

Prüfbericht-Nr.: Test Report No.:	17042407 001	Auftrags-Nr.: Order No.:	164020122	Seite 1 von 28 Page 1 of 28
Kunden-Referenz-Nr.: Client Reference No.:	N/A	Auftragsdatum: Order date:	20.08.2014	
Auftraggeber: Client:	SHENZHEN CTECH SCIENCE & TECHNOLOGY CO. LTD B-511. Shenzhen Garden, Kexing Road, Nanshan District, Shenzhen, China			
Prüfgegenstand: Test item:	Bluetooth Keyboard Case			
Bezeichnung / Typ-Nr.: Identification / Type No.:	NS-UN8F2BK X35mini	NS-UN10F2BK X35	NS-UN12F2BK X36	
Auftrags-Inhalt: Order content:	FCC Certification IC Certification			
Prüfgrundlage: Test specification:	FCC CFR47 Part 15: Subpart C Section 15.247 FCC CFR47 Part 15: Subpart C Section 15.207 FCC CFR47 Part 15: Subpart C Section 15.209 FCC CFR47 Part 15: Subpart B Section 15.107 FCC CFR47 Part 15: Subpart B Section 15.109 FCC KDB publication 447498 D01 v05r01 RSS-210 Issue 8 December 2010 RSS-102 Issue 4 March 2010			
Wareneingangsdatum: Date of receipt:	23.08.2014			
Prüfmuster-Nr.: Test sample No.:	A000099003 001-003			
Prüfzeitraum: Testing period:	23.08.2014 - 27.08.2014			
Ort der Prüfung: Place of testing:	Accurate Technology Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			



geprüft von / tested by:			kontrolliert von / reviewed by:		
					
26.09.2014	Tom Wang/Assistant Project Manager		26.09.2014	Winnie Hou/Technical Certifier	
Datum	Name / Stellung	Unterschrift	Datum	Name / Stellung	Unterschrift
Date	Name / Position	Signature	Date	Name / Position	Signature

Sonstiges / Other: **FCC ID: PD8X35** **IC: 12304A-X36**
 Bluetooth Keyboard Case is also named as Insignia Universal Folio with keyboard for 8" tablets, Insignia Universal Folio with keyboard for 10" tablets and Insignia Universal Folio with keyboard for 12" tablets when put into market.

Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged
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* Legende: 1 = sehr gut 2 = gut 3 = befriedigend

Legend: 1 = very good 2 = good 3 = satisfactory

P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n)

P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s)

4 = ausreichend 5 = mangelhaft

4 = sufficient 5 = poor

N/A = nicht anwendbar N/T = nicht getestet

N/A = not applicable N/T = not tested

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

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.

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 PEAK OUTPUT POWER

RESULT: Pass

5.1.3 99% BANDWIDTH

RESULT: Pass

5.1.4 20dB BANDWIDTH

RESULT: Pass

5.1.5 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.6 NUMBER OF HOPPING CHANNELS

RESULT: Pass

5.1.7 DWELL TIME

RESULT: Pass

5.1.8 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100kHz BANDWIDTH

RESULT: Pass

5.1.9 RADIATED SPURIOUS EMISSIONS

RESULT: Pass

5.1.10 CONDUCTED EMISSIONS

RESULT: Pass

5.1.11 RADIATED EMISSIONS

RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS

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 1: Test Results

2. Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.
F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China
FCC Registration No.: 752051
IC OATS Registration No.: 5077A-2

The tests at the test site have been conducted under the supervision of a TÜV engineer.

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2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Spurious emission and Radiated emission				
Spectrum Analyzer	Agilent	E7405A	MY45115511	2015-01-11
Test Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2015-01-11
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2015-01-11
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2015-01-11
50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	2015-01-11
Pre-Amplifier	Rohde & Schwarz	CBLU11835 40-01	3791	2015-01-11
Broadband antenna	CHASE	CBL6111C	2576	2015-01-11
Horn Antenna	AR	AT4002A	305754	2015-01-11
Radio Test Suite				
Receiver	Rohde & Schwarz	ESPI	100396/003	2015-01-11
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
Artificial Mains Network	Schwarzbeck	NLSK8126	8126431	2015-01-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2015-01-11
50_ Coaxial Switch	Anritsu Corp	MP59B	6200283933	2015-01-11

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 are $\pm 3\text{dB}$.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were included in 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 Shenzhen Emtex Co., Ltd. located at Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, P.R. China, is listed on the US Federal Communications Commission list of facilities and Industry Canada OATS list approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUTs are Bluetooth Keyboard Case used for iPad.

The model NS-UN12F2BK is similar with model NS-UN10F2BK and model NS-UN8F2BK in circuit design, RF module, PCB design and components employed except the difference in keyboard size and case size.

The model X36 is identical with model NS-UN12F2BK except product name and model name.

The model X35 is identical with model NS-UN10F2BK except product name and model name.

The model X35mini is identical with model NS-UN8F2BK except product name and model name.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	Bluetooth keyboard case		
Type Designation:	NS-UN8F2BK X35mini	NS-UN10F2BK X35	NS-UN12F2BK X36
FCC ID	PD8X35		
IC	12304A-X36		

Table 3: Technical Specification of EUT

Technical Specification	Value
Operating Frequency	2402-2480MHz
Operation Voltage	DC 3.7V via internal rechargeable battery
Battery Type	Li-ion Polymer Cell
Battery Capacity	230mAh
Charging Voltage	DC 5.0V via USB port
Modulation	GFSK
Number of channel	79
Chanel spacing	1MHz
Bluetooth version	Bluetooth 3.0 (BDR)
Measured Maximum RF Power	2.50 dBm
Antenna type and Gain	PCB Antenna, 0dBi

3.3 Independent Operation Modes

The basic operation modes are:

- A. Bluetooth on, Transmitting
- B. Charging
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Block Diagram
- Bill of Material
- Rating Label
- Circuit Diagram
- Instruction Manual
- PCB layout

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

Immunity: The equipment under test (EUT) was configured to have its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the instructions for use.

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted 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.

Due to difference described in clause 3.1, all radio spectrum tests were applied on NS-UN12F2BK. Coducted emission and radiated emission were applied on NS-UN12F2BK and NS-UN8F2BK.

Table 4: RF channel and frequency of EUT

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Description	Manufacturer	Part No.	S/N
PC	Lenovo	4290-RT8	R9-FW93G
Printer	HP	1015	CNFG030424

4.4 Countermeasures to Achieve ERM Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF). No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

