TEST REPORT

Report No.:	8337EU010805W2
Applicant:	QPAD Limited
Address:	Unit 03-04, 21/F, Eight Commercial Tower, 8 Sun Yip Street, Chai Wan, Hong Kong
Product Name:	Wireless gaming mouse
Model No.:	M5 Vision (refer to clause 2.4)
Trademark:	QPAD
Test Standard(s):	MIC Notice No.88 Appendix No.43 Ordinance of MPT No.37, 1981: Article 2 paragraph 1 item (19)
Test Result:	Pass
Date of Receipt:	Dec. 08, 2025
Test Date:	Dec. 08, 2025 – Dec. 16, 2025
Date of Issue:	Jan. 07, 2026

ISSUED BY:

SHENZHEN EU TESTING LABORATORY LIMITED

SHENZHEN EU TESTING LABORATORY LIMITED APPROVED

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Revision Record

Report Version	Issued Date	Description	Status
V0	Jan. 07, 2026	Original	Valid

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Website: www.eu-test.com
Tel: (86)-755-2357-9714 Email: Service@eu-test.com

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2 General Information

2.1 Applicant Information

Applicant	QPAD Limited
Address	Unit 03-04, 21/F, Eight Commercial Tower, 8 Sun Yip Street, Chai Wan, Hong Kong

2.2 Manufacturer Information

Manufacturer	QPAD Limited
Address	Unit 03-04, 21/F, Eight Commercial Tower, 8 Sun Yip Street, Chai Wan, Hong Kong

2.3 Factory Information

Factory	QPAD Limited
Address	Unit 03-04, 21/F, Eight Commercial Tower, 8 Sun Yip Street, Chai Wan, Hong Kong

2.4 General Description of E.U.T.

Product Name	Wireless gaming mouse
Model No. Under Test	M5 Vision
List Model No.	423009
Description of Model differentiation	All models are same with electrical parameters and internal circuit structure, but only differ in appearance color and model name. (this information provided by the customer)
Rating(s)	Input: 5V⎓0.2A Battery Capacity: 3.7VDC, 300mAh, 1.11Wh
Product Type	☐ Mobile ☒ Portable ☐ Fix Location
Test Sample No.	-1/2(Normal Sample), -2/2(Engineering Sample)
Hardware Version	V1.0
Software Version	V2.17
Remark	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.5 Technical Information of E.U.T.

Network and Wireless Connectivity	Bluetooth Low Energy (BLE): 2402-2480MHz 2.4G ISM Band (GFSK modulation): 2403-2480MHz

The requirement for the following technical information of the EUT was tested in this report:

Technology	2.4G ISM Band (GFSK modulation)
Modulation Type	GFSK
Operating Frequency	2403-2480MHz
Number of Channel	16
Tested Channel	00 (2403 MHz), 02 (2442 MHz), 15 (2480 MHz)
Antenna Type	PCB Antenna
Antenna Gain(Peak)	2.00 dBi
Antenna Impedance	50Ω
Rated output Power	0.800 mW
Remark	The above information are declared by the applicant, EU-LAB is not responsible for the information accuracy provided by the applicant.

All channels were listed on the following table:

Channel Number	Freq. (MHz)	Channel Number	Freq. (MHz)	Channel Number	Freq. (MHz)	Channel Number	Freq. (MHz)
00	**2403**	04	2446	08	2462	12	2470
01	2424	05	2450	09	2464	13	2472
02	**2442**	06	2452	10	2466	14	2474
03	2444	07	2458	11	2468	**15**	**2480**

3 Test Summary

3.1 Test Standard

The tests were performed according to following standards:

No.	Identity	Document Title
1	MIC Notice No.88 Appendix No.43 Ordinance of MPT No.37, 1981: Article 2 paragraph 1 item (19)	Low power data communications system in the 2.4GHz band

Remark:
Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission should be checked to ensure compliance has been maintained.

