




<b>Prüfbericht-Nr.:</b> Test Report No.:	<b>17050212 001</b>	<b>Auftrags-Nr.:</b> Order No.:	<b>164039123</b>	Seite 1 von 98 Page 1 of 98
<b>Kunden-Referenz-Nr.:</b> Client Reference No.:	<b>N/A</b>	<b>Auftragsdatum:</b> Order date:	<b>19.06.2015</b>	
<b>Auftraggeber:</b> Client:	<b>Dongguan Newmen Electronics Technology Co.,LTD</b> No.5, Xifa Road, Lin Village, Tangxia Town, Dongguan, Guangdong, China			
<b>Prüfgegenstand:</b> Test item:	<b>Wireless keyboard with Integrated Touch Pad</b>			
<b>Bezeichnung / Typ-Nr.:</b> Identification / Type No.:	<b>NS-PNK6811 (keyboard), MX-640 (Dongle)</b>			
<b>Auftrags-Inhalt:</b> Order content:	<b>FCC Certification</b>			
<b>Prüfgrundlage:</b> 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			
<b>Wareneingangsdatum:</b> Date of receipt:	<b>19.06.2015</b>			
<b>Prüfmuster-Nr.:</b> Test sample No.:	<b>A000214899-001~003</b>			
<b>Prüfzeitraum:</b> Testing period:	<b>19.06.2015 - 3.07.2015</b>			
<b>Ort der Prüfung:</b> Place of testing:	<b>Accurate Technology Co., Ltd.</b>			
<b>Prüflaboratorium:</b> Testing laboratory:	<b>TÜV Rheinland (Shenzhen) Co., Ltd.</b>			
<b>Prüfergebnis*:</b> Test result*:	<b>Pass</b>			
<b>geprüft von / tested by:</b>		<b>kontrolliert von / reviewed by:</b>		
<div style="display: flex; justify-content: space-between;"> <div> <b>16.07.2015</b> Datum Date </div> <div> <b>Lin Lin / Project Manager</b> Name / Stellung Name / Position </div> <div>  Unterschrift Signature </div> </div>		<div style="display: flex; justify-content: space-between;"> <div> <b>16.07.2015</b> Datum Date </div> <div> <b>Winnie Hou / Technical Certifier</b> Name / Stellung Name / Position </div> <div>  Unterschrift Signature </div> </div>		
<b>Sonstiges / Other:</b> FCC ID: V4P-NS-PNK6811 (keyboard) FCC ID: V4P-MX-640 (dongle)				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> Condition of the test item at delivery:		<b>Prüfmuster vollständig und unbeschädigt</b> 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				
<b>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.</b> <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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*Test Report No.*

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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
<b>Spurious emission and Radiated emission</b>				
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
<b>Radio Test Suite</b>				
Receiver	Rohde & Schwarz	FSV40	101495	2016-01-10
<b>Conducted Emission</b>				
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)	$< \pm 3.08 \text{ dB}$
Radiated emission (30MHz-1GHz)	$< \pm 4.42 \text{ dB}$
Radiated emission (above 1GHz)	$< \pm 4.06 \text{ dB}$
Conducted Emission	$< \pm 2.23 \text{ dB}$

## 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

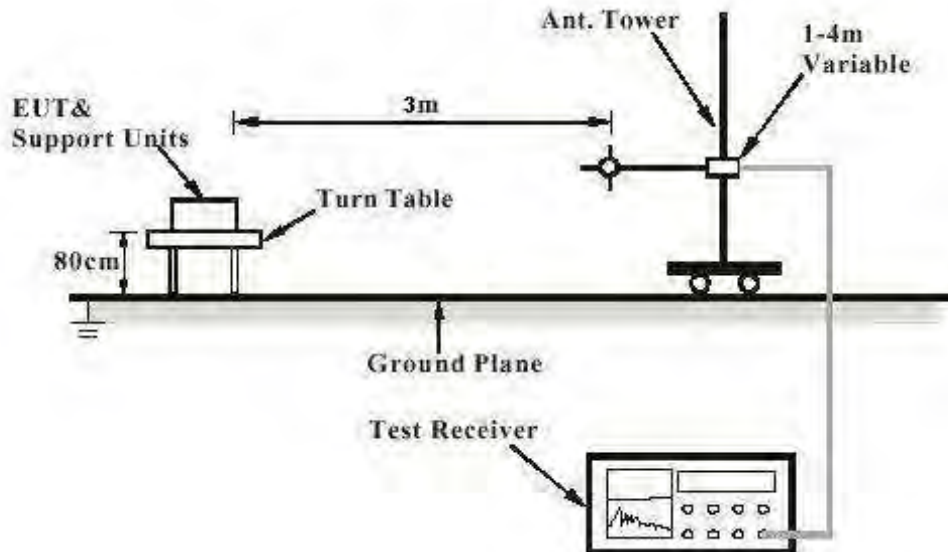
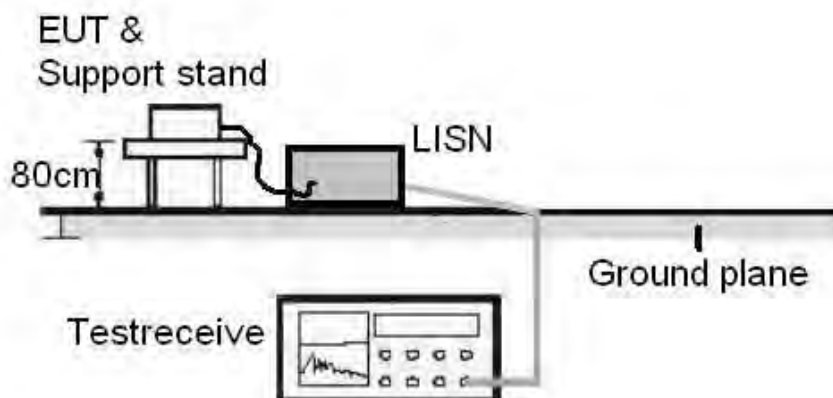
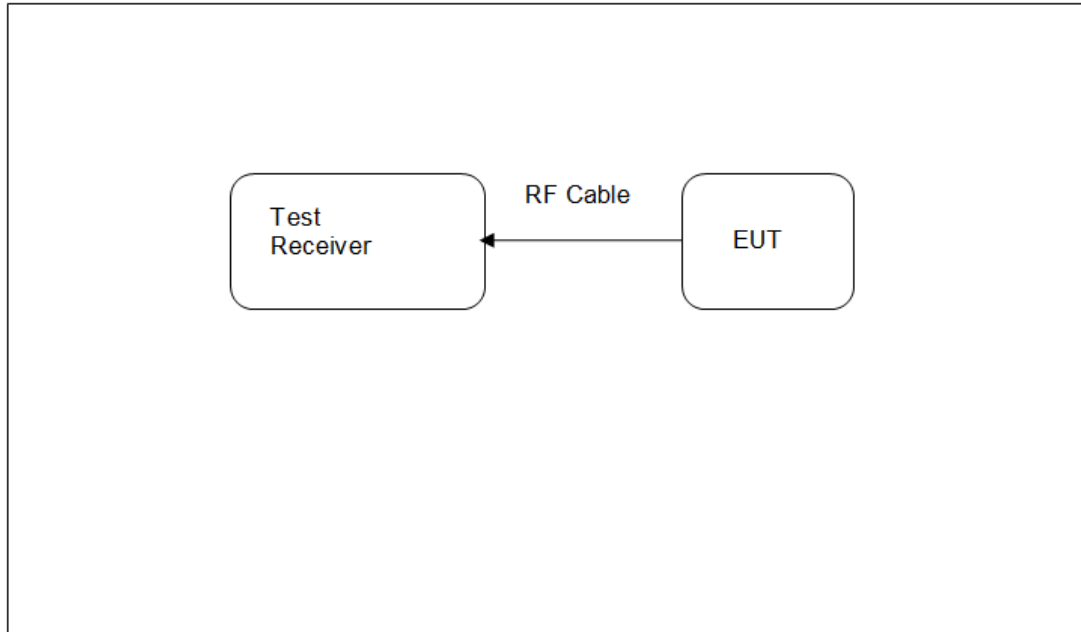


Diagram of Measurement Equipment Configuration for Conduction Measurement



**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**

**ACCURATE TECHNOLOGY CO., LTD.**

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

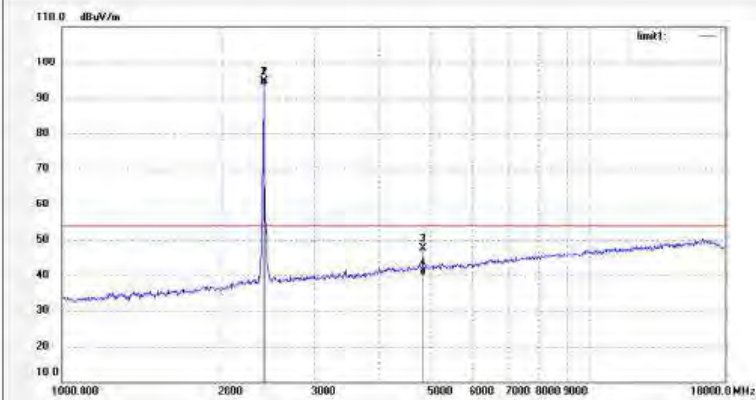
Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #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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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

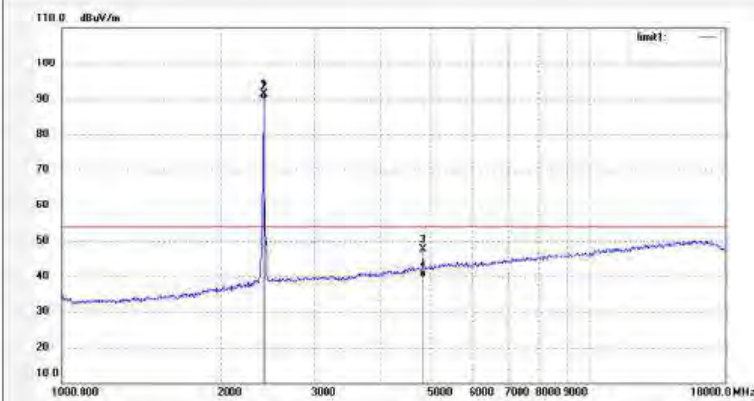
Date: 15/06/27/

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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Site: 2# Chamber

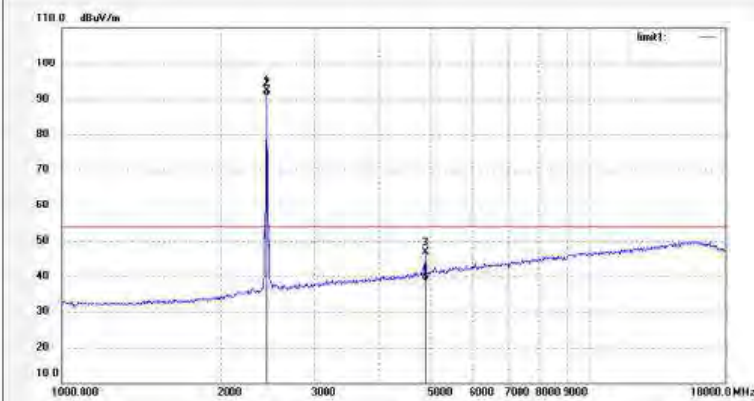
Tel: +86-0755-26503290

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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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

