



Prüfbericht-Nr.: <i>Test report No.:</i>	60357211 002	Auftrags-Nr.: <i>Order No.:</i>	168257717	Seite 1 von 18 <i>Page 1 of 18</i>
Kunden-Referenz-Nr.: <i>Client reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	23.03.2020	
Auftraggeber: <i>Client:</i>	Sunwoda Electronic Co., Ltd. No.2, Yihe Rd., Shilong Community, Shiyan Street, Baoan District, Shenzhen, China			
Prüfgegenstand: <i>Test item:</i>	Lenovo E-Color Pen			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	Lenovo E-Color Pen (Trademark: Lenovo)			
Auftrags-Inhalt: <i>Order content:</i>	FCC and IC approval			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.223 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 2: Subpart J Section 2.1093 FCC KDB Publication 447498 D01 V06	RSS-210 Issue 10 October 2019 RSS-Gen Issue 5 March 2019 RSS-102 Issue 5 March 2015		
Wareneingangsdatum: <i>Date of receipt:</i>	14.04.2020	Please refer to photo documents		
Prüfmuster-Nr.: <i>Test sample No.:</i>	A001078696			
Prüfzeitraum: <i>Testing period:</i>	15.04.2020 - 19.05.2020			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
				
20.05.2020	Alex Lan / Senior Project Engineer	20.05.2020	Sam Lin / Technical Certifier	
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>
Sonstiges / Other:				
FCC ID: 2ABWEECOLORPEN, IC: 23012-ECOLORPEN, HVIN: Lenovo E-Color Pen				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>		
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specifications(s)	2 = good F(ail) = failed a.m. test specifications(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines.				
<i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

V04

TEST SUMMARY

5.1.1. ANTENNA REQUIREMENT*RESULT: Pass***5.1.2. FUNDAMENTAL & HARMONICS RADIATED EMISSION***RESULT: Pass***5.1.3. 6dB BANDWIDTH***RESULT: Pass***5.1.4. 99% BANDWIDTH***RESULT: Pass***5.1.5. RADIATED SPURIOUS EMISSION***RESULT: Pass***5.1.6. CONDUCTED EMISSIONS***RESULT: Pass*

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1. General Remarks

1.1. Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test setup photos.

Appendix B: Test Result.

2. Test Sites

2.1. Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China

FCC Registration No.: 694916

IC Registration No.: 25069

2.2.List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (TS8997)					
Equip. No.	Equipment	Manufacturer	Model	Serial No.	Cal. until
1825795	Signal Analyzer	R&S	FSV 40	101441	20.08.2020
1825798	OSP	R&S	OSP 150	101017	17.12.2020
1825799	Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
1825800	Test Software	R&S	WMS32 (V10.50.10)	N/A	N/A
1825801	Power Meter	R&S	NRP2	107105	17.12.2020
1825802	Wideband Power Sensor	R&S	NRP-Z81	105350	17.12.2020
1826431	Shielding Room 8#	Albatross	SR8	APC17151-SR8	23.07.2020
Unwanted Emission Testing (TS9975)					
Equip. No.	Equipment	Manufacturer	Model	Serial No.	Cal. until
1826021	EMI Test Receiver	R&S	ESR 7	102021	19.08.2020
1826023	Signal Analyzer	R&S	FSV 40	101439	21.08.2020
1826024	System Controller Interface	R&S	SCI-100	S10010038	N/A
1826025	Filterbank	R&S	Wlan	100759	21.08.2020
1826026	OSP	R&S	OSP 120	102040	N/A
1826028	Pre-amplifier	R&S	SCU08F1	08320031	20.08.2020
1826029	Amplifier	R&S	SCU-18F	180070	20.08.2020
1826030	Amplifier	R&S	SCU40A	100475	20.09.2020
1826031	Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	02.09.2020
1826032	Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	02.09.2020
1826033	Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	02.09.2020
1826034	Active Loop Antenna	Schwarzbeck	FMZB 1513	302	01.09.2020
1826035	Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18313	02.09.2020
1826036	Test software	R&S	EMC32 (V10.50.40)	N/A	N/A
1826037	Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
1826433	3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	06.07.2020

Conducted Emission on AC Mains					
Equip. No.	Equipment	Manufacturer	Model	Serial No.	Cal. until
1822625	EMI Test Receiver	R&S	ESR3	102428	03.09.2020
1822627	Artificial Mains Network	R&S	ENV216	102333	19.08.2020
1822626	Artificial Mains Network	R&S	ENV432	101411	19.08.2020
1822629	Attenuator	R&S	ESH2Z31	100300	19.08.2020
1825090	EMC32 test software	R&S	EMC32(Ver.10.5 0.01)	N/A	N/A

2.3.Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4.Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5.Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table:

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF Power (conducted)	± 2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	± 6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	± 6 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB
Radiated Emission (3m SAC), 30MHz to 1000MHz	± 4.52 dB
Radiated Emission (3m SAC), above 1000MHz	± 4.37 dB
Temperature	± 1 °C
Humidity	± 5 %
Voltage (DC)	± 1 %
Voltage (AC, <10kHz)	± 2 %