3.2 Test Verdict

No.	Description	Test Mode	Channel	Verdict	Remark
1	Frequency Tolerance	GFSK	Low/Middle /High	Pass	--
2	Occupied Bandwidth	GFSK	Low/Middle /High	Pass	--
3	Antenna Power / EIRP Antenna Power	GFSK	Low/Middle /High	Pass	--
4	Spurious Emission Intensity	GFSK	Low/Middle /High	Pass	--
5	Secondary Radiated Emission	GFSK	Low/Middle /High	Pass	--
6	Spurious Emissions	GFSK	Low/Middle /High	Pass	--
7	Interference Prevention Function	GFSK	Low/Middle /High	Pass	--
8	Transmission Radiated Angle Width (3dB Beam Bandwidth)	GFSK	Low/Middle /High	N/A	Note [2]
9	Construction Protection Confirmation	GFSK	Low/Middle /High	Compliance	--
10	Carrier Sense Function (1)	GFSK	Low/Middle /High	N/A	Note [3]
11	Carrier Sense Function (2)	GFSK	Low/Middle /High	N/A	Note [4]

Note 1: The tests were performed according to the method of measurements prescribed in MIC Notice No.88 Appendix No.43.
Note 2: Note: Because the EIRP is less than 12.14 dBm, this item is not applicable.
Note 3: Not apply to this device, since EIRP does not require compensation through Antenna Power.
Note 4: Application to transmitting devices with OFDM modulation and the occupied bandwidth greater than 26MHz.

3.3 Test Laboratory

Test Laboratory	Shenzhen EU Testing Laboratory Limited
Address	101, Building B1, Fuqiao Fourth Area, Qiaotou Community, Fuhai Subdistrict, Baoan District, Shenzhen, Guangdong, China

4 Test Configuration

4.1 Test Environment

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	52%	
Atmospheric Pressure	103 kPa	
Temperature	NT (Normal Temperature)	+26℃
Working Voltage of the EUT	NV (Normal Voltage)	3.70VDC
	LV (Low Voltage)	3.33VDC
	HV (High Voltage)	4.07VDC

Power Supply Voltage Fluctuation Test

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input To EUT	3.70VDC	4.07VDC	3.33VDC
Output To RF Module	3.3VDC	3.3VDC	3.3VDC
Voltage Variation (%)	--	0.00%	0.00%

Note:
Voltage Variation (%)=(Output high or Low Voltage - Output Normal Voltage)/ Output Normal Voltage* 100%
For extreme voltage test, we have tested the relationship between the external power supply and RF IC power supply. Base on the test results, only the normal voltage was selected to perform all items.

4.2 Test Equipment

Radiated Emission and RF Test					
Equipment	**Manufacturer**	**Model No**	**Serial No**	**Cal Date**	**Cal Due Date**
EMI Test Receiver	ROHDE & SCHWARZ	ESPI	EE-006	2025/01/08	2026/01/07
Bilog Broadband Antenna	SCHWARZBECK	VULB 9163	EE-007	2023/01/14	2026/01/13
Double Ridged Horn Antenna	A-INFOMW	LB-10180-NF	EE-008	2023/01/12	2026/01/11
Pre-amplifier	Agilent	8447D	EE-009	2025/01/08	2026/01/07
Pre-amplifier	Agilent	8449B	EE-010	2025/01/08	2026/01/07
MXA Signal Analyzer	Agilent	N9020A	EE-011	2025/01/08	2026/01/07
MXG RF Vector Signal Generator	Agilent	N5182A	EE-012	2025/01/08	2026/01/07
Test Software	Farad	EZ-EMC	EE-015	N.C.R	N.C.R
MIMO Power Measurement Module	TSTPASS	TSPS 2023R	EE-016	2025/01/08	2026/01/07
RF Test Software	TSTPASS	TS32893 V2.0	EE-017	N.C.R	N.C.R
Wideband Radio Communication Tester	ROHDE & SCHWARZ	CMW500	EE-402	2025/02/14	2026/02/13
Loop Antenna	TESEQ	HLA6121	EE-403	2025/02/14	2026/02/13
MXG RF Analog Signal Generator	Agilent	N5181A	EE-406	2025/02/14	2026/02/13
Constant Temperature Humidity Chamber	Guangxin	GXP-401	ES-002	2025/07/29	2026/07/28
Power Sensor	ROHDE&SCHWARZN	NRP18S	ES-052	2025/02/14	2026/02/13
DC Power Source	QJE	QJ3020E	ES-037	2025/07/29	2026/07/28
Note[1]: Calibration Company: Shenzhen Academy Of Metrology& Quality inspection. Note[2]: Calibration method: Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 and Article 24-2, Paragraph 4 of the Radio Act.					