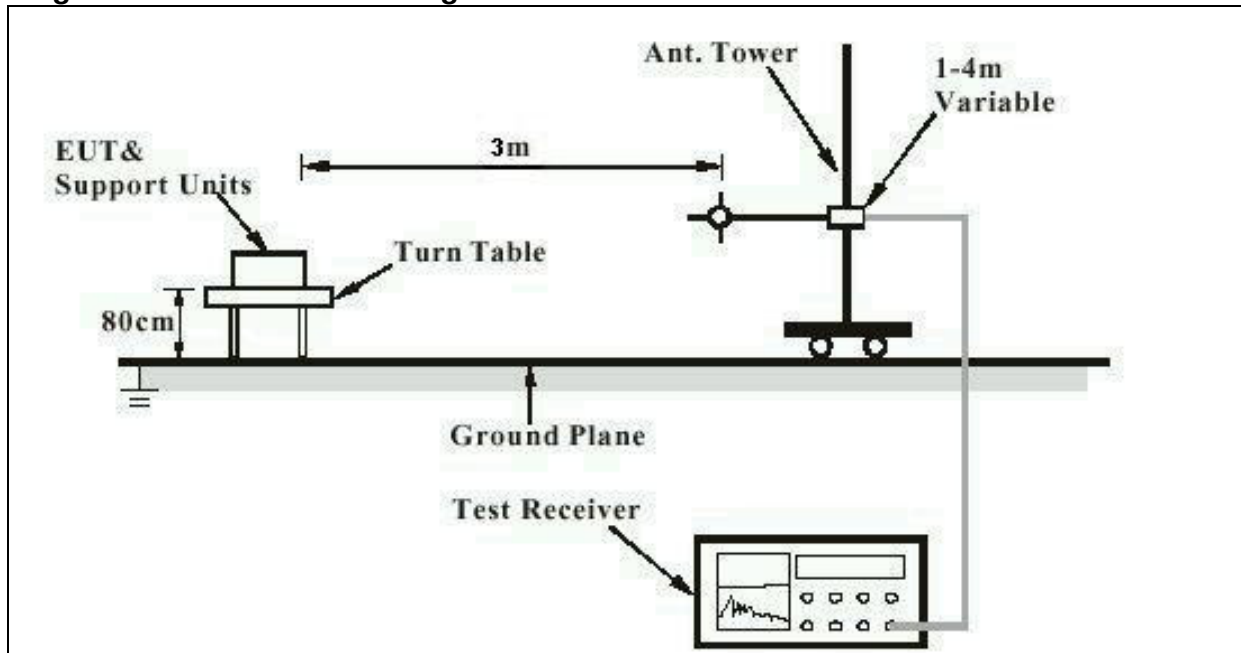


Diagram of Measurement Equipment Configuration for Conduction Measurement

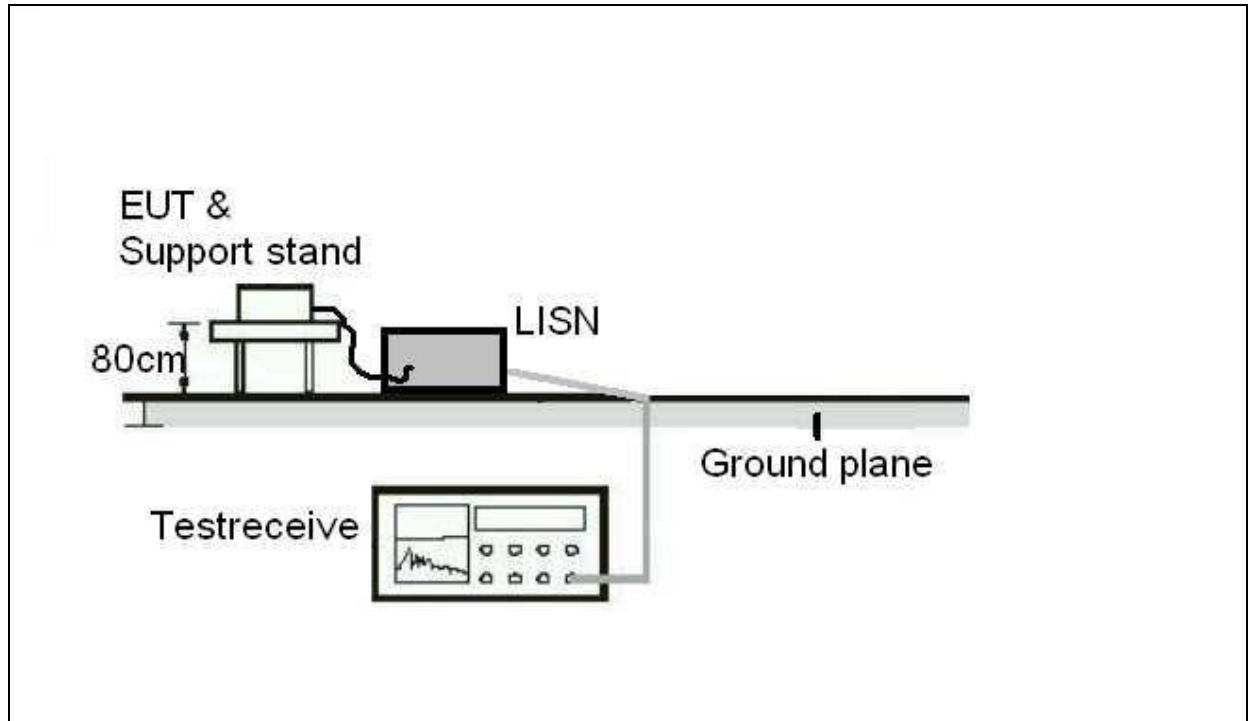
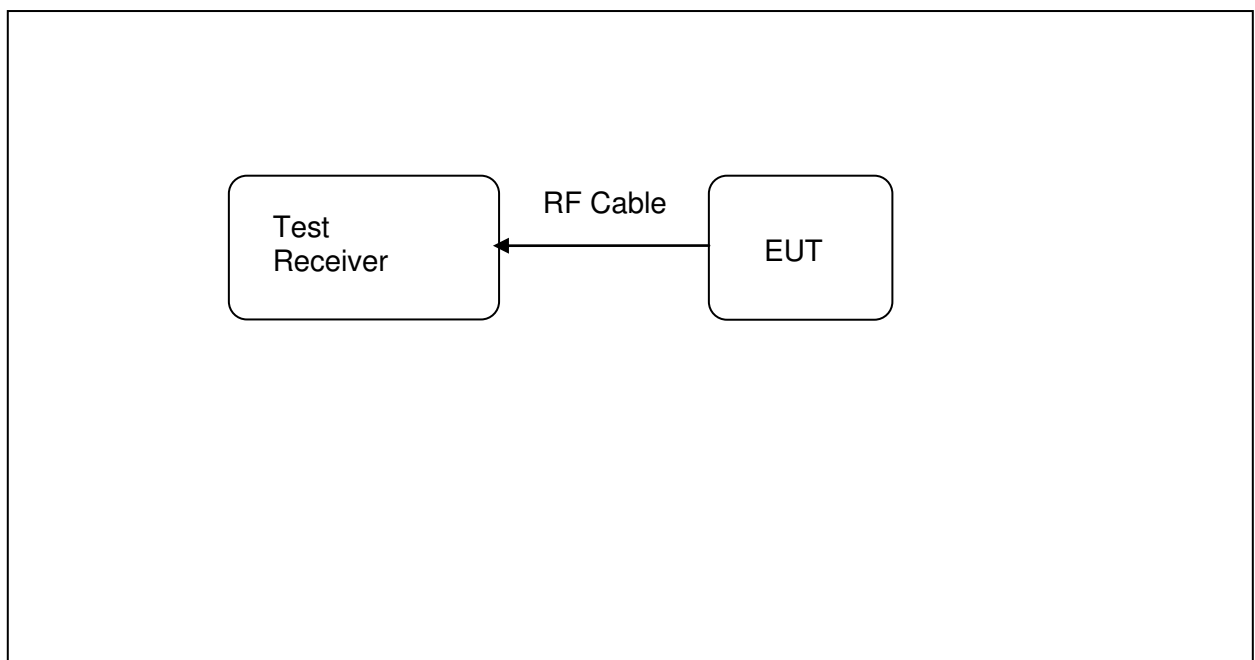


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test date	:	2014-08-24
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen 7.1.4
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal PCB antenna, the directional gain of antenna is 0dBi, 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 photos for details.