2.6.Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7.Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. test facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1. Product Function and Intended Use

The EUT is Active stylus which supports Bluetooth Low Energy and operate with a drawing board use 1.8MHz frequency.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2. Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Lenovo E-Color Pen
Type Designation	Lenovo E-Color Pen
FCC ID	2ABWEECOLORPEN
IC:	23012-ECOLORPEN
HVIN:	Lenovo E-Color Pen
Extreme Temperature Range	0°C to +40°C
Operating Voltage	DC 5V via Type-C interface for charging DC 3.7V, 50mAh via built-in Lithium Battery
Testing Voltage	DC 5V via Type-C interface for charging DC 3.7V, 50mAh via built-in Lithium Battery
Technical Specification of Bluetooth Low Energy	
Operating Frequency	2402 – 2480 MHz
Bluetooth Core Version	5.0, 1Mbps
Channel Number	40 channels
Channel separation	2MHz
Modulation	GFSK
Antenna Type	Integral Antenna
Antenna Gain	-7.41 dBi
Technical Specification of 1.8MHz	
Operating Frequency	1.8MHz
Channel Number	1
Type of Modulation	ASK
Antenna Type	Integral Antenna
Antenna number	1
Antenna Gain	0 dBi Max

3.3.Independent Operation Modes

The basic operation modes are:

- A. On, 1.8MHz transmitting mode
- B. On, Operating
- C. On, Charging
- D. Off

3.4.Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5.Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Technical Description
- Circuit Diagram
- Instruction Manual
- Rating Label

4. Test Set-up and Operation Modes

4.1. Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2. Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

4.3. Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories

Description	Manufacturer	Type	S/N	Rating
Notebook	Lenovo	YOGA Duet 7-13-5	AYX00300G	N/A
AC/DC Adapter	Lenovo	ADLX45YLC3D	N/A	Input: AC 100-240V, 50/60Hz Output: DC 5V, 2A or DC 9V, 2A or DC 15V, 3A or DC 20V, 2.25A

4.4. Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5. Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

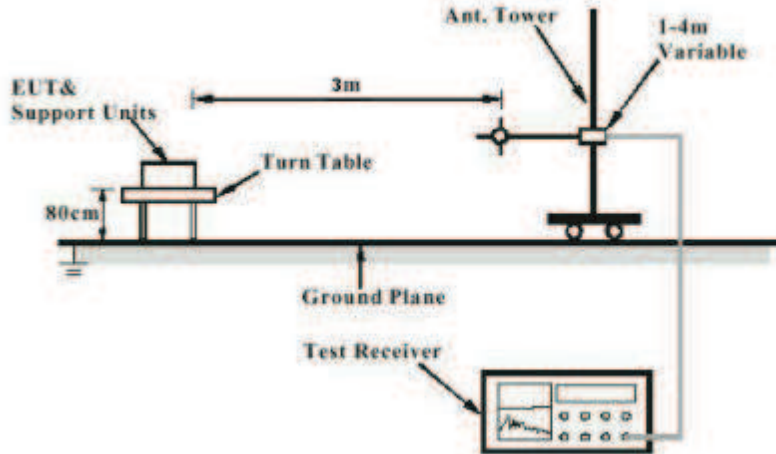


Diagram of Measurement Configuration for Mains Conduction Measurement

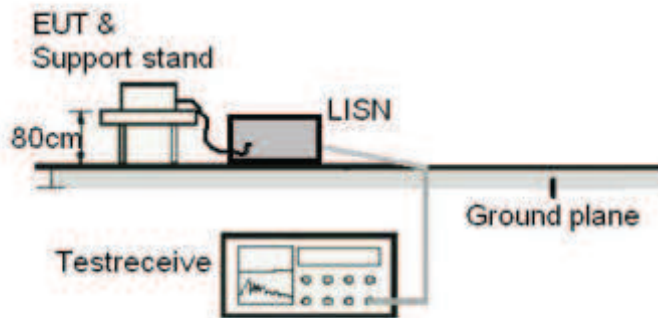
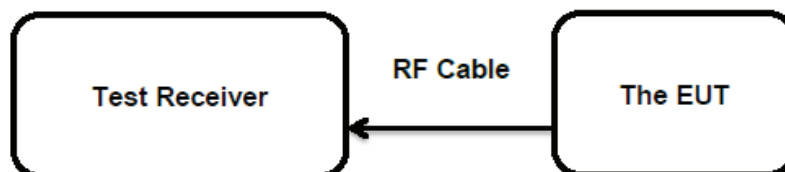


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5. Test Results

5.1. Transmitter Requirement & Test Suites

5.1.1. Antenna Requirement

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.203
RSS-Gen Clause 6.8

According to the manufacturer declared, the EUT has two internal antenna, the directional gain of antenna are -7.41 dBi for Bluetooth and 0dBi for 1.8MHz and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2.Fundamental & Harmonics Radiated Emission

RESULT:**Pass****Test Specification**

Test standard	:	FCC Part 15.223 (a) RSS-210, Annex B.3 (a)
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to FCC Part 15.209(a) RSS-210 Annex B.3(a)
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	01.05.2020
Input voltage	:	DC 3.7V, 50mAh via built-in Lithium Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	22 °C
Relative humidity	:	50 %
Atmospheric pressure	:	100 kPa

For the measurement records, refer to the appendix B.