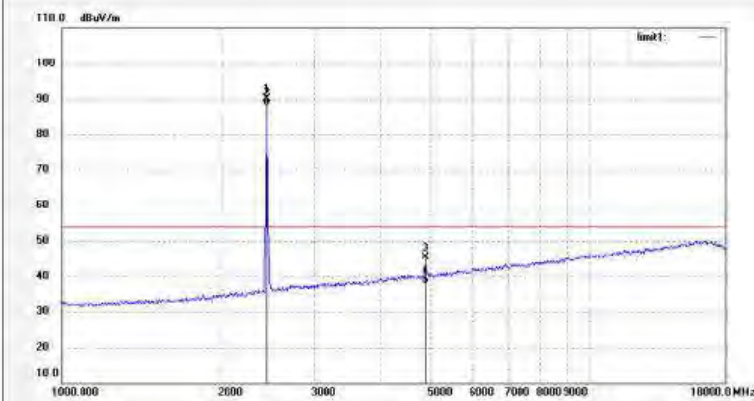
Date: 15/06/27/

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

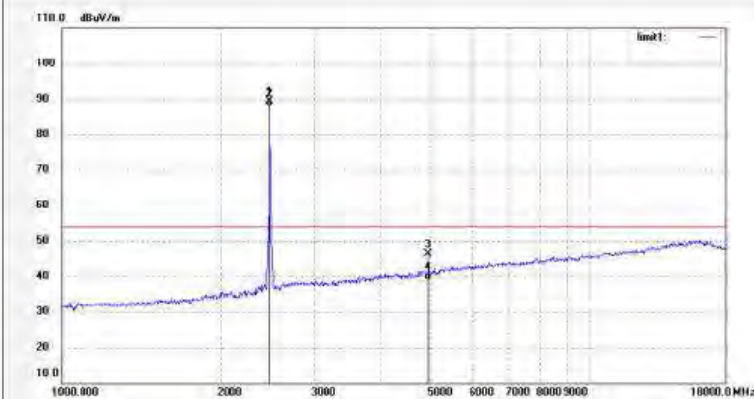
Tel: +86-0755-26503290

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

Site: 2# Chamber

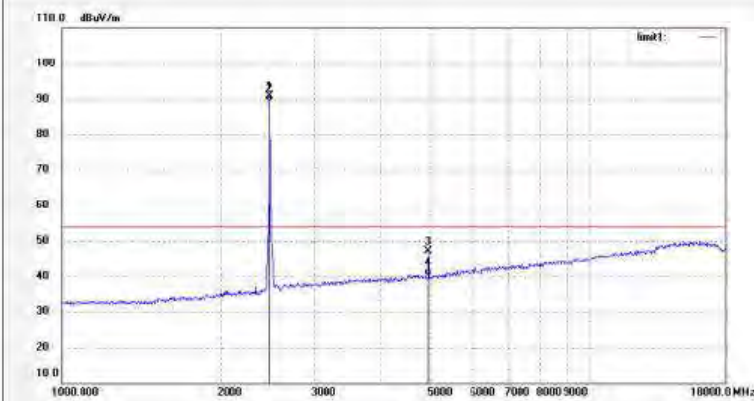
Tel: +86-0755-26503290

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			

**Test plot of Fundamental & Harmonics Radiated Emission-Dongle**

**ACCURATE TECHNOLOGY CO., LTD.**

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

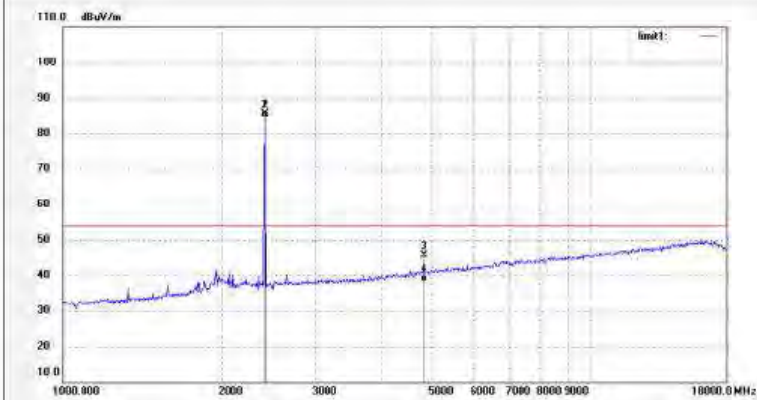
Site: 2# Chamber

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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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

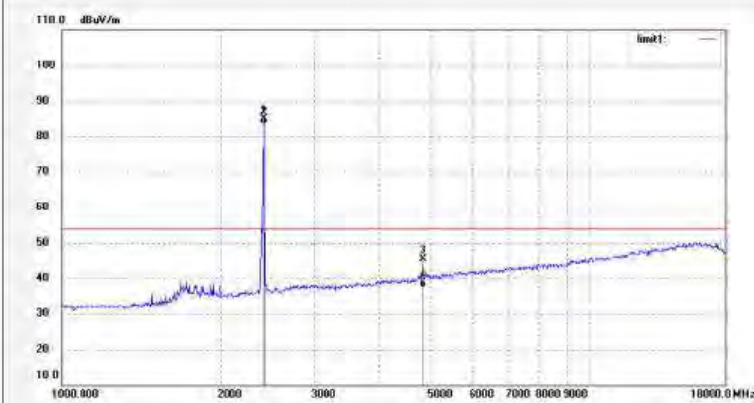
Date: 15/06/27/

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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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

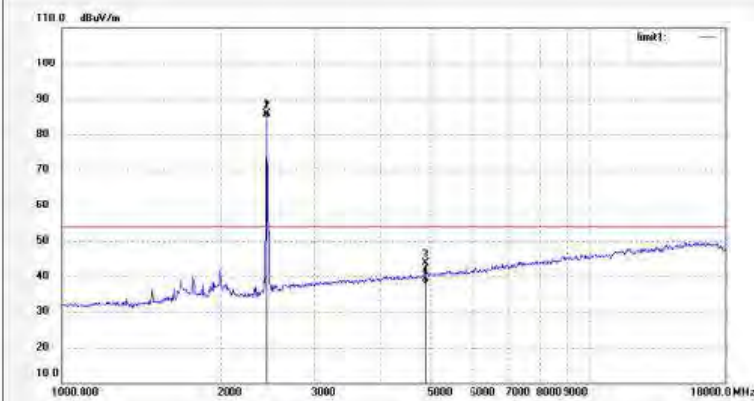
Date: 15/06/27/

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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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

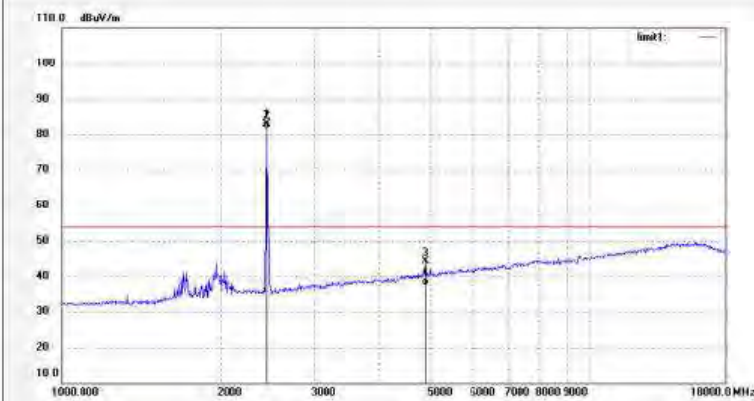
Date: 15/06/27/

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	4980.035	43.89	0.17	44.06	74.00	-29.94	peak			
4	4980.035	37.25	0.17	37.42	54.00	-16.58	AVG			


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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

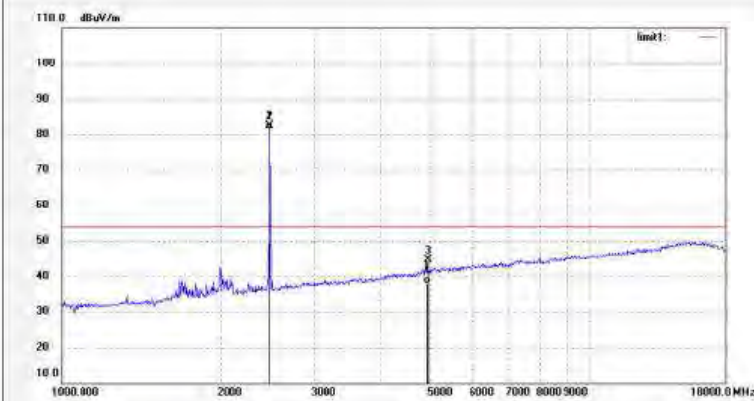
Date: 15/06/27/

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			



# **Prüfbericht - Nr.: 17050212 001** *Test Report No.*

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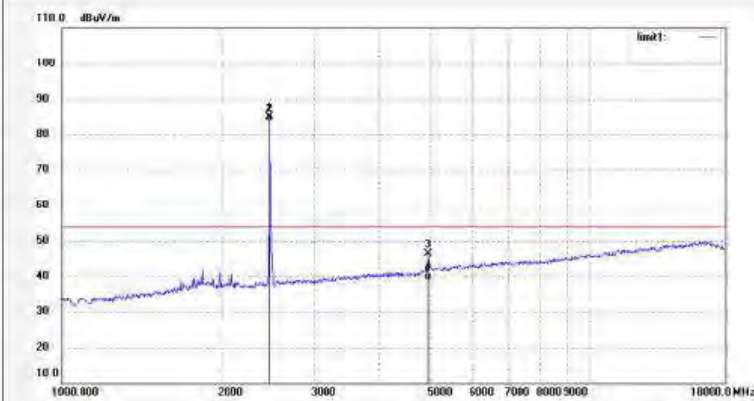
Tel: +86-0755-26503290

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**

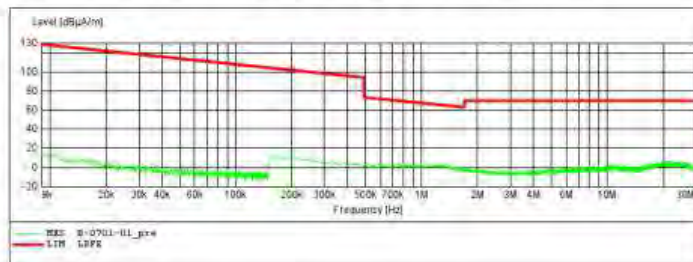
**ACCURATE TECHNOLOGY CO., LTD.**

**FCC Class B 3M Radiated**

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-ENEES11  
 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	1516M
150.0 kHz	30.0 MHz	5.0 kHz				QuasiPeak	1.0 s	9 kHz	1516M



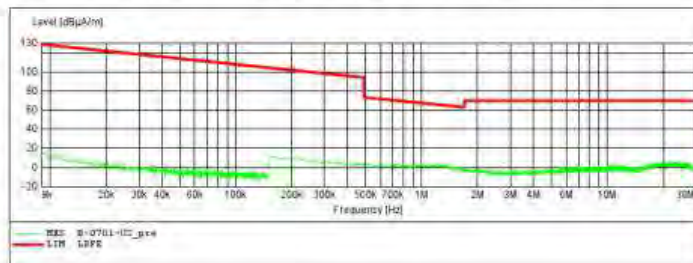
**ACCURATE TECHNOLOGY CO., LTD.**

**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: FCC 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



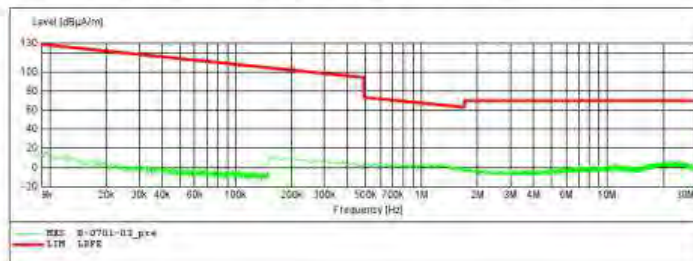
**ACCURATE TECHNOLOGY CO., LTD.**

**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 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			
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



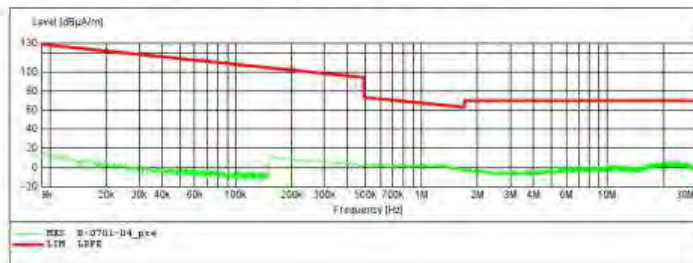
**ACCURATE TECHNOLOGY CO., LTD.**

**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: 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



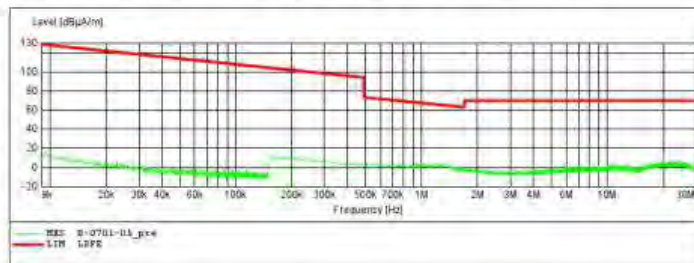
ACCURATE TECHNOLOGY CO., LTD.