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5.1.2 Peak Output Power

RESULT:

Pass

Test date : 2014-08-25
Test standard : FCC Part 15.247(b)(1)
RSS-210 A8.4 (2)
Basic standard : ANSI C63.4: 2009
Limit : 125 mW
Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 5: Test result of Peak Output Power

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(mW)	(mW)
Low Channel	2402	2.42	1.74	125
Middle Channel	2441	2.50	1.78	125
High Channel	2480	2.48	1.77	125

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5.1.3 99% Bandwidth

RESULT:

Pass

Date of testing : 2014-08-25
Test standard : RSS-Gen clause 4.6.1
Basic standard : ANSI C63.4: 2009
Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 6: Test result of 99% Bandwidth, mode A.1

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	972	/	Pass
Mid Channel	2441	984	/	Pass
High Channel	2480	984	/	Pass

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5.1.4 20dB Bandwidth

RESULT:

Pass

Date of testing : 2014-08-25
Test standard : FCC Part 15.247(a)(1)
RSS-210 A8.4 (2)
Basic standard : ANSI C63.4: 2009
Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 7: Test result of 20dB Bandwidth

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit(MHz)
Low Channel	2402	954	/
Middle Channel	2441	948	/
High Channel	2480	946	/

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5.1.5 Carrier Frequency Separation

RESULT:

Pass

Test date : 2014-08-25
Test standard : FCC Part 15.247(a)(1)
RSS-210 A8.1 (b)
Basic standard : ANSI C63.4: 2009
Limit : $\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth,
whichever is greater
Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High
Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 8: Test result of Carrier frequency separation

Channel	Channel Frequency(MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1.002	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth	Pass
Adjacency Channel	2403			
Middle Channel	2441	1.002	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth	Pass
Adjacency Channel	2442			
High Channel	2480	1.002	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth	Pass
Adjacency Channel	2479			

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5.1.6 Number of Hopping Channels

RESULT:

Pass

Test date : 2014-08-24
Test standard : FCC Part 15.247(a)(1)(iii)
RSS-210 A8.1 (d)
Basic standard : ANSI C63.4: 2009
Limit : ≥ 15 non-overlapping channels
Kind of test site : Shielded room

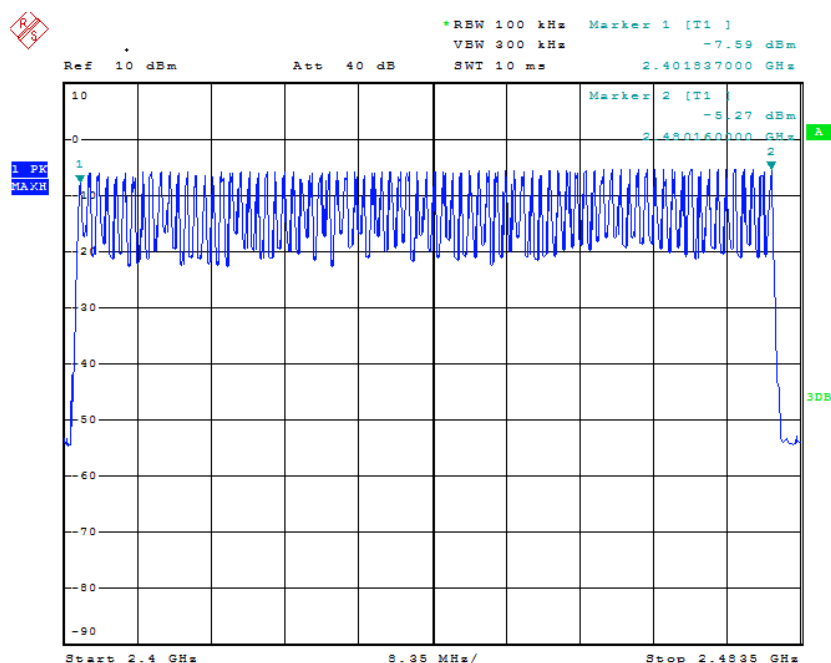
Test setup

Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 9: Test Result of Number of Hopping Frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2400 to 2483.5 MHz	79	≥ 15	Pass

Figure 1 Test plot of hopping channels



Date: 26.AUG.2014 10:31:48

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5.1.7 Dwell Time

RESULT:

Pass

Test date : 2014-08-27
Test standard : FCC Part 15.247(a)(1)(iii)
RSS-210 A8.1 (d)
Basic standard : ANSI C63.4: 2009
Limit : ≤0.4s
Kind of test site : Shielded room

Test setup

Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 10: Test result of Dwell time

Channel	Data Mode	Pulse Width (ms)	Measured Dwell time(s)	Limit(s)	Result
Low Channel	DH1	0.46	0.15	≤0.4	Pass
	DH3	1.76	0.28	≤0.4	Pass
	DH5	3.00	0.32	≤0.4	Pass
Middle Channel	DH1	0.46	0.15	≤0.4	Pass
	DH3	1.75	0.28	≤0.4	Pass
	DH5	3.01	0.32	≤0.4	Pass
High Channel	DH1	0.46	0.15	≤0.4	Pass
	DH3	1.75	0.28	≤0.4	Pass
	DH5	3.00	0.32	≤0.4	Pass

Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

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5.1.8 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT:

Pass

Date of testing	:	2014-08-26
Test standard	:	FCC Part 15.247(d) RSS-210 A8.5
Basic standard	:	ANSI C63.4: 2009
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low/Middle/ High
Operation mode	:	A
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101 kPa

For details refer to test plots in Appendix 1.

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5.1.9 Radiated Spurious Emissions

RESULT:

Pass

Date of testing	:	2014-08-23
Test standard	:	FCC Part 15.247(d), FCC 15.205, RSS-210 Clause 2.2
Basic standard	:	ANSI C63.4: 2009
Limit	:	Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101 kPa

For details refer to the test plots in Appendix 1.

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5.1.10 Conducted Emissions

RESULT:

Pass

Date of testing : 2014-08-27
Test standard : FCC Part 15.107(a)
FCC Part 15.207(a)
RSS-Gen Clause 7.2.4
Basic standard : ANSI C63.4: 2009,
Limit : Refer to FCC Part 15.107 (a)
Kind of test site : Shield room

Test setup

Operation mode : A, B
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For details refer to the test plots in Appendix 1.

5.1.11 Radiated Emissions

RESULT:

Pass

Date of testing : 2014-08-27
Test standard : FCC Part 15.109(a)
ICES-003 Issue 5 August 2012
Basic standard : ANSI C63.4: 2009,
Limit : Refer to FCC Part 15.107 (a)
Kind of test site : Shield room

Test setup

Operation mode : B
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For details refer to the test plots in Appendix 1.

6. Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:

Pass

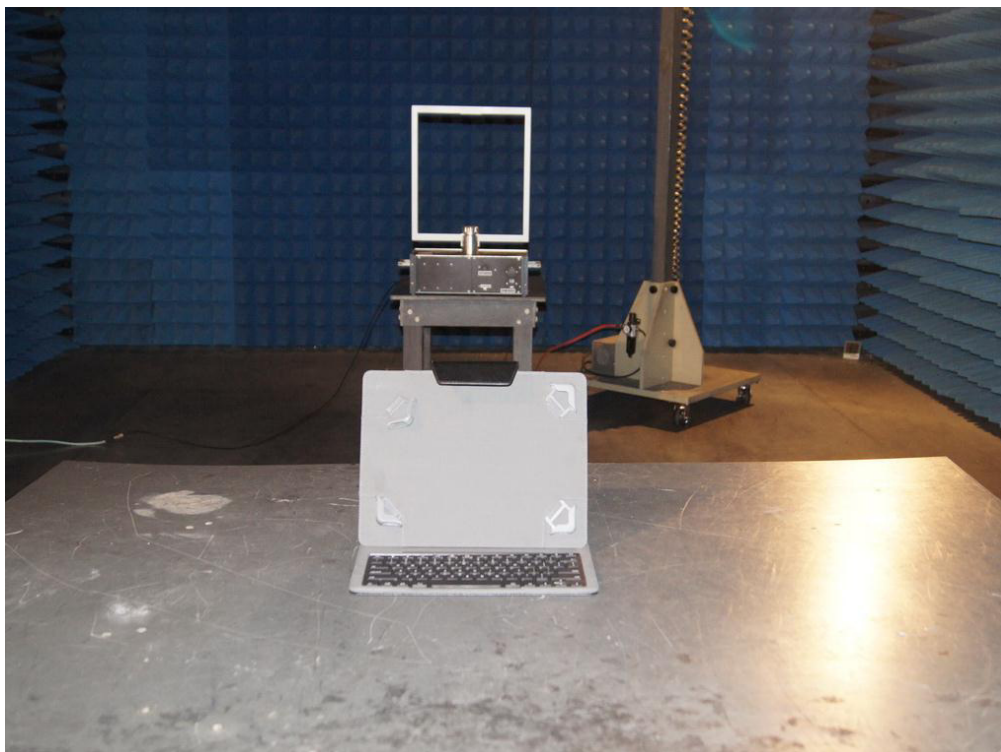
Test standard : FCC KDB Publication 447498
RSS-102 Issue 4

The minimum distance for the EUT is 5mm, since maximum peak output power of the transmitter is 1.78mW (2.50dBm), which is far below the SAR exclusion threshold level 10 mW (Appendix A, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v05.