4.3 Description of Support Unit

No.	Title	Manufacturer	Model No.	Serial No.
1	--	--	--	--

4.4 Measurement Uncertainty

Parameters	Uncertainty
Frequency Error / 99% Bandwidth	(3.2 x f x 10^{-6}) Hz
Antenna Power	1.82 dB
TX-RX Spurious Emissions	1.84 dB
Transmission Antenna Gain	5.36 dB
Temperature	0.8 ℃
Humidity	4 %
DC / AC Power Source	0.04%
Noet: “f” is the nominal signal frequency in Hz.	

Note: This uncertainty represents as expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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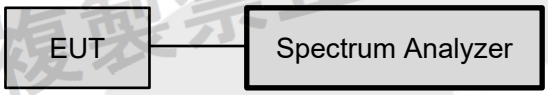
5 Test Items

5.1 Frequency Tolerance Test

5.1.1 Test Requirement

Item	Limits
Frequency Tolerance	≤±50 ppm

5.1.2 Test Setup Diagram



5.1.3 Test Procedure

Test Frequency= test channel
RBW=VBW=100KHz
Span=2MHz
Sweep time=Auto
Detector mode=Positive peak
Indication mode=Max hold
EUT have transmitted unmodulated signal and fixed channelize. f is using the mark cursor to mark the peak frequency value, fc is declaring of channel frequency.

5.1.4 Test Deviation

There is no deviation with the original standard.

5.1.5 EUT Operation during Test

The EUT was programmed to be in continuous transmit, carrier mode.

5.1.6 Test Data

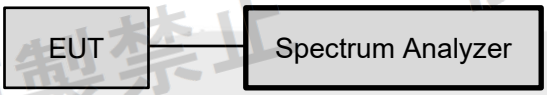
PASS.
Please refer to Annex E for details.

5.2 Occupied Bandwidth

5.2.1 Test Requirement

Item	Limits
Occupied Band Width	FHSS≦83.5MHz; OFDM≦40MHz, DSSS≦26MHz; Others≦26MHz

5.2.2 Test Setup Diagram



5.2.3 Test Procedure

1. Set the spectrum analyzer as follows:
   Center frequency: Test frequency
   Span: Approximately 2 to 3.5 times nominal bandwidth
   Resolution bandwidth: Within 3% of the technical standard
   Video bandwidth: equivalent to resoluble bandwidth
   Sweep time: auto
   Sweep mode: Continuous sweep
   Detection: Positive peak
   Trace mode: Maximum hold
2. After repeating sweeps until the display shows steady data, store the values at all data points into the computer array variables.

5.2.4 Test Deviation

There is no deviation with the original standard.

5.2.5 EUT Operation during Test

The EUT was programmed to be in continuous transmit, channel-selected mode.

5.2.6 Test Data

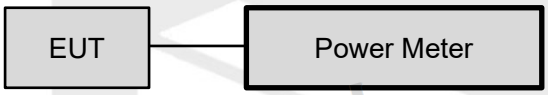
PASS.
Please refer to Annex E for details.