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 240MHz  
Test Site: I# Chamber  
Operator: LAM  
Test Specification: DC 3V  
Comment: Y  
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



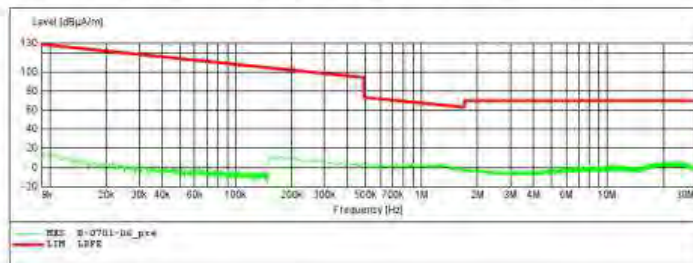
**ACCURATE TECHNOLOGY CO., LTD.**

**FCC Class B 3M Radiated**

EUT: Wireless keyboard w Integrated Touch Pad M/N: NS-PNE2811  
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD  
 Operating Condition: TX 2440MHz  
 Test Site: EM Chamber  
 Operator: LAM  
 Test Specification: DE 3V  
 Comment: 1  
 Start of Test: 2015-07-01 /

**SCAN TABLE: "LFRE Fin"**

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
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	





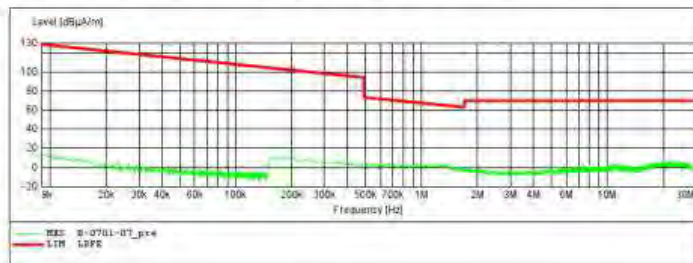
**ACCURATE TECHNOLOGY CO., LTD.**

**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 2474MHz  
 Test Site: EM Chamber  
 Operator: LAM  
 Test Specification: PC 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



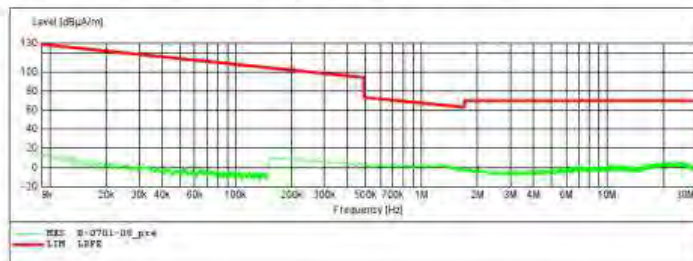
**ACCURATE TECHNOLOGY CO., LTD.**

**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



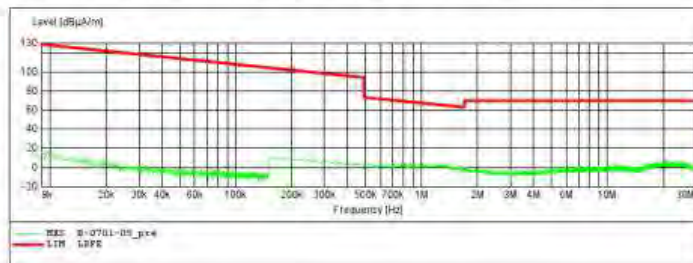
**ACCURATE TECHNOLOGY CO., LTD.**

**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.	
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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Site: 2# Chamber

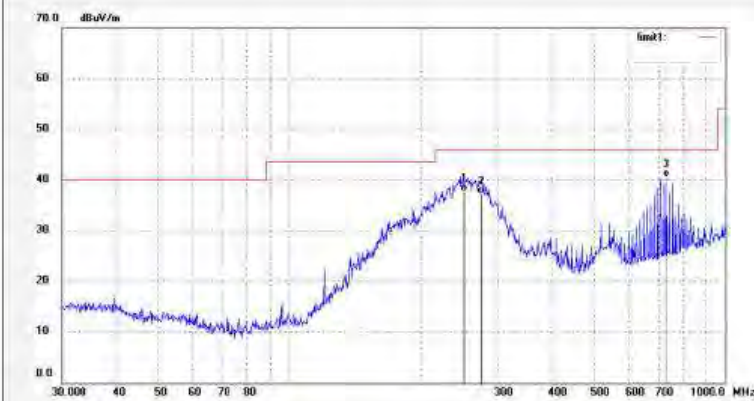
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Job No.: Jan2015-2 #1163  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.: C/Hum.(%) 23 C/48 %  
EUT: Wireless keyboard w integrated Touch Pad  
Mode: TX 2408MHz  
Model: NS-PNK6811  
Manufacturer: Dongguan Newmen Electronics 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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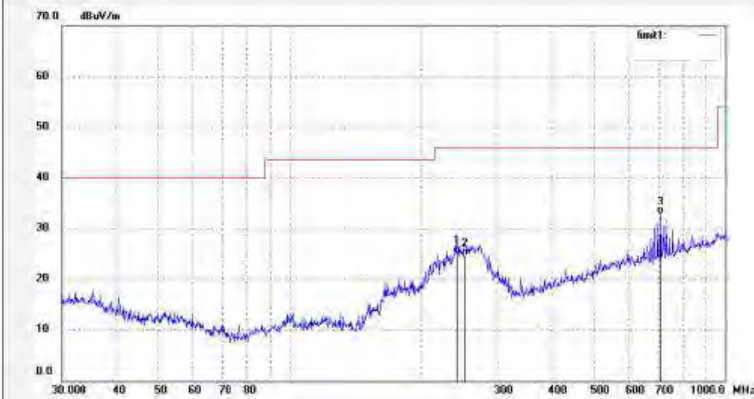
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Job No.: Jan2015-2 #1165	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 15/06/27/
Temp.: C/Hum.(%) 23 C/48 %	Time:
EUT: Wireless keyboard w integrated Touch Pad	Engineer Signature:
Mode: 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	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			

# **Prüfbericht - Nr.: 17050212 001** *Test Report No.*

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Site: 2# Chamber

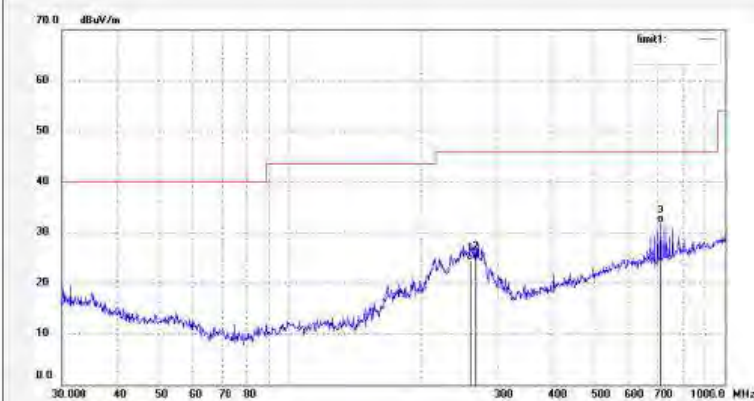
Tel: +86-0755-26503290

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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Site: 2# Chamber

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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

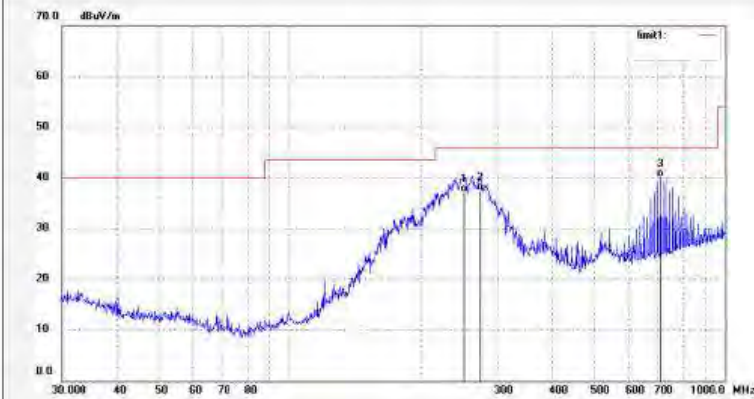
Date: 15/06/27/

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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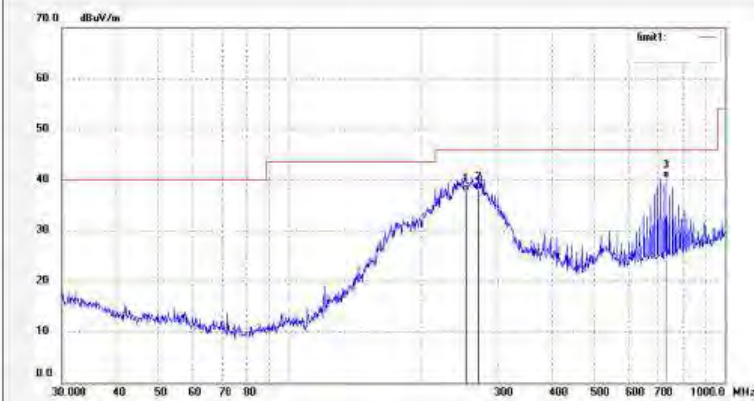
Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1168	Polarization: Horizontal
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	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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**ACCURATE TECHNOLOGY CO., LTD.**

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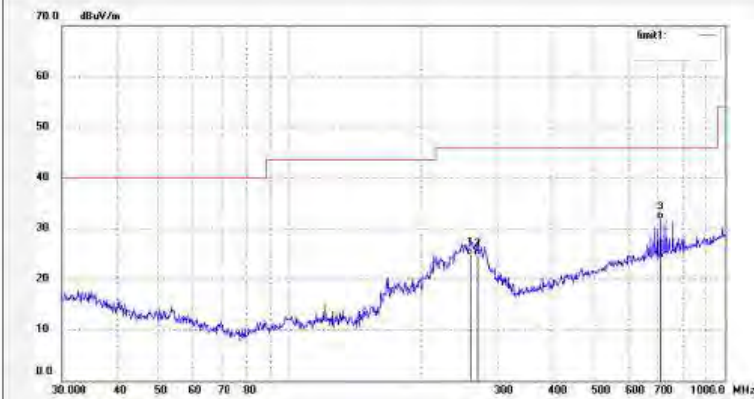
Site: 2# Chamber

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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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

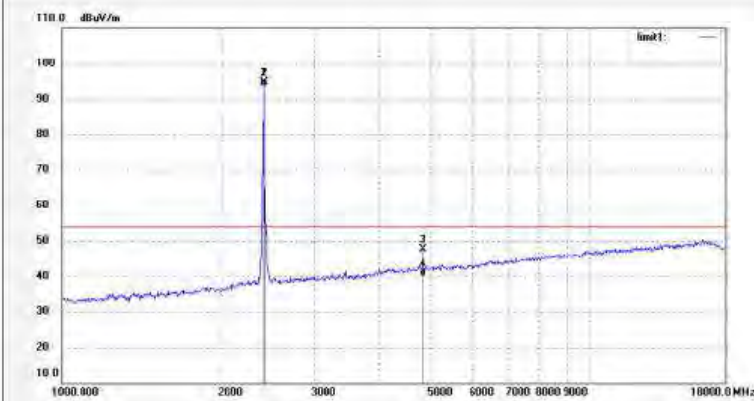
Date: 15/06/27/

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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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

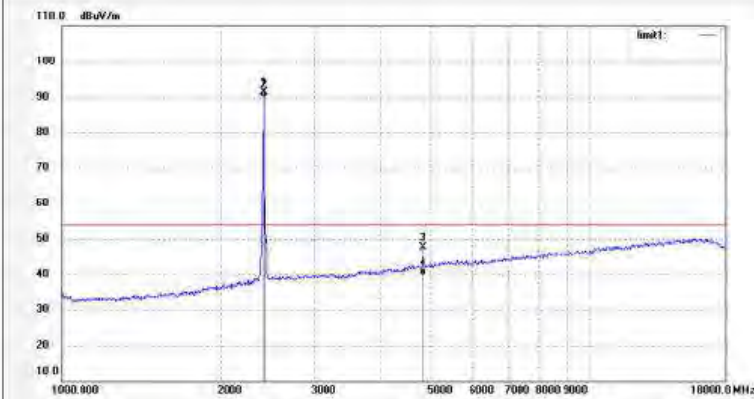
Date: 15/06/27/

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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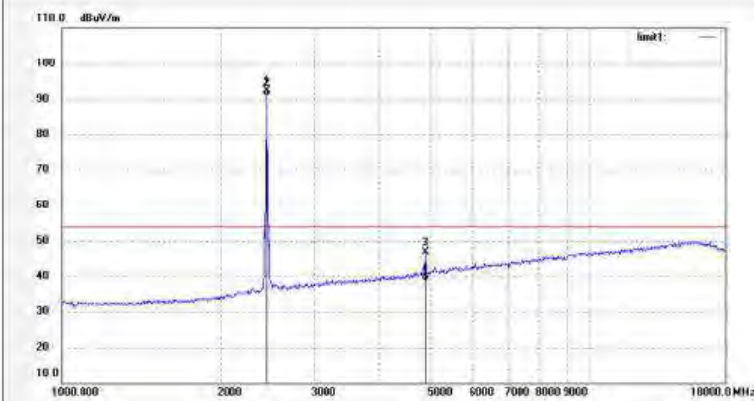
Tel: +86-0755-26503290

