Prüfbericht - Nr.: *Test Report No.:*	**17020961 001**		**Seite 1 von 73** *Page 1 of 73*
Auftraggeber: *Client:*	Primax Electronics Ltd. No. 669, Ruey Kuang Road. Neihu 114, Taipei, Taiwan		
Gegenstand der Prüfung: *Test item:*	iPad 2 Keyboard Capsule		
Bezeichnung: *Identification:*	RF-iCAP14	**Serien-Nr.:** *Serial No.:*	n.a.
Wareneingangs-Nr.: *Receipt No.:*	163078604	**Eingangsdatum:** *Date of receipt:*	2011-05-26
Prüfort: *Testing location:*	Neutron Engineering Inc. No. 3. Jinshagang 1st Road, ShiXia, DaLang Town, Dong Guan, China FCC Registration No.: 319330 Industry Canada Test Site No.: 4428B-1		
Prüfgrundlage: *Test specification:*	FCC CFR47 Part 15: Subpart C Section 15.247 FCC CFR47 Part 15: Subpart C Section 15.207 FCC CFR47 Part 15: Subpart C Section 15.209 FCC CFR47 Part 15: Subpart B Section 15.107 FCC CFR47 Part 15: Subpart B Section 15.109 RSS-210 Issue 8 December 2010 RSS-Gen Issue 3 December 2010 RSS-102 Issue 4 March 2010		
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*		
Prüflaboratorium: *Testing Laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.		

geprüft/ *tested by:*			**kontrolliert/** *reviewed by:*		
2011-06-17	Sam Lin/ Project Manager		2011-06-17	Shawn Peng/ Technical Certifier	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/ *Other Aspects:*

Abkürzungen:				*Abbreviations:*			
	P(ass)	=	*entspricht Prüfgrundlage*		*P(ass)*	=	*passed*
	F(ail)	=	*entspricht nicht Prüfgrundlage*		*F(ail)*	=	*failed*
	N/A	=	*nicht anwendbar*		*N/A*	=	*not applicable*
	N/T	=	*nicht getestet*		*N/T*	=	*not tested*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: Passed

5.1.2 PEAK OUTPUT POWER
RESULT: Passed

5.1.3 20DB BANDWIDTH AND 99% BANDWIDTH
RESULT: Passed

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH
RESULT: Passed

5.1.5 SPURIOUS EMISSIONS
RESULT: Passed

5.1.6 FREQUENCY SEPARATION
RESULT: Passed

5.1.7 NUMBER OF HOPPING FREQUENCY
RESULT: Passed

5.1.8 TIME OF OCCUPANCY
RESULT: Passed

5.1.9 RADIATED EMISSIONS
RESULT: Passed

5.1.10 CONDUCTED EMISSIONS
RESULT: Passed

6.1.1 ELECTROMAGNETIC FIELDS
RESULT: Passed

Contents

1. General Remarks

1.1 Complementary Materials

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

Appendix 1: Test Result

2. Test Sites

2.1 Test Facilities

Neutron Engineering Inc.
(FCC Registration No.: 319330 & Test Site Industry Canada No.: 4428B-1)

No. 3. Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China

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 No.	Serial No.	Calibrated until
Spurious emissions				
Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jul. 17, 2011
Pre-Amplifier	EMC	EMC330	980001	Jul. 03, 2011
Test Cable	TIMES	LMR-400	966_12m	Jun. 17, 2011
Test Cable	TIMES	LMR-400	966_3m	Jun. 17, 2011
Loop Antenna	R&S	HFH2-Z2	830749/020	May.27.2011
Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011
EMI Measuring Receiver	SHCAFFNER	SCR 3501	408	Dec. 16, 2011
Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-546	Jun. 26, 2011
Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 19, 2012
Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1m	May. 19, 2012
Microflex Cable	AISI	S104-SMAP-1	10m	Aug. 22, 2011
Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	3m	Aug. 22, 2011
Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011
Horn Ant	Schwarzbeck	BBHA-9170	9170-187	Dec. 12, 2011
Conducted emissions				
LISN	EMCO	3816/2	00052765	May. 26.2012
LISN	R&S	ENV216	100087	May. .2012
Test Cable	N/A	C_17	N/A	Mar. 31.2012
EMI TEST RECEIVER	R&S	ESCS30	8333641017	May. 27.2012
50Ω Terminator	SHX	TF2-3G-A	08122902	May. 26.2012
Radiated emissions				
Antenna	Schwarbeck	VULB9160	9160-3232	Jul. 08.2011
Amplifier	HP	8447D	2944A09673	May. 26.2012
Test Receiver	R&S	ESCI	100382	May. 26.2012
Test Cable	N/A	C-01_CB03	N/A	Jul. 06.2011
Controller	CT	SC100	N/A	N/A

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 basics using in house standards or comparisons.

2.5 Measurement Uncertainty

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

Test Item	Measurement Frequency Range	U (dB)	NOTE
Conducted Emissions	150 KHz ~ 30MHz	±1.94	--
Radiated Emissions	30MHz ~ 200MHz	±3.82	--
	200MHz ~ 1,000MHz	±3.94	--
	1GHz ~ 18GHz	±1.47	--
	18GHz ~ 30GHz	±1.53	--

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The Neutron Engineering Inc. facility located at No. 3. Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is wireless keyboard with Bluetooth technology for iPad 2.
This device supports Bluetooth Specification V2.0, the firmware only supports DH1 packet type. This device only supports HID profile.
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	iPad2 Keyboard Capsule
Type Designation:	RF-iCAP14
FCC ID	EMJKRF-ICAP14
IC ID	4251A-KRFICAP14

Table 3: Technical Specification of EUT

Technical Specification	Value
Operating Frequency band	2402 – 2480 MHz
Channel separation	1MHz
Operation Voltage	DC 3.7V via Lithium battery
Charging Voltage	DC 5V via USB port
Modulation	GFSK
Antenna Type	Printed Antenna, Non-User Replaceable
Antenna Gain	0.52dBi
RF Output Power	0.0014W (1.48dBm)

Table 4: Frequency hopping information

Technical Specification	Description
Hopping Range	Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification V2.0 for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E).
Hopping Sequence	Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73, 07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56, 69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43, 15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,
Receiver input bandwidth	The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

3.3 Independent Operation Modes

The basic operation modes are:

A. Transmitting
    1. Low channel
    2. Middle channel
    3. High channel
B. Receiving
C. Charging by USB port
D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