5.1.3. 6dB Bandwidth

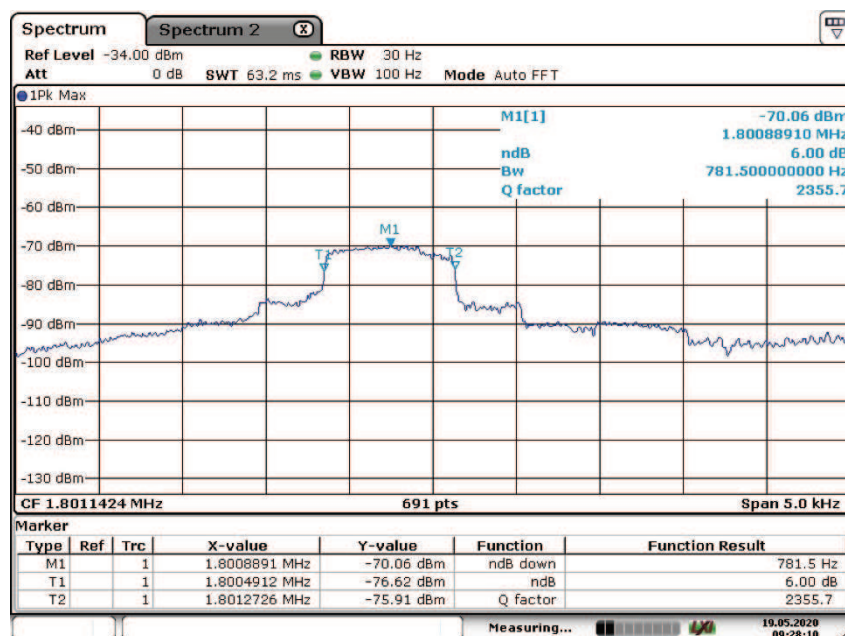
RESULT:
Pass
Test Specification

Test standard : FCC Part 15.223 (a)
 : RSS-210, Annex B.3 (b)
 Basic standard : ANSI C63.10: 2013
 Kind of test site : Shielded Room

Test Setup

Date of testing : 19.05.2020
 Input voltage : DC 3.7V, 50mAh via built-in Lithium Battery
 Operation mode : A
 Ambient temperature : 22 °C
 Relative humidity : 50 %
 Atmospheric pressure : 100 kPa

Channel Frequency (MHz)	6 dB Bandwidth (Hz)
1.8MHz	781.5



5.1.4.99% Bandwidth

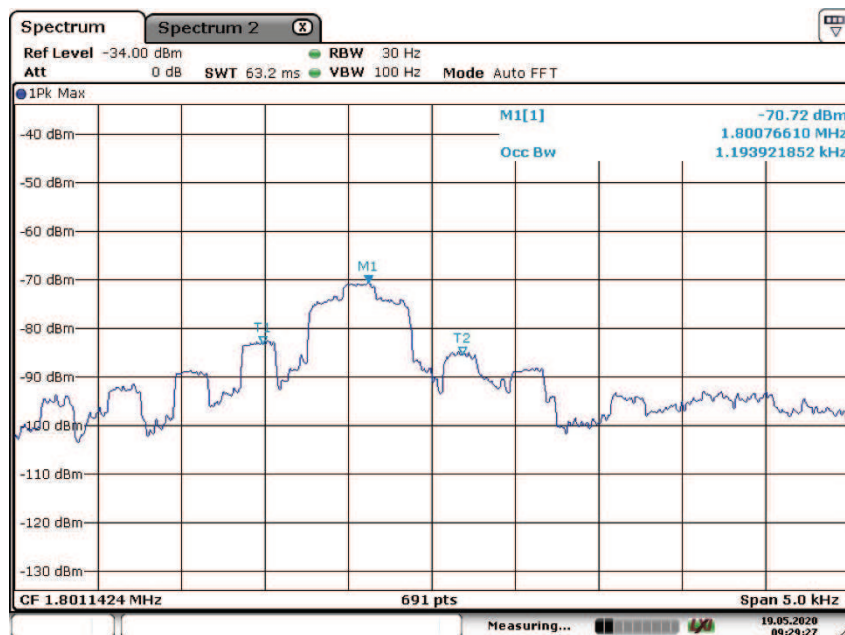
RESULT:
Pass
Test Specification

Test standard : RSS-Gen Section 6.7
 Basic standard : ANSI C63.10: 2013
 Kind of test site : Shielded Room

Test Setup

Date of testing : 19.05.2020
 Input voltage : DC 3.7V, 50mAh via built-in Lithium Battery
 Operation mode : A
 Ambient temperature : 22 °C
 Relative humidity : 50 %
 Atmospheric pressure : 100 kPa

Channel Frequency (MHz)	99% Bandwidth (Hz)
1.8MHz	1193.9



Date: 19.MAY.2020 09:29:28

5.1.5. Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.223 (a, b) & FCC Part 15.205 RSS-210, Annex B.3 (c)
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) RSS-Gen Clause 8.9 & 8.10
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 01.05.2020
Input voltage	: DC 3.7V, 50mAh via built-in Lithium Battery
Operation mode	: A
Ambient temperature	: 22 °C
Relative humidity	: 50 %
Atmospheric pressure	: 100 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B.