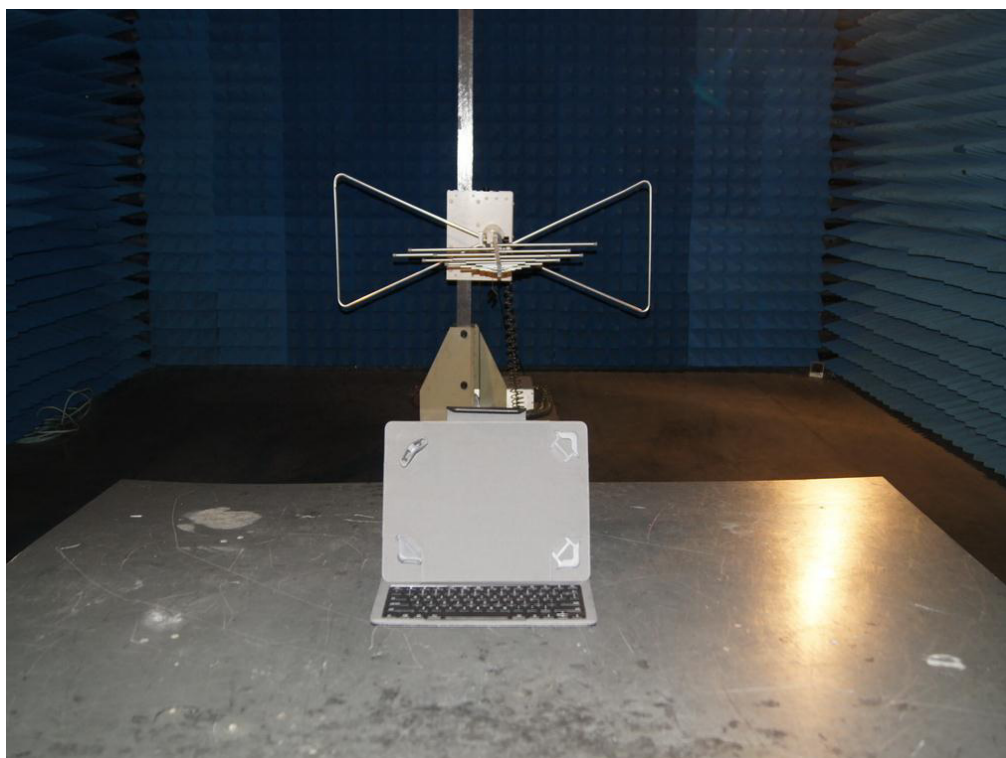
And the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 4 as well.

7. Photographs of the Test Set-Up

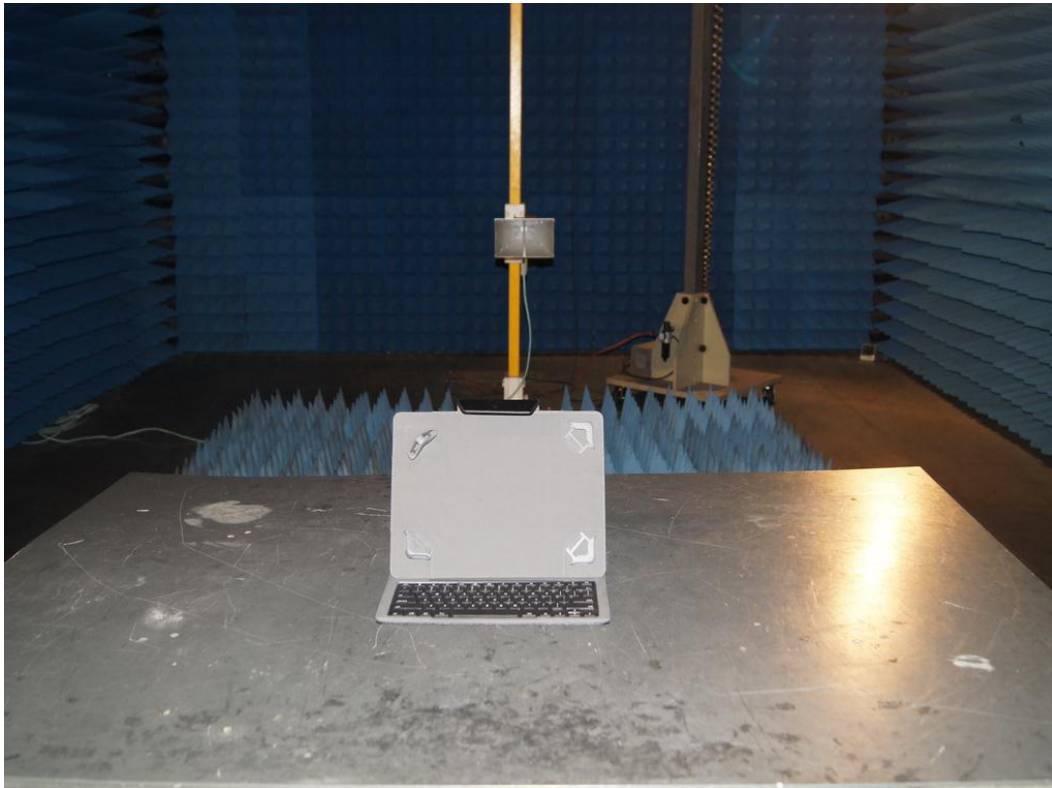
Photograph 1: Set-up for Radiated Spurious Emissions, 9 KHz-30MHz