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

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

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

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

Equipment	Manufacturer	Model	FCC ID	S/N
PC	Dell 320	DCSM	DOC	J4JQ52X
LCD monitor	Dell	E177FPc	DOC	CNOFJ179-64180-6AG-1WNS
USB Keyboard	Dell	L100	DOC	CNORH6596589071T08NE
USB Mouse	Dell	MO56UOA	DOC	FQJ000BS
Modem	ACEEX	DM-1414V	IFAXDm1414	0603002131
Printer	SII	DPU-414	DOC	3018507 B
IPAD	Apple	A1337	BCG-E2328A	GB023CTEA90

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

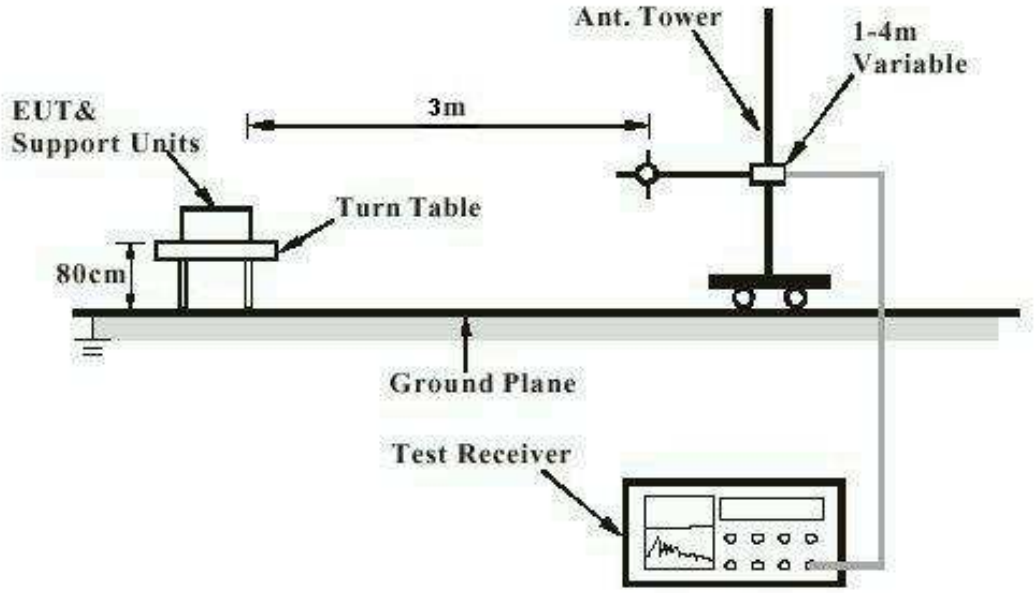


Diagram of Measurement Equipment Configuration for Conduction Measurement

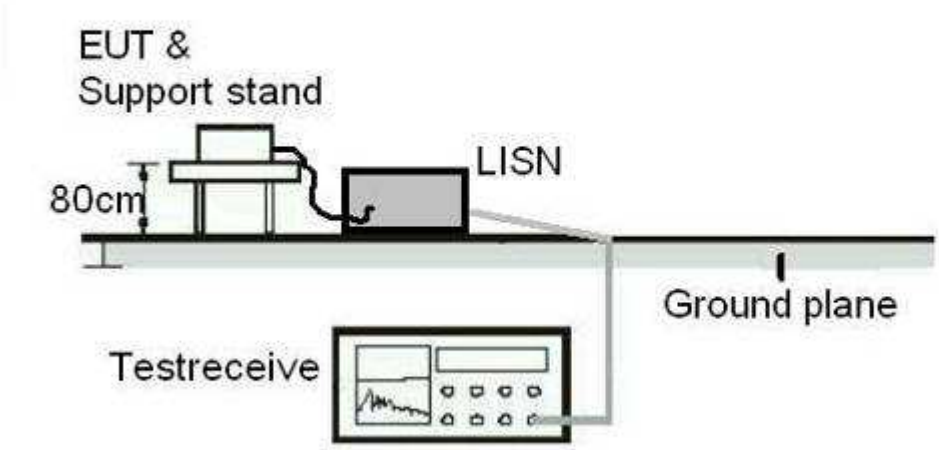
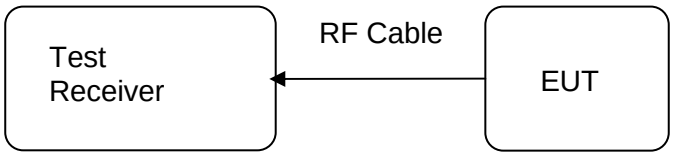


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test date	:	2011-06-09
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen 7.1.4
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0.52dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to compliance the provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT: **Passed**

Test date	:	2011-06-09 to 2011-06-14
Test standard	:	FCC Part 15.247(b)(1) RSS-210 A8.4(2)
Basic standard	:	ANSI C63.4: 2003
Limit	:	1 Watt
Kind of test site	:	Shielded room

Test setup

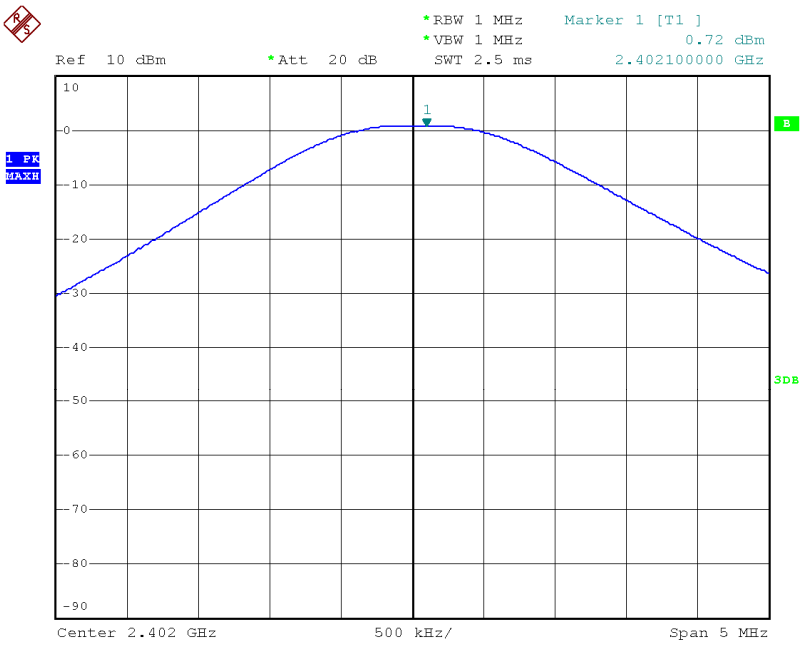
Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Table 5: Test result of Peak Output Power