5.1.6. Conducted emissions

RESULT:**Pass****Test Specification**

Test standard	:	FCC Part 15.207(a) RSS-Gen, 7.2.2
Basic standard	:	ANSI C63.10: 2013
Frequency range	:	150KHz - 30MHz
Classification	:	Class B
Limit	:	FCC Part 15.207(a) & FCC Part 15.107(a) ICES-003 Table 2
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	15.04.2020
Input voltage	:	DC 5V via Type-C interface for charging
Operation mode	:	C
Earthing	:	Not connected
Ambient temperature	:	23 °C
Relative humidity	:	48 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the following test plots.

6. List of Tables

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7. List of Photographs

Refer to appendix A.

Appendix B: Test Results

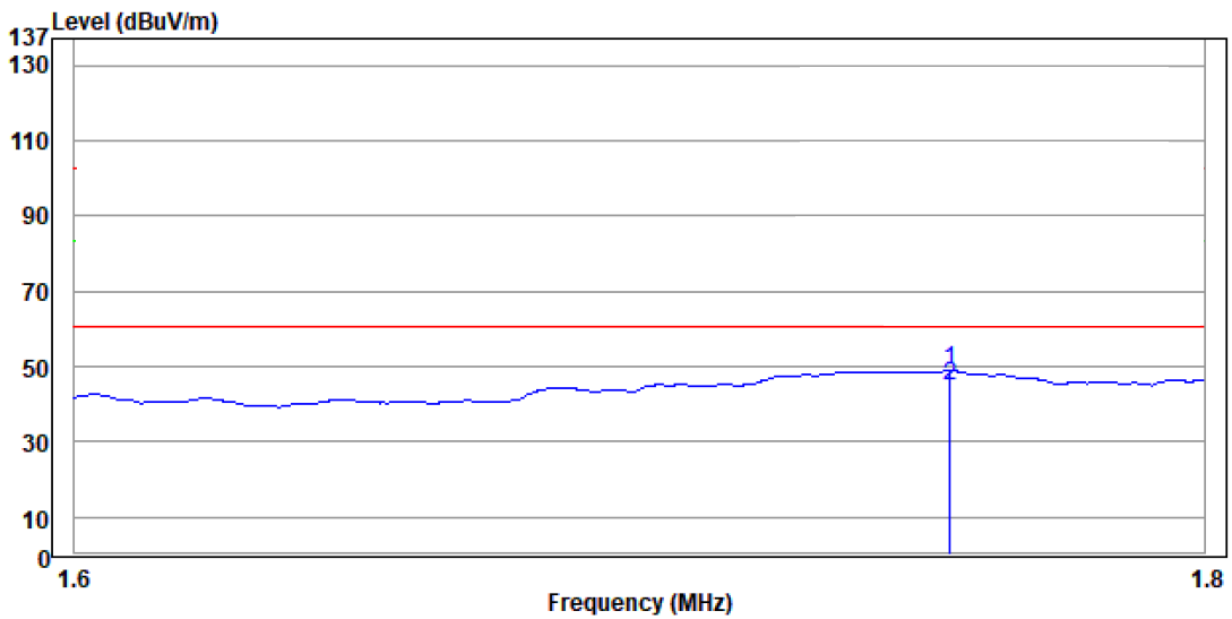
APPENDIX B: TEST RESULTS.....	1
APPENDIX B.1: TEST RESULTS OF RADIATED SPURIOUS FUNDAMENTAL.....	2
APPENDIX B.2: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS.....	3
APPENDIX B.3: TEST RESULTS OF CONDUCTED EMISSION.....	8

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Appendix B.1: Test Results of Radiated Spurious Fundamental

Note 1: Testing was carried out within three polarities and only the worst case was recorded.

