

Prüfbericht-Nr.: Test Report No.:	17050212 001	Auftrags-Nr.: Order No.:	164039123	Seite 1 von 98 Page 1 of 98
Kunden-Referenz-Nr.: Client Reference No.:	N/A	Auftragsdatum: Order date:	19.06.2015	
Auftraggeber: Client:	Dongguan Newmen Electronics Technology Co.,LTD No.5, Xifa Road, Lin Village, Tangxia Town, Dongguan, Guangdong, China			
Prüfgegenstand: Test item:	Wireless keyboard with Integrated Touch Pad			
Bezeichnung / Typ-Nr.: Identification / Type No.:	NS-PNK6811 (keyboard), MX-640 (Dongle)			
Auftrags-Inhalt: Order content:	FCC Certification			
Prüfgrundlage: Test specification:	CFR47 FCC Part 15: Subpart C Section 15.249 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 FCC KDB publication 447498 D01 v05r02			
Wareneingangsdatum: Date of receipt:	19.06.2015			
Prüfmuster-Nr.: Test sample No.:	A000214899-001~003			
Prüfzeitraum: Testing period:	19.06.2015 - 3.07.2015			
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:

16.07.2015 Lin Lin / Project Manager

Datum Date	Name / Stellung Name / Position	Unterschrift Signature
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kontrolliert von / reviewed by:

16.07.2015 Winnie Hou / Technical Certifier

Datum Date	Name / Stellung Name / Position	Unterschrift Signature
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Sonstiges / Other:
FCC ID: V4P-NS-PNK6811 (keyboard)
FCC ID: V4P-MX-640 (dongle)

Zustand des Prüfgegenstandes bei Anlieferung:
Condition of the test item at delivery:

Prüfmuster vollständig und unbeschädigt
Test item complete and undamaged

* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft
P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet

Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor
P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) 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.



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TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT*RESULT: Pass***5.1.2 FUNDAMENTAL & HARMONICS RADIATED EMISSION***RESULT: Pass***5.1.3 RADIATED SPURIOUS EMISSIONS OUTSIDE BAND***RESULT: Pass***5.1.4 CONDUCTED EMISSION***RESULT: Pass***6.1.1 ELECTROMAGNETIC FIELDS***RESULT: Pass*

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1. General Remarks

1.1 Complementary Materials

None.

2. Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.

F1, Bldg. A, Changyuan New Material Port Keyuan Rd., Science & Industry Park, Nanshan
Shenzhen, 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.

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	Rohde&Schwarz	FSV40	101495	2016-01-10
Test Receiver	Rohde & Schwarz	ESCS30	100307	2016-01-10
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2016-01-10
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2016-01-10
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2016-01-10
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2016-01-10
Pre-Amplifier	Rohde & Schwarz	CBLU1183540-01	3791	2016-01-10
Radio Test Suite				
Receiver	Rohde & Schwarz	FSV40	101495	2016-01-10
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2016-01-10
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2016-01-10
L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100310	2016-01-10
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2016-01-10
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2016-01-10
RF Coaxial Cable	SUHNER	N-2m	No.3	2016-01-10

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, 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

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Radiated emission (below 30MHz)	< ± 3.08 dB
Radiated emission (30MHz-1GHz)	< ± 4.42 dB
Radiated emission (above 1GHz)	< ± 4.06 dB
Conducted Emission	< ± 2.23 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

Accurate Technology Co., Ltd. Test facility located at F1, Bldg. A, Changyuan New Material Port Keyuan Rd., Science & Industry Park, Nanshan, Shenzhen, P.R. China and 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 product is a set of wireless keyboard with dongle and operates at 2.4GHz ISM frequency band.
The test samples are engineering samples.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of Keyboard

Technical Specification	Value
Operating Frequency band	2408-2474MHz
Channel number	34
Operation Voltage	3Vdc (via 2 x AA size batteries)
Modulation	FSK
Antenna type	Internal antenna
Antenna Gain	0dBi
Chanel spacing	2MHz

Table 4: Technical Specification of Dongle

Technical Specification	Value
Operating Frequency band	2408-2474MHz
Channel number	34
Operation Voltage	USB operated
Modulation	FSK
Antenna type	Internal antenna
Antenna Gain	0dBi
Chanel spacing	2MHz

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Wireless mode
 - 1. Keyboard transmitting
 - 2. Dongle transmitting

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- | | |
|---------------------------|----------------------|
| - Bill of Material | - Circuit Diagram |
| - PCB Layout | - Instruction Manual |
| - Operational Description | - 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 C63.4: 2003.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories.

Table 5: Accessories and Auxiliary Equipment

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

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

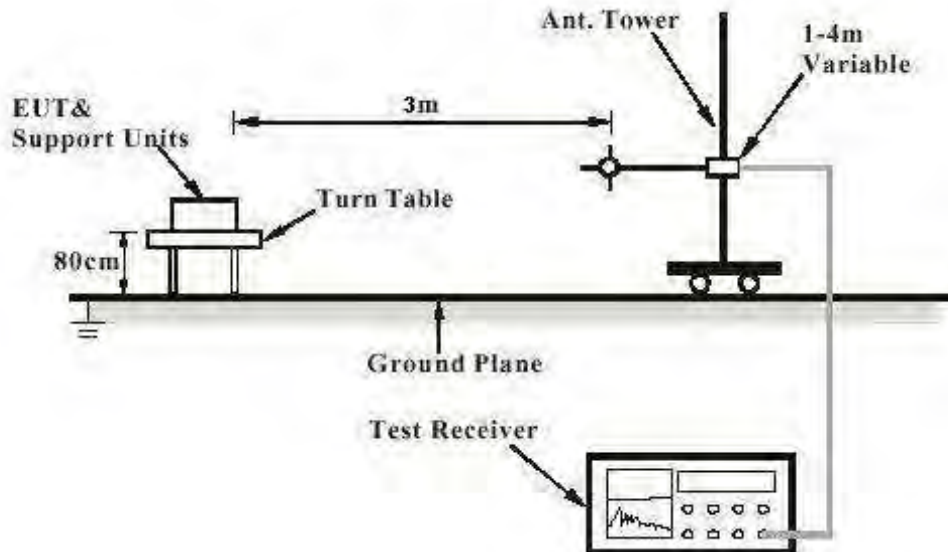


Diagram of Measurement Equipment Configuration for Conduction Measurement

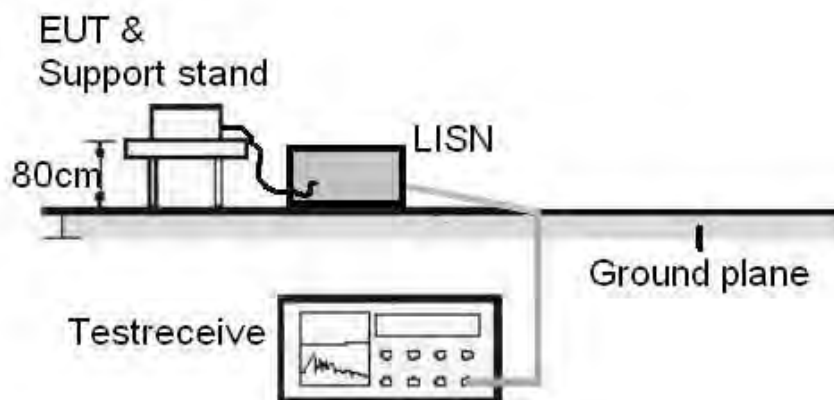
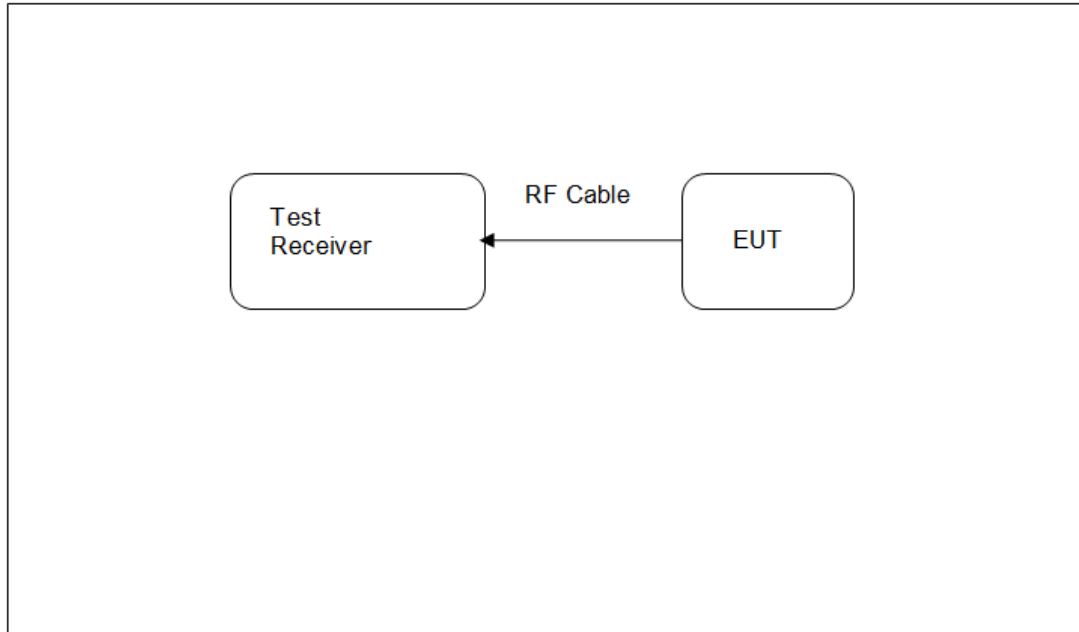


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement

5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test standard	:	FCC Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the maximum directional gain of antenna is 0dBi for keyboard and dongle, 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.

5.1.2 Fundamental & Harmonics Radiated Emission

RESULT:**Pass**

Test standard	:	FCC part 15.249(a)
Basic standard	:	ANSI C63.4: 2003
Limits	:	FCC part 15.249(a)
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test channel	:	Low / Middle / High
Input voltage	:	3Vdc for Keyboard USB operated for Dongle
Operation mode	:	A.1, A.2
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101kPa

For details refer to following test plots.

Test plot of Fundamental & Harmonics Radiated Emission-Keyboard

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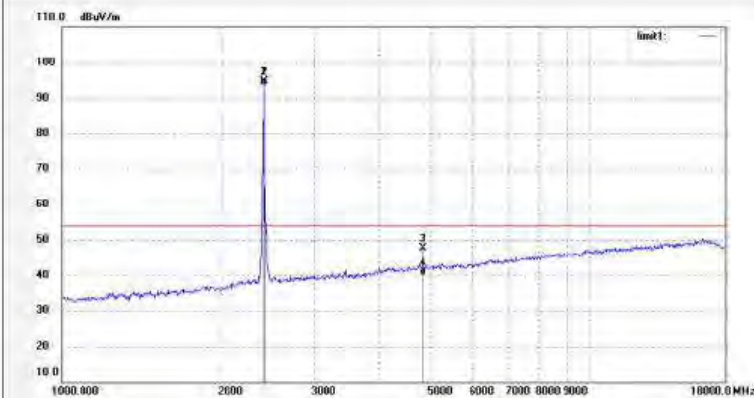
Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1096	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 15/06/27/
Temp.: C/Hum.(%) 23 C / 48 %	Time:
EUT: Wireless keyboard w integrated Touch Pad	Engineer Signature
Mode: TX 2408MHz	Distance: 3m
Model: NS-PNK6811	
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD	

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	102.14	-7.44	94.70	/	/	peak			
2	2408.000	101.01	-7.44	93.57	/	/	AVG			
3	4816.026	47.84	-0.23	47.61	74.00	-26.39	peak			
4	4816.026	40.05	-0.23	39.82	54.00	-14.18	AVG			


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Fax: +86-0755-26503396

Job No.: Jan2015-2 #1097

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2408MHz

Model: NS-PNK6811

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 3V

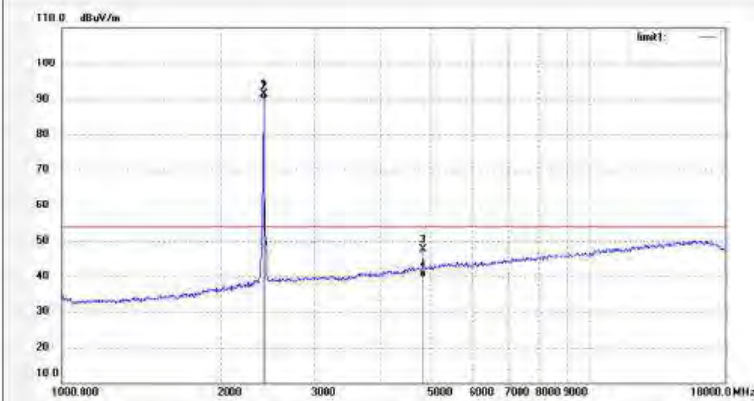
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	98.75	-7.44	91.31	/	/	peak			
2	2408.000	97.24	-7.44	89.80	/	/	AVG			
3	4816.034	47.81	-0.23	47.58	74.00	-26.42	peak			
4	4816.034	39.95	-0.23	39.72	54.00	-14.28	AVG			

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Site: 2# Chamber

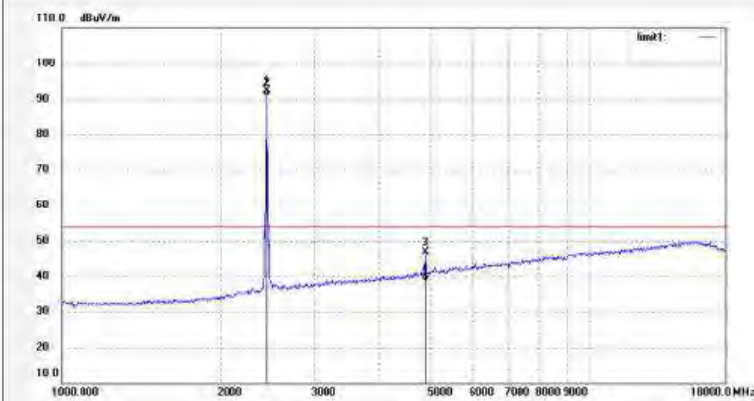
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1100
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C / 48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2440MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	99.62	-7.36	92.26	74.00	-27.19	peak			
2	2440.000	98.33	-7.36	90.97	74.00	-16.97	AVG			
3	4880.022	46.68	0.13	46.81	54.00	-7.19	peak			
4	4880.022	38.46	0.13	38.59	54.00	-15.41	AVG			

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Site: 2# Chamber

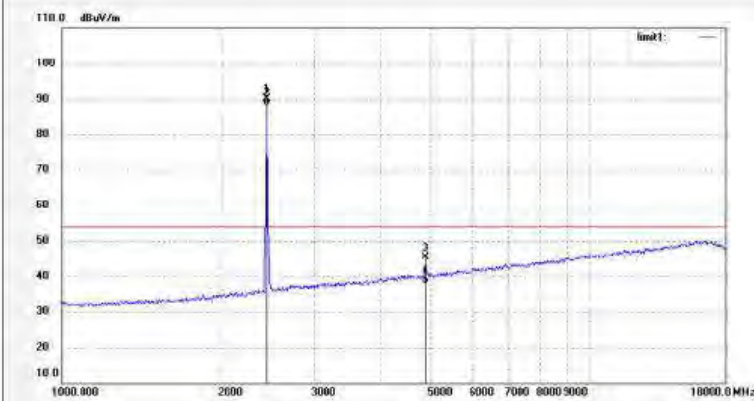
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1101
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C / 48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2440MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	97.40	-7.36	90.04	74.00	-16.04	peak			
2	2440.000	95.55	-7.36	88.19	74.00	-14.19	AVG			
3	4880.028	45.28	0.13	45.41	74.00	-28.59	peak			
4	4880.028	37.86	0.13	37.99	74.00	-36.01	AVG			