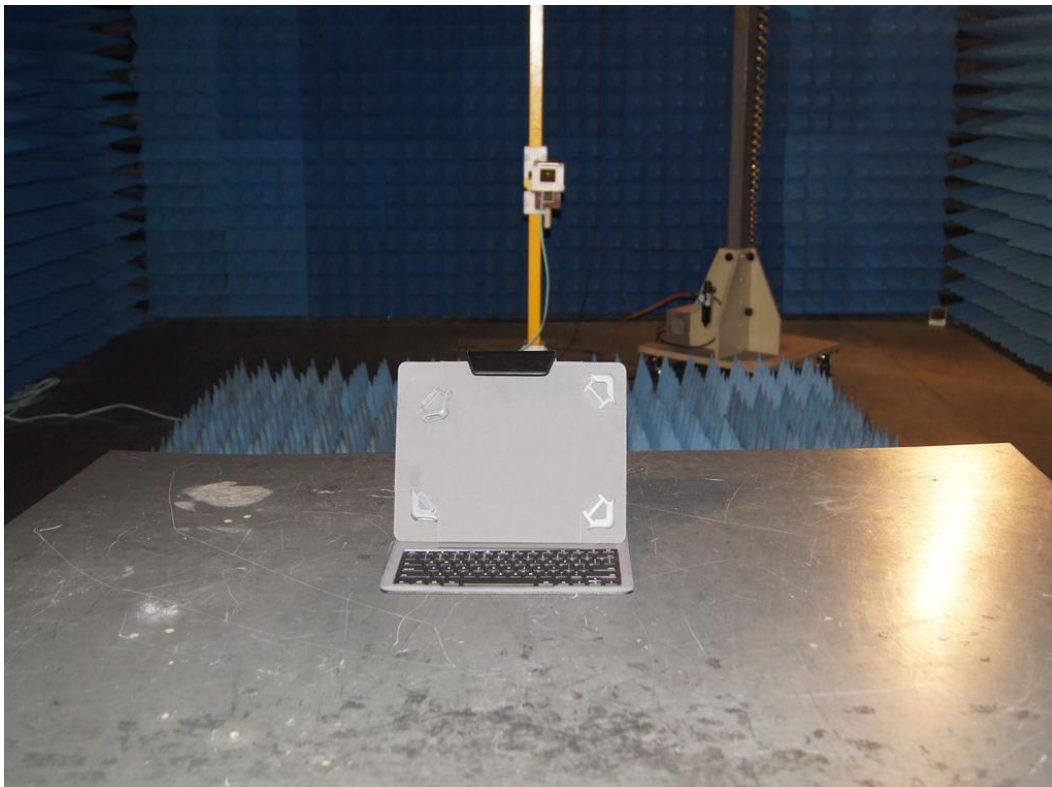
Photograph 2: Set-up for Radiated Spurious Emissions, 30MHz-1GHz



Photograph 3: Set-up for Radiated Spurious Emissions, 1GHz-18GHz



Photograph 4: Set-up for Radiated Spurious Emissions, 18GHz-25GHz



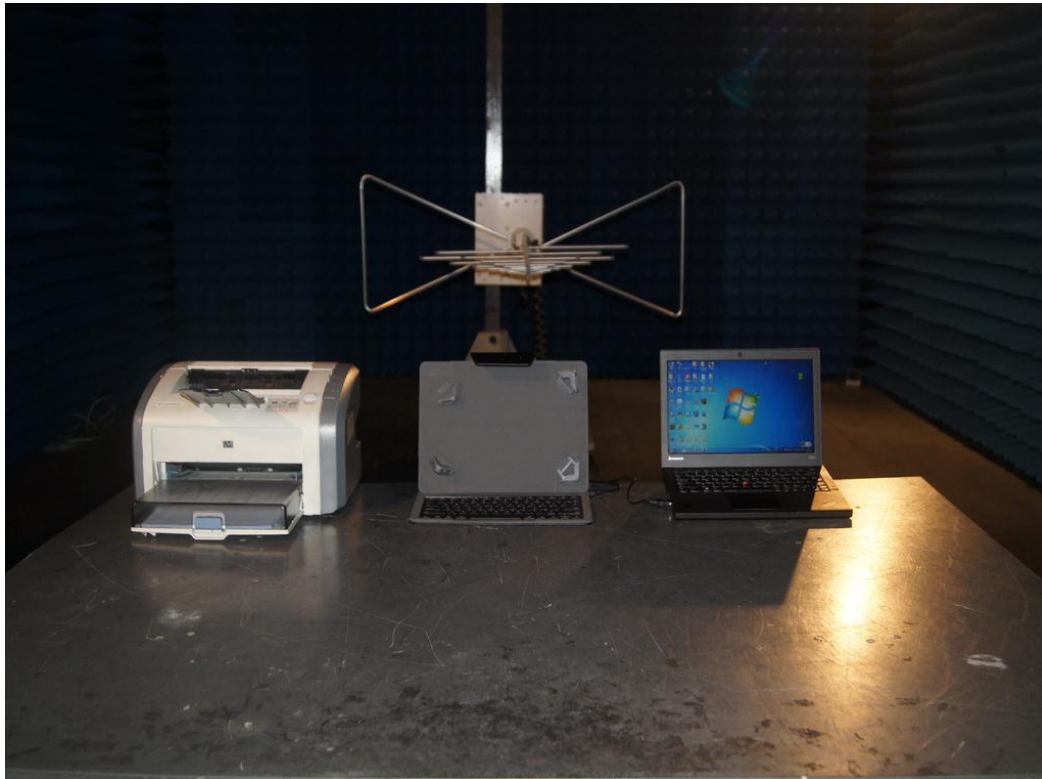
Photograph 5: Set-up for Conducted Emissions



Photograph 6: Set-up for Radiated Emissions, 9 KHz-30MHz



Photograph 7: Set-up for Radiated Emissions, 30MHz- 1GHz



Photograph 8: Set-up for radio spectrum test



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1 Test Plots of Conducted Emission

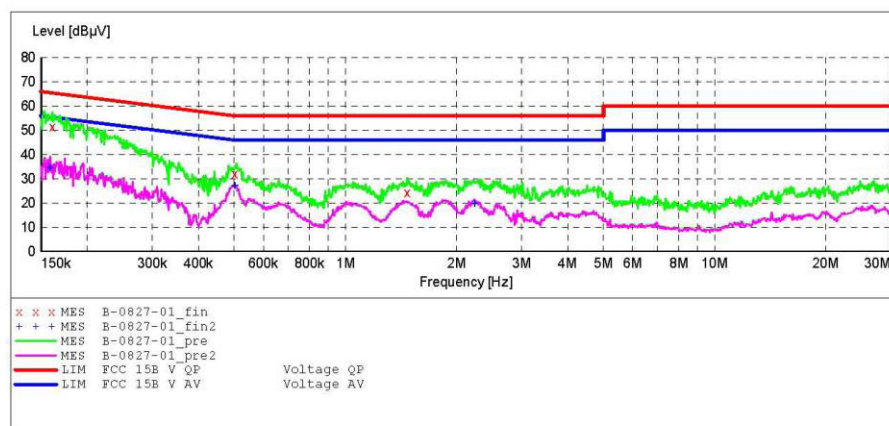
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X35mini
Manufacturer: CTECH
Operating Condition: Charging Via Computer
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: L 120V/60Hz
Comment:
Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK0126 2008
Average



MEASUREMENT RESULT: "B-0827-01_fin"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.161175	51.40	10.5	65	14.0	QP	L1	GND
0.500809	32.00	10.7	56	24.0	QP	L1	GND
1.471550	24.30	10.9	56	31.7	QP	L1	GND

MEASUREMENT RESULT: "B-0827-01_fin2"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.158622	34.60	10.5	56	20.9	AV	L1	GND
0.500809	27.20	10.7	46	18.8	AV	L1	GND
2.237767	19.80	11.0	46	26.2	AV	L1	GND

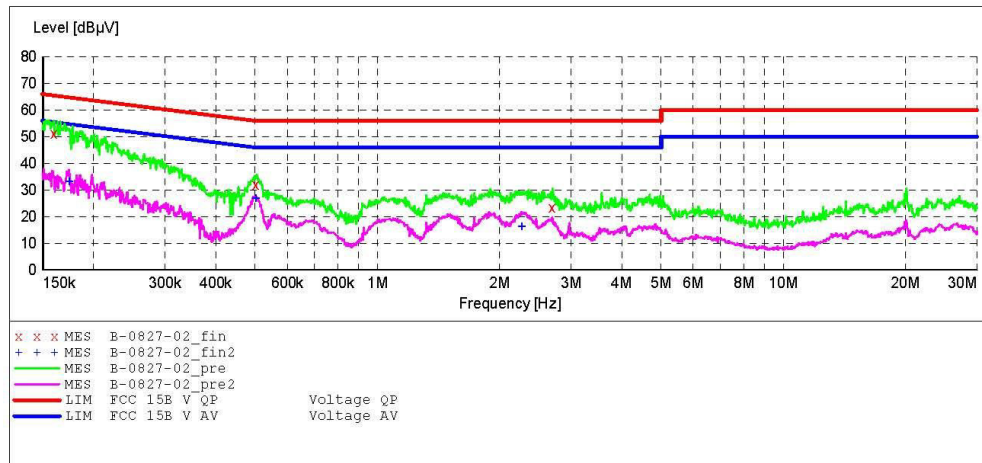
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X35mini
 Manufacturer: CTECH
 Operating Condition: Charging Via Computer
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: N 120V/60Hz
 Comment:
 Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "B-0827-02_fin"