EUT Name: Lenovo E-Color Pen
 Model: Lenovo E-Color Pen
 Test Mode: TX_1.8MHz
 Test Voltage: Battery
 Remark: Temp 22 Humi:50%
 Test Standard: FCC 15.223
 Tested By: Kei Zhang
 Reviewed By: Terry Yin
 Polarity: X



Critical Freqs

Frequency (MHz)	QuasiPeak (d μ V/m)	Limit (d μ V/)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Preamp (dB)	Trd Corr. (dB/m)
1.755919	48.90	63.50	14.60	100.0	X	211.0	20.0	0.0	20.0

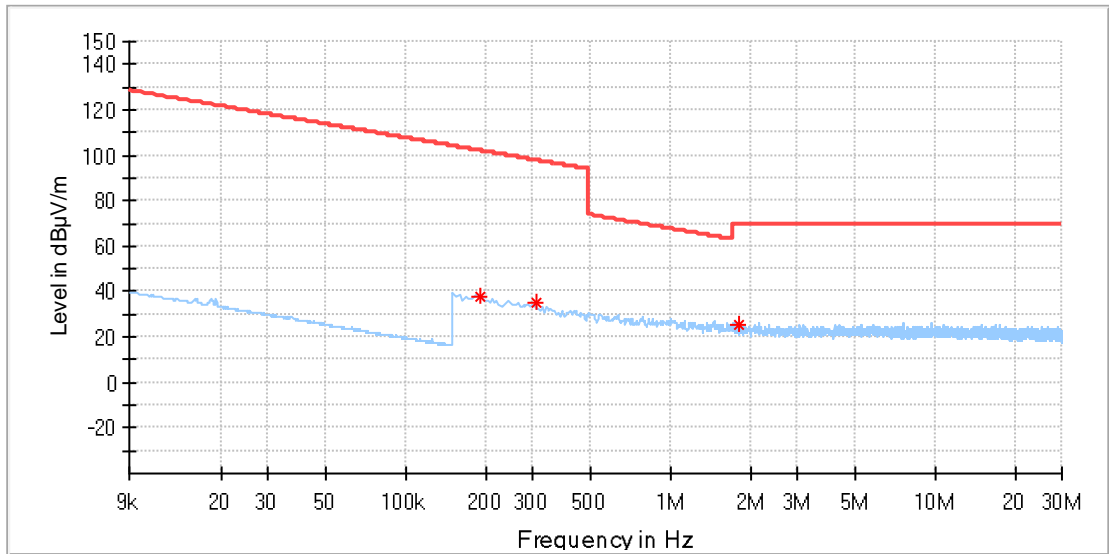
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 Products

Appendix B.2: Test Results of Radiated Spurious Emissions

Note 1: Testing was carried out within frequency range 9 kHz to the tenth harmonics.

EUT Information

EUT Name:	Lenovo E-Color Pen
Model:	Lenovo E-Color Pen
Test Mode:	TX_1.8MHz
Test Voltage::	Battery
Remark:	Temp 22 Humi:50%
Test Standard:	FCC 15.223
Tested By:	Kei Zhang
Reviewed By:	Terry Yin
Polarity:	X

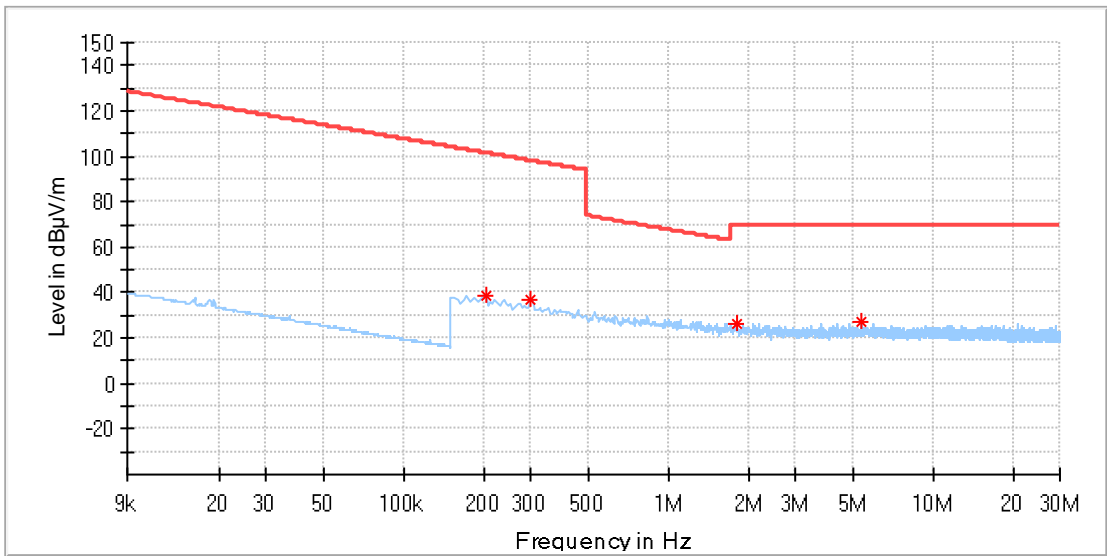


Critical_Freqs

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/)	Margin (dB)	Height (cm)	Azimuth (deg)	Corr. (dB/m)	Preamp (dB)	Trd Corr. (dB/m)
0.189508	38.20	102.05	63.85	100.0	93.0	20.0	0.0	20.0
0.308030	34.94	97.83	62.89	100.0	299.0	20.0	0.0	20.0
1.804919	25.32	69.50	44.19	100.0	227.0	20.0	0.0	20.0