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Site: 2# Chamber

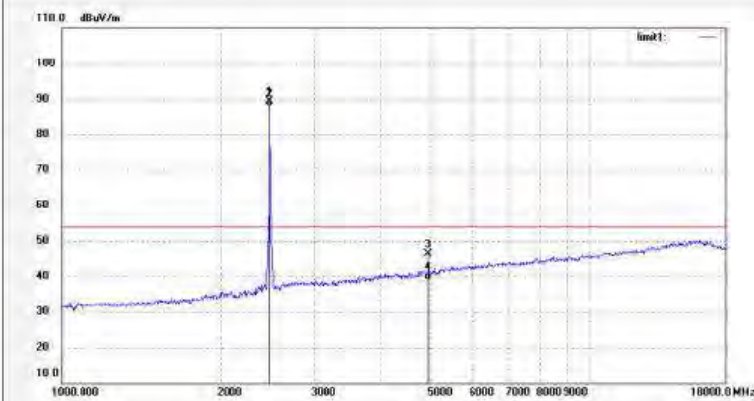
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1103
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C / 48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2474MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	98.81	-7.37	89.44	/	/	peak			
2	2474.000	95.36	-7.37	87.99	/	/	AVG			
3	4948.033	45.82	0.46	46.28	74.00	-27.72	peak			
4	4948.033	38.41	0.46	38.87	54.00	-15.13	AVG			


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Fax: +86-0755-26503396

Job No.: Jan2015-2 #1104

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C / 48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2474MHz

Model: NS-PNK6811

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 3V

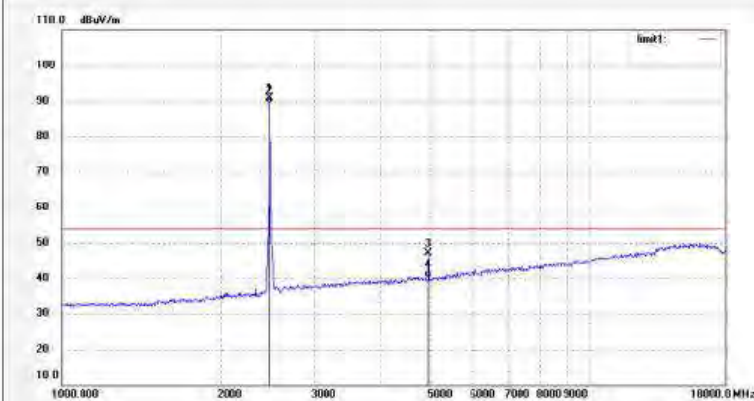
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	98.13	-7.37	90.76	/	/	peak			
2	2474.000	96.86	-7.37	89.49	/	/	AVG			
3	4948.023	46.77	0.46	47.23	74.00	-26.77	peak			
4	4948.023	39.79	0.46	40.25	54.00	-13.75	AVG			

Test plot of Fundamental & Harmonics Radiated Emission-Dongle

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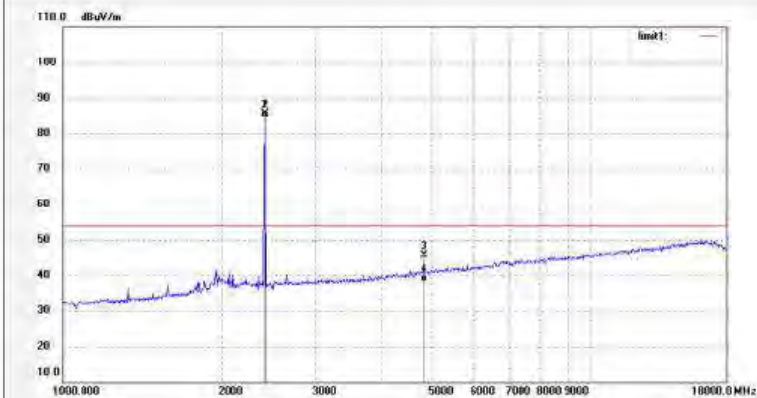
Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1109	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 15/06/27/
Temp.: (C)/Hum.(%) 23 °C / 48 %	Time:
EUT: Dongle	Engineer Signature
Mode: TX 2408MHz	Distance: 3m
Model: MX-640	
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD	

Note



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	92.82	-7.44	85.38	/	/	peak			
2	2408.000	91.78	-7.44	84.34	/	/	AVG			
3	4816.031	45.88	-0.23	45.65	74.00	-28.35	peak			
4	4816.031	38.35	-0.23	38.12	54.00	-15.88	AVG			


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Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1110

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2408MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

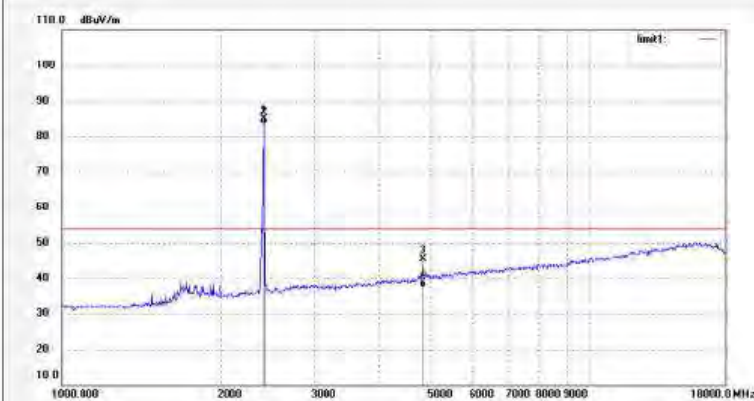
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	92.27	-7.44	84.83	/	/	peak			
2	2408.000	90.87	-7.44	83.43	/	/	AVG			
3	4816.021	45.71	-0.23	45.48	74.00	-28.52	peak			
4	4816.021	37.52	-0.23	37.29	54.00	-16.71	AVG			


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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1113

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2440MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

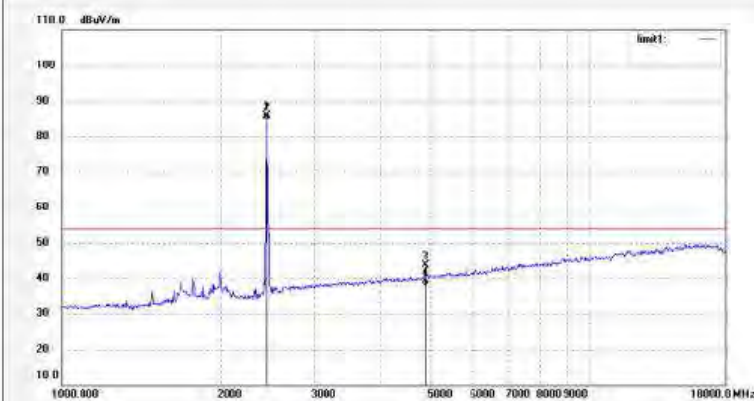
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	93.08	-7.36	85.72	/	/	peak			
2	2440.000	91.89	-7.36	84.53	/	/	AVG			
3	4880.034	43.59	0.13	43.72	74.00	-30.28	peak			
4	4880.034	37.85	0.13	37.98	54.00	-16.02	AVG			

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Test Report No.
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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1114

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2440MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

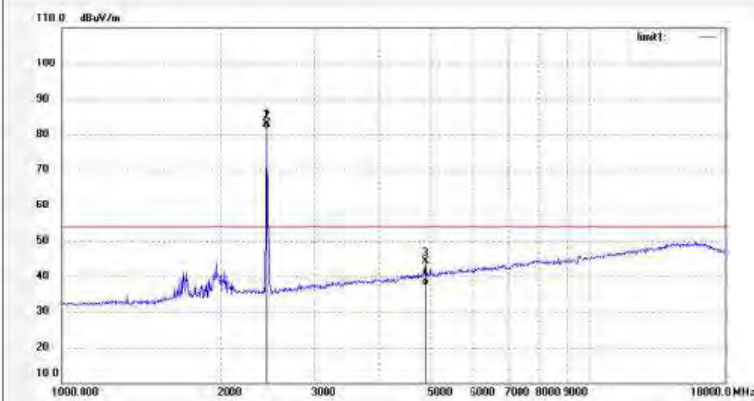
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	90.22	-7.36	82.86	/	/	peak			
2	2440.000	88.96	-7.36	81.60	/	/	AVG			
3	4880.035	43.89	0.17	44.06	74.00	-29.94	peak			
4	4880.035	37.25	0.17	37.42	54.00	-16.58	AVG			


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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1115

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

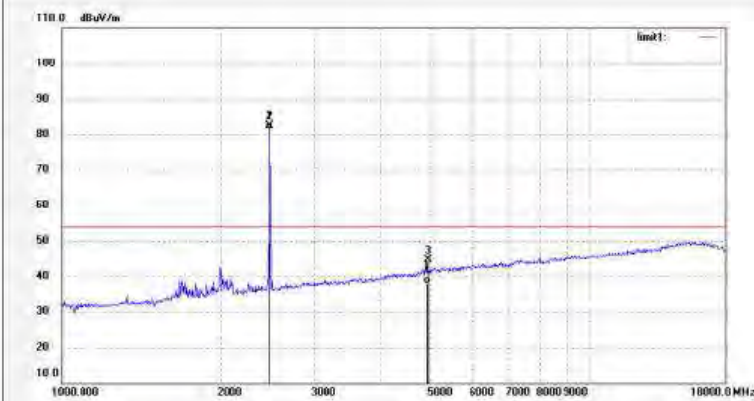
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	89.72	-7.37	82.35	/	/	peak			
2	2474.000	88.74	-7.37	81.37	/	/	AVG			
3	4948.023	44.05	0.46	44.51	74.00	-29.49	peak			
4	4948.023	37.54	0.46	38.00	54.00	-16.00	AVG			


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Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1116

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

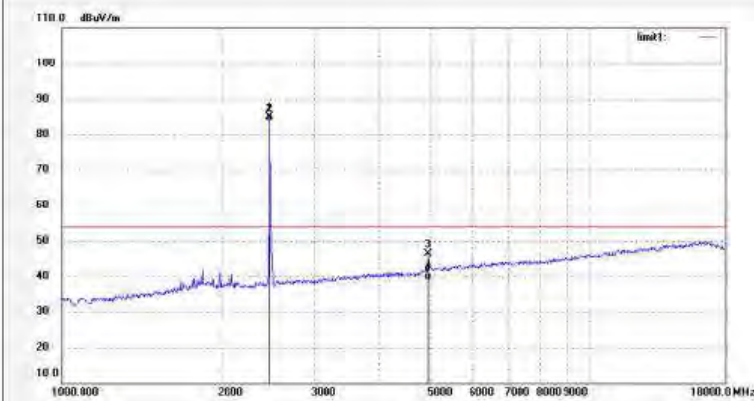
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	92.31	-7.37	84.94	/	/	peak			
2	2474.000	91.01	-7.37	83.64	/	/	AVG			
3	4948.035	45.81	0.46	46.27	74.00	-27.73	peak			
4	4948.035	38.34	0.46	38.80	54.00	-15.20	AVG			

5.1.3 Radiated spurious emissions outside band

RESULT:**Pass**

Test standard	:	FCC Part 15.209(a) FCC Part 15.249(d)
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	*9KHz and up to 10th harmonic of the highest frequency
Limits	:	FCC Part 15.209(a)
Kind of test site	:	3m Semi-Anechoic Chamber

Test Setup

Test channel	:	Low / Middle / High
Input voltage	:	3Vdc for Keyboard USB operated for Dongle
Operation mode	:	A.1, A.2
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101kPa

*Note: The EUT's highest frequency generated is 2474 MHz, hence the highest scan frequency is up to at least 25GHz.

Test Plots of Radiated spurious emissions outside band-KeyBoard

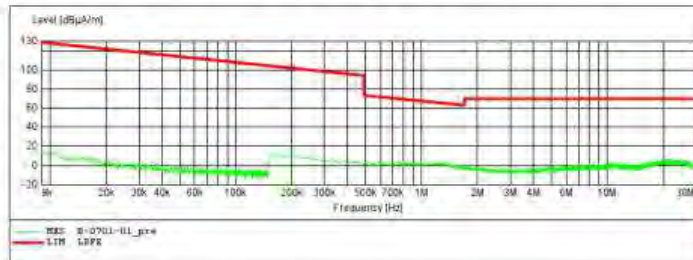
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless Keyboard w Integrated Touch Pad M/N: NS-ENES11
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2400MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DC 3V
Comment: X
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Sub STD	VTERM	1.70	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width					Time	Bandw.	
5.0 kHz	150.0 kHz	100.0 Hz				QuasiPeak	1.0 s	200 Hz	1512M
150.0 kHz	30.0 MHz	5.0 kHz				QuasiPeak	1.0 s	9 kHz	1512M



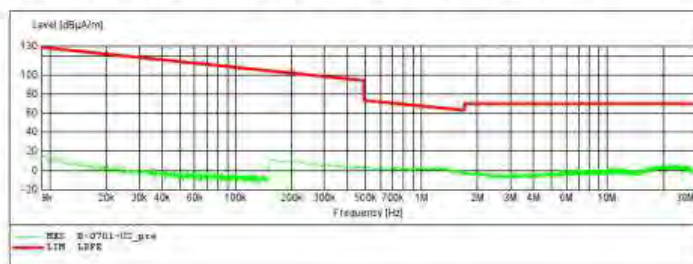
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless Keyboard w Integrated Touch Pad M/N: NS-ENES11
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2400MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DC 3V
Comment: Y
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



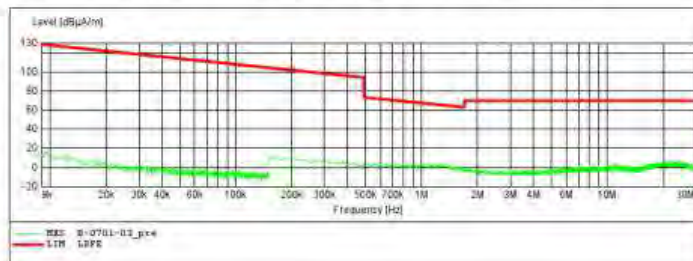
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-ENES11
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
 Operating Condition: TX 2400MHz
 Test Site: EM Chamber
 Operator: LAM
 Test Specification: DC 3V
 Comment: 1
 Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70		Detector	Meas.	IF	Transducer
Start	Stop	Step	Frequency	Width	Time	Bandw.		
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak 1.0 s	200 Hz	1512M			
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak 1.0 s	9 kHz	1512M			