8/27/2014

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.159893	51.10	10.5	66	14.4	QP	N	GND
0.502813	32.00	10.7	56	24.0	QP	N	GND
2.699599	23.40	11.0	56	32.6	QP	N	GND

MEASUREMENT RESULT: "B-0827-02_fin2"

8/27/2014

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.173876	33.30	10.5	55	21.5	AV	N	GND
0.502813	27.00	10.7	46	19.0	AV	N	GND
2.264728	16.20	11.0	46	29.8	AV	N	GND

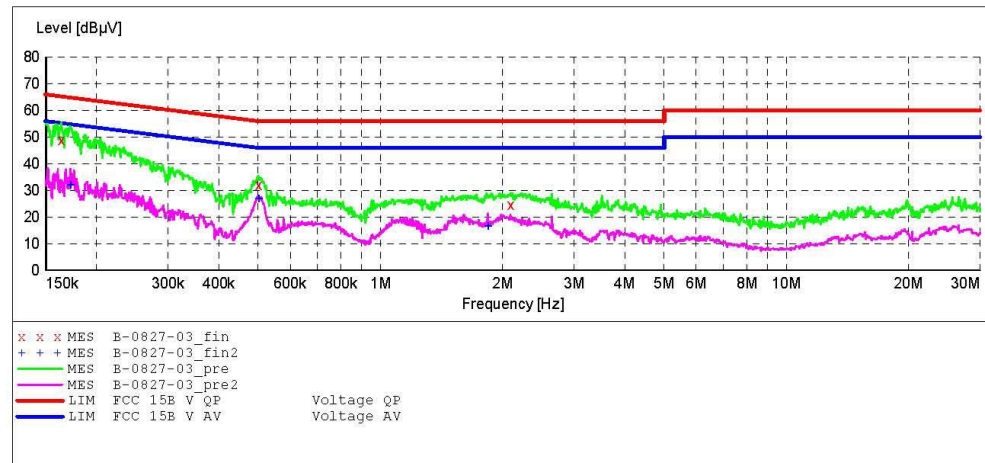
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X31
Manufacturer: CTECH
Operating Condition: Charging Via Computer
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: N 120V/60Hz
Comment:
Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "B-0827-03_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.163769	48.90	10.5	65	16.4	QP	N	GND
0.500809	32.10	10.7	56	23.9	QP	N	GND
2.099304	24.60	11.0	56	31.4	QP	N	GND

MEASUREMENT RESULT: "B-0827-03_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.172493	31.90	10.5	55	22.9	AV	N	GND
0.500809	26.90	10.7	46	19.1	AV	N	GND
1.840191	16.50	11.0	46	29.5	AV	N	GND

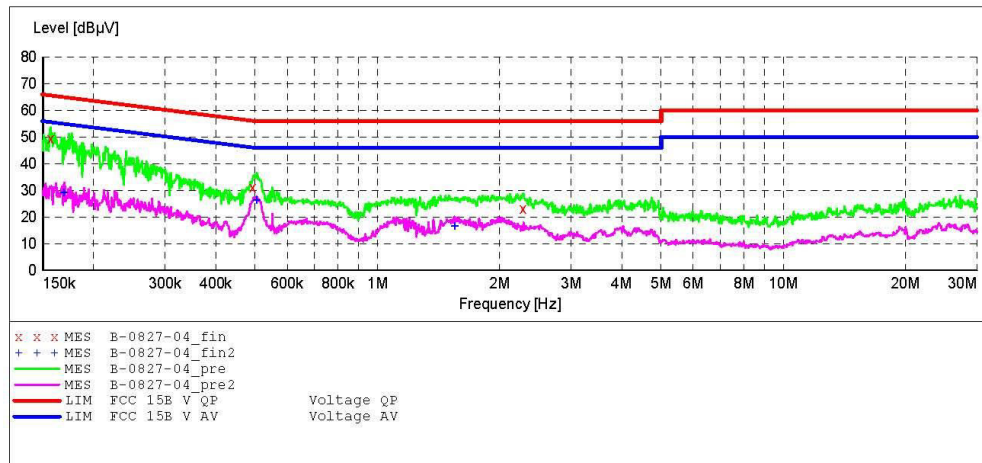
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X31
Manufacturer: CTECH
Operating Condition: Charging Via Computer
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: L 120V/60Hz
Comment:
Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "B-0827-04_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.156734	49.40	10.5	66	16.2	QP	L1	GND
0.492876	31.30	10.7	56	24.8	QP	L1	GND
2.292013	23.20	11.0	56	32.8	QP	L1	GND

MEASUREMENT RESULT: "B-0827-04_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.169084	29.10	10.5	55	25.9	AV	L1	GND
0.504824	26.30	10.7	46	19.7	AV	L1	GND
1.549934	16.70	10.9	46	29.3	AV	L1	GND

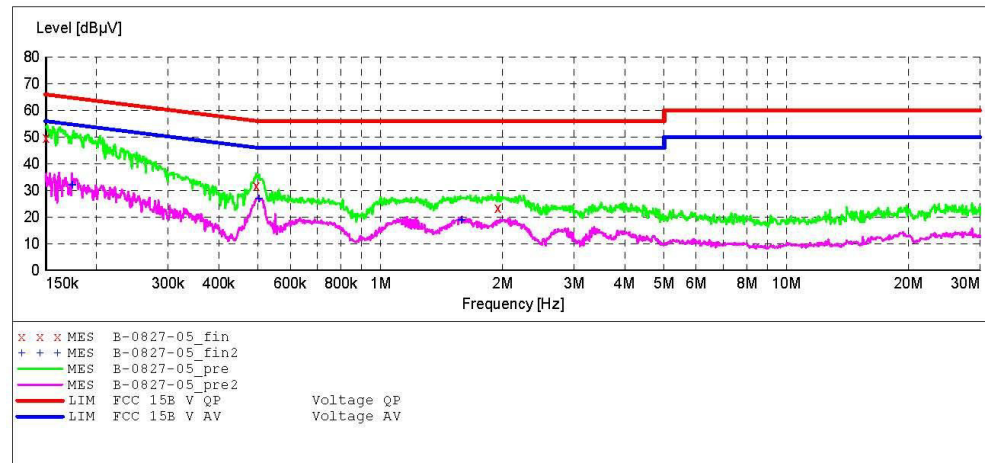
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X31
Manufacturer: CTECH
Operating Condition: TX
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: L 120V/60Hz
Comment:
Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "B-0827-05_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150600	49.90	10.5	66	16.1	QP	L1	GND
0.494848	31.70	10.7	56	24.4	QP	L1	GND
1.953748	23.50	11.0	56	32.5	QP	L1	GND

MEASUREMENT RESULT: "B-0827-05_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.173876	31.90	10.5	55	22.9	AV	L1	GND
0.500809	27.00	10.7	46	19.0	AV	L1	GND
1.587507	19.00	10.9	46	27.0	AV	L1	GND