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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Tel: +86-0755-26503290

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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

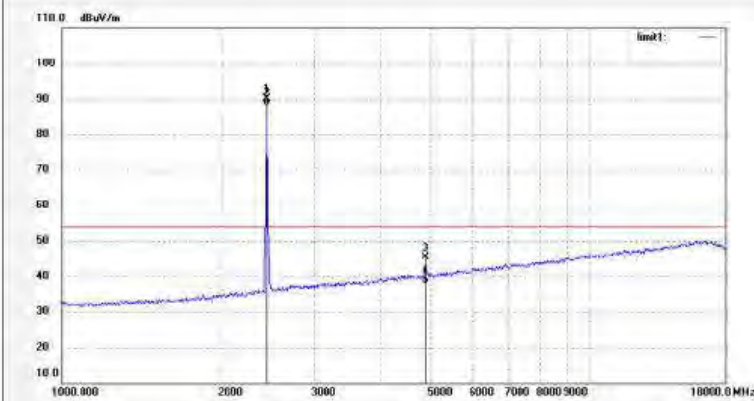
Date: 15/06/27/

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	/	/	peak			
2	2440.000	95.55	-7.36	88.19	/	/	AVG			
3	4880.028	45.28	0.13	45.41	74.00	-28.59	peak			
4	4880.028	37.86	0.13	37.99	54.00	-16.01	AVG			

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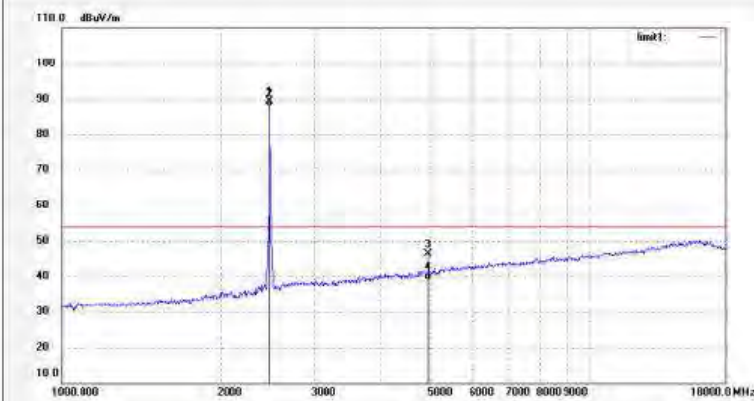
Tel: +86-0755-26503290

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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Site: 2# Chamber

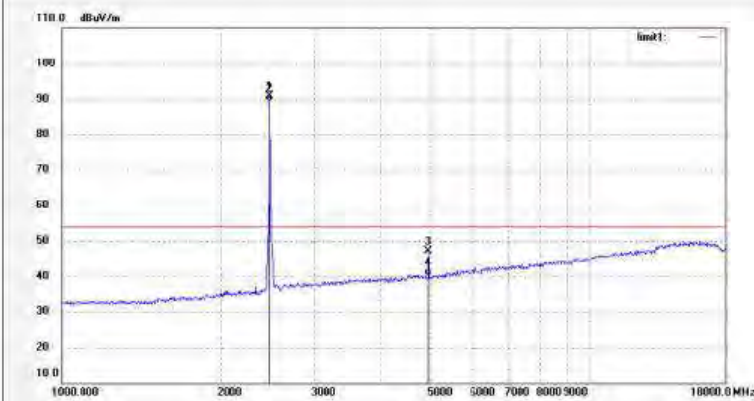
Tel: +86-0755-26503290

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	/	/	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			

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

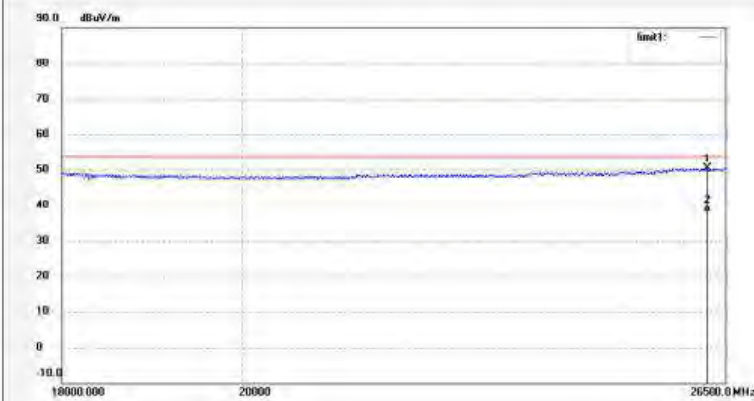
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #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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F1 Bldg. A, Changyuan New Material Port, Keyuan Rd.  
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Site: 2# Chamber

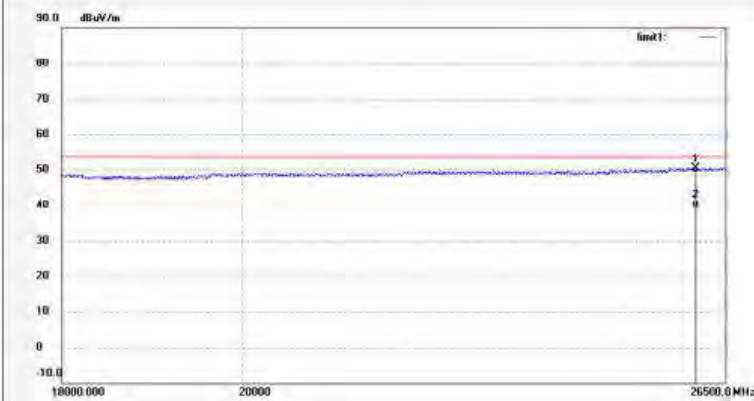
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1140  
 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	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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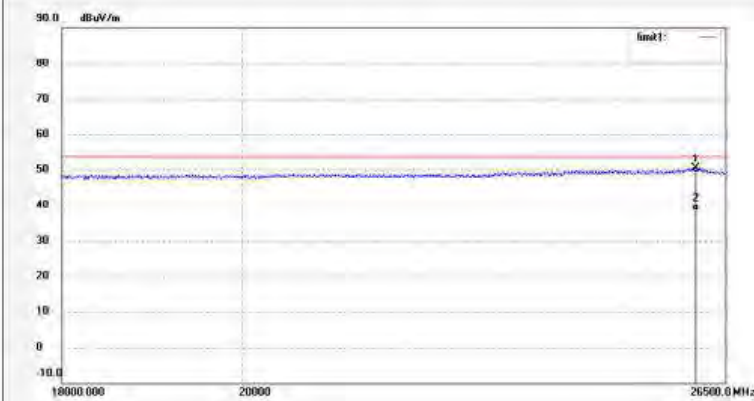
Tel: +86-0755-26503290

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

Site: 2# Chamber

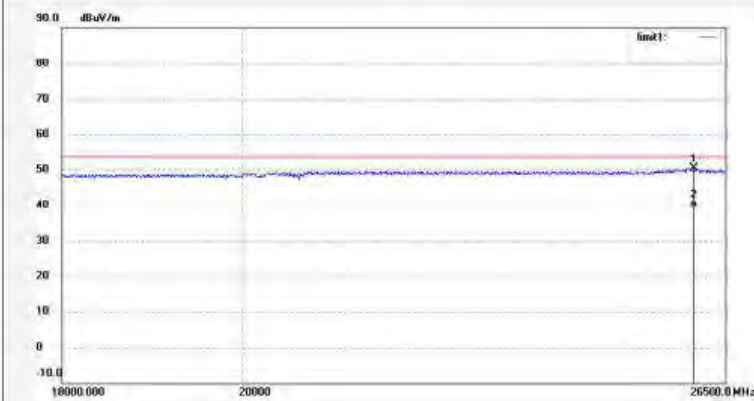
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #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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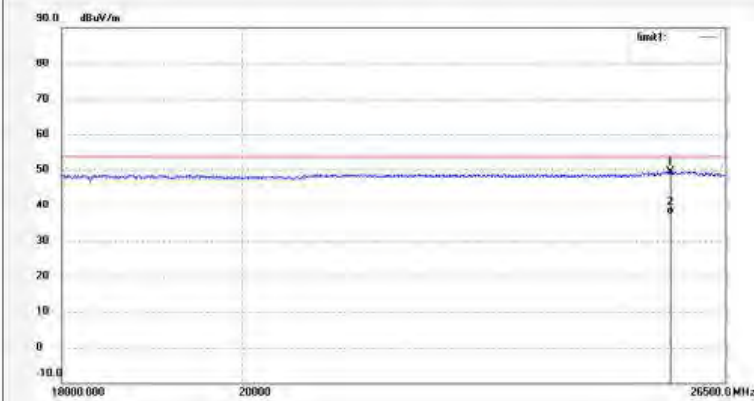
Tel: +86-0755-26503290

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

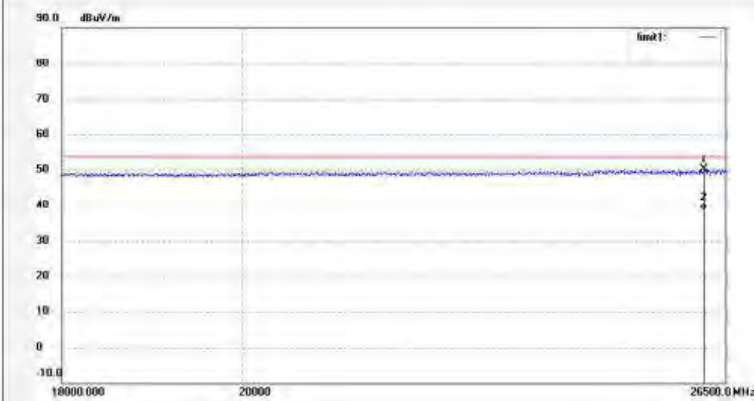
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #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	25163.918	33.65	16.50	50.15	74.00	-23.85	peak			
2	25163.916	22.05	16.50	38.55	54.00	-15.45	AVG			

**Test Plots of Bandedge-Keyboard**

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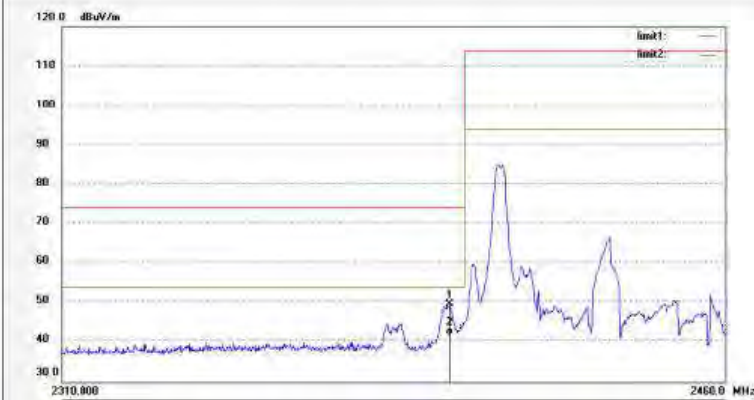
Site: 2# Chamber

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 C/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