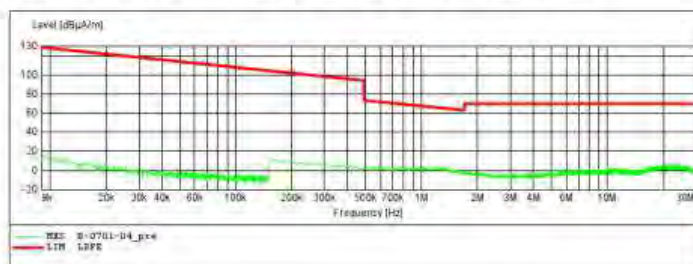
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-ENES11
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2440MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DC 3V
Comment: X
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



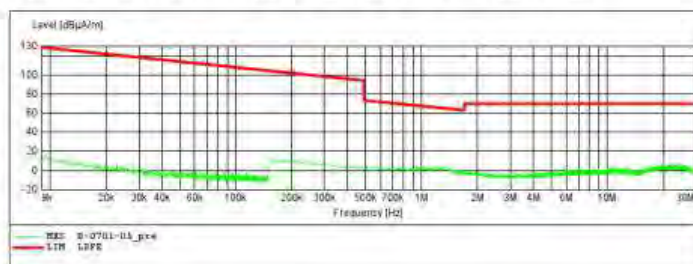
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless Keyboard w Integrated Touch Pad M/N: NS-ENES11
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2440MHz
Test Site: I# Chamber
Operator: LAM
Test Specification: DC 3V
Comment: Y
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



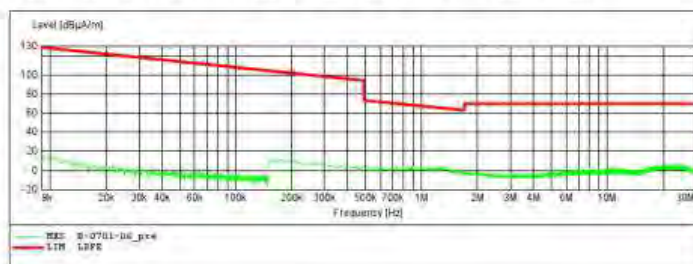
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-ENES11
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2440MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DC 3V
Comment: 1
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTFRM2 1.70			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



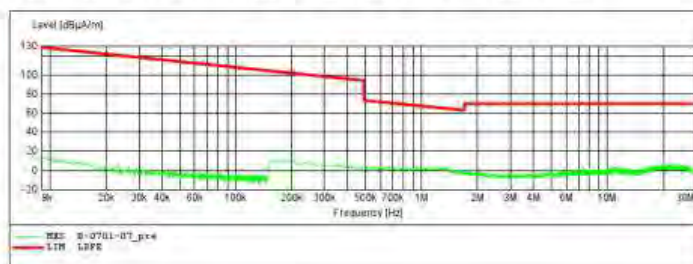
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-ENES11
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2474MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DC 3V
Comment: X
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



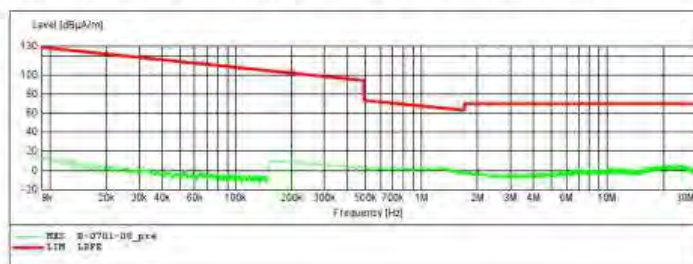
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-ENES11
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
 Operating Condition: TX 2474MHz
 Test Site: I# Chamber
 Operator: LAM
 Test Specification: DC 3V
 Comment: Y
 Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

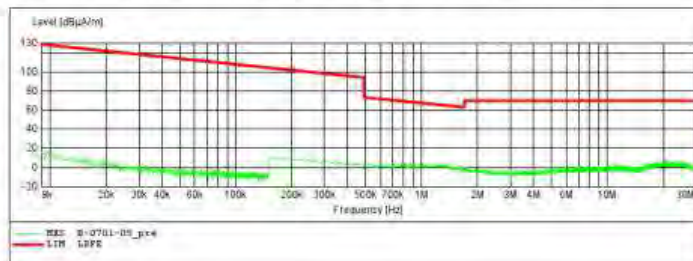


ACCURATE TECHNOLOGY CO., LTD.
FCC Class B 3M Radiated

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-ENES11
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
 Operating Condition: TX 2474MHz
 Test Site: I# Chamber
 Operator: LAM
 Test Specification: DC 3V
 Comment: 1
 Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M




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Site: 2# Chamber

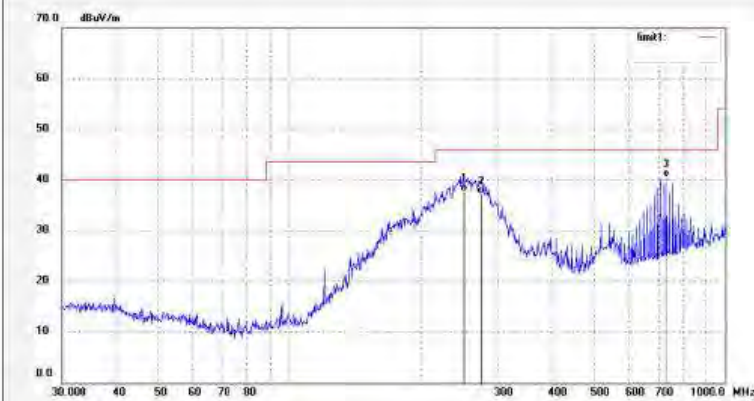
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1163
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.: C/Hum.(%) 23 C/48 %
 EUT: Wireless keyboard w integrated Touch Pad
 Mode: TX 2408MHz
 Model: NS-PNK6811
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
 Power Source: DC 3V
 Date: 15/06/27/
 Time:
 Engineer Signature
 Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	251.1803	48.47	-10.77	37.70	46.00	-8.30	QP			
2	276.1235	47.14	-9.95	37.19	46.00	-8.81	QP			
3	731.9202	41.88	-1.33	40.55	46.00	-5.45	QP			


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Site: 2# Chamber

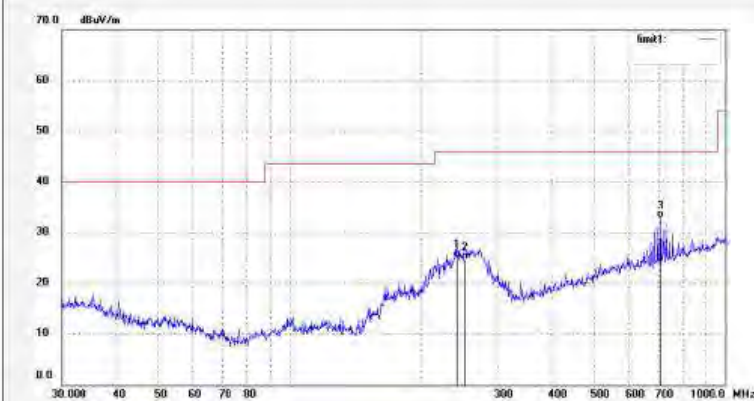
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1165
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.: C/Hum.(%) 23 C/48 %
 EUT: Wireless keyboard w integrated Touch Pad
 Mode: TX 2408MHz
 Model: NS-PNK6811
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
 Power Source: DC 3V
 Date: 15/06/27/
 Time:
 Engineer Signature
 Distance: 3m

Note



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	241.6762	36.02	-10.84	25.18	46.00	-20.82	QP			
2	252.0627	35.38	-10.77	24.61	46.00	-21.39	QP			
3	709.1823	34.44	-1.62	32.82	46.00	-13.18	QP			


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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1166

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2440MHz

Model: NS-PNK6811

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 3V

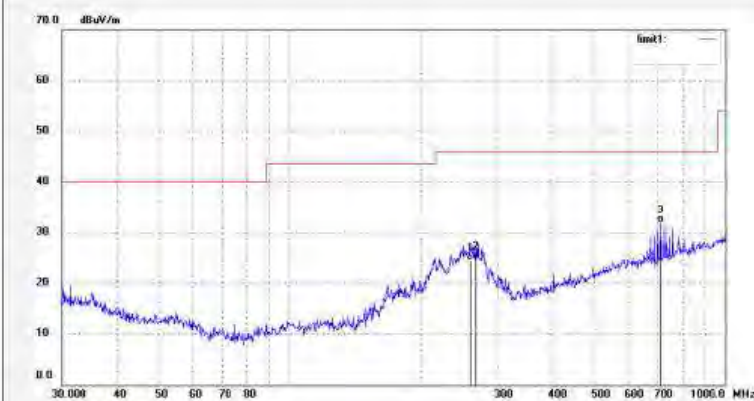
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	259.2337	35.23	-10.73	24.50	46.00	-21.50	QP			
2	268.4852	34.97	-10.25	24.72	46.00	-21.28	QP			
3	709.1823	33.53	-1.62	31.91	46.00	-14.09	QP			


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Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

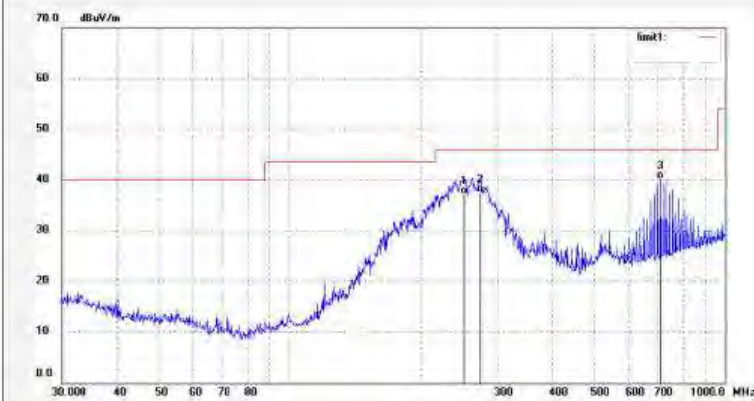
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1167
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.: C/Hum.(%) 23 C / 48 %
 EUT: Wireless keyboard w integrated Touch Pad
 Mode: TX 2440MHz
 Model: NS-PNK6811
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
 Power Source: DC 3V
 Date: 15/06/27/
 Time:
 Engineer Signature
 Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	251.1803	48.04	-10.77	37.27	46.00	-8.73	QP			
2	274.1938	47.53	-10.01	37.52	46.00	-8.48	QP			
3	709.1823	41.85	-1.62	40.23	46.00	-5.77	QP			

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F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

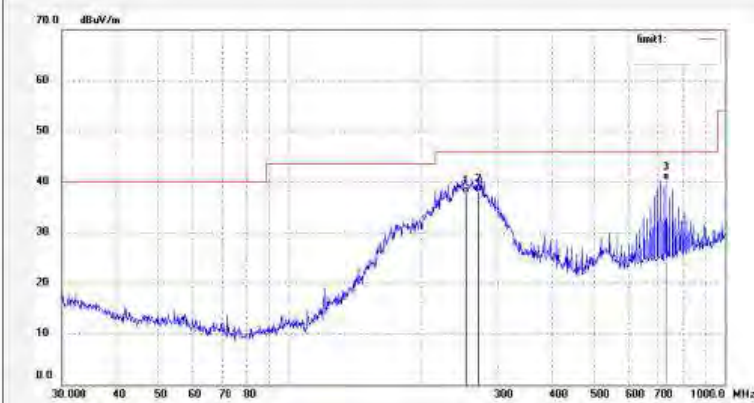
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1168
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2474MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	252.9482	48.55	-10.76	37.79	46.00	-8.21	QP			
2	271.3245	48.24	-10.13	38.11	46.00	-7.89	QP			
3	731.9202	41.63	-1.33	40.30	46.00	-5.70	QP			

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F1 Bldg. A, Changyuan New Material Port Keyuan Rd.
Science & Industry Park Nanshan Shenzhen, P.R. China

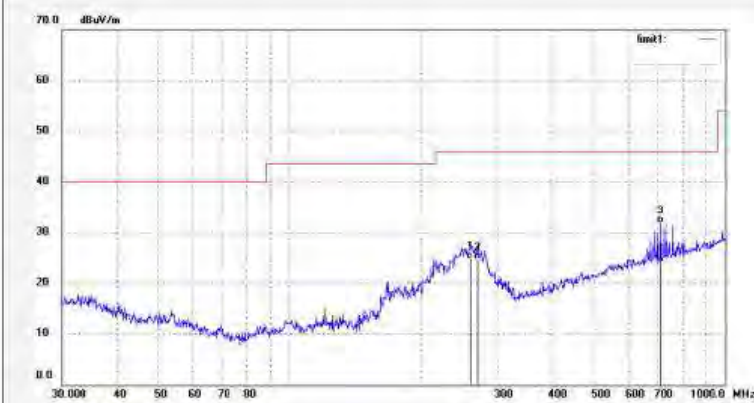
Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1169	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 15/06/27/
Temp.: C/Hum.(%) 23 C/48 %	Time:
EUT: Wireless keyboard w integrated Touch Pad	Engineer Signature
Mode: TX 2474MHz	Distance: 3m
Model: NS-PNK6811	
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD	

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	259.2337	35.52	-10.73	24.79	46.00	-21.21	QP			
2	270.3747	34.78	-10.17	24.61	46.00	-21.39	QP			
3	709.1823	33.45	-1.62	31.83	46.00	-14.17	QP			


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Site: 2# Chamber

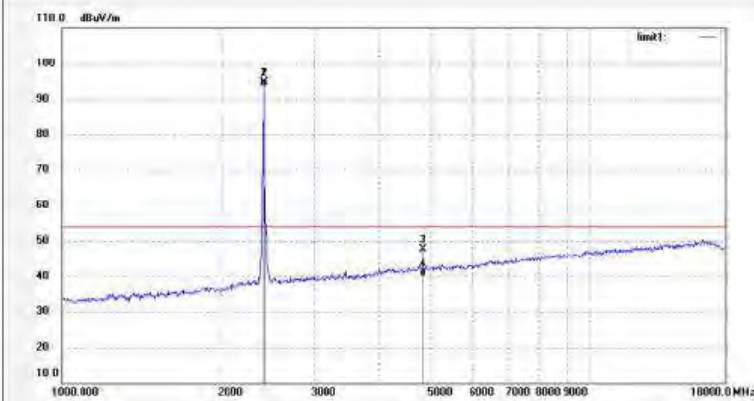
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1096
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2408MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	102.14	-7.44	94.70	/	/	peak			
2	2408.000	101.01	-7.44	93.57	/	/	AVG			
3	4816.026	47.84	-0.23	47.61	74.00	-26.39	peak			
4	4816.026	40.05	-0.23	39.82	54.00	-14.18	AVG			


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F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1097