5.3 Antenna Power / EIRP Antenna Power Test

5.3.1 Test Requirement

Item	Limits
Antenna Power Density	a) FH, FH+DS, or FH+OFDM form 2427 - 2470.75 MHz: ≦3 mW/MHz b) DS but other than a) from 2400~2483.5 MHz: ≦10 mW/MHz c) OFDM, but other than a): For OCB of 26MHz or less: ≦10 mW/MHz For OCB of over 26 MHz to 40 MHz: ≦5 mw/MHz d) Other than a), b) and c): ≦10 mW
Antenna Power Error	+20% (Base on manufacturer declare antenna power density)
EIRP Power	12.14 dBm

5.3.2 Test Setup Diagram



5.3.3 Test Procedure

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast responding diode detector.

5.3.4 Test Deviation

There is no deviation with the original standard.

5.3.5 EUT Operation during Test

The EUT was programmed to be in continuous transmit, channel-selected mode.

5.3.6 Test Data

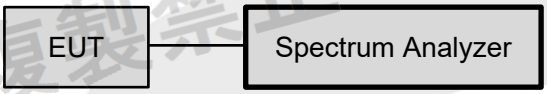
PASS.
Please refer to Annex E for details.

5.4 Spurious Emissions Intensity Test

5.4.1 Test Requirement

Item	Limits
TX Spurious Emission	≦2.5μW/MHz (2387MHz>f ; 2496.5MHz<f)
	≦25μW/MHz (2387MHz≦f<2400MHz) and (2483.5MHz<f≦2496.5MHz)

5.4.2 Test Setup Diagram



5.4.3 Test Procedure

Spectrum Parameter	Setting
Attenuation	Auto
RB	30-1000 MHz: 1 MHz/1 MHz
VB	Above 1GHz: 1 MHz/1 MHz
Detector	Peak
Trace	Max Hold
Sweep	Auto

1. The EUT is placed in transmit mode at maximum power/modulation at a fixed channel.
2. Setting of SA is following as: RBW/VBW = 1MHz; / AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. Setting of SA is following as 30 MHz and stop frequency 2387 MHz Then to mark peak reading value + cable loss shall be less than 2.5 μW
4. SA adjusted to start frequency 2387 MHz and stop frequency 2400 MHz. Then to mark peak reading value + cable loss shall be less than 25 μW.
5. SA adjusted to start frequency 2483.5 MHz and stop frequency 2496.5 MHz Then to mark peak reading value + cable loss shall be less than 25 μW
6. SA adjusted to start frequency 2496.5 MHz and stop frequency 12500 MHz Then to mark peak reading value + cable loss shall be less than 2.5 μW
7. If the Result_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result_Value.

5.4.4 Test Deviation

There is no deviation with the original standard.

5.4.5 EUT Operation during Test

The EUT was programmed to be in continuous transmit, channel-selected mode.

5.4.6 Test Data

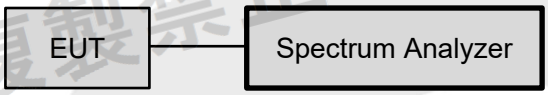
PASS.
Please refer to Annex E for details.

5.5 Secondary Radiated Emissions Test

5.5.1 Test Requirement

Item	Limits
RX Spurious Emission	≦4nW (f<1GHz)
	≦20nW (1GHz≦f)

5.5.2 Test Setup Diagram



5.5.3 Test Procedure

Spectrum Parameter	Setting
Attenuation	Auto
RB	30-1000 MHz: 100KHz/100KHz
VB	Above 1GHz: 1 MHz/1 MHz
Detector	Peak
Trace	Max Hold
Sweep	Auto

1. The EUT is placed in Rx mode and set to a fixed channel.
2. Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) / AT:10 dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. SA set RB: 100 kHz and VB: 100 kHz. Then adjust to start frequency 30 MHz and stop frequency 1000 MHz. Search to mark peak reading value + cable loss shall be less than 4 nW
4. SA set RB: 1 MHz and VB: 1 MHz. Then adjust to start frequency 1000 MHz and stop frequency 12500 MHz. Search to mark peak reading value + cable loss shall be less than 20 nW
5. If power level of lower emissions are more than 1/10 of limit (0.4nW for f < 1 GHz, 2 nW for f≥ 1GHz), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated

5.5.4 Test Deviation

There is no deviation with the original standard.