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	0.72	0.0012	1
Middle Channel	2441	1.36	0.0014	1
High Channel	2480	1.48	0.0014	1

Test Graph of Peak Output Power

Low Channel



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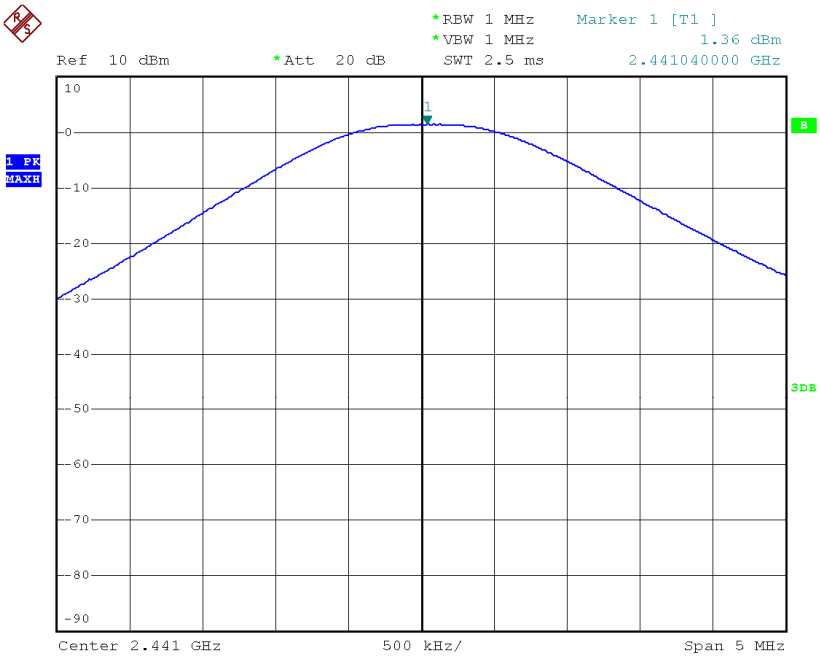
Middle Channel



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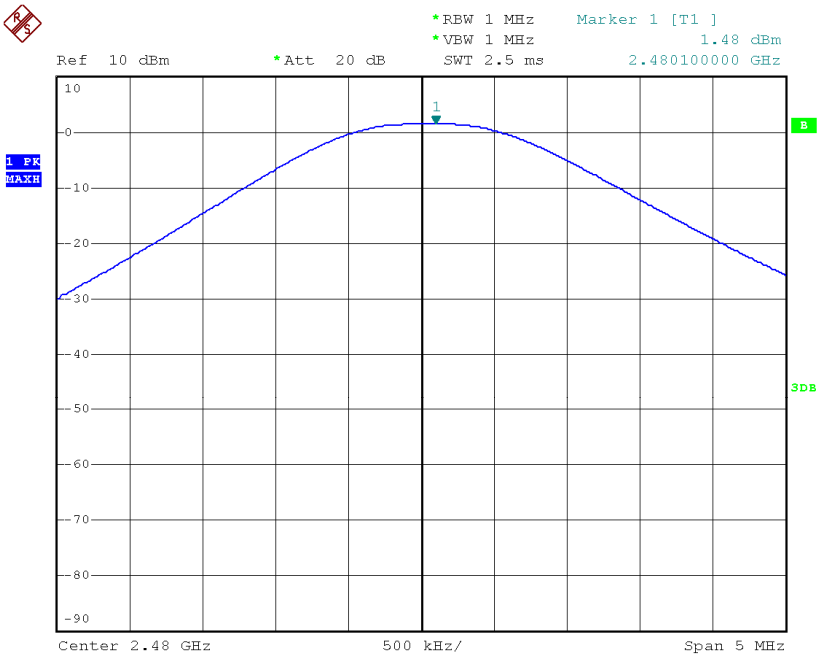
High Channel



Date: 9.JUN.2011 14:51:33

5.1.3 20dB Bandwidth and 99% Bandwidth

RESULT: **Passed**

Date of testing	:	2011-06-09 to 2011-06-14
Test standard	:	FCC Part 15.247(a)(1) RSS-210 A8.1(a)
Basic standard	:	ANSI C63.4: 2003
Kind of test site	:	Shielded room

Test setup

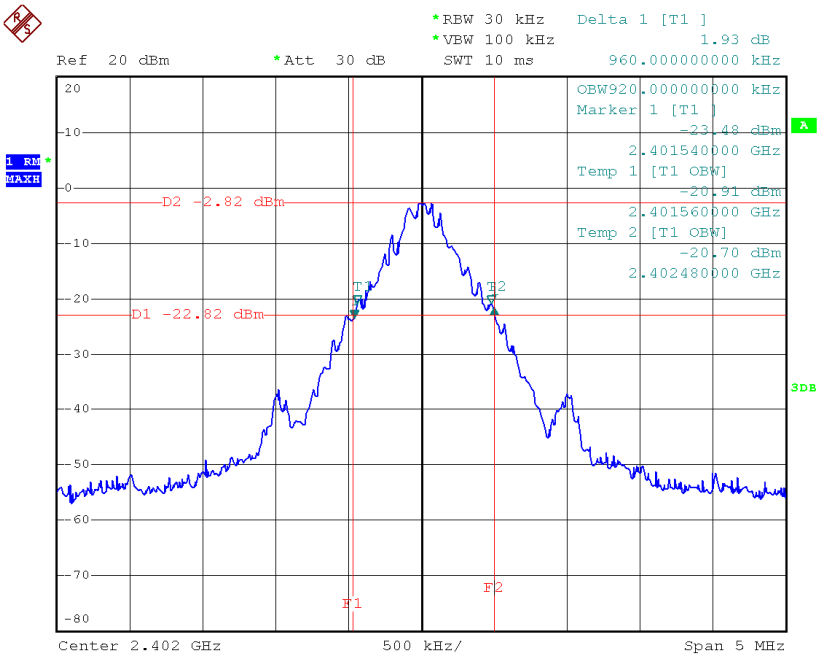
Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Table 6: Test result of 20dB Bandwidth and 99% Bandwidth