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2408MHz

Model: NS-PNK6811

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 3V

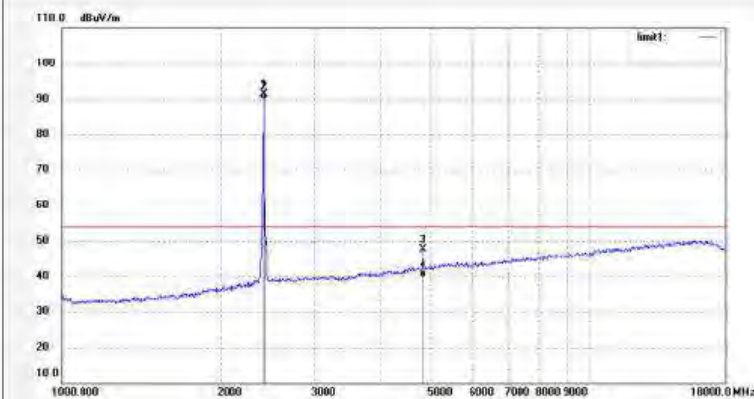
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	98.75	-7.44	91.31	/	/	peak			
2	2408.000	97.24	-7.44	89.80	/	/	AVG			
3	4816.034	47.81	-0.23	47.58	74.00	-26.42	peak			
4	4816.034	39.95	-0.23	39.72	54.00	-14.28	AVG			

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Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

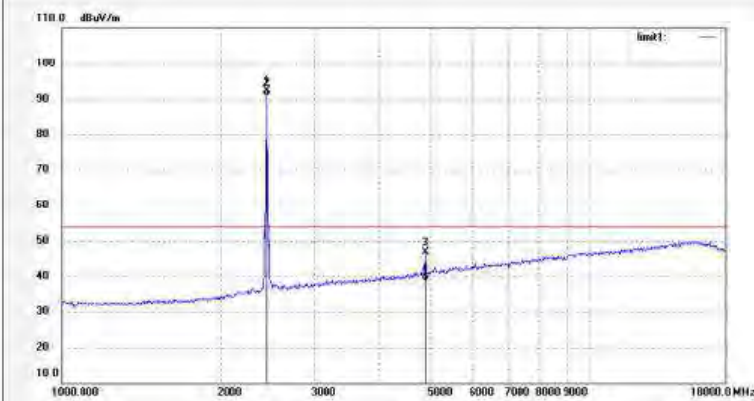
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1100
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C / 48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2440MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	99.62	-7.36	92.26	74.00	-27.19	peak			
2	2440.000	98.33	-7.36	90.97	74.00	-27.19	AVG			
3	4880.022	46.68	0.13	46.81	54.00	-15.41	peak			
4	4880.022	38.46	0.13	38.59	54.00	-15.41	AVG			

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F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1101

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2440MHz

Model: NS-PNK6811

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 3V

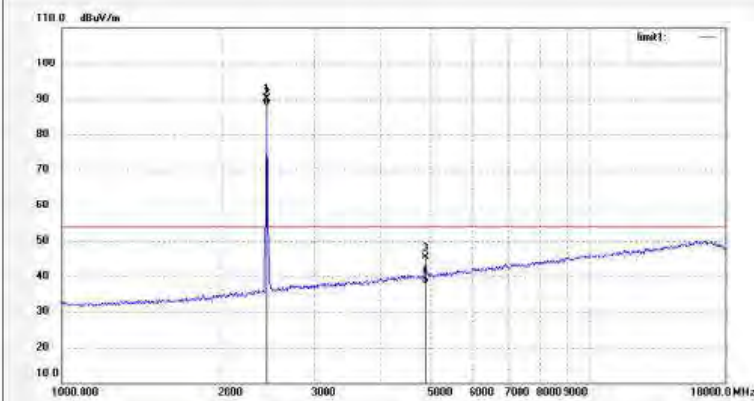
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	97.40	-7.36	90.04	74.00	-16.04	peak			
2	2440.000	95.55	-7.36	88.19	74.00	-14.19	AVG			
3	4880.028	45.28	0.13	45.41	74.00	-28.59	peak			
4	4880.028	37.86	0.13	37.99	74.00	-36.01	AVG			

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F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

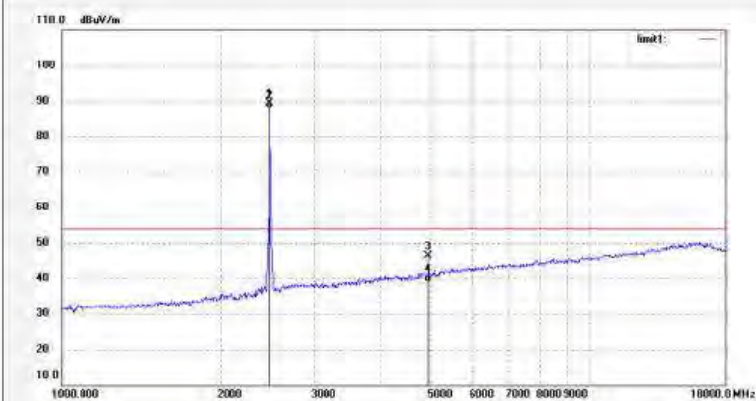
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1103
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C / 48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2474MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	98.81	-7.37	89.44	/	/	peak			
2	2474.000	95.36	-7.37	87.99	/	/	AVG			
3	4948.033	45.82	0.46	46.28	74.00	-27.72	peak			
4	4948.033	38.41	0.46	38.87	54.00	-15.13	AVG			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd.
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

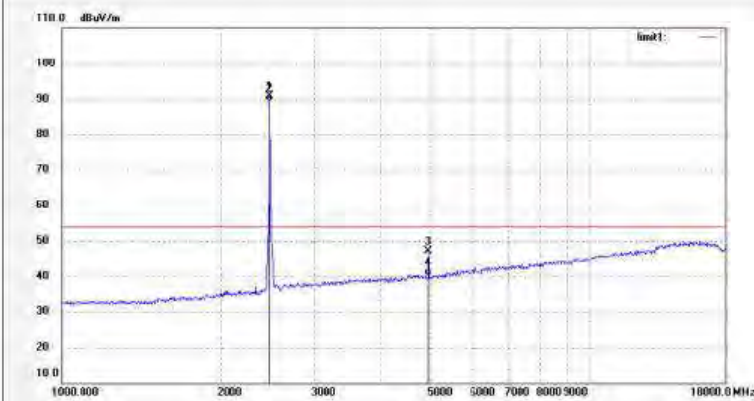
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1104
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.: C/Hum.(%) 23 C / 48 %
 EUT: Wireless keyboard w integrated Touch Pad
 Mode: TX 2474MHz
 Model: NS-PNK6811
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
 Power Source: DC 3V
 Date: 15/06/27/
 Time:
 Engineer Signature
 Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	98.13	-7.37	90.76	74.00	-16.76	peak			
2	2474.000	96.86	-7.37	89.49	74.00	-15.49	AVG			
3	4948.023	46.77	0.46	47.23	74.00	-26.77	peak			
4	4948.023	39.79	0.46	40.25	74.00	-33.75	AVG			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

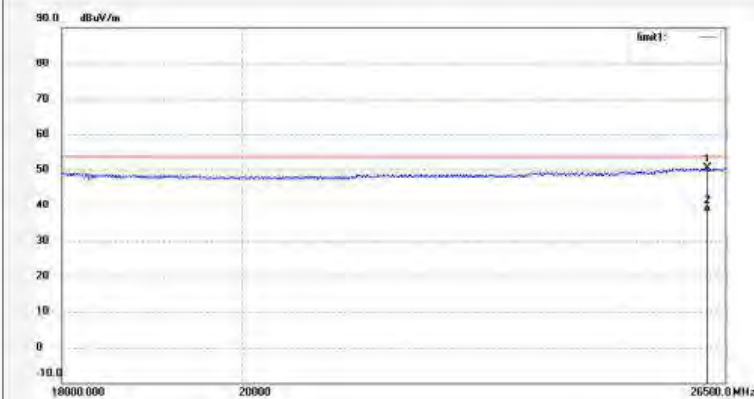
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1139
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2408MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26224.704	33.90	16.50	50.40	74.00	-23.60	peak			
2	26224.704	21.45	16.50	37.95	54.00	-16.05	AVG			


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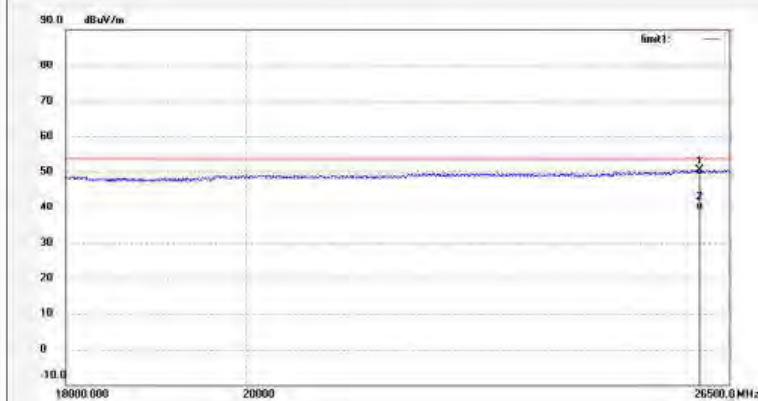
Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1140	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 15/06/27/
Temp.: C/Hum.(%) 23 C/48 %	Time:
EUT: Wireless keyboard w integrated Touch Pad	Engineer Signature:
Mode: TX 2408MHz	Distance: 3m
Model: NS-PNK6811	
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD	

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26042.764	33.94	16.50	50.44	74.00	-23.56	peak			
2	26042.764	22.76	16.50	39.26	54.00	-14.74	AVG			


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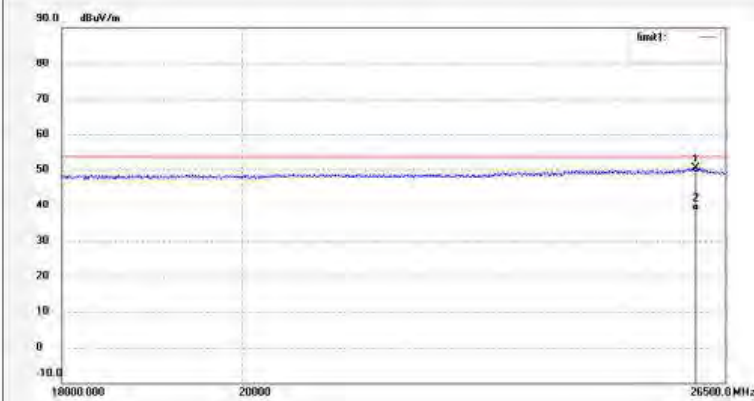
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1141
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.: C/Hum.(%) 23 °C / 48 %
 EUT: Wireless keyboard w integrated Touch Pad
 Mode: TX 2440MHz
 Model: NS-PNK6811
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
 Power Source: DC 3V
 Date: 15/06/27/
 Time:
 Engineer Signature:
 Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26042.764	33.99	16.50	50.49	74.00	-23.51	peak			
2	26042.764	21.87	16.50	38.37	54.00	-15.63	AVG			


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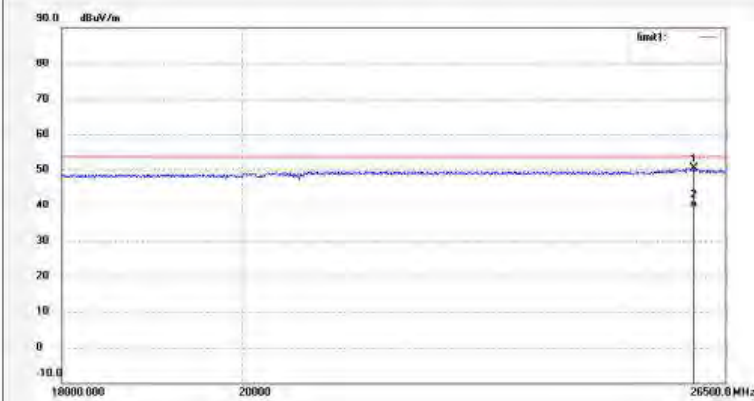
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1142
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2440MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26012.583	33.85	16.50	50.35	74.00	-23.65	peak			
2	26012.583	22.77	16.50	39.27	54.00	-14.73	AVG			


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Site: 2# Chamber

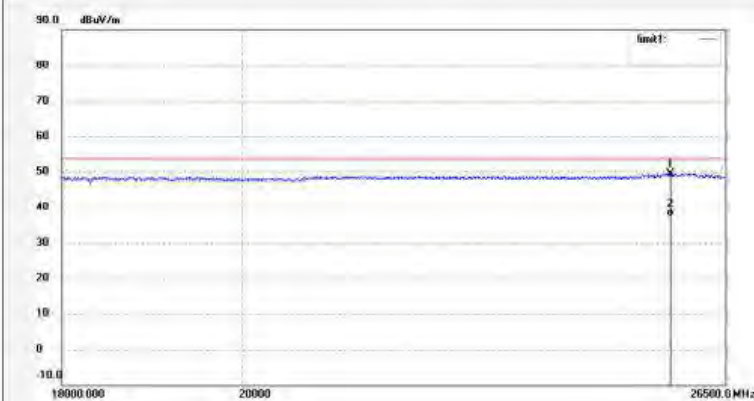
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1143
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C / 48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2474MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	25672.730	32.99	16.50	49.49	74.00	-24.51	peak			
2	25672.730	20.79	16.50	37.29	54.00	-16.71	AVG			


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Site: 2# Chamber

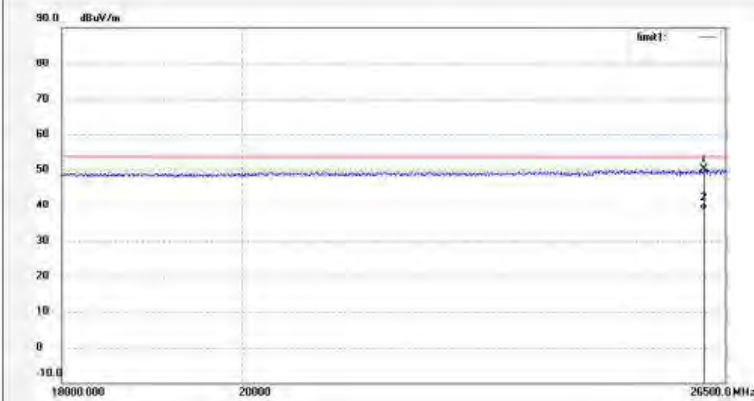
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1144
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Wireless keyboard w integrated Touch Pad
Mode: TX 2474MHz
Model: NS-PNK6811
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 3V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26163.916	33.65	16.50	50.15	74.00	-23.85	peak			
2	26163.916	22.05	16.50	38.55	54.00	-15.45	AVG			

Test Plots of Bandedge-Keyboard

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Science & Industry Park Nanshan Shenzhen P.R. China

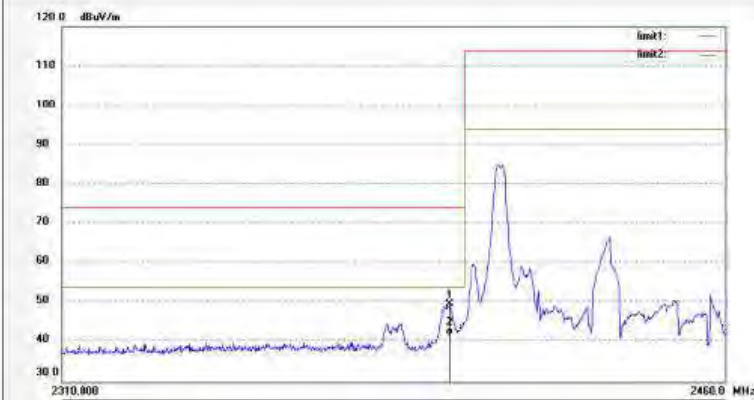
Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: tuv2015 #461	Polarization: Horizontal
Standard: FCC Part 15 (Band Edge)	Power Source: DC 3V
Test item: Radiation Test	Date: 15/07/01/
Temp.: C/Hum.(%) 23 C / 48 %	Time:
EUT: Wireless keyboard w integrated Touch Pad	Engineer Signature
Mode: TX 2408MHz	Distance: 3m
Model: NS-PNK0811	
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD	