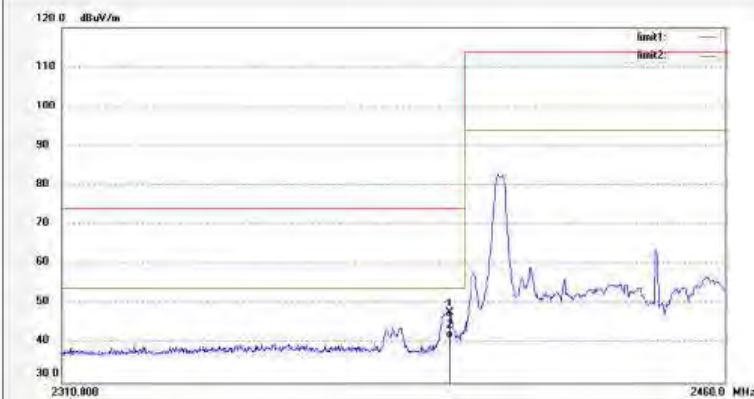
Date: 15/07/01/

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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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

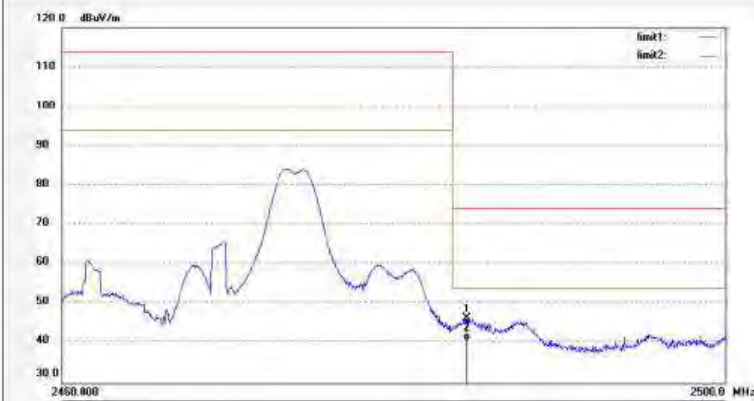
Date: 15/07/01/

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

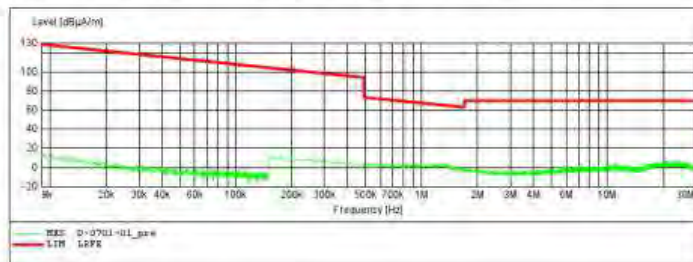
ACCURATE TECHNOLOGY CO., LTD.

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		



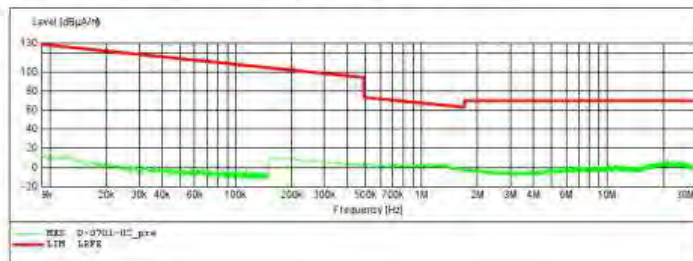
ACCURATE TECHNOLOGY CO., LTD.

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		Detector	Meas.	IF	Transducer
Start	Stop	Step	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			



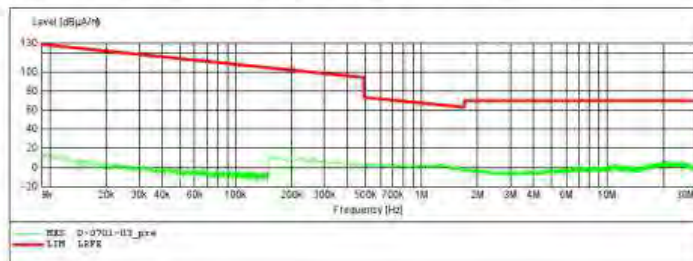
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640  
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD  
Operating Condition: TX 2400MHz  
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		Detector	Meas.	IF	Transducer
Start	Stop	Step	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			



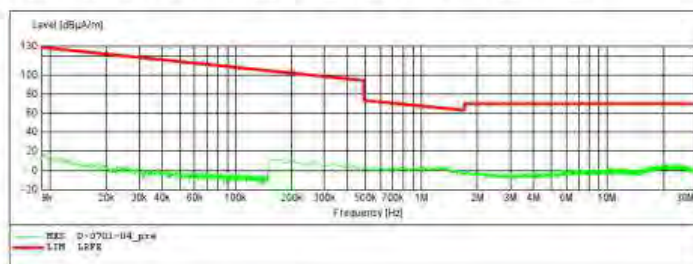
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640  
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD  
Operating Condition: TX 2440MHz  
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	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



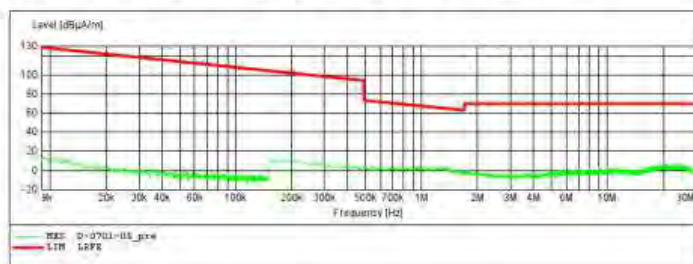
**ACCURATE TECHNOLOGY CO., LTD.**

**FCC Class B 3M Radiated**

EUT: Dongle M/N:MX-640  
 Manufacturer: Dongguan Newmen Electronics Technology Co., LTD  
 Operating Condition: TX 240MHz  
 Test Site: 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.	Bandw.	
Frequency	Frequency	Width		Time		
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



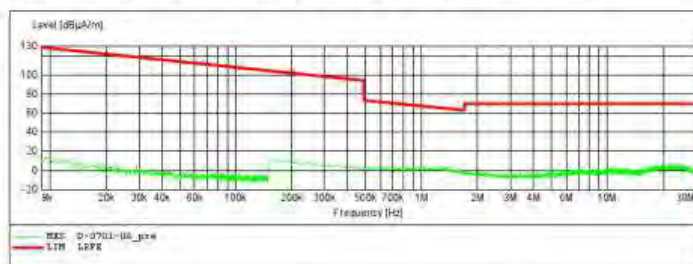
ACCURATE TECHNOLOGY CO., LTD.

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
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



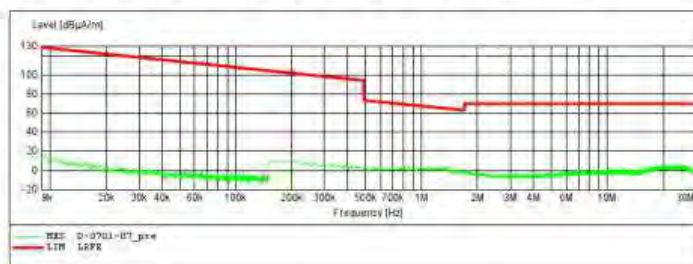
**ACCURATE TECHNOLOGY CO., LTD.**

**FCC Class B 3M Radiated**

EUT: Dongle M/N:MX-640  
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD  
Operating Condition: TX 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





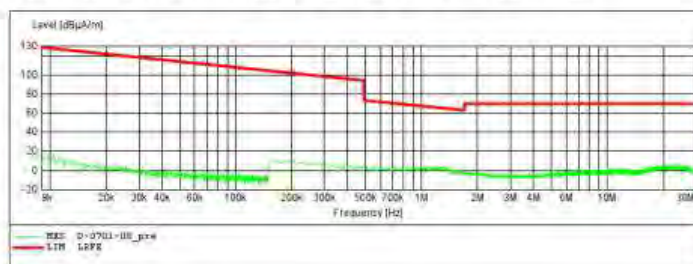
ACCURATE TECHNOLOGY CO., LTD.

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"

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



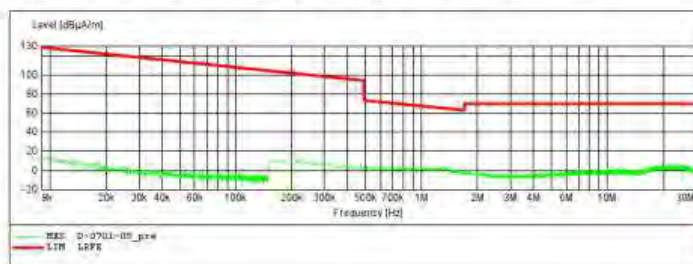
ACCURATE TECHNOLOGY CO., LTD.

FCC Class B 3M Radiated

EUT: Dongle M/N:MX-640  
Manufacturer: Dongguan Newmen Electronics Technology Co., LTD  
Operating Condition: TX 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		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	1516M			
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak 1.0 s	9 kHz	1516M			



# **Prüfbericht - Nr.: 17050212 001** *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 #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

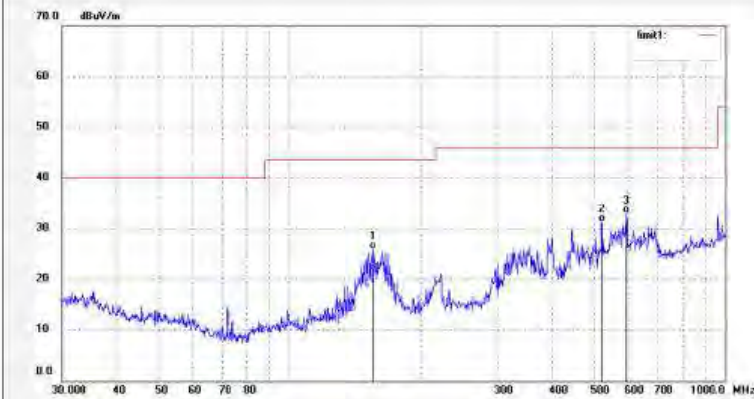
Date: 15/06/27/

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			

# **Prüfbericht - Nr.: 17050212 001** *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 #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

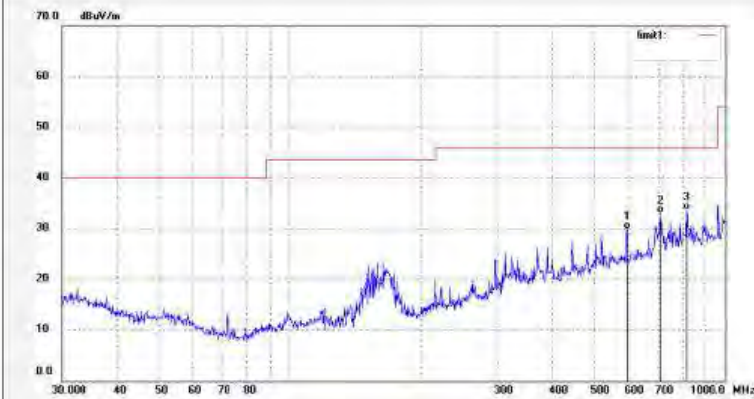
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Time:

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			

# **Prüfbericht - Nr.: 17050212 001** *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 #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

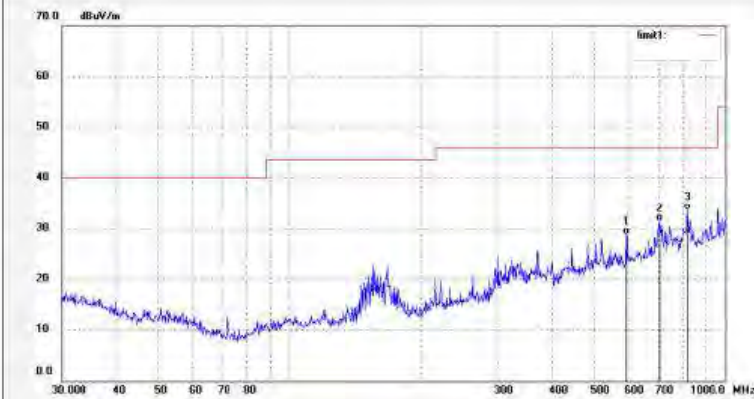
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Time:

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			

# **Prüfbericht - Nr.: 17050212 001** *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 #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