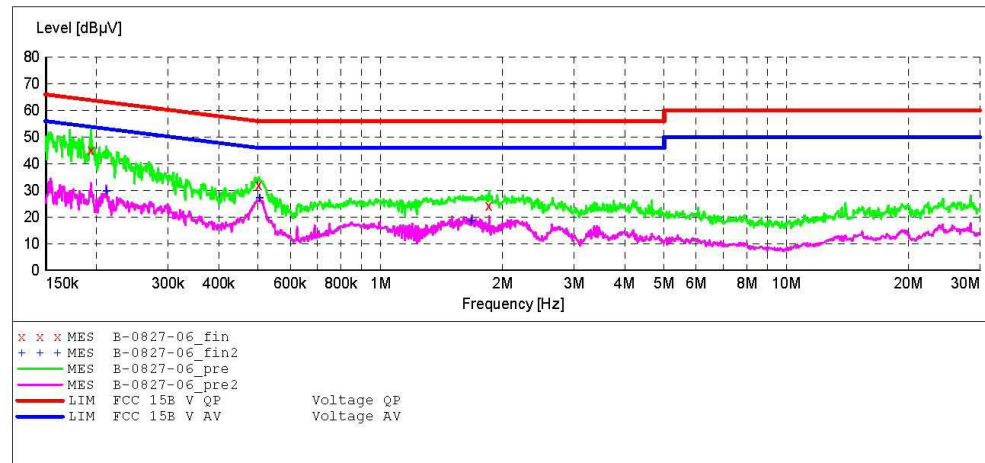
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X31
Manufacturer: CTECH
Operating Condition: TX
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: N 120V/60Hz
Comment:
Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "B-0827-06_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.193664	45.20	10.5	64	18.7	QP	N	GND
0.500809	31.90	10.7	56	24.1	QP	N	GND
1.854942	24.20	11.0	56	31.8	QP	N	GND

MEASUREMENT RESULT: "B-0827-06_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.211442	29.80	10.5	53	23.3	AV	N	GND
0.504824	27.10	10.7	46	18.9	AV	N	GND
1.678756	18.50	10.9	46	27.5	AV	N	GND

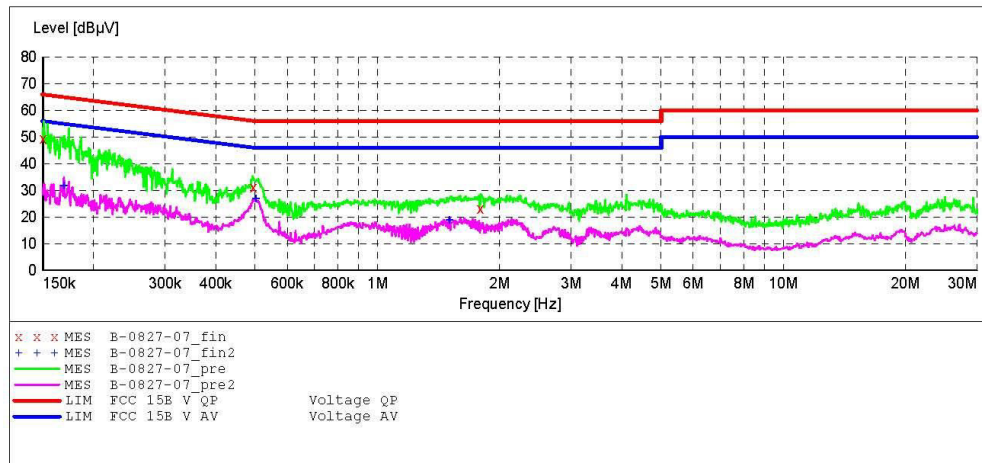
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X35mini
Manufacturer: CTECH
Operating Condition: TX
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: N 120V/60Hz
Comment:
Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "B-0827-07_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150600	49.60	10.5	66	16.4	QP	N	GND
0.494848	31.30	10.7	56	24.8	QP	N	GND
1.796638	23.10	11.0	56	32.9	QP	N	GND

MEASUREMENT RESULT: "B-0827-07_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.169084	31.80	10.5	55	23.2	AV	N	GND
0.500809	26.90	10.7	46	19.1	AV	N	GND
1.507222	18.80	10.9	46	27.2	AV	N	GND

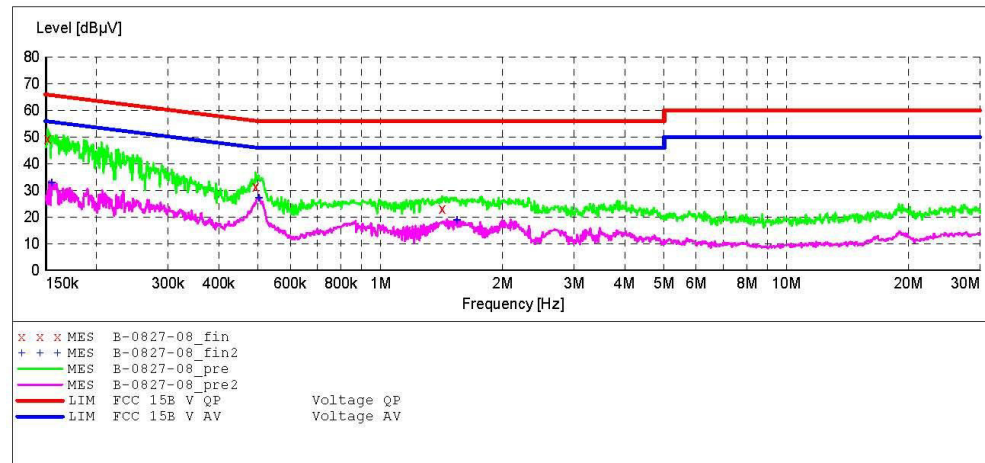
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Keyboard M/N:X35mini
Manufacturer: CTECH
Operating Condition: TX
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: L 120V/60Hz
Comment:
Start of Test: 8/27/2014 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB STD VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "B-0827-08_fin"

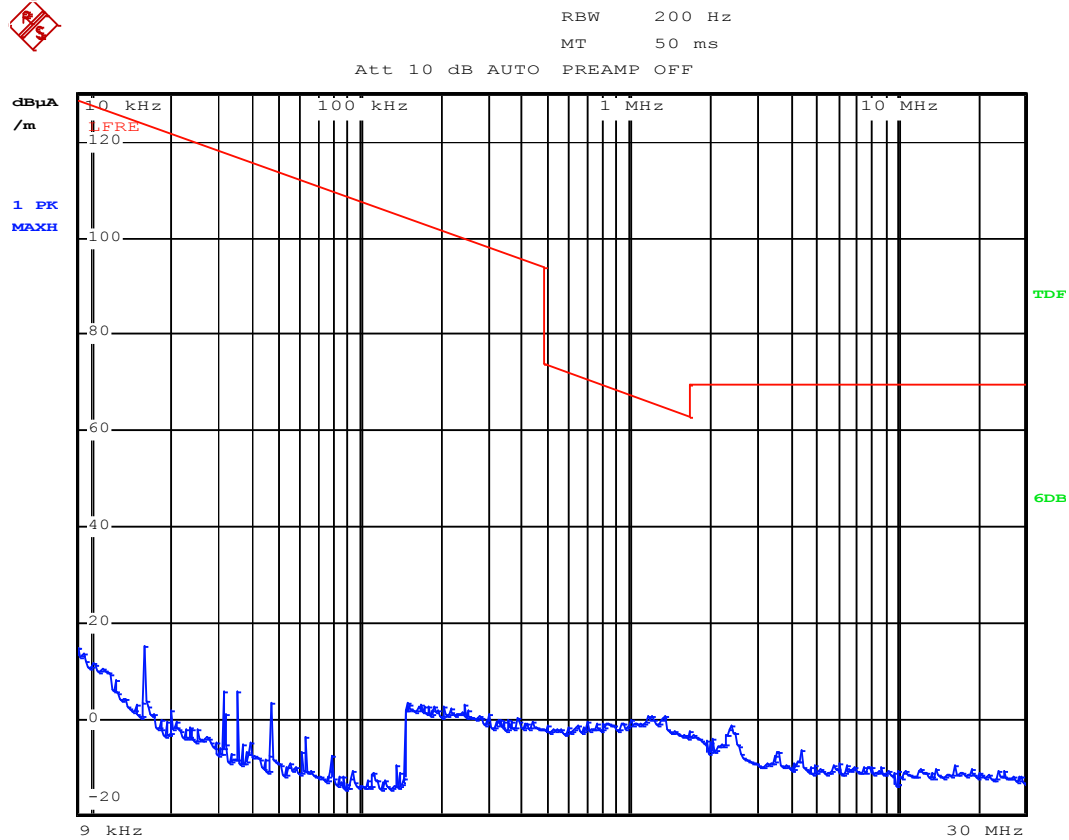
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.151807	49.60	10.5	66	16.3	QP	L1	GND
0.492876	31.50	10.7	56	24.6	QP	L1	GND
1.419618	23.10	10.9	56	32.9	QP	L1	GND