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)	Result
Low Channel	2402	960.00	920.00	Pass
Mid Channel	2441	960.00	920.00	Pass
High Channel	2480	960.00	910.00	Pass

Test Graph of 20dB Bandwidth and 99% Bandwidth

Low Channel



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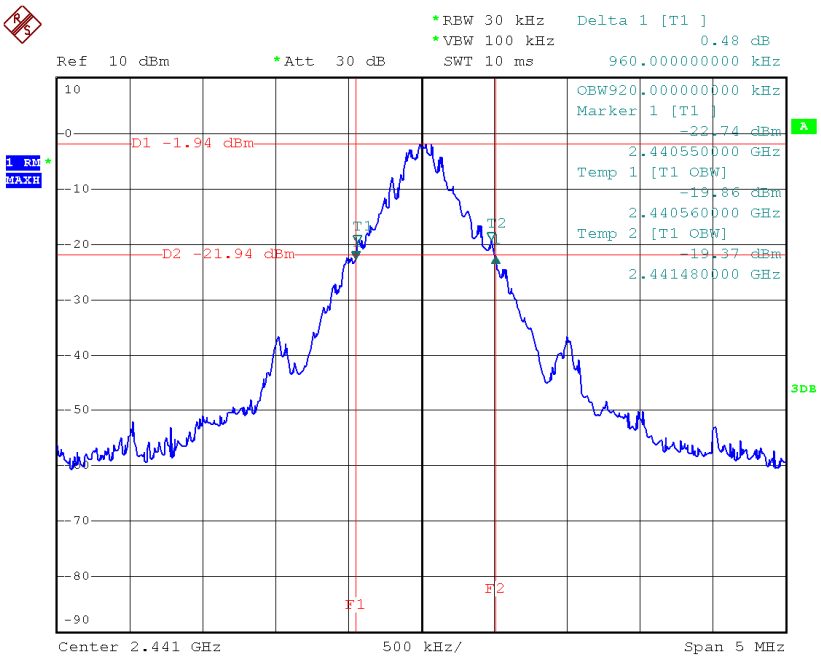
Middle Channel



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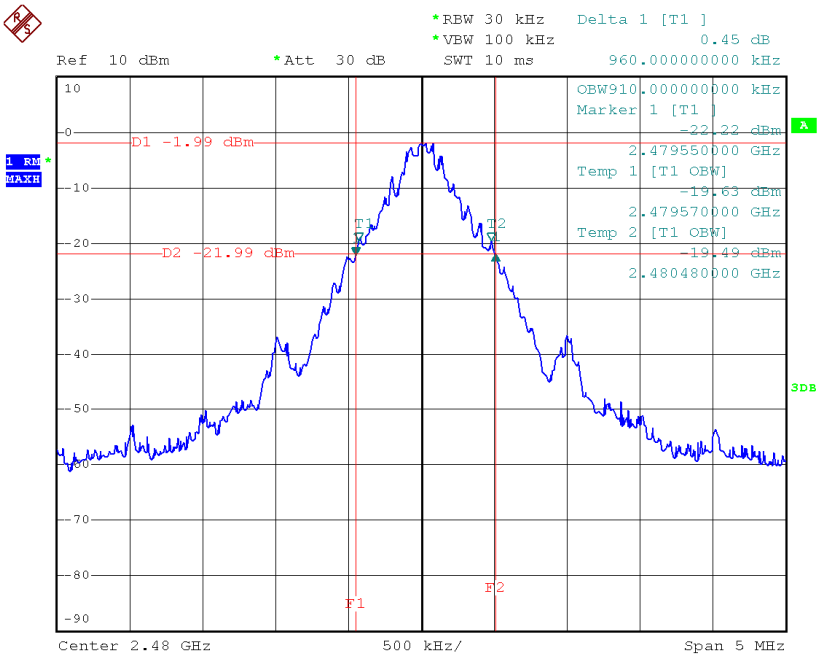
High Channel



5.1.4 Conducted Spurious Emissions measured in 100 kHz Bandwidth

RESULT: **Passed**

Date of testing	:	2011-06-09 to 2011-06-14
Test standard	:	FCC part 15.247(d) RSS-210 A8.5
Basic standard	:	ANSI C63.4: 2003
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

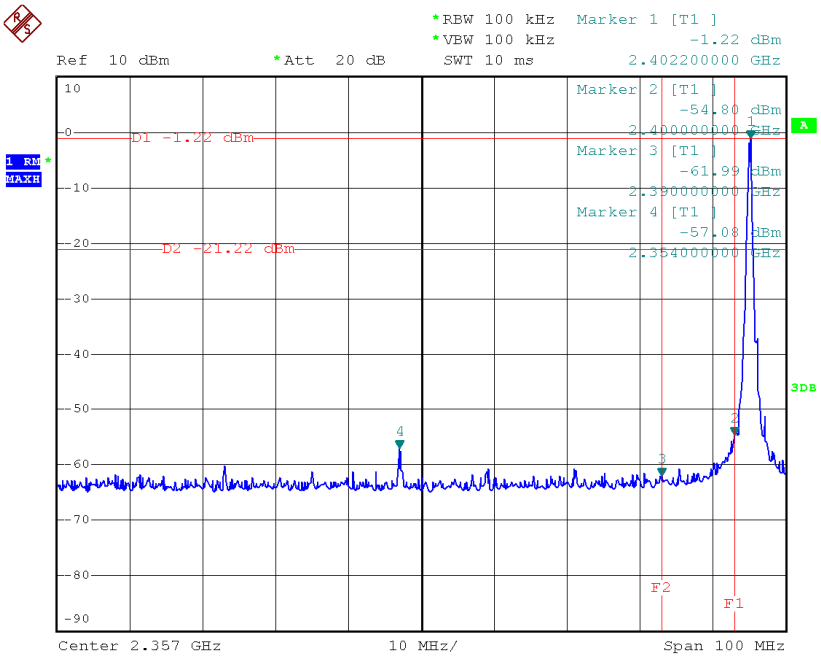
Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test graph, and compliance is achived as well.