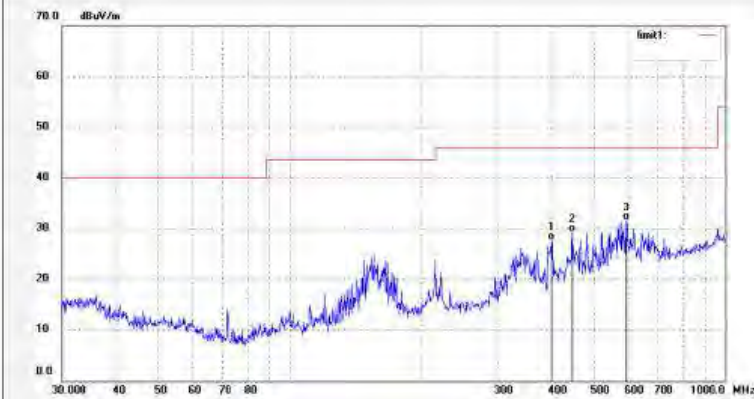
Date: 15/06/27/

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			



# **Prüfbericht - Nr.: 17050212 001** *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 #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

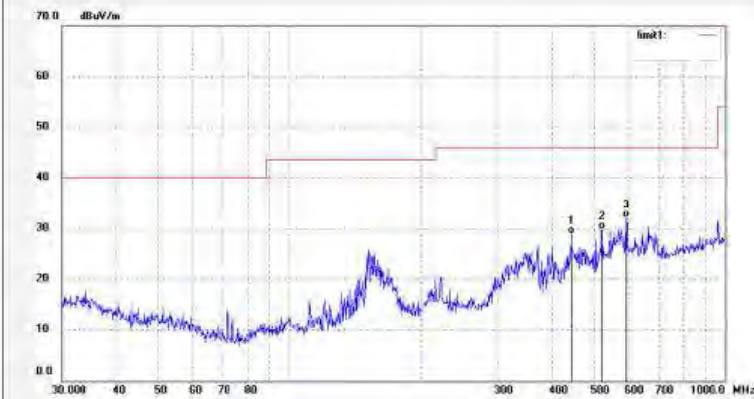
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Time:

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			


**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 #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

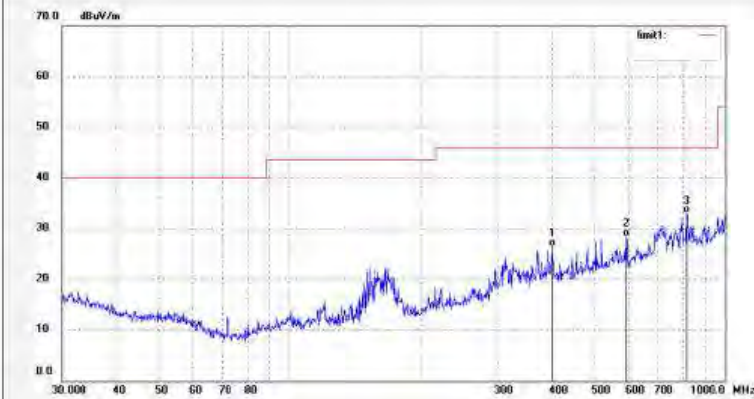
Date: 15/06/27/

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	815.9878	32.64	0.27	32.91	46.00	-13.09	QP			



# **Prüfbericht - Nr.: 17050212 001** *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 #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

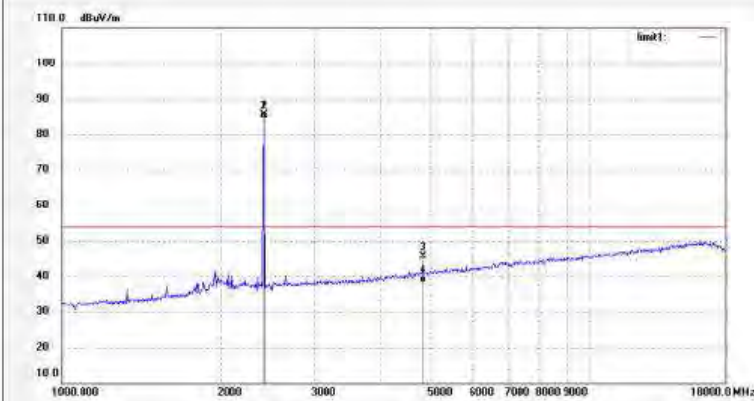
Date: 15/06/27/

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			

# **Prüfbericht - Nr.: 17050212 001** *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 #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

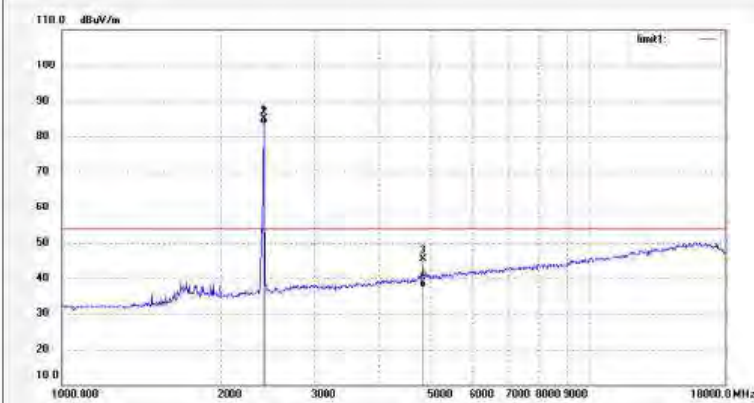
Date: 15/06/27/

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			

# **Prüfbericht - Nr.: 17050212 001** *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 #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

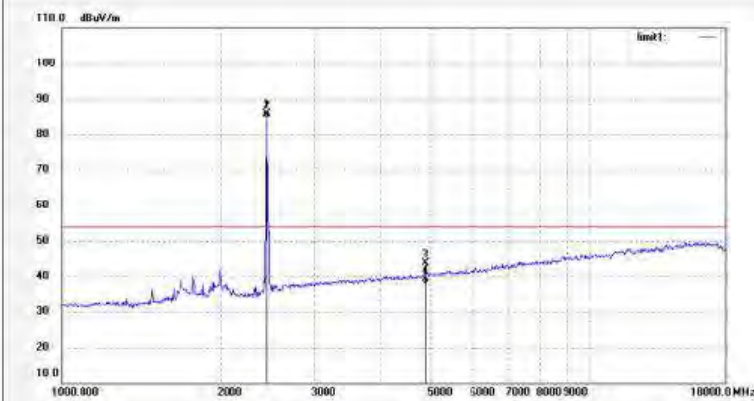
Date: 15/06/27/

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			

# **Prüfbericht - Nr.: 17050212 001** *Test Report No.*

**Seite 76 von 98**  
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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 °C / 48 %

EUT: Dongle

Mode: TX 2440MHz

Model: MX-640

Manufacturer: Dongguan Newmen Electronics Technology Co.,LTD

Polarization: Horizontal

Power Source: DC 5V

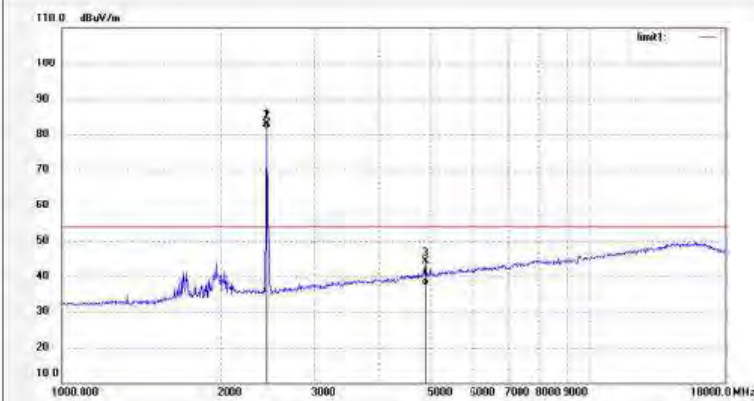
Date: 15/06/27/

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	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			

# **Prüfbericht - Nr.: 17050212 001** *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 #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

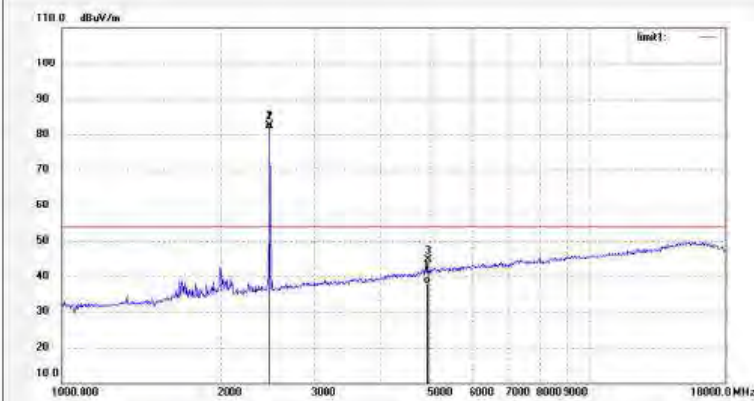
Date: 15/06/27/

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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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

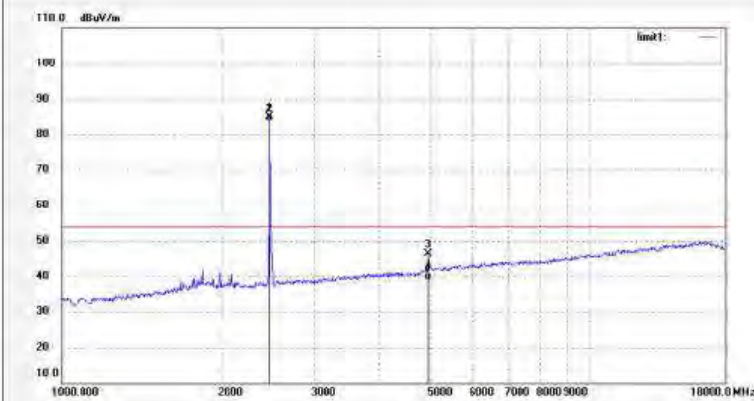
Date: 15/06/27/

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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Site: 2# Chamber

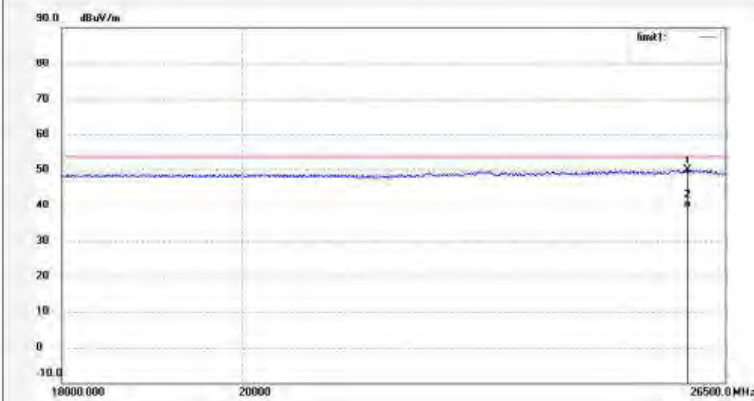
Tel: +86-0755-26503290

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	54.00	-24.02	peak			
2	25922.172	22.78	16.50	39.28	54.00	-14.72	AVG			


**ACCURATE TECHNOLOGY CO., LTD.**

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Site: 2# Chamber

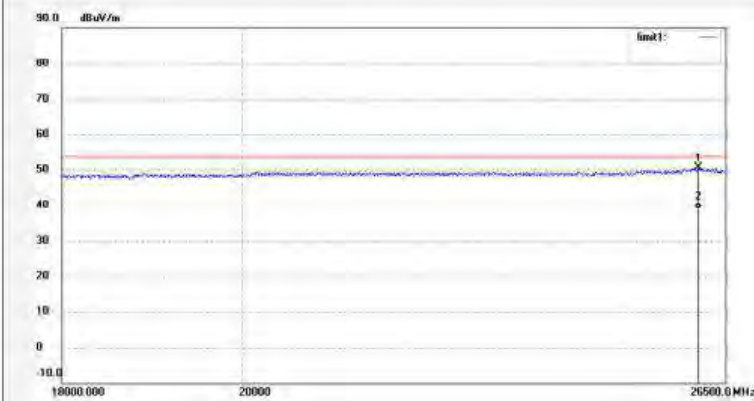
Tel: +86-0755-26503290

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	74.00	-23.31	peak			
2	26083.086	22.46	16.50	38.96	54.00	-15.04	AVG			