EUT Information

EUT Name: Lenovo E-Color Pen
 Model: Lenovo E-Color Pen
 Test Mode: TX_1.8MHz
 Test Voltage: Battery
 Remark: Temp 22 Humi:50%
 Test Standard: FCC 15.223
 Tested By: Kei Zhang
 Reviewed By: Terry Yin
 Polarity: Y



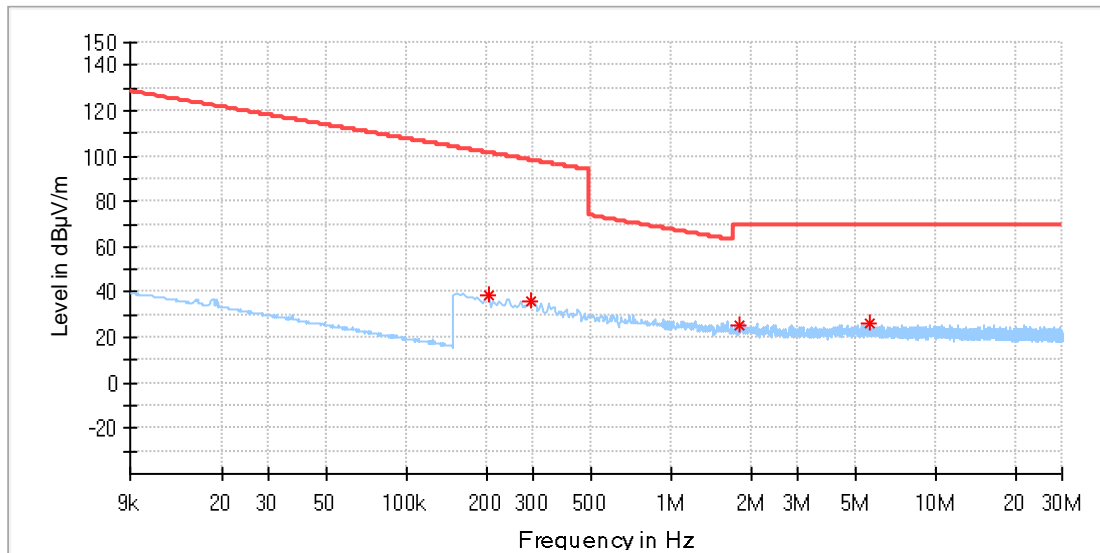
Critical_Freqs

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/)	Margin (dB)	Height (cm)	Azimuth (deg)	Corr. (dB/m)	Preamp (dB)	Trd Corr. (dB/m)
0.202677	38.72	101.46	62.74	100.0	109.0	20.0	0.0	20.0
0.299250	37.17	98.08	60.91	100.0	241.0	20.0	0.0	20.0
1.809309	25.99	69.50	43.51	100.0	200.0	20.0	0.0	20.0
5.373750	26.76	69.50	42.74	100.0	10.0	20.0	0.0	20.0

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Products

EUT Information

EUT Name: Lenovo E-Color Pen
 Model: Lenovo E-Color Pen
 Test Mode: TX_1.8MHz
 Test Voltage: Battery
 Remark: Temp 22 Humi:50%
 Test Standard: FCC 15.223
 Tested By: Kei Zhang
 Reviewed By: Terry Yin
 Polarity: Z



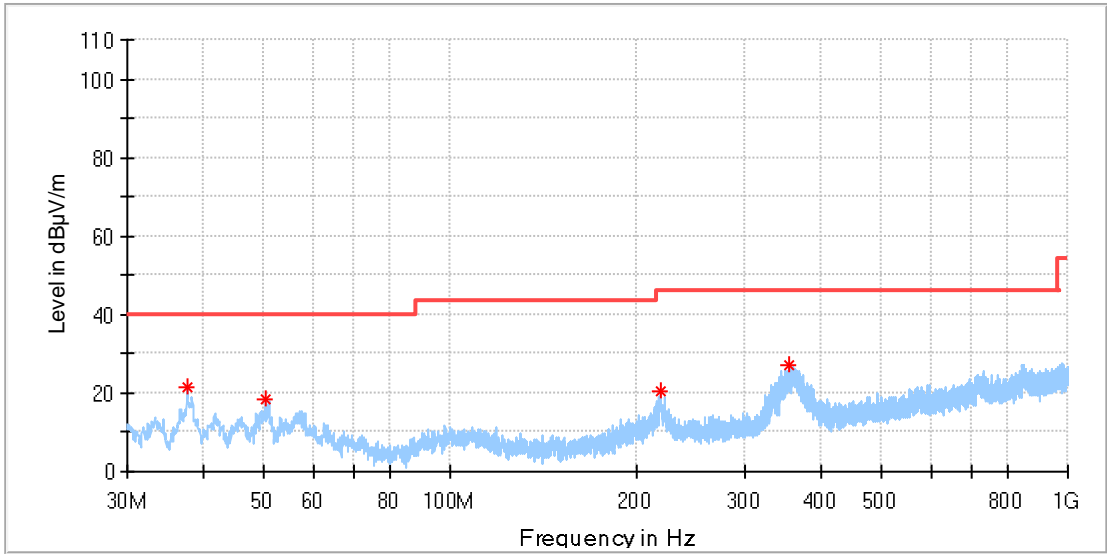
Critical_Freqs

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/)	Margin (dB)	Height (cm)	Azimuth (deg)	Corr. (dB/m)	Preamp (dB)	Trd Corr. (dB/m)
0.202677	38.35	101.46	63.12	100.0	7.0	20.0	0.0	20.0
0.294860	36.36	98.21	61.85	100.0	110.0	20.0	0.0	20.0
1.813699	25.04	69.50	44.46	100.0	7.0	20.0	0.0	20.0
5.606405	26.17	69.50	43.33	100.0	289.0	20.0	0.0	20.0