Test Graph of 100 kHz Bandwidth of Frequency Band Edge

Low Channel



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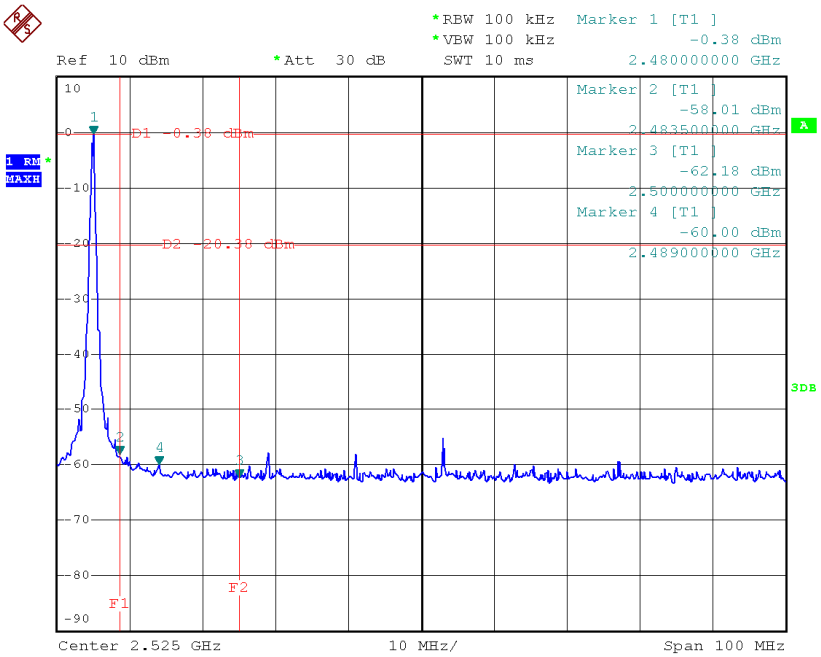
High Channel



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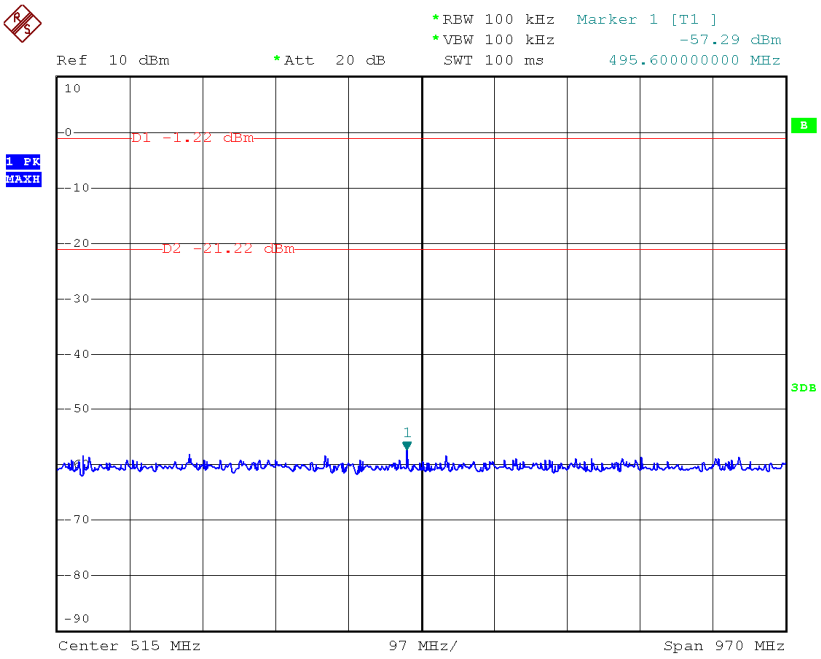
Test Graph of Conducted spurious emissions measured in 100 kHz Bandwidth

Low Channel



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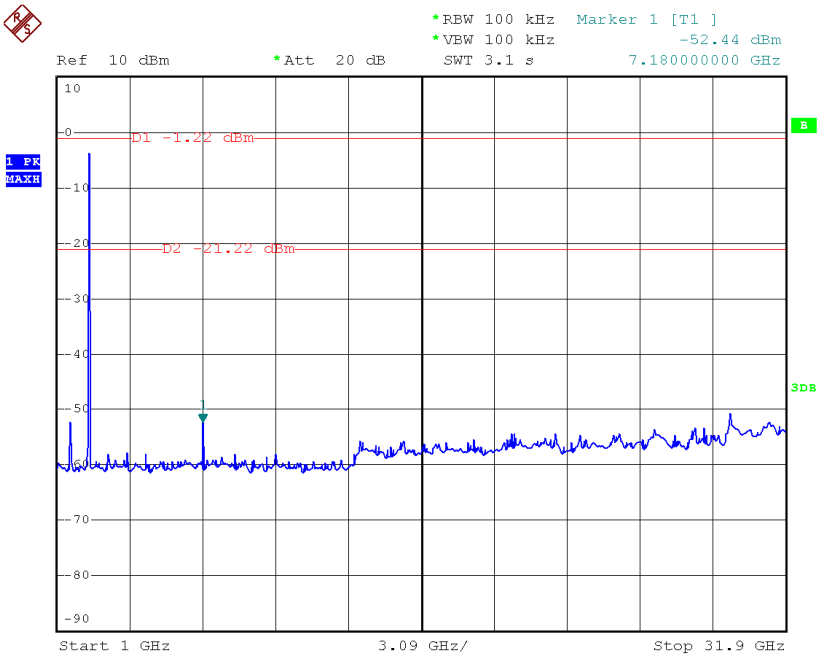

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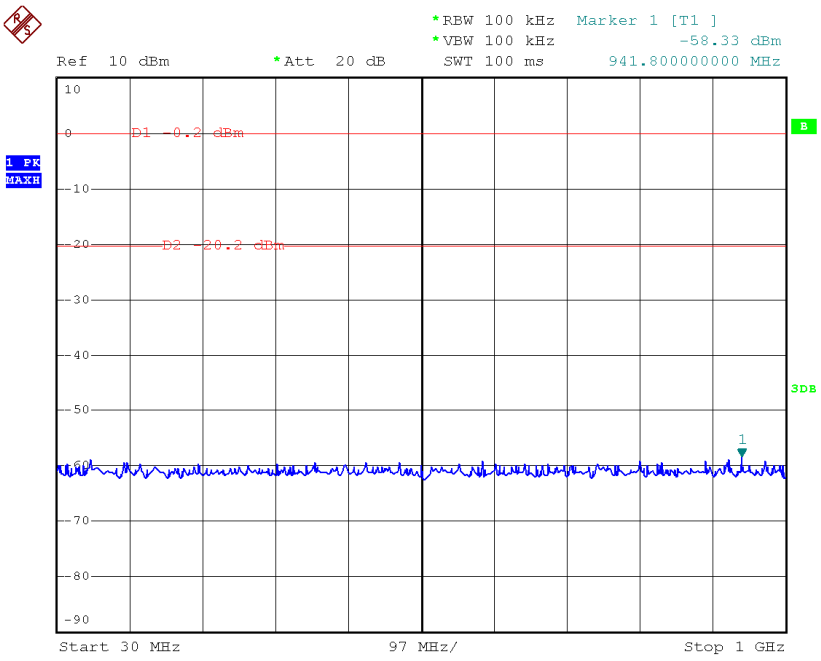
Middle Channel