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2396.700	57.20	-7.48	49.72	74.00	-24.28	peak			
2	2396.700	49.29	-7.48	41.81	54.00	-12.19	AVG			

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Site: 2# Chamber

Tel: +86-0755-26503290

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Job No.: tuv2015 #462

Standard: FCC Part 15 (Band Edge)

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2408MHz

Model: NS-PNK0811

Manufacturer: Dongguan Newmen Electronics Technology Co. LTD

Polarization: Vertical

Power Source: DC 3V

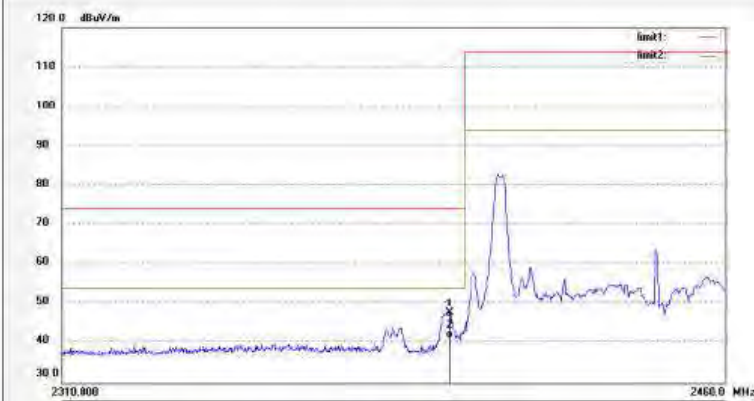
Date: 15/07/01/

Time:

Engineer Signature

Distance: 3m

Note



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2396.550	55.25	-7.48	47.77	74.00	-26.23	peak			
2	2396.550	48.76	-7.48	41.28	54.00	-12.72	AVG			

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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: tuv2015 #459

Standard: FCC Part 15 (Band Edge)

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C / 48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2474MHz

Model: NS-PNK0811

Manufacturer: Dongguan Newmen Electronics Technology Co. LTD

Polarization: Vertical

Power Source: DC 3V

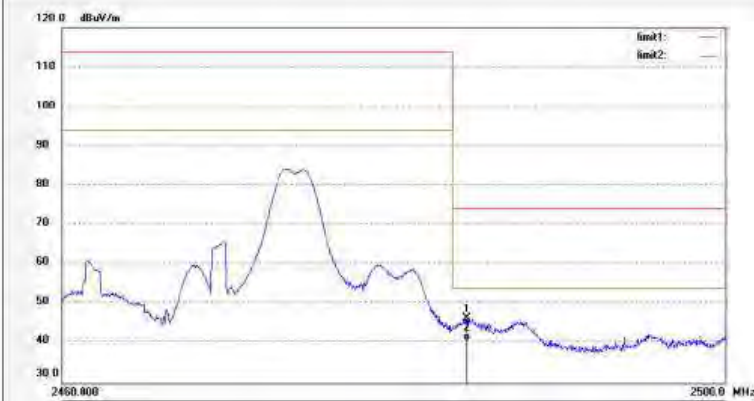
Date: 15/07/01/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2484.380	53.80	-7.38	46.42	74.00	-27.58	peak			
2	2484.380	47.96	-7.38	40.58	54.00	-13.42	AVG			

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F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: tuv2015 #480

Standard: FCC Part 15 (Band Edge)

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Wireless keyboard w integrated Touch Pad

Mode: TX 2474MHz

Model: NS-PNK0811

Manufacturer: Dongguan Newmen Electronics Technology Co. LTD

Polarization: Horizontal

Power Source: DC 3V

Date: 15/07/01/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2484.720	52.90	-7.38	45.52	74.00	-28.48	peak			
2	2484.720	45.53	-7.38	38.15	54.00	-15.85	AVG			

Test Plots of Radiated spurious emissions outside band-Dongle

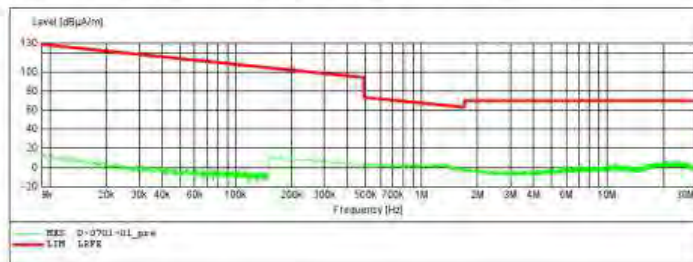
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-840
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2400MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: EMC 5V
Comment: X
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Sub	STD	VTERM	Meas.	IF	Transducer
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	151dB		
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	151dB		



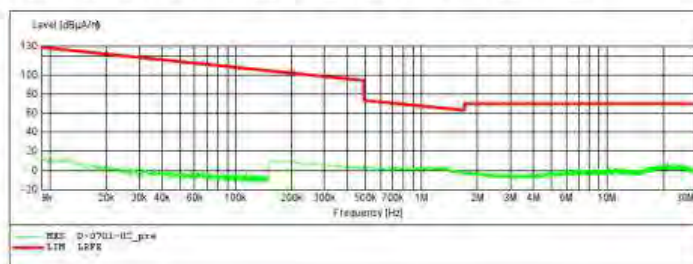
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
 Operating Condition: TX 2400MHz
 Test Site: EM Chamber
 Operator: LAM
 Test Specification: EN 54
 Comment: Y
 Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70		IF	Transducer
Start	Stop	Step	Detector	Meas.	Time	Bandw.
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



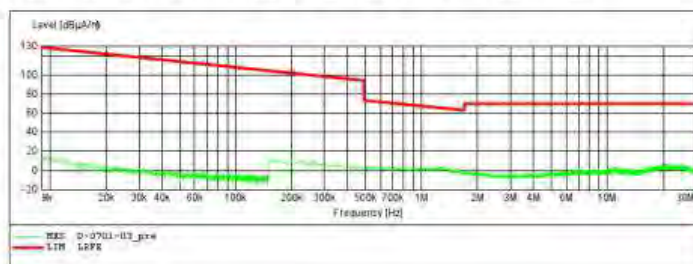
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2400MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DE 5V
Comment: 1
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



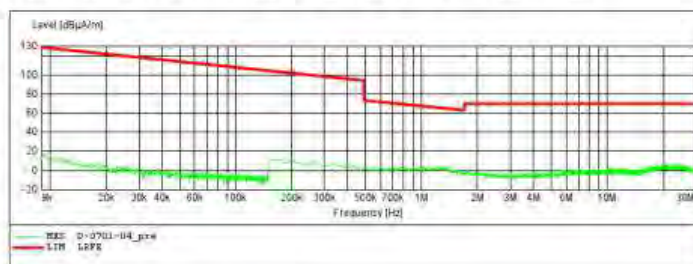
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 240MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: EN 54
Comment: X
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas.	IF	Transducer
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



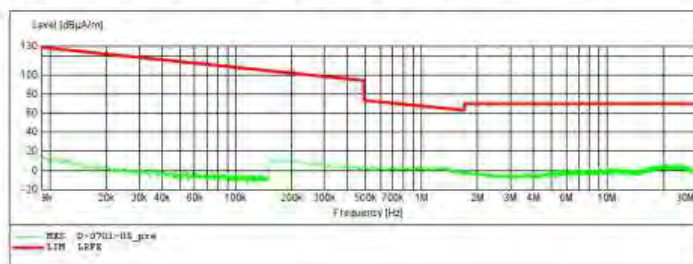
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
 Operating Condition: TX 240MHz
 Test Site: I# Chamber
 Operator: LAM
 Test Specification: EN 54
 Comment: Y
 Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			_SUB_STD_VTERM2 1.70		IF	Transducer
Start	Stop	Step	Detector	Meas.	Time	Bandw.
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



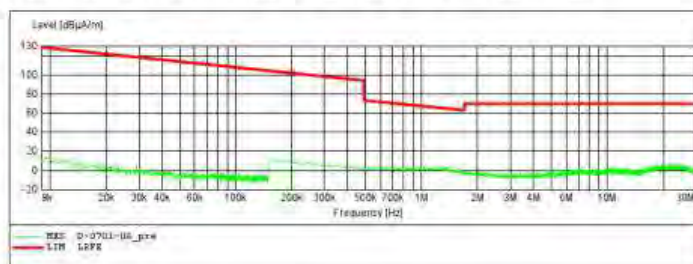
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 240MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DE 5V
Comment: 1
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



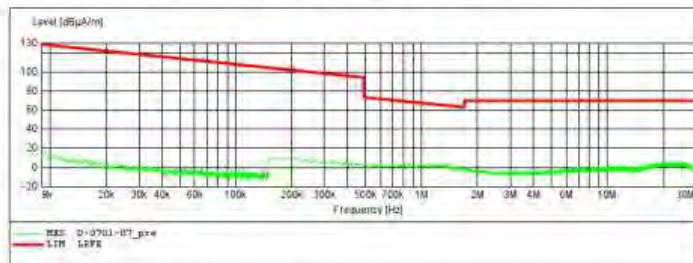
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2474MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: EN 54
Comment: X
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			_SUB_STD_VTERM2 1.70		IF	Transducer
Start	Stop	Step	Detector	Meas.	Time	Bandw.
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



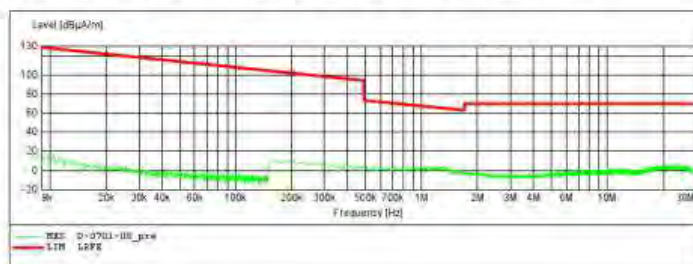
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-840
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
 Operating Condition: TX 2474MHz
 Test Site: EM Chamber
 Operator: LAM
 Test Specification: EN 54
 Comment: Y
 Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70		IF	Transducer
Start	Stop	Step	Detector	Meas.	Time	Bandw.
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



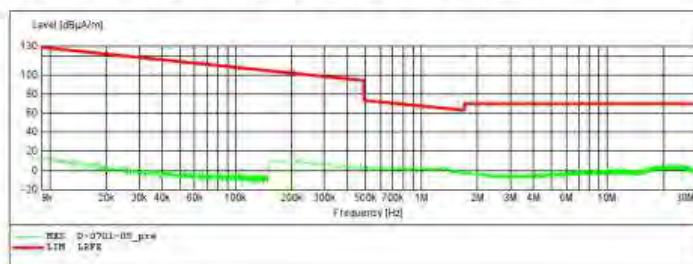
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-840
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD
Operating Condition: TX 2474MHz
Test Site: EM Chamber
Operator: LAM
Test Specification: DE 5V
Comment: 1
Start of Test: 2015-07-01 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB_STD_VTERM2 1.70		IF	Transducer
Start	Stop	Step	Detector	Meas.	Time	Bandw.
5.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1170

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Dongle

Mode: TX 2408MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

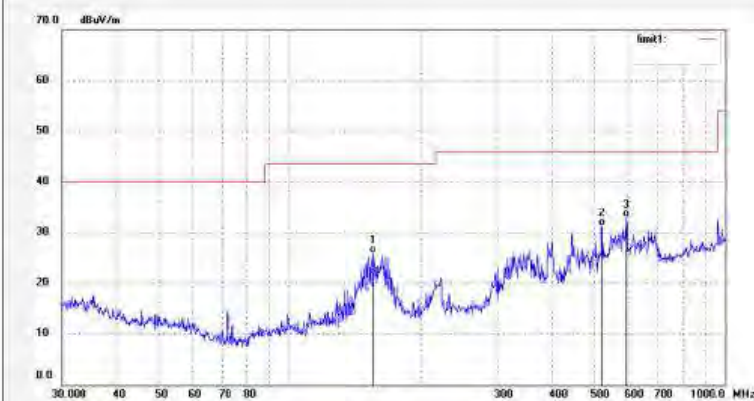
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	155.3642	41.01	-15.05	25.96	43.50	-17.54	QP			
2	520.8881	35.58	-4.31	31.27	46.00	-14.73	QP			
3	593.0497	36.06	-3.03	33.03	46.00	-12.97	QP			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1171

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Dongle

Mode: TX 2408MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

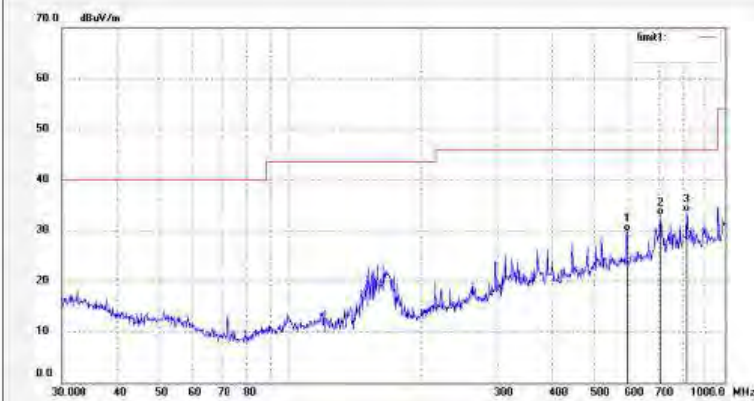
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	595.1327	32.81	-3.02	29.79	46.00	-16.21	QP			
2	709.1823	34.59	-1.62	32.97	46.00	-13.03	QP			
3	815.9678	33.41	0.27	33.68	46.00	-12.32	QP			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1172

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C / Hum.: % 23 C / 48 %

EUT: Dongle

Mode: TX 2440MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co., LTD

Polarization: Horizontal

Power Source: DC 5V

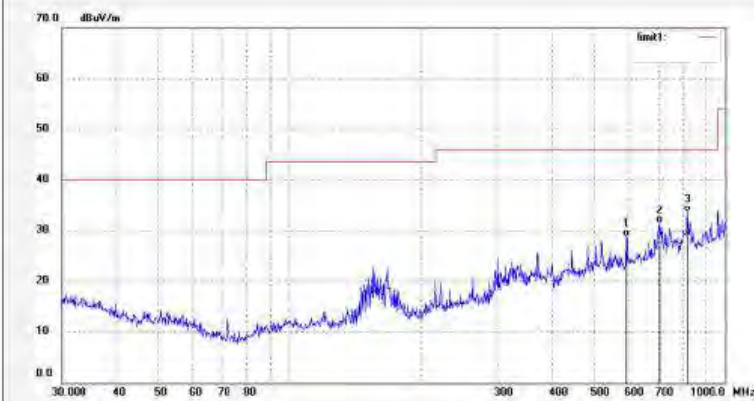
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	593.0497	31.79	-3.03	28.76	46.00	-17.24	QP			
2	706.6997	33.04	-1.62	31.42	46.00	-14.58	QP			
3	818.8341	33.42	0.30	33.72	46.00	-12.28	QP			