5.5.5 EUT Operation during Test

The EUT was programmed to be in continuous transmit, channel-selected mode.

5.5.6 Test Data

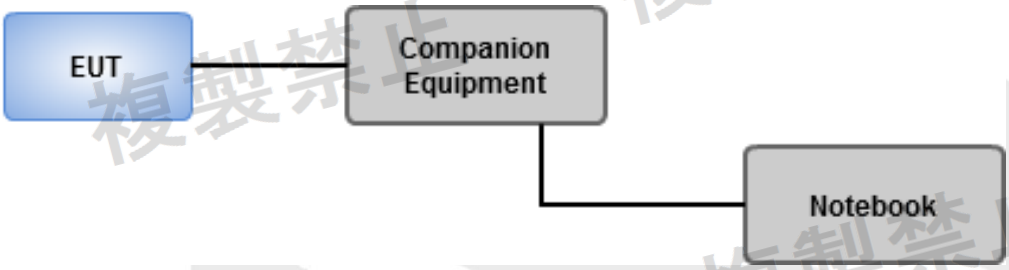
PASS.
Please refer to Annex E for details.

5.6 Interference Prevention Function

5.6.1 Test Requirement

Item	Limits
Identification	≥ 48 bits

5.6.2 Test Setup Diagram



5.6.3 Test Procedure

1. In the case that the EUT has the function of automatically transmitting the identification code:
   a. Transmit the predetermined identification codes form EUT.
   b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification code:
   a. Transmit the predetermined identification codes form the counterpart.
   b. Check if communication is normal.
   c. Transmit the signals other than predetermined ID codes form the counterpart.
   d. check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

5.6.4 Test Deviation

There is no deviation with the original standard.

5.6.5 EUT Operation during Test

The EUT was programmed to be in continuous transmit, channel-selected mode.

5.6.6 Test Data

PASS.

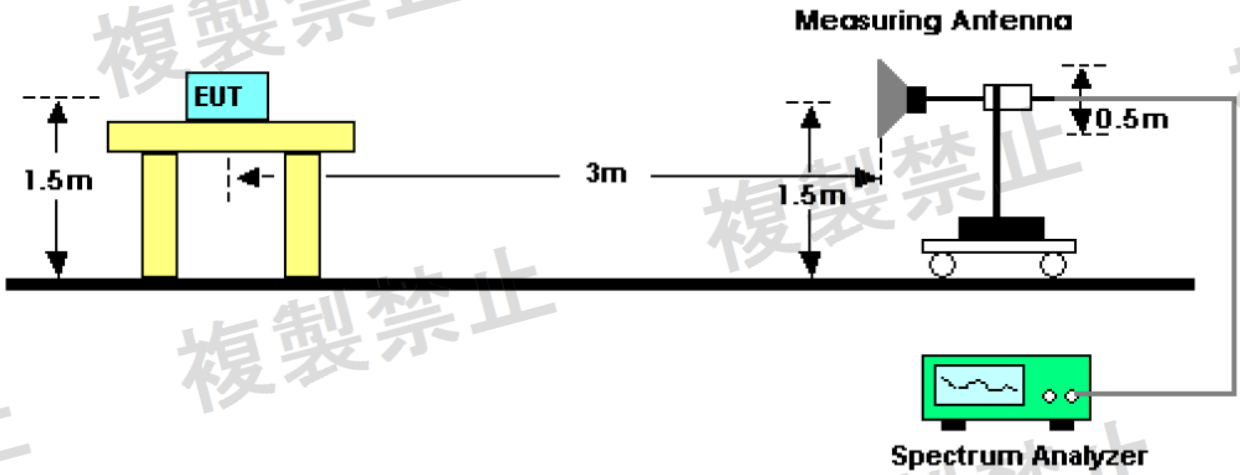
Mode	ID Code	Test Results
2.4G	22:23:9E:43:3D:3E	Pass

5.7 Transmission Radiation Angle Width (3dB Beamwidth) Measurement

5.7.1 Test Requirement

Item	Limits
3dB antenna beam width	360/A (If A<1; then A=1) A = {EIRP Power [mW] / 16.36 for DS, OFDM} or A = {EIRP Power [mW] / 4.9 for FH}
Note: This test item will not be applied to the transmission antenna which has a gain of 2.14dBi or less.	