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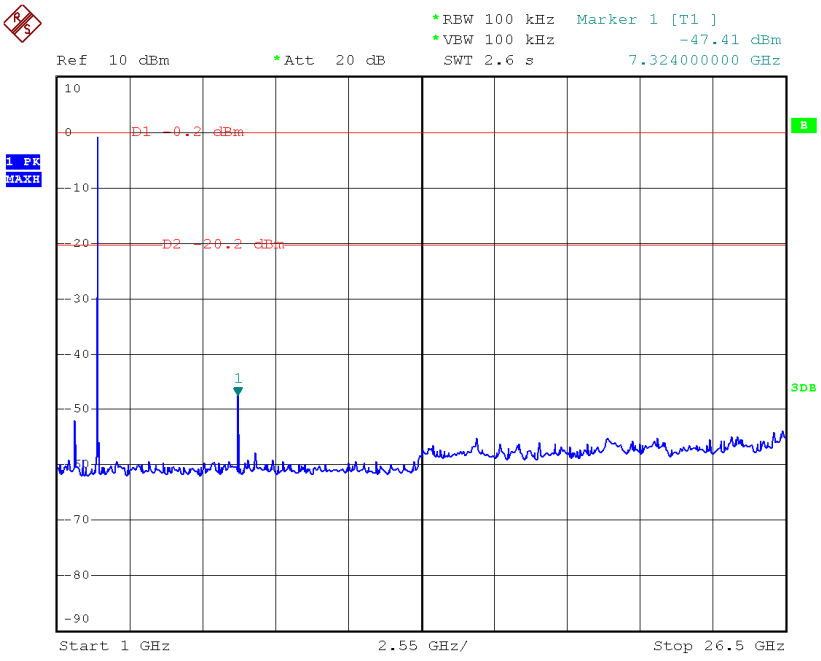

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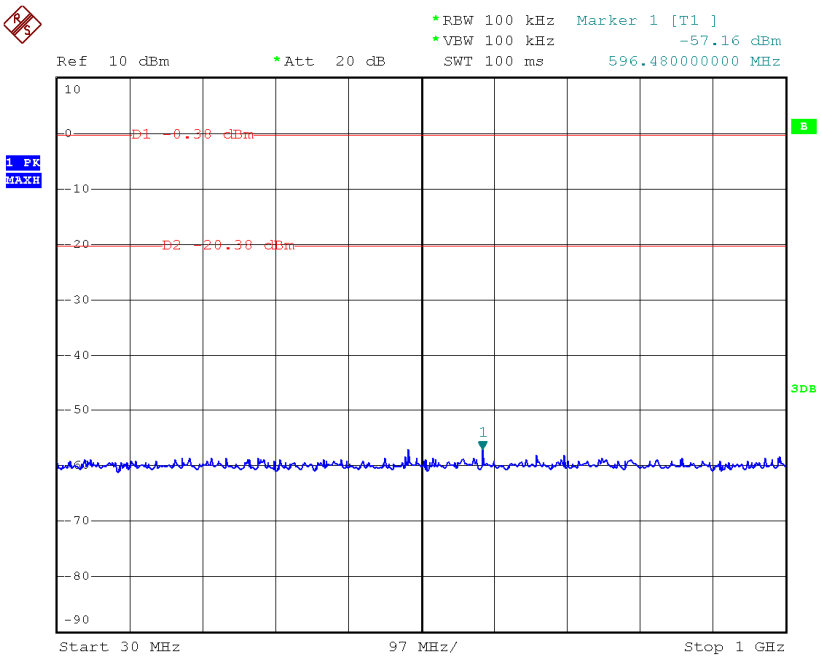
High Channel



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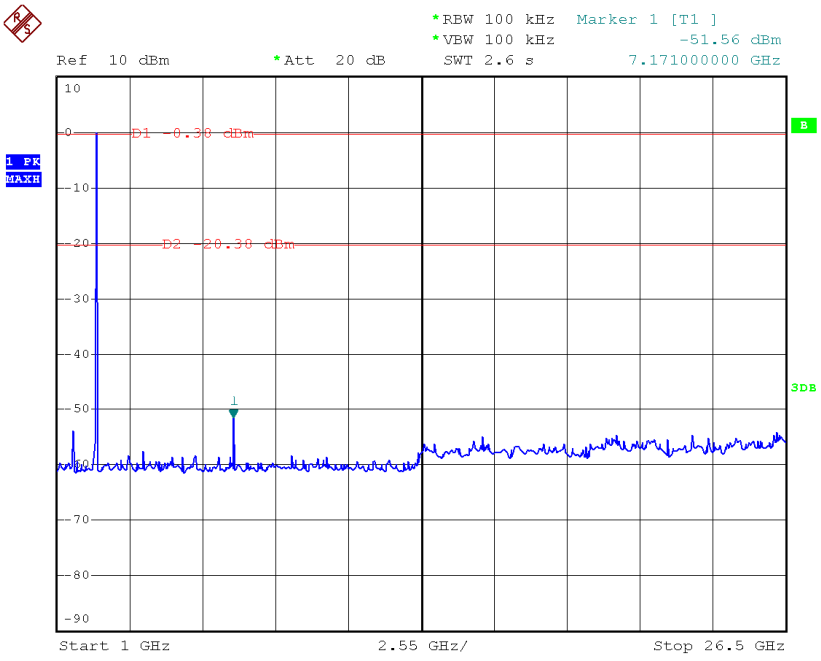