MEASUREMENT RESULT: "B-0827-08_fin2"

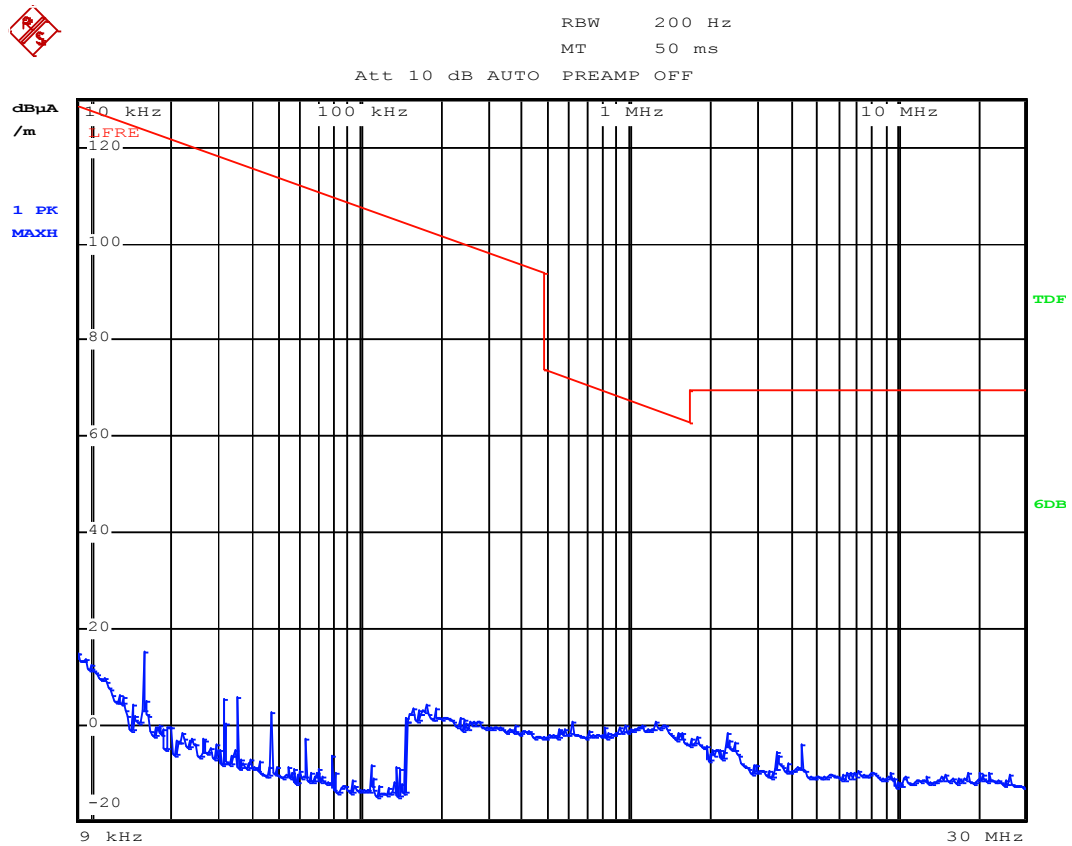
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.154868	33.00	10.5	56	22.7	AV	L1	GND
0.502813	27.10	10.7	46	18.9	AV	L1	GND
1.543759	18.90	10.9	46	27.1	AV	L1	GND

1 Test Plots of Radiated Emission, 9 KHz- 30 MHz

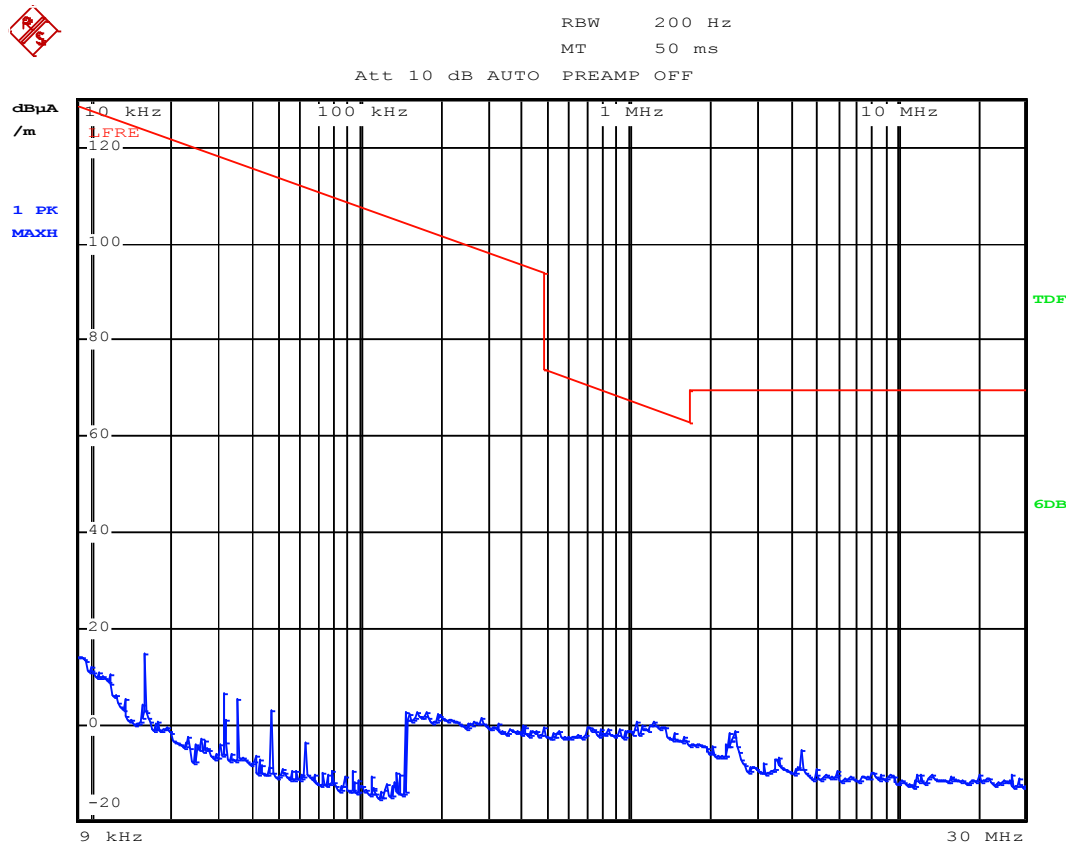
X31



Date: 23.AUG.2014 11:57:36



Date: 23.AUG.2014 11:53:42



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