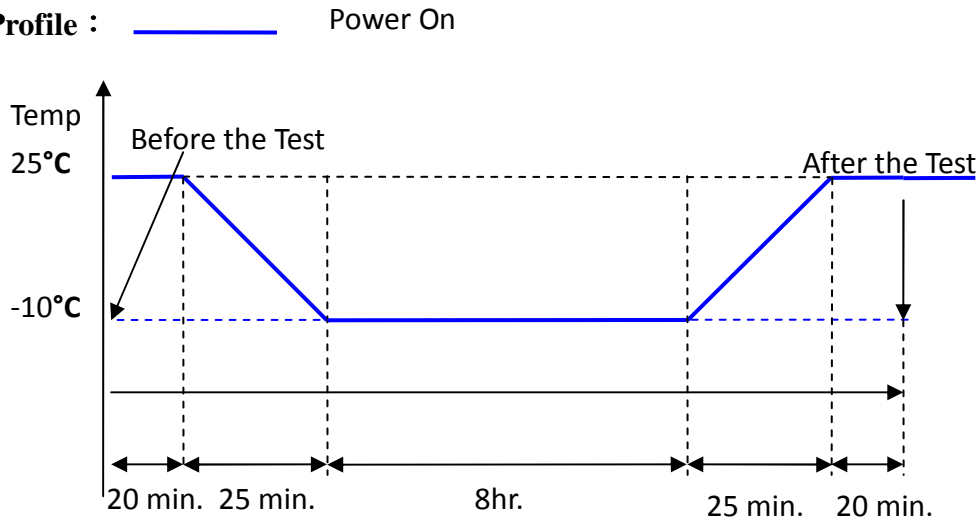
2.2 Procedure：

The DUT will be installed in an environmental chamber and operated within the following psychometric envelope。After the test sequence the DUT should have normal operation and good appearance。。

2.3 Judgment Criteria：

After the test sequence DUT shall undergo complete diagnostics。The units shall be examined for any type of shifting of DUT。And the DUT mechanical and plastic part shall be examined for (gap、color、print、etc.)。

2.4 Test Profile：



2.5 Internal software setting：

※Connection Method：Wireless。

※Chariot-Script：Throughput。

3.TEST PROCEDURE：

Item	Description	Expected Result
1	Check DUT main board、cover and function work。	DUT function work correctly。
2	Put DUT into the Temperature/Humidity Test Chamber。	Take initial pictures。
3	Temperature/Humidity Test Chamber (Model：040P) run script as above temperature and humidity condition。	NIL。
4	Chariot run throughput script DUT。	DUT function work correctly。
5	After 8 hours，stop test。	Take final pictures。
6	Check DUT main board、cover and function work。	DUT function work correctly。

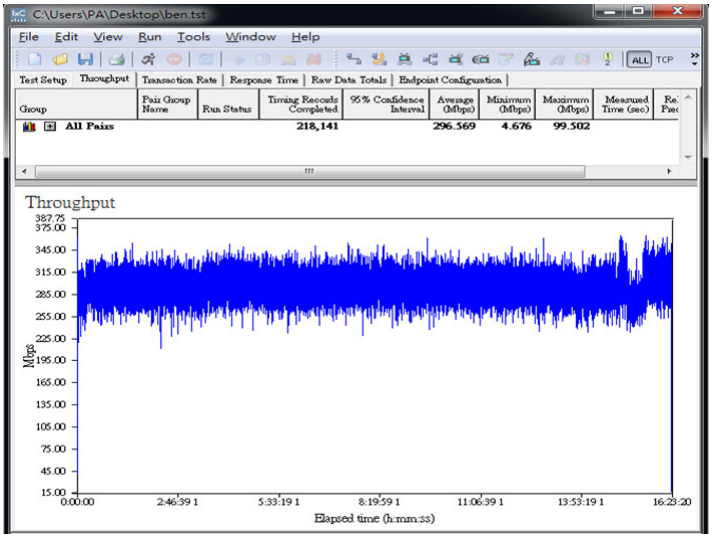
4.TEST PICTURE：

Initial Pictures：



Put DUT into the Temperature/Humidity Test Chamber。

Final Pictures：



Run Chariot with throughput script ◦

5.TEST RESULT：

Model	Abnormal Phenomenon	Result	Remark
EW-7822ULC	NIL	Pass	Normal operation and good surface ◦