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 Products

EUT Information

EUT Name: Lenovo E-Color Pen
 Model: Lenovo E-Color Pen
 Test Mode: TX_1.8MHz
 Test Voltage:: Battery
 Remark: Temp 22 Humi:50%
 Test Standard: FCC 15.223
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



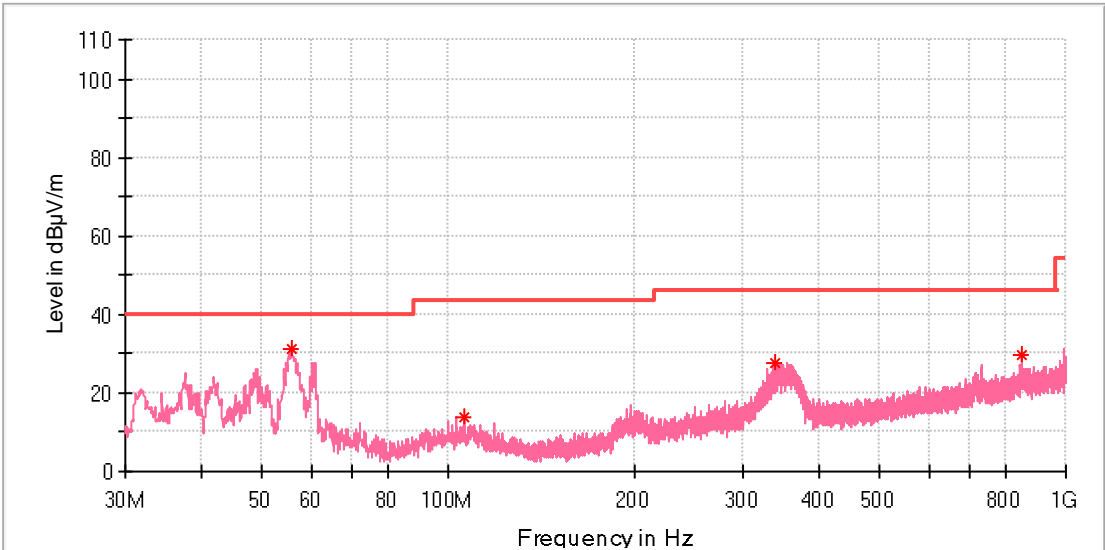
Critical_Freqs

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.469000	21.54	40.00	18.46	100.0	H	155.0	-21.3
50.176000	18.33	40.00	21.67	100.0	H	184.0	-18.6
218.810500	20.30	46.00	25.70	100.0	H	224.0	-18.9
352.622000	26.99	46.00	19.01	100.0	H	270.0	-15.1

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EUT Information

EUT Name: Lenovo E-Color Pen
 Model: Lenovo E-Color Pen
 Test Mode: TX_1.8MHz
 Test Voltage: Battery
 Remark: Temp 22 Humi:50%
 Test Standard: FCC 15.223
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