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Site: 2# Chamber

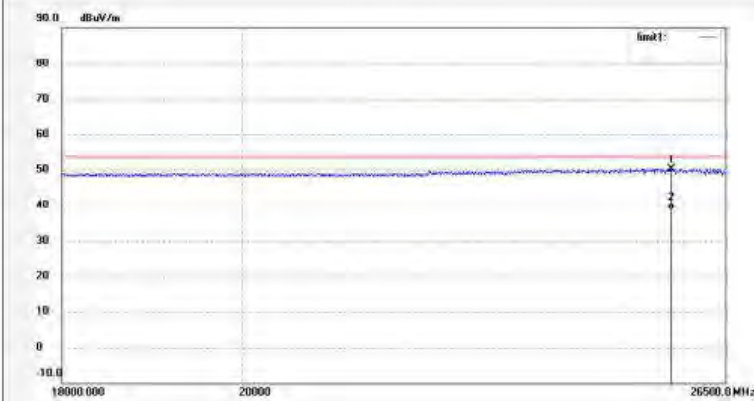
Tel: +86-0755-26503290

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

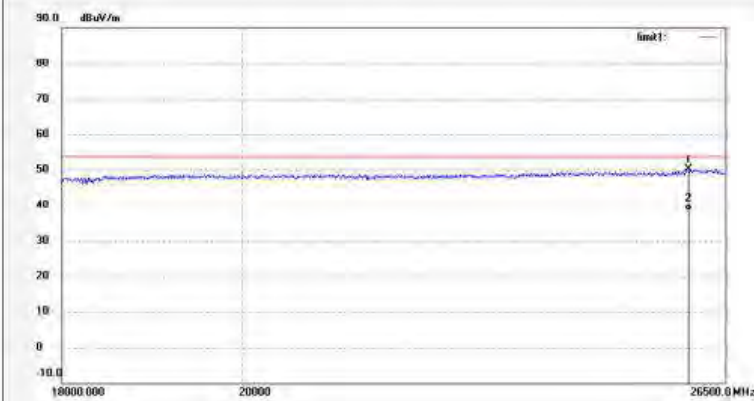
Tel: +86-0755-26503290

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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Site: 2# Chamber

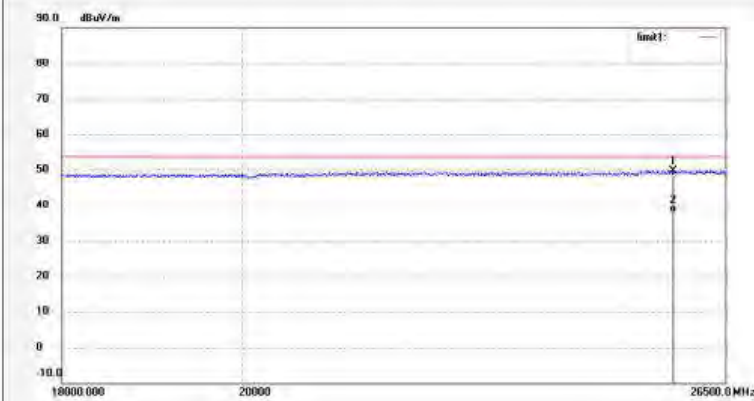
Tel: +86-0755-26503290

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			

**Prüfbericht - Nr.: 17050212 001**  
*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

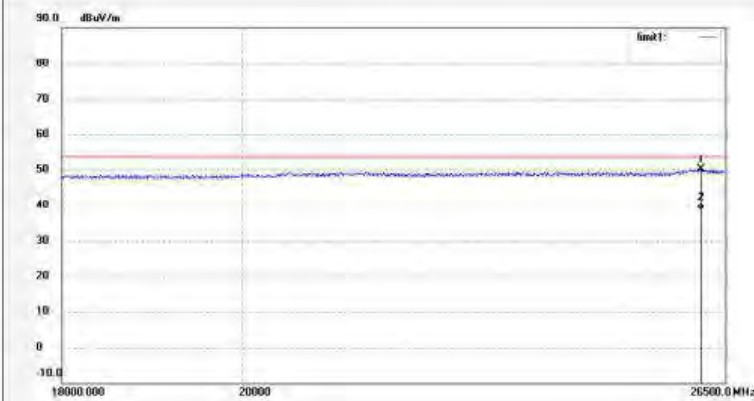
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #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**

**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 2# Chamber

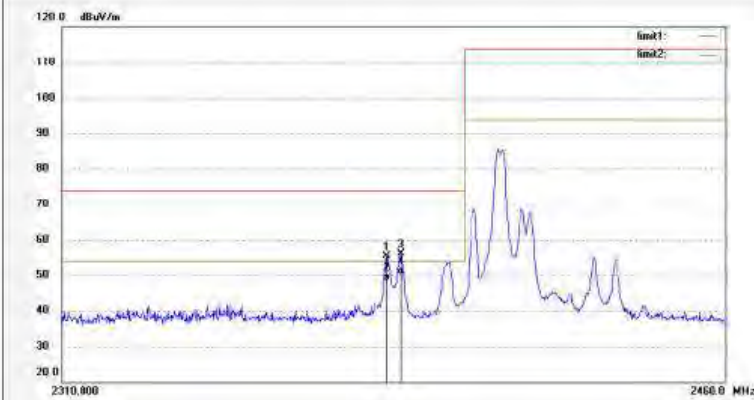
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #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			

# **Prüfbericht - Nr.: 17050212 001** *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

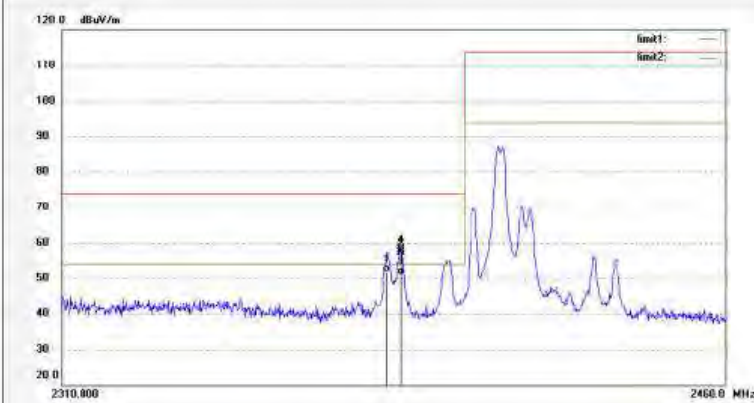
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #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			


**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 #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

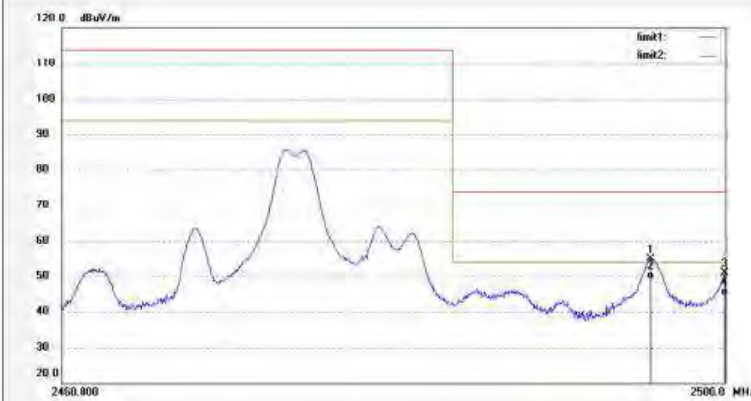
Date: 15/06/27/

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			



# **Prüfbericht - Nr.: 17050212 001** *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 #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

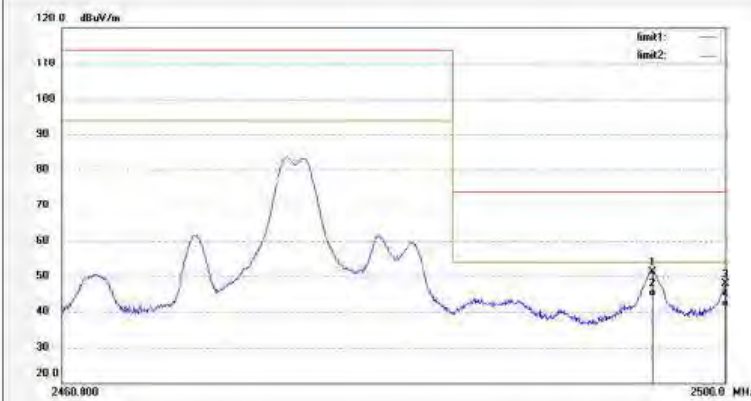
Date: 15/06/27/

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

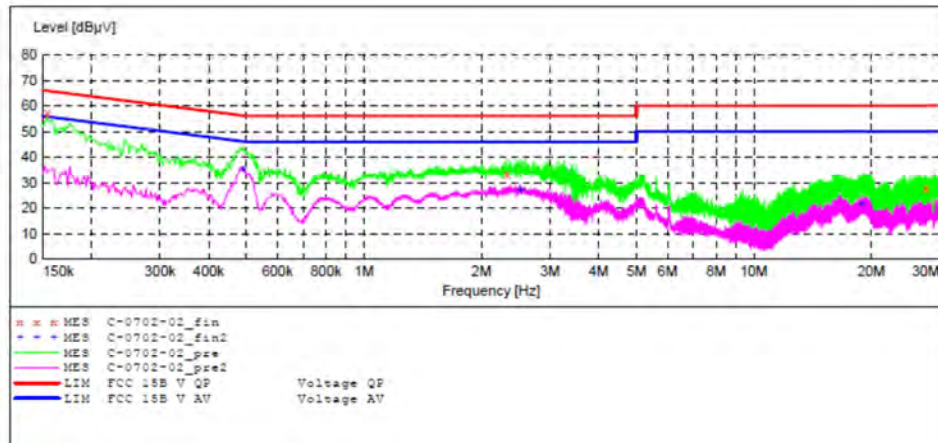
For details refer to test plots.

**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"**

2015-7-2

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"**

2015-7-2

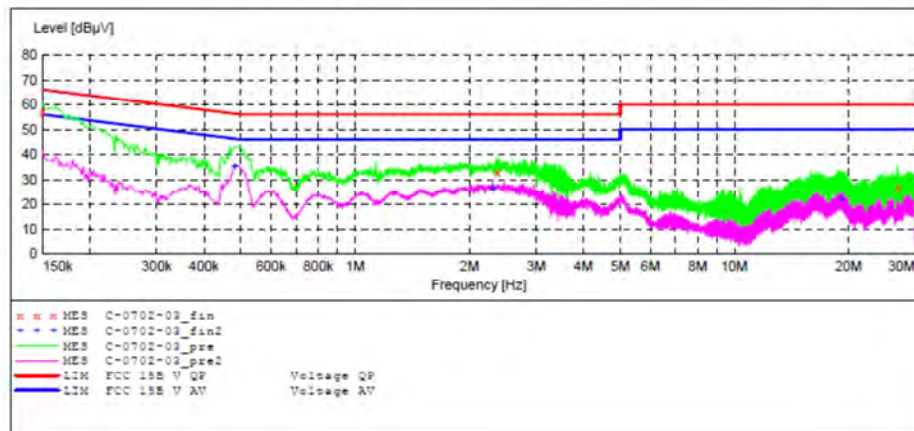
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.490000	35.50	11.5	46	10.7	AV	L1	GND
2.517500	27.50	11.7	46	18.5	AV	L1	GND
18.920000	21.80	11.9	50	28.2	AV	L1	GND