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Site: 2# Chamber

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Fax: +86-0755-26503396

Job No.: Jan2015-2 #1173

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Dongle

Mode: TX 2440MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

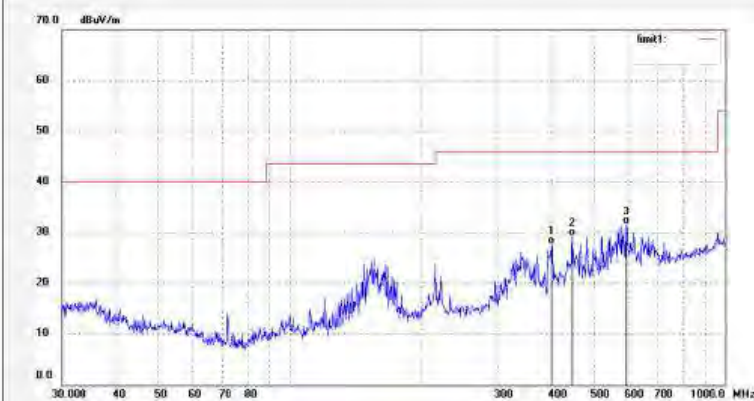
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	399.0300	34.58	-6.86	27.72	46.00	-18.28	QP			
2	446.4141	35.14	-5.84	29.30	46.00	-16.70	QP			
3	593.0497	34.54	-3.03	31.51	46.00	-14.49	QP			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1174

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

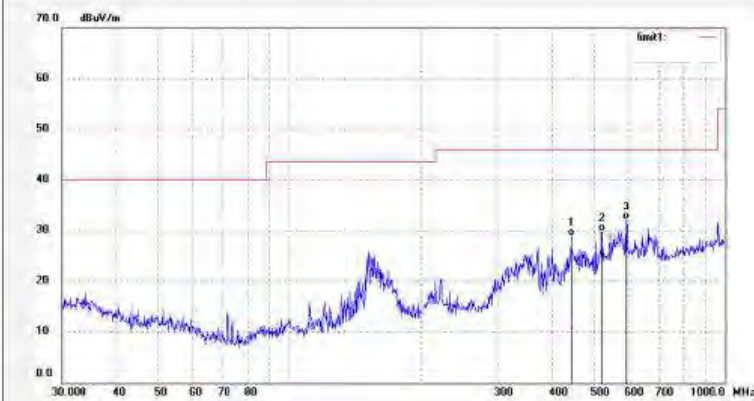
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	443.2943	34.85	-5.87	28.98	46.00	-17.02	QP			
2	520.8881	34.20	-4.31	29.89	46.00	-16.11	QP			
3	593.0497	35.16	-3.03	32.13	46.00	-13.87	QP			


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F1 Bldg A Changyuan New Material Port Keyuan Rd
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Site: 2# Chamber

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Fax: +86-0755-26503396

Job No.: Jan2015-2 #1175

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

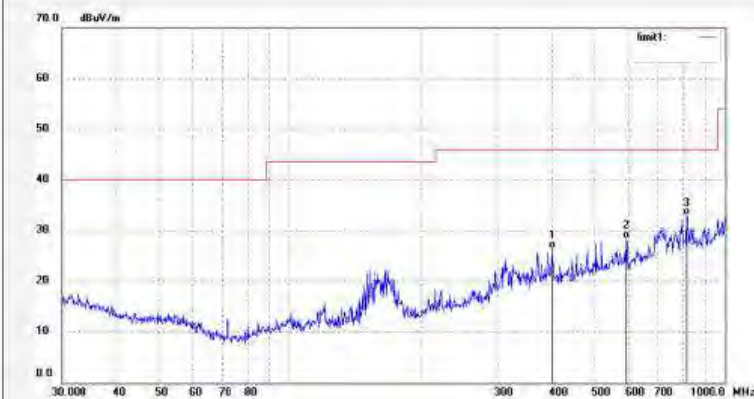
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	400.4318	33.38	-6.61	26.57	46.00	-19.43	QP			
2	593.0497	31.53	-3.03	28.50	46.00	-17.50	QP			
3	815.9678	32.64	0.27	32.91	46.00	-13.09	QP			


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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1109

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2408MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

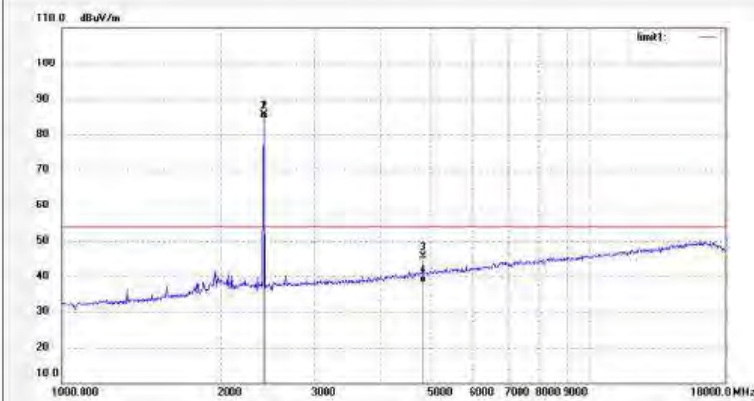
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	92.82	-7.44	85.38	/	/	peak			
2	2408.000	91.78	-7.44	84.34	/	/	AVG			
3	4816.031	45.88	-0.23	45.65	74.00	-28.35	peak			
4	4816.031	38.35	-0.23	38.12	54.00	-15.88	AVG			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

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Job No.: Jan2015-2 #1110

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2408MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

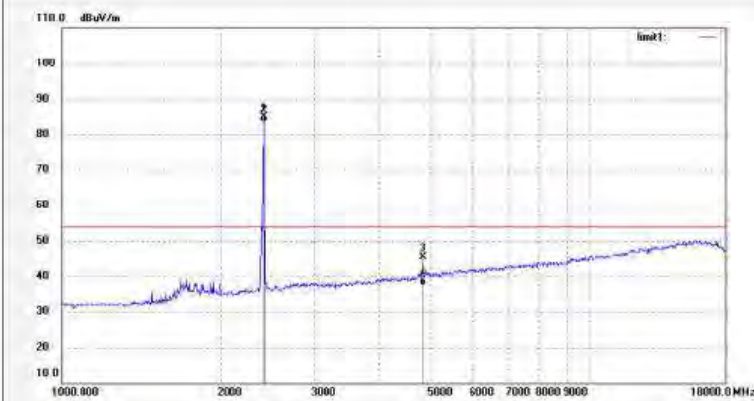
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2408.000	92.27	-7.44	84.83	/	/	peak			
2	2408.000	90.87	-7.44	83.43	/	/	AVG			
3	4816.021	45.71	-0.23	45.48	74.00	-28.52	peak			
4	4816.021	37.52	-0.23	37.29	54.00	-16.71	AVG			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1113

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2440MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

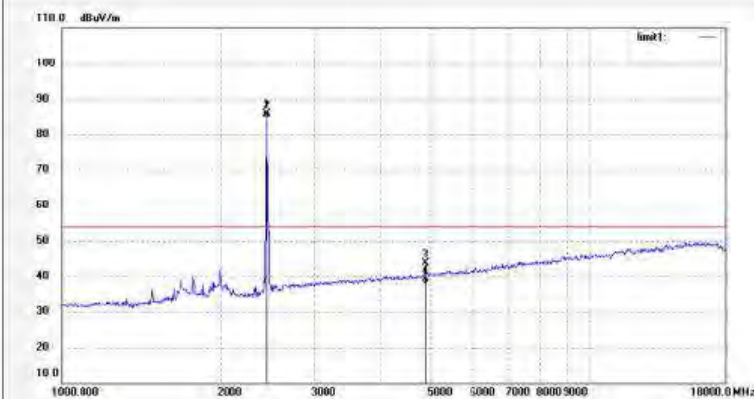
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	93.08	-7.36	85.72	/	/	peak			
2	2440.000	91.89	-7.36	84.53	/	/	AVG			
3	4880.034	43.59	0.13	43.72	74.00	-30.28	peak			
4	4880.034	37.85	0.13	37.98	54.00	-16.02	AVG			

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ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1114

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2440MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

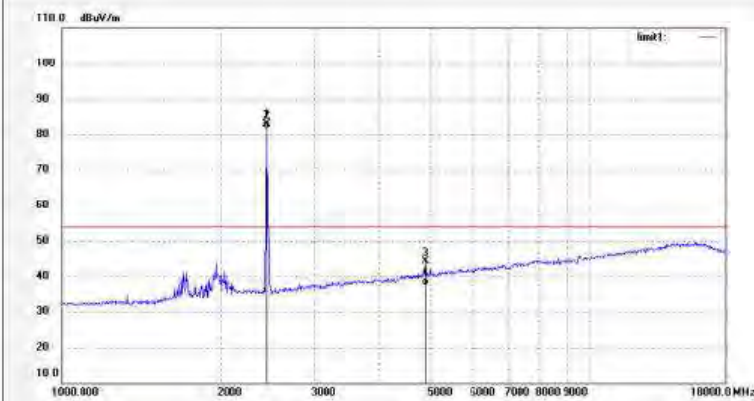
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note




ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1115

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

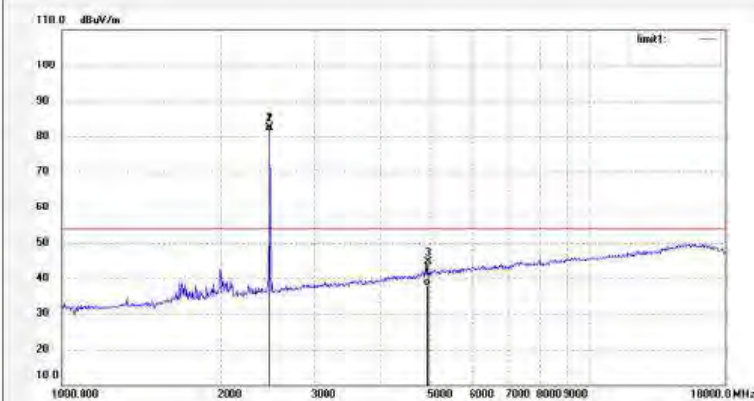
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	89.72	-7.37	82.35	/	/	peak			
2	2474.000	88.74	-7.37	81.37	/	/	AVG			
3	4948.023	44.05	0.46	44.51	74.00	-29.49	peak			
4	4948.023	37.54	0.46	38.00	54.00	-16.00	AVG			

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ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1116

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum.(%) 23 / 48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

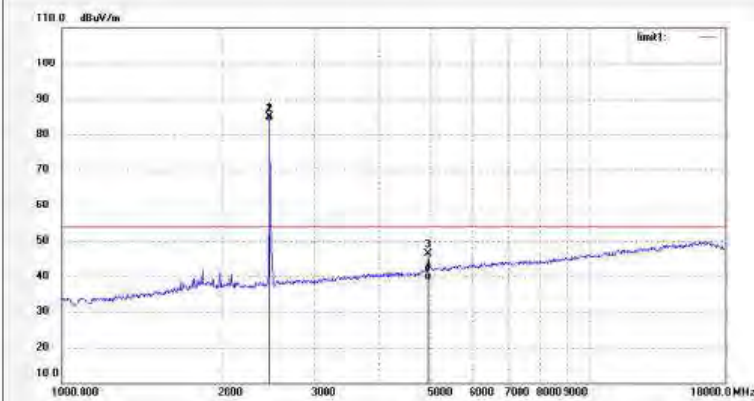
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2474.000	92.31	-7.37	84.94	/	/	peak			
2	2474.000	91.01	-7.37	83.64	/	/	AVG			
3	4948.035	45.81	0.46	46.27	74.00	-27.73	peak			
4	4948.035	38.34	0.46	38.80	54.00	-15.20	AVG			

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ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg A Changyuan New Material Port Keyuan Rd
Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

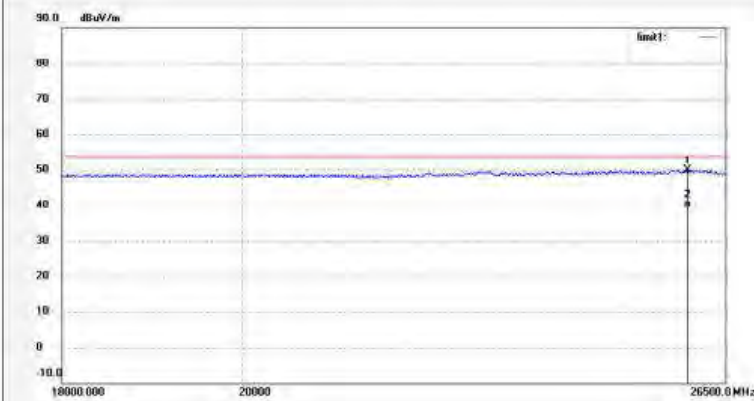
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1145
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Dongle
Mode: TX 2408MHz
Model: MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 5V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	25922.172	33.48	16.50	49.98	74.00	-24.02	peak			
2	25922.172	22.78	16.50	39.28	54.00	-14.72	AVG			


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F1 Bldg A, Changyuan New Material Port Keyuan Rd.
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Site: 2# Chamber

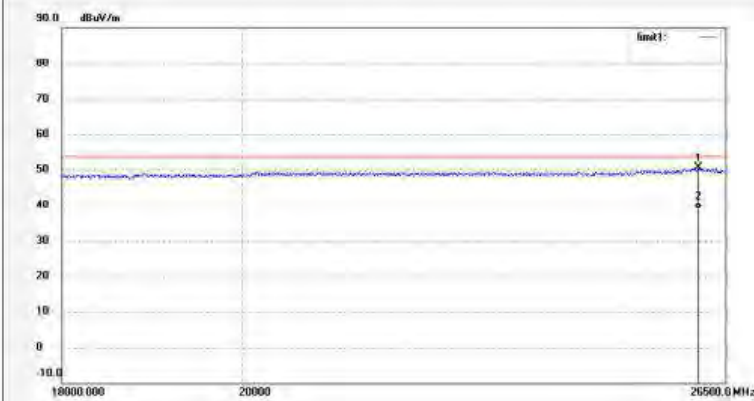
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1146
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.: C/Hum.(%) 23 C/48 %
 EUT: Dongle
 Mode: TX 2408MHz
 Model: MX-640
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
 Power Source: DC 5V
 Date: 15/06/27/
 Time:
 Engineer Signature:
 Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26083.086	34.19	16.50	50.69	54.00	-23.31	peak			
2	26083.086	22.46	16.50	38.96	54.00	-15.04	AVG			

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Test Report No.
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F1 Bldg A Changyuan New Material Port Keyuan Rd
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Site: 2# Chamber