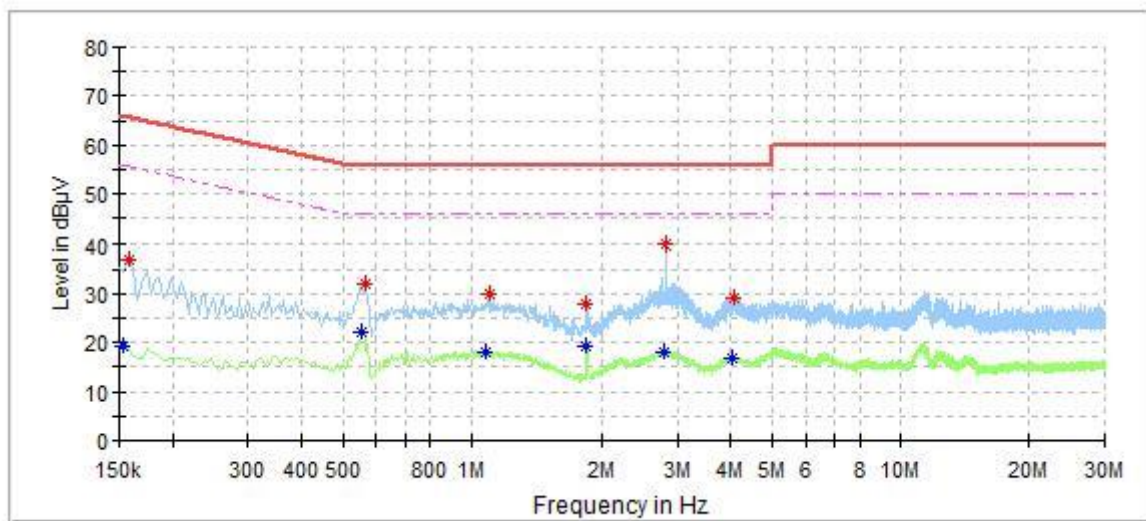
Critical_Freqs

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
55.802000	31.16	40.00	8.84	100.0	V	260.0	-18.8
106.242000	13.86	43.50	29.64	100.0	V	222.0	-19.2
338.557000	27.81	46.00	18.19	100.0	V	13.0	-15.4
845.479000	29.55	46.00	16.45	100.0	V	2.0	-6.0

Appendix B.3: Test Results of Conducted Emission

EUT Information

EUT Name: Lenovo E-Color Pen
 Model: Lenovo E-Color Pen
 Order No.: 168257717
 Test Mode: TX
 Test Voltage: AC 120V, 60Hz
 Test By: Charlie Wang
 Review By: Gary Chen
 Remark:



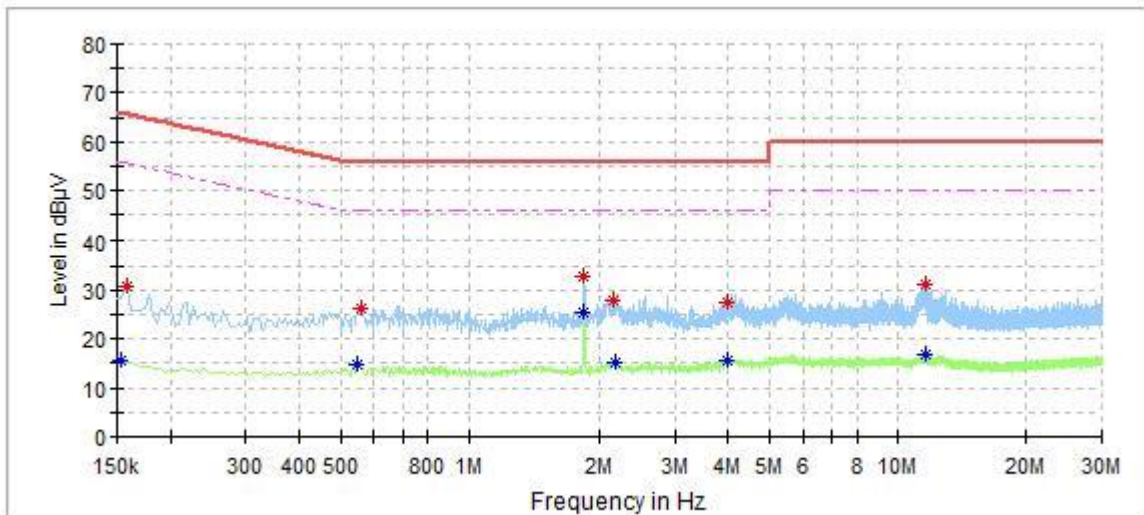
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.154000	—	19.31	55.78	36.47	L1	9.6
0.158000	36.72	—	65.57	28.85	L1	9.6
0.556000	—	22.24	46.00	23.76	L1	9.7
0.564000	31.81	—	56.00	24.19	L1	9.7
1.080000	—	17.96	46.00	28.04	L1	9.7
1.100000	29.79	—	56.00	26.21	L1	9.7
1.840000	27.99	—	56.00	28.01	L1	9.7
1.840000	—	19.12	46.00	26.88	L1	9.7
2.804000	—	18.18	46.00	27.82	L1	9.8
2.828000	39.98	—	56.00	16.02	L1	9.8
4.032000	—	17.02	46.00	28.98	L1	9.8
4.056000	29.32	—	56.00	26.68	L1	9.8

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EUT Information

EUT Name: Lenovo E-Color Pen
 Model: Lenovo E-Color Pen
 Order No.: 168257717
 Test Mode: TX
 Test Voltage: DC 5V
 Test By: Charlie Wang
 Review By: Gary Chen
 Remark:



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.154000	—	15.65	55.78	40.13	N	9.6
0.158000	30.85	—	65.57	34.71	N	9.6
0.548000	—	14.81	46.00	31.19	N	9.7
0.560000	26.40	—	56.00	29.60	N	9.7
1.840000	32.62	—	56.00	23.38	N	9.7
1.840000	—	25.23	46.00	20.77	N	9.7
2.152000	27.81	—	56.00	28.19	N	9.7
2.172000	—	15.01	46.00	30.99	N	9.7
3.996000	—	15.44	46.00	30.56	N	9.8
4.004000	27.44	—	56.00	28.56	N	9.8
11.580000	30.98	—	60.00	29.02	N	10.2
11.656000	—	17.01	50.00	32.99	N	10.2