5.7.2 Test Setup Diagram



5.7.3 Test Procedure

1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Set spectrum analyzer with RBW=1 MHz, VBW=1 KHz, Y scale=5 dB, Detector=Peak, Trace mode=Max Hold, and tune reference level to observe receiving signal position.
3. Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within ± 50cm of EUT height and swing it to find the maximum output of measuring antenna. The output level at the spectrum analyzer is read as “E”
5. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
6. Calculate 3dB antenna beam width by the formula below 360/A (If A<1; then A=1). A = {EIRP Power [mW] / 16.36 for DS, OFDM} or A = {EIRP Power [mW] / 4.9 for FH}

5.7.4 Test Deviation

There is no deviation with the original standard.

5.7.5 EUT Operation during Test

The EUT was programmed to be in continuous transmit, channel-selected mode.

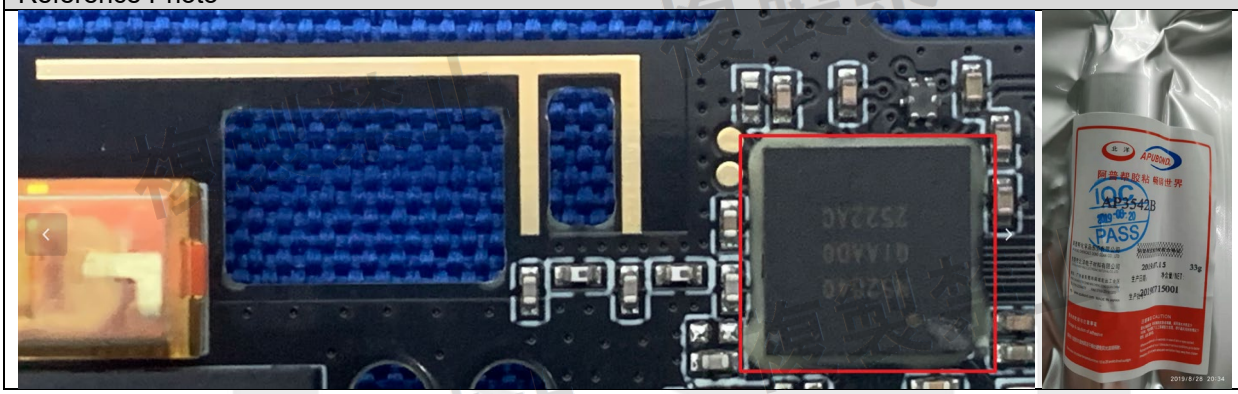
5.7.6 Test Data

Note: Because the EIRP is less than 12.14 dBm, this item is not applicable.

5.8 Construction Protection Confirmation Method

The RF and modulation portions are protected against illegal modification as following method:

Protected Method	Description
Structure protection	The product has glue with model number AP3542B (APUBOND CHEMICALS DONG GUAN CO.LTD) for the housing, so it can't be easily opened and modified.
Reference Photo	



ANNEX A TEST SETUP PHOTOS

Please refer to the document “8337EU010805W-AA.PDF”

ANNEX B EXTERNAL PHOTOS

Please refer to the document “8337EU010805W-AB.PDF”

ANNEX C INTERNAL PHOTOS

Please refer to the document “8337EU010805W-AC.PDF”

ANNEX E TEST DATA

Please refer to the document “8337EU010805W-AE.PDF”

STATEMENT

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the “inspection and testing dedicated stamp” or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

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