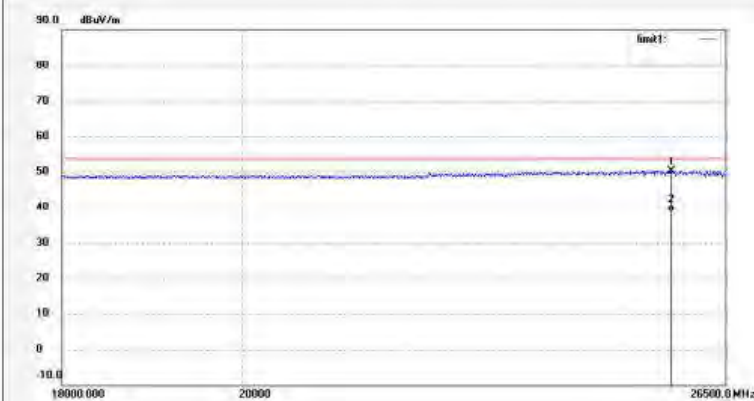
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1147
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Dongle
Mode: TX 2440MHz
Model: MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 5V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	25682.662	33.75	16.50	50.25	74.00	-23.75	peak			
2	25682.662	22.15	16.50	38.65	54.00	-15.35	AVG			


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Site: 2# Chamber

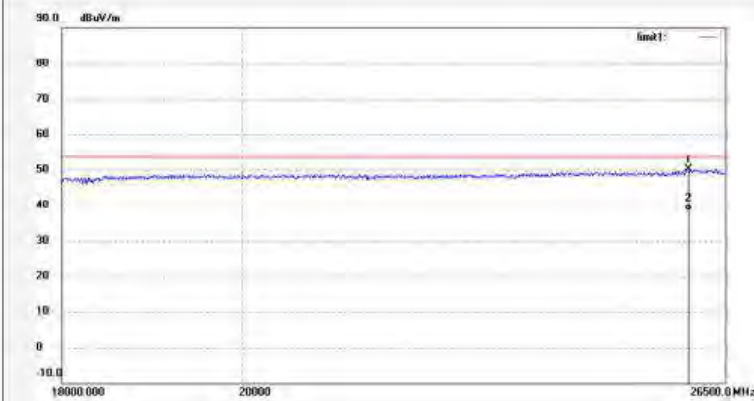
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1148
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Dongle
Mode: TX 2440MHz
Model: MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 5V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	25942.232	33.72	16.50	50.22	74.00	-23.78	peak			
2	25942.232	21.79	16.50	38.29	54.00	-15.71	AVG			


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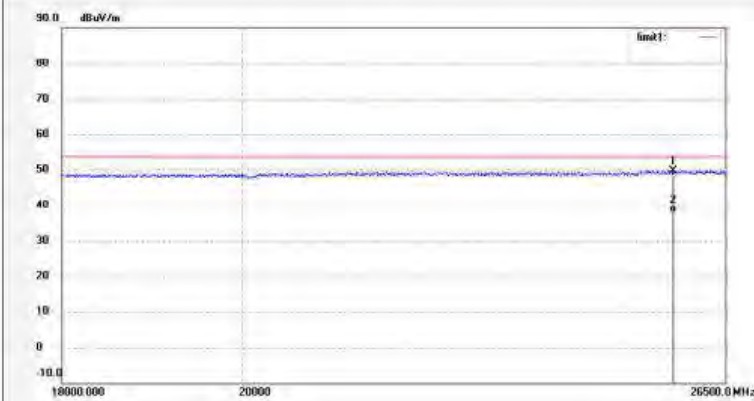
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1149
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Dongle
Mode: TX 2474MHz
Model: MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 5V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	25712.479	33.24	16.50	49.74	74.00	-24.26	peak			
2	25712.479	21.47	16.50	37.97	54.00	-16.03	AVG			


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Site: 2# Chamber

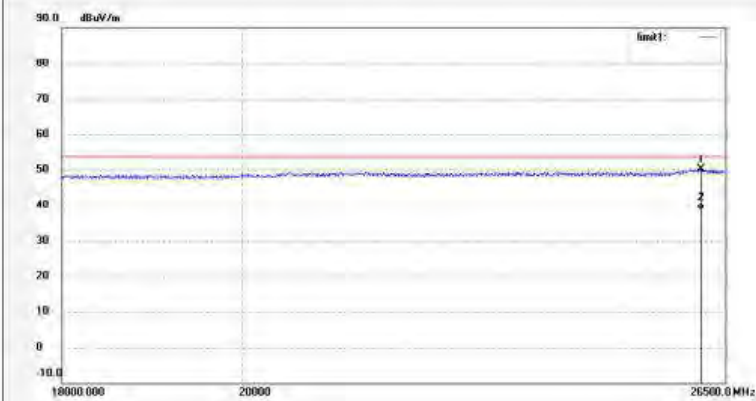
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1150
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C/48 %
EUT: Dongle
Mode: TX 2474MHz
Model: MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
Power Source: DC 5V
Date: 15/06/27/
Time:
Engineer Signature:
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26123.470	33.73	16.50	50.23	74.00	-23.77	peak			
2	26123.470	22.06	16.50	38.56	54.00	-15.44	AVG			

Test Plots of Bandedge-Dongle

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Site: 2# Chamber

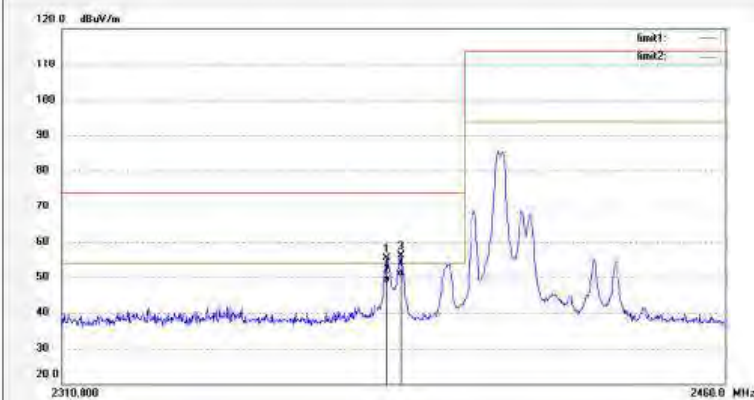
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1111
 Standard: FCC Part 15 (Band Edge)
 Test item: Radiation Test
 Temp.: C/Hum.: 23 C / 48 %
 EUT: Dongle
 Mode: TX 2408MHz
 Model: MX-640
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal
 Power Source: DC 5V
 Date: 15/06/27/
 Time:
 Engineer Signature
 Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2382.450	62.93	-7.58	55.35	74.00	-18.65	peak			
2	2382.450	55.86	-7.58	48.28	54.00	-5.72	AVG			
3	2385.600	63.70	-7.56	56.14	74.00	-17.86	peak			
4	2385.600	57.75	-7.56	50.19	54.00	-3.81	AVG			

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Science & Industry Park Nanshan Shenzhen P.R. China

Site: 2# Chamber

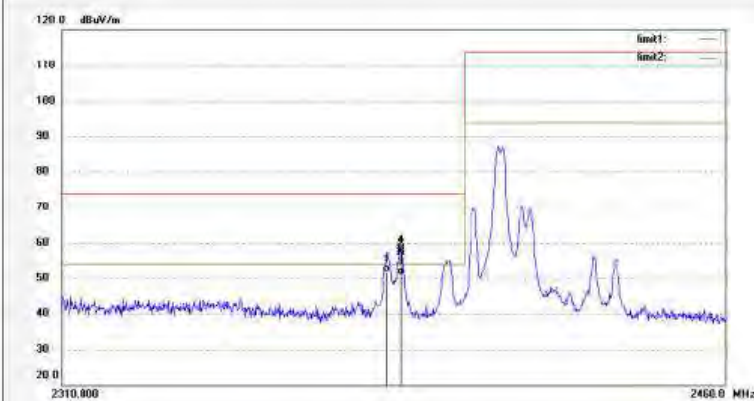
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1112
Standard: FCC Part 15 (Band Edge)
Test item: Radiation Test
Temp.: C/Hum.(%) 23 C / 48 %
EUT: Dongle
Mode: TX 2408MHz
Model: MX-640
Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical
Power Source: DC 5V
Date: 15/06/27/
Time:
Engineer Signature
Distance: 3m

Note



No	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2382.450	59.25	-7.58	51.67	54.00	-2.33	AVG			
2	2385.550	64.97	-7.56	57.41	74.00	-16.59	peak			
3	2385.550	58.56	-7.56	51.00	54.00	-3.00	AVG			
4	2385.600	65.78	-7.56	58.22	74.00	-15.78	peak			


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Job No.: Jan2015-2 #1117

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Vertical

Power Source: DC 5V

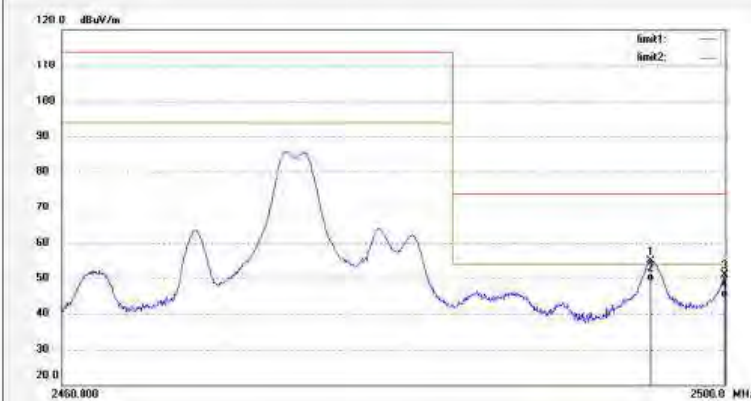
Date: 15/06/27/

Time:

Engineer Signature:

Distance: 3m

Note



No	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2495.480	62.38	-7.39	54.99	74.00	-19.01	peak			
2	2495.480	56.58	-7.39	49.19	54.00	-4.81	AVG			
3	2499.960	58.26	-7.40	50.86	74.00	-23.14	peak			
4	2499.960	51.96	-7.40	44.56	54.00	-9.44	AVG			

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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1118

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.: C/Hum.(%) 23 C/48 %

EUT: Dongle

Mode: TX 2474MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

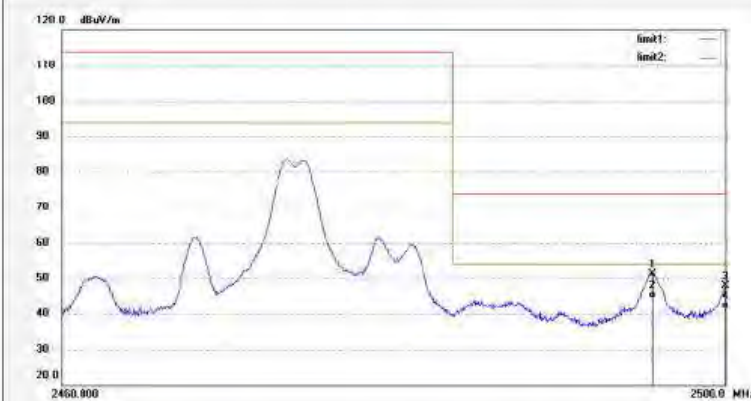
Date: 15/06/27/

Time:

Engineer Signature

Distance: 3m

Note



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2495.600	58.59	-7.39	51.20	74.00	-22.80	peak			
2	2495.600	51.79	-7.39	44.40	54.00	-9.60	AVG			
3	2500.000	55.21	-7.40	47.81	74.00	-26.19	peak			
4	2500.000	48.88	-7.40	41.48	54.00	-12.52	AVG			

5.1.4 Conducted emission

RESULT:**Pass**

Test standard	:	FCC Part 15.207
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207
Kind of test site	:	Shield room

Test setup

Input voltage	:	3Vdc for Keyboard USB operated for Dongle
Operation mode	:	A.2
Earthing	:	Not connected
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101kPa

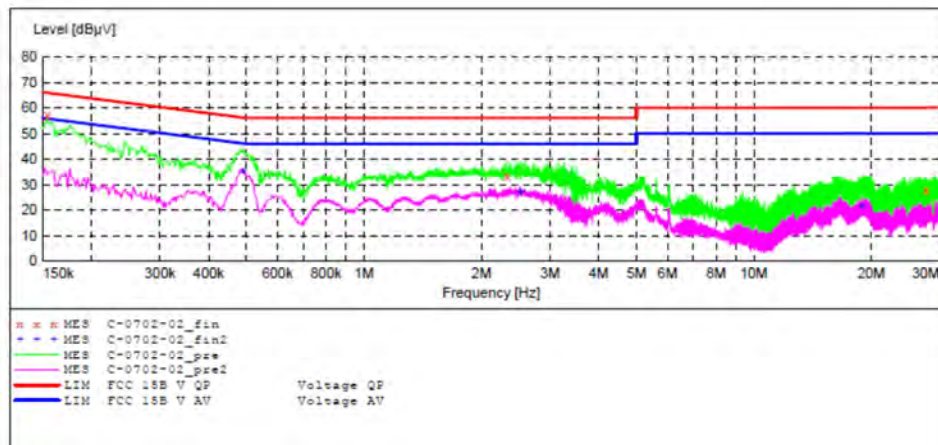
For details refer to test plots.

Test Plots of Conducted Emission
ACCURATE TECHNOLOGY CO.,LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Dongle M/N:MX-640
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD
 Operating Condition: Transmitting
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 2015-7-2 /

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: "C-0702-02_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.154000	57.00	10.4	66	8.8	QP	L1	GND
2.324000	33.30	11.7	56	22.7	QP	L1	GND
27.587000	27.60	12.0	60	32.4	QP	L1	GND

MEASUREMENT RESULT: "C-0702-02_fin2"

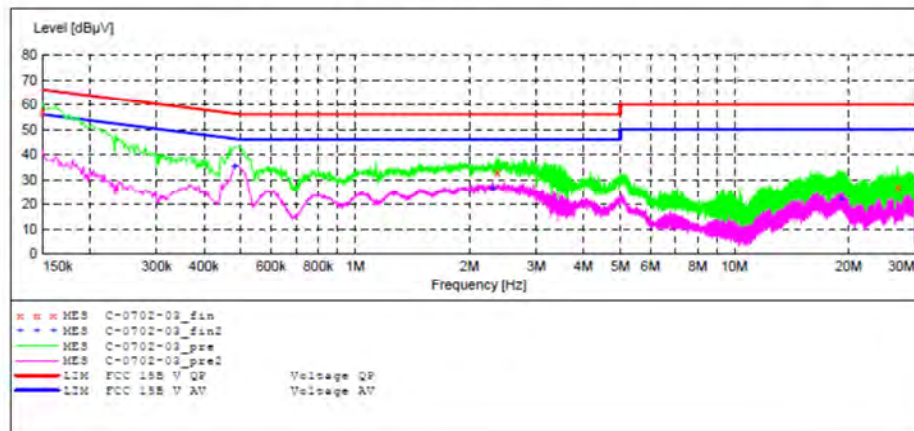
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.490000	35.50	11.5	46	10.7	AV	L1	GND
2.517500	27.50	11.7	46	18.5	AV	L1	GND
18.920000	21.80	11.9	50	28.2	AV	L1	GND

ACCURATE TECHNOLOGY CO.,LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Dongle M/N:MX-640
 Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD
 Operating Condition: Transmitting
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 2015-7-2 /

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 NSLR8126 2008
 Average


MEASUREMENT RESULT: "C-0702-03_fin"

2015-7-2

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	57.10	10.3	66	8.9	QP	N	GND
2.369000	32.90	11.7	56	23.1	QP	N	GND
26.966000	26.80	12.0	60	33.2	QP	N	GND

MEASUREMENT RESULT: "C-0702-03_fin2"

2015-7-2

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.482000	35.60	11.5	46	10.7	AV	N	GND
2.306000	26.80	11.7	46	19.2	AV	N	GND
19.109000	22.40	11.9	50	27.6	AV	N	GND

6. Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:**Pass**

Test standard : FCC KDB Publication 447498 D01 v05r02

The separation distance of the Keyboard should be 5mm. The measured maximum peak output power of the Keyboard is 94.7dBuV/m $\approx$ -0.53dBm, which is far below the SAR exclusion threshold level 10 mW (Appendix A, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and $\leq$ 50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v05r02.