**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

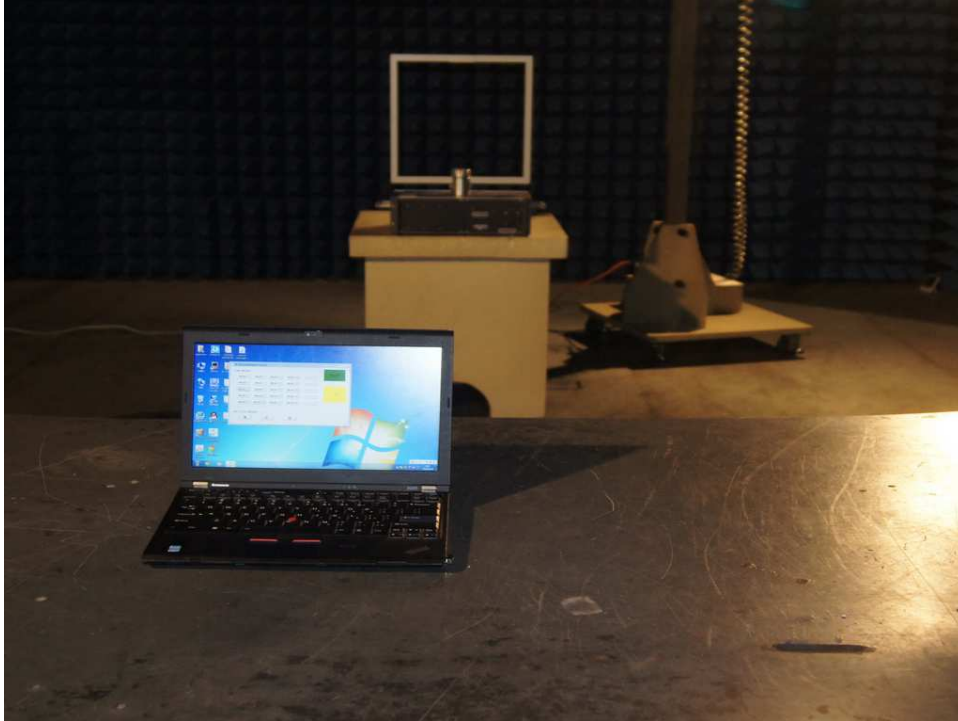
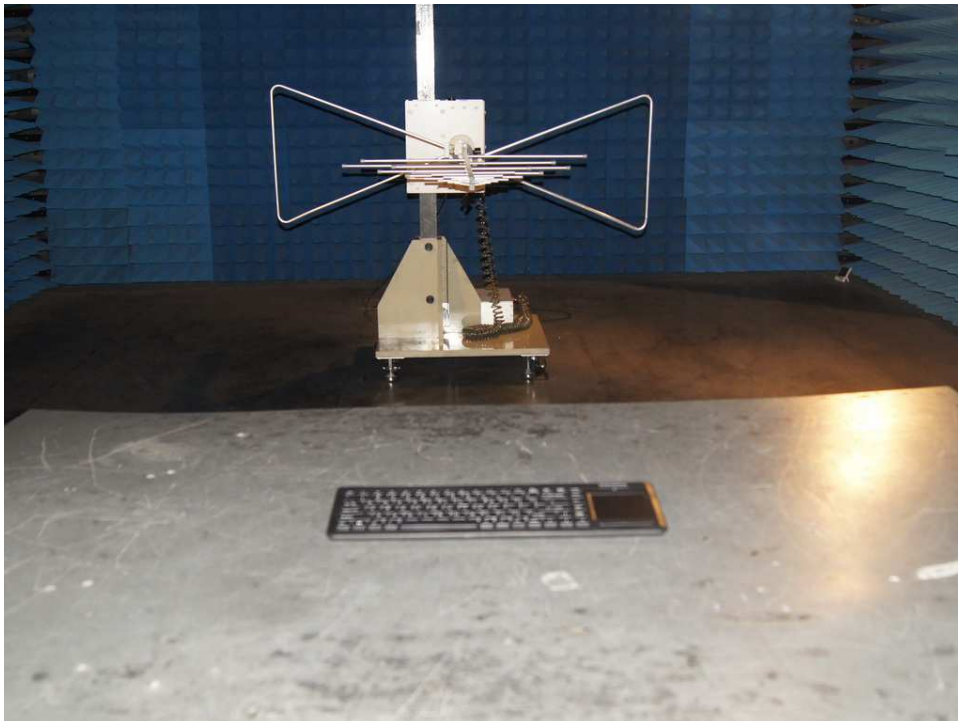
**Photograph 1: Set-up for Conducted Emissions**

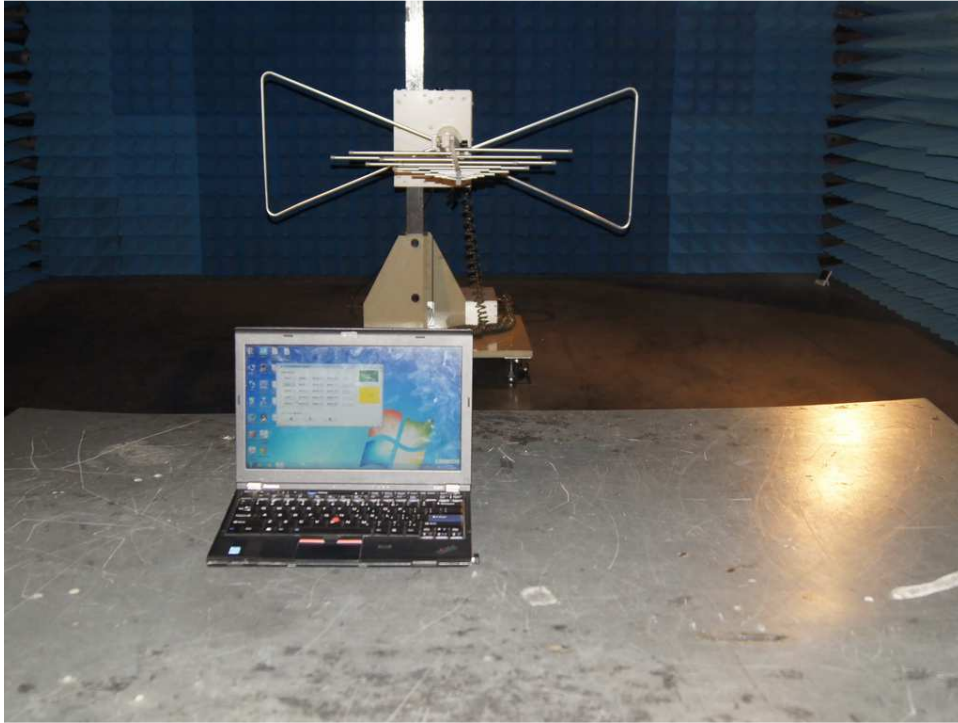
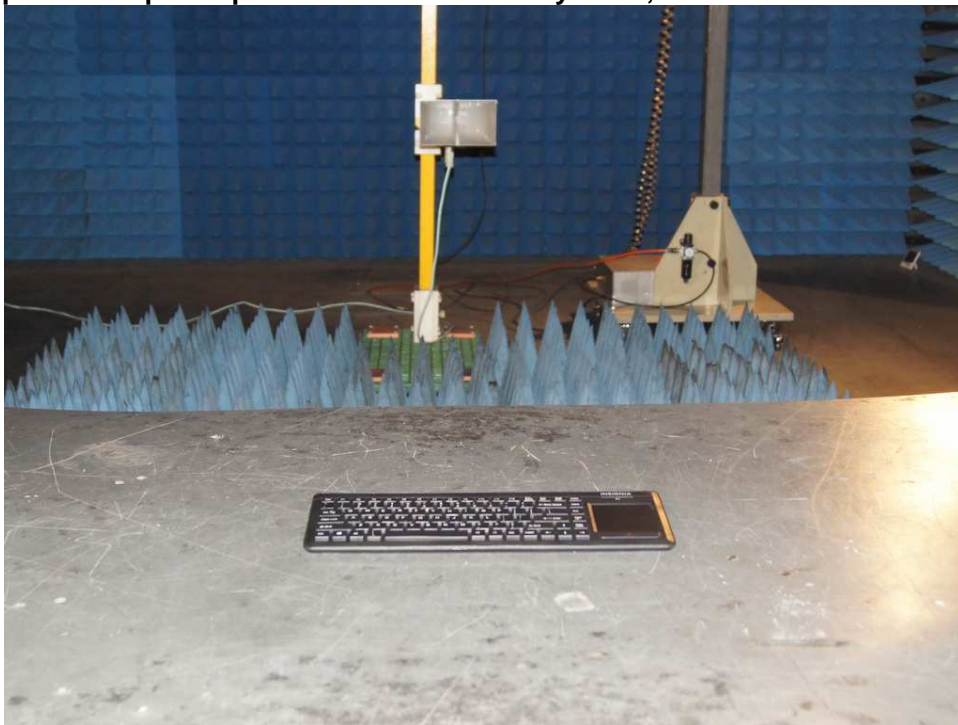


**Photograph 2: Set-up for Spurious Emissions of Keyboard, below 30MHz**





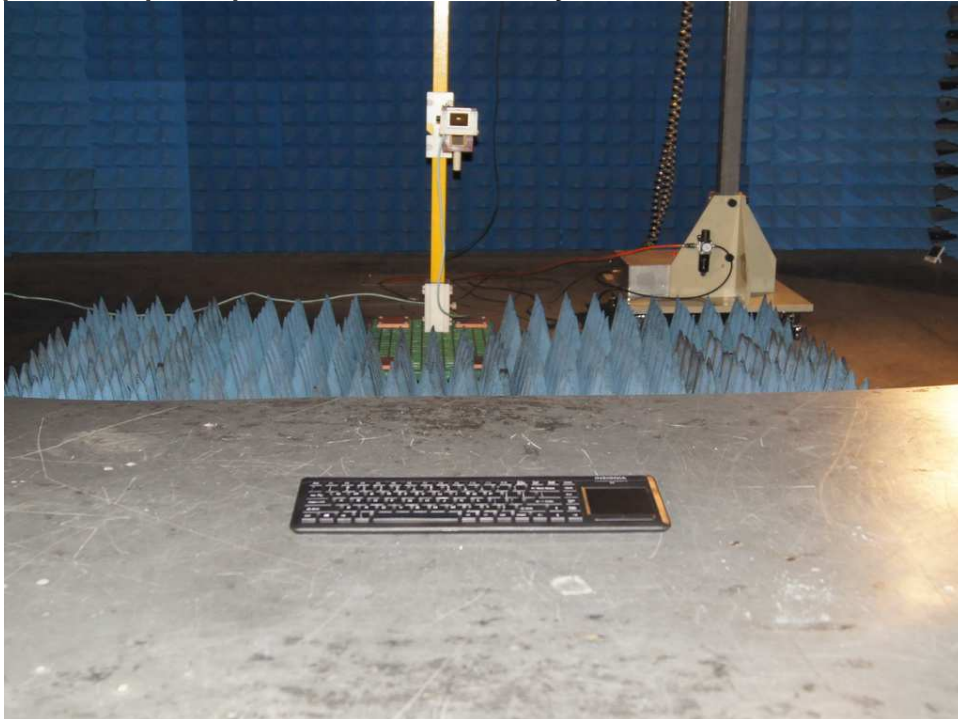
**Photograph 3: Set-up for Spurious Emissions of dongle, below 30MHz****Photograph 4: Set-up for Spurious Emissions of Keyboard, 30MHz - 1GHz**

**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**

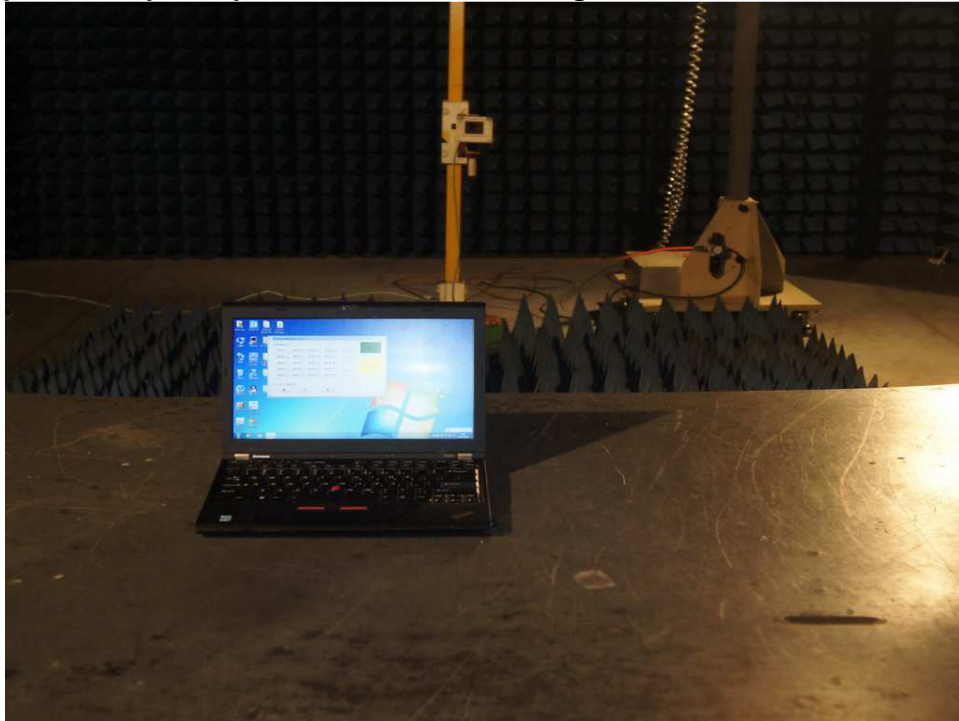


**Photograph 8: Set-up for Spurious Emissions of Keyboard, 18GHz – 25GHz**





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



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