The separation distance of the USB dongle should be 5mm. The measured maximum peak output power of the dongle is 85.72dBuV/m $\approx$ -9.51dBm, which is far below the SAR exclusion threshold level 10mW (Appendix A, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and $\leq$ 50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v05r02.

7. Photographs of the Test Set-Up

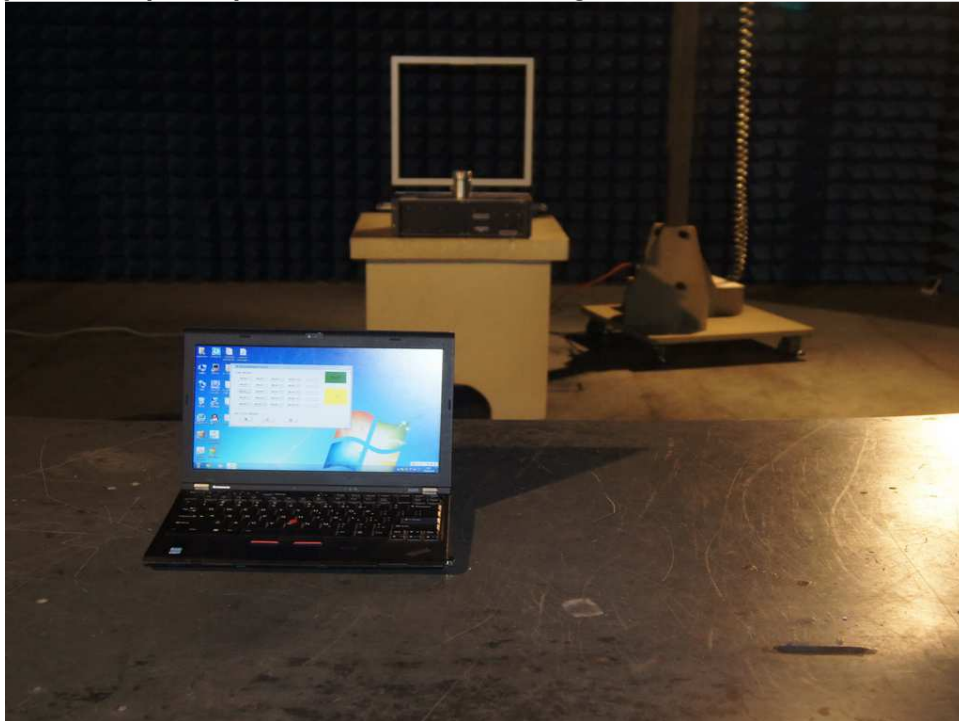
Photograph 1: Set-up for Conducted Emissions



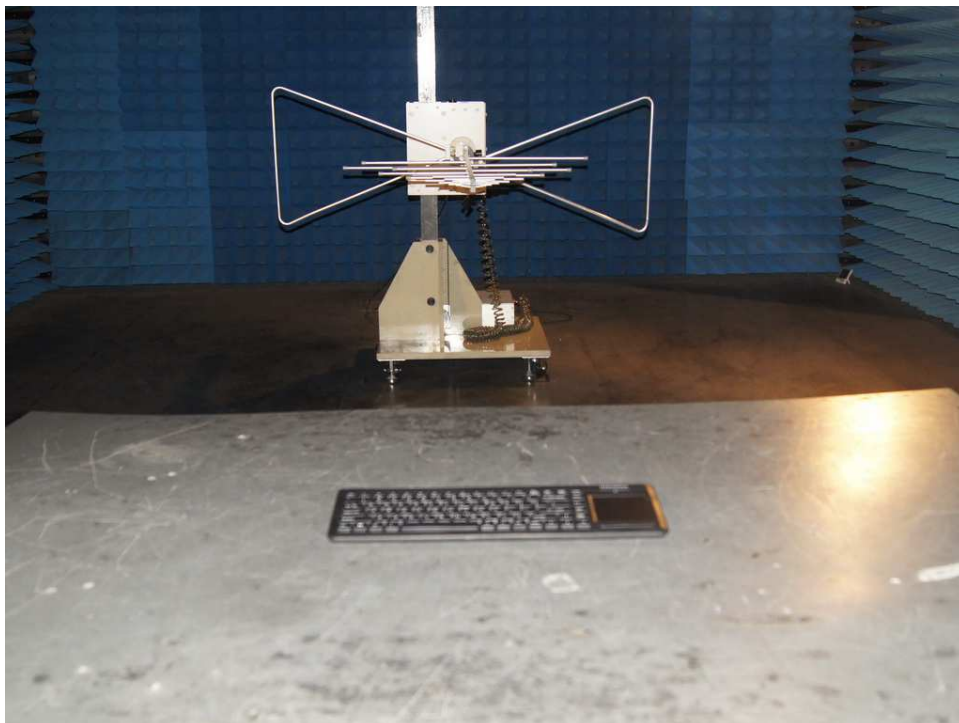
Photograph 2: Set-up for Spurious Emissions of Keyboard, below 30MHz

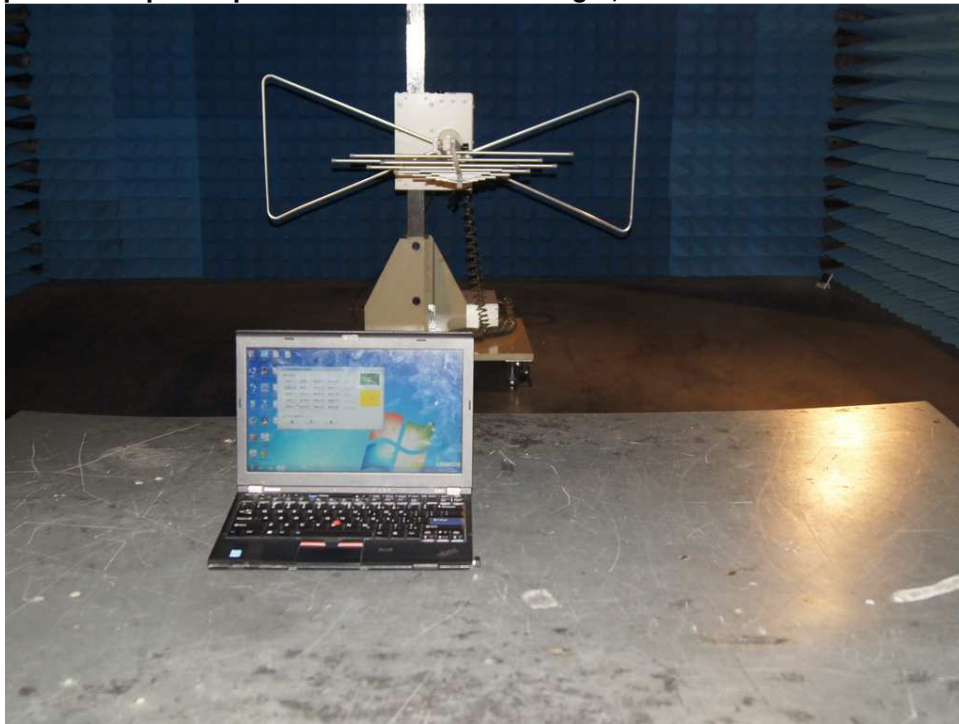
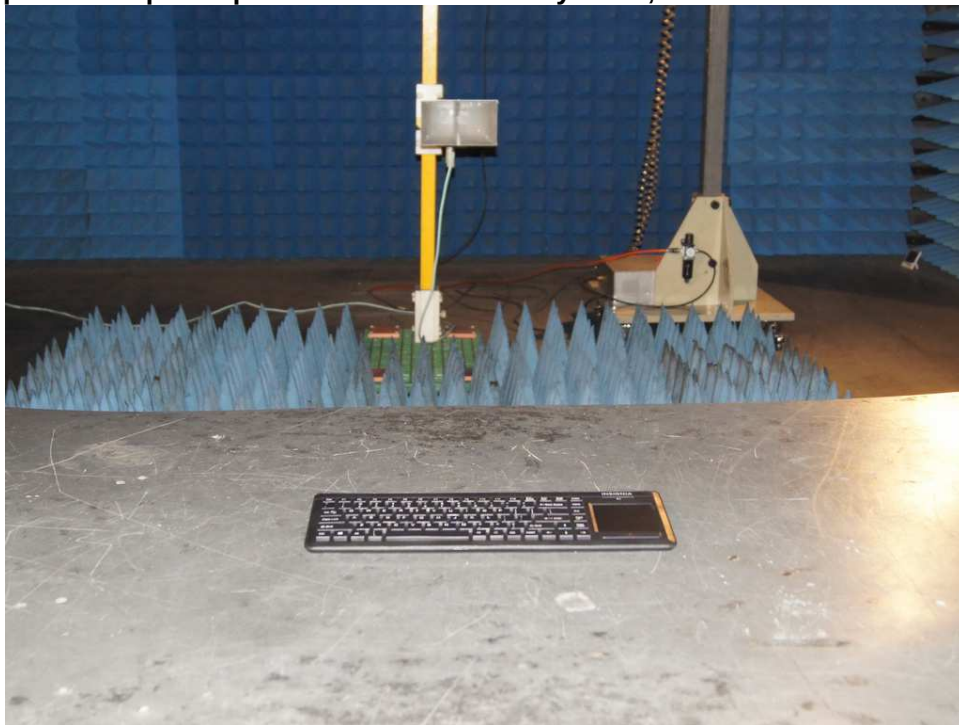


Photograph 3: Set-up for Spurious Emissions of dongle, below 30MHz



Photograph 4: Set-up for Spurious Emissions of Keyboard, 30MHz - 1GHz

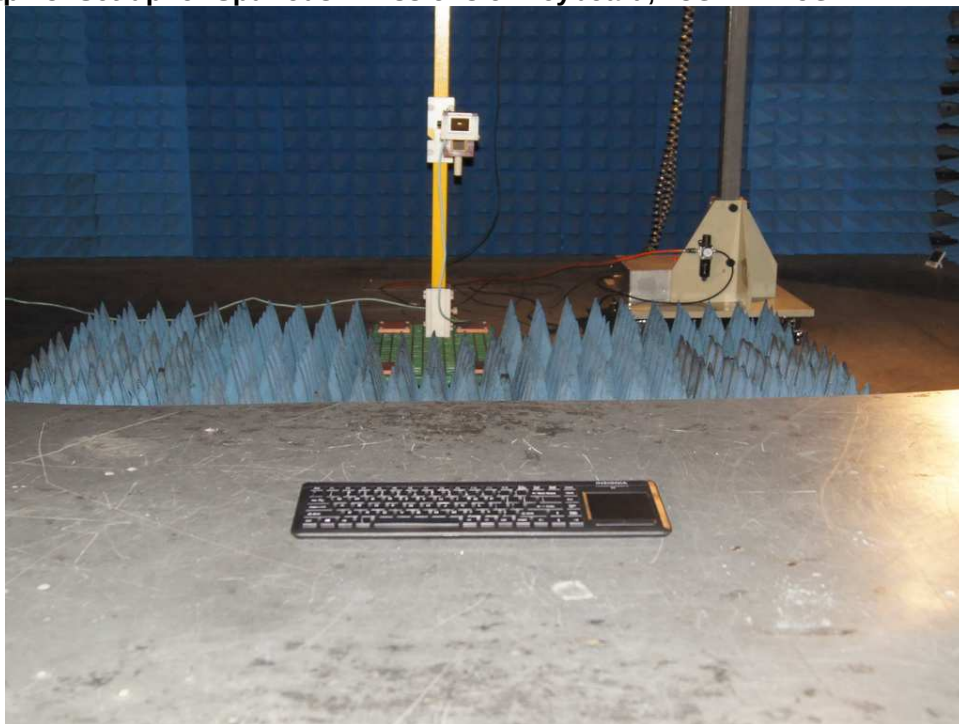


Photograph 5: Set-up for Spurious Emissions of dongle, 30MHz - 1GHz**Photograph 6: Set-up for Spurious Emissions of Keyboard, 1GHz – 18GHz**

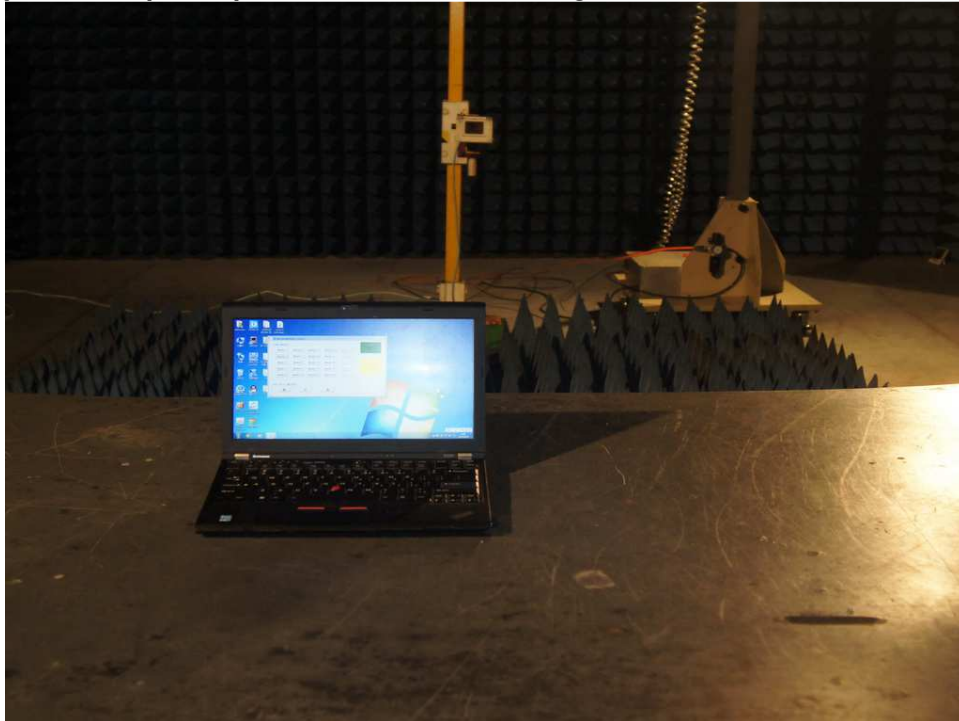
Photograph 7: Set-up for Spurious Emissions of dongle, 1GHz – 18GHz



Photograph 8: Set-up for Spurious Emissions of Keyboard, 18GHz – 25GHz



Photograph 9: Set-up for Spurious Emissions of dongle, 18GHz – 25GHz



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