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5.1.5 Spurious Emissions

RESULT: **Passed**

Date of testing	:	2011-06-09 to 2011-06-14
Test standard	:	FCC part 15.247(d) RSS-210 Clause 2.5
Basic standard	:	ANSI C63.4: 2003
Limits	:	Refer to 15.209(a) RSS-210 Clause 2.5
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A, B
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Table 7: Test result of Spurious Emissions

Frequency (MHz)	Read level (dBuV/m)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
0.0135	128.64	24.3	102.36	124.9975495	-22.63	Vertical
0.1253	129.47	20.9952	86.02	105.6452034	-19.62	Vertical
0.214	69.09	20.472	48.618	100.9959494	-52.37	Vertical
0.387	86.67	20.0712	66.5988	95.85000553	-29.25	Vertical
0.3998	72.03	20.04048	67.02	95.56736904	-28.54	Vertical
0.623	79.46	20.1936	50.37	71.7144639	-21.34	Vertical
0.0153	136.79	24.3	100.2	123.9103962	-23.71	Horizontal
0.023	123.87	24.11	99.02	120.3696681	-21.34	Horizontal
0.1365	64.87	20.816	56.66	104.9015718	-48.24	Horizontal
0.354	86.09	20.1504	65.9396	96.62415959	-30.68	Horizontal
0.561	93.64	19.9952	51.1	72.62496761	-21.52	Horizontal
0.599	79.65	20.1168	50.32	72.05568839	-21.73	Horizontal

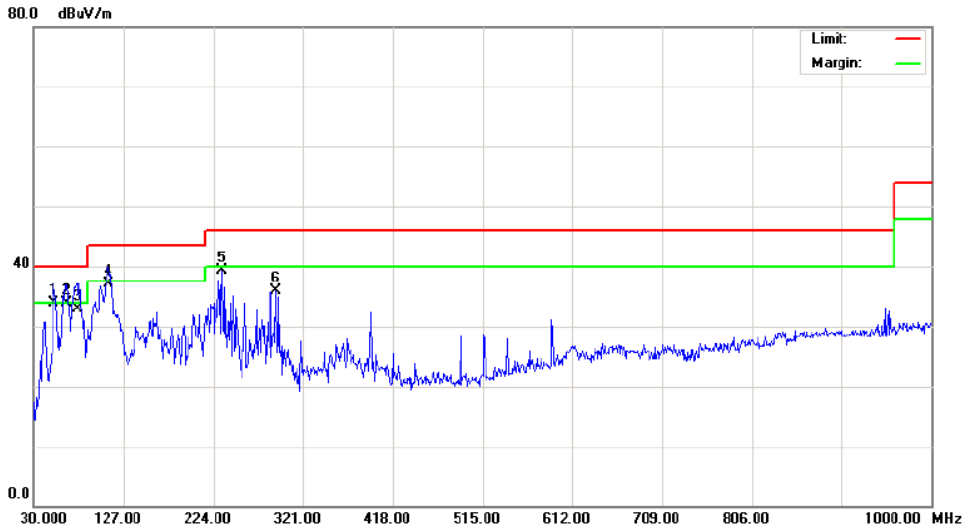
Refer to following test graph for details of spurious emissioins from 30MHz to 26.5GHz

Test Graph of Spurious emissions, Low channel, mode A

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029 Data :#18 Date: 2011-6-14 Time: 15:25:53



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2402

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

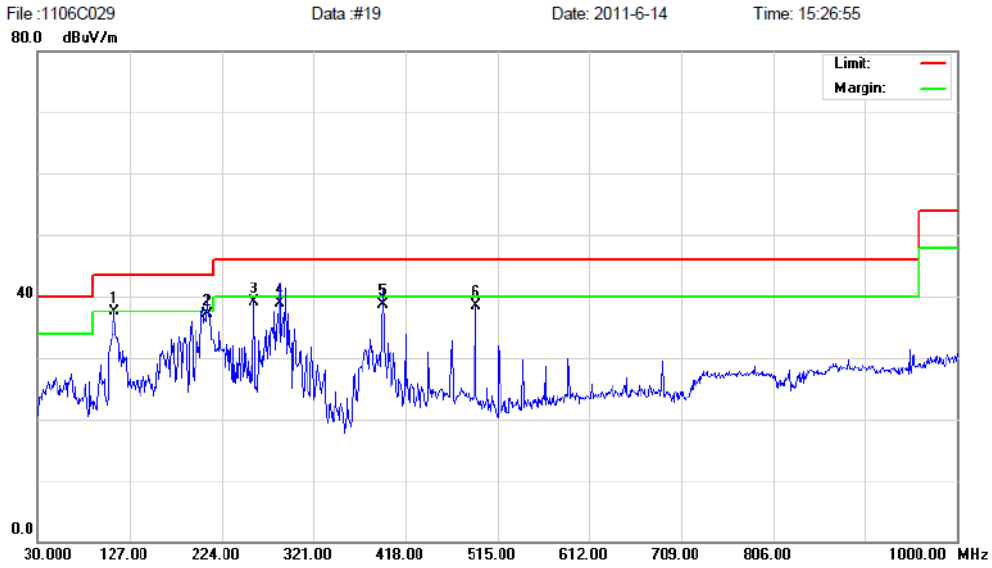
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	51.3400	51.34	-17.46	33.88	40.00	-6.12	QP	
2		65.8900	51.55	-17.73	33.82	40.00	-6.18	QP	
3		76.5600	51.75	-18.88	32.87	40.00	-7.13	QP	
4		110.5100	55.38	-18.36	37.02	43.50	-6.48	QP	
5		233.7000	54.75	-15.45	39.30	46.00	-6.70	peak	
6		291.9000	48.02	-12.06	35.96	46.00	-10.04	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

File :1106C029\Data :#18 *Page: 1* Engineer Signature:

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2402

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

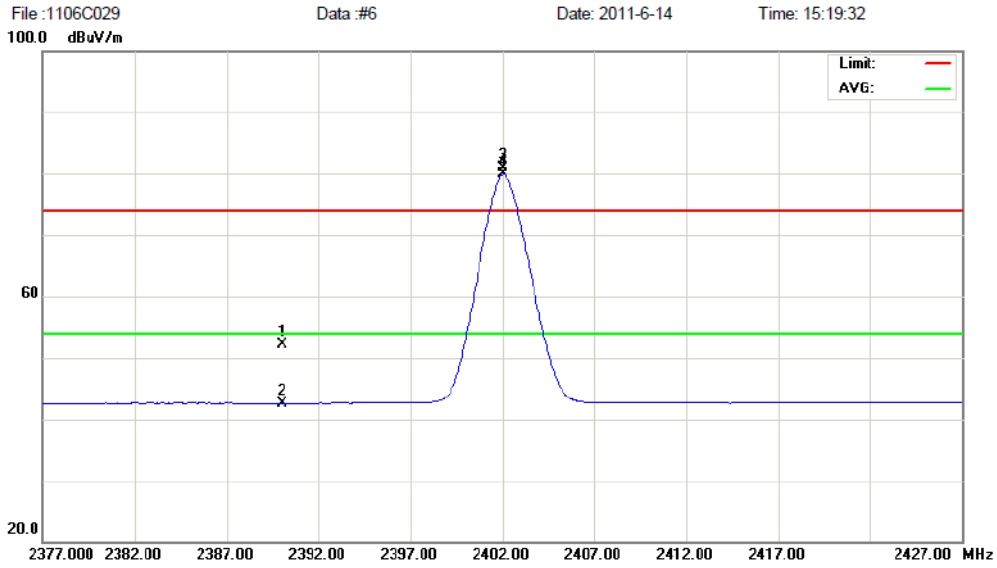
Temperature: 22
Humidity: 45 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	110.5100	55.84	-18.36	37.48	43.50	-6.02	peak	
2		208.4800	53.37	-16.35	37.02	43.50	-6.48	QP	
3		257.9500	53.11	-14.00	39.11	46.00	-6.89	QP	
4		285.1100	51.20	-12.34	38.86	46.00	-7.14	QP	
5		393.7500	47.93	-9.25	38.68	46.00	-7.32	QP	
6		491.7200	45.95	-7.48	38.47	46.00	-7.53	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2402

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

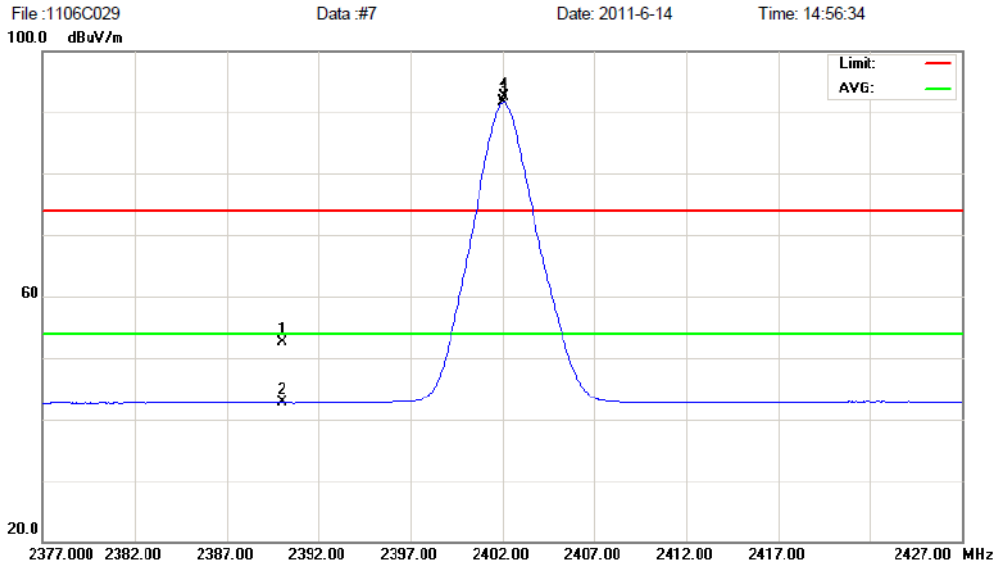
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	20.58	31.54	52.12	74.00	-21.88	peak	
2		2390.000	11.02	31.54	42.56	54.00	-11.44	AVG	
3	X	2402.050	49.32	31.56	80.88	74.00	6.88	peak	
4	*	2402.050	48.40	31.56	79.96	54.00	25.96	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

Engineer Signature:

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2402

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	20.96	31.54	52.50	74.00	-21.50	peak	
2		2390.000	11.10	31.54	42.64	54.00	-11.36	AVG	
3	*	2402.050	60.18	31.56	91.74	54.00	37.74	AVG	
4	X	2402.100	60.97	31.56	92.53	74.00	18.53	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

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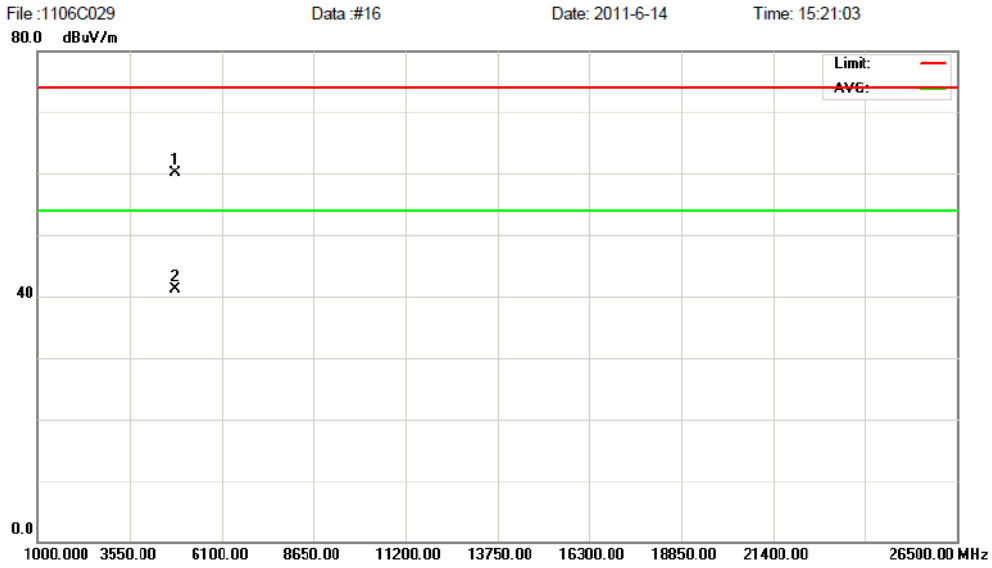
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2402

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4803.900	55.20	4.98	60.18	74.00	-13.82	peak	
2	*	4803.970	36.10	4.98	41.08	54.00	-12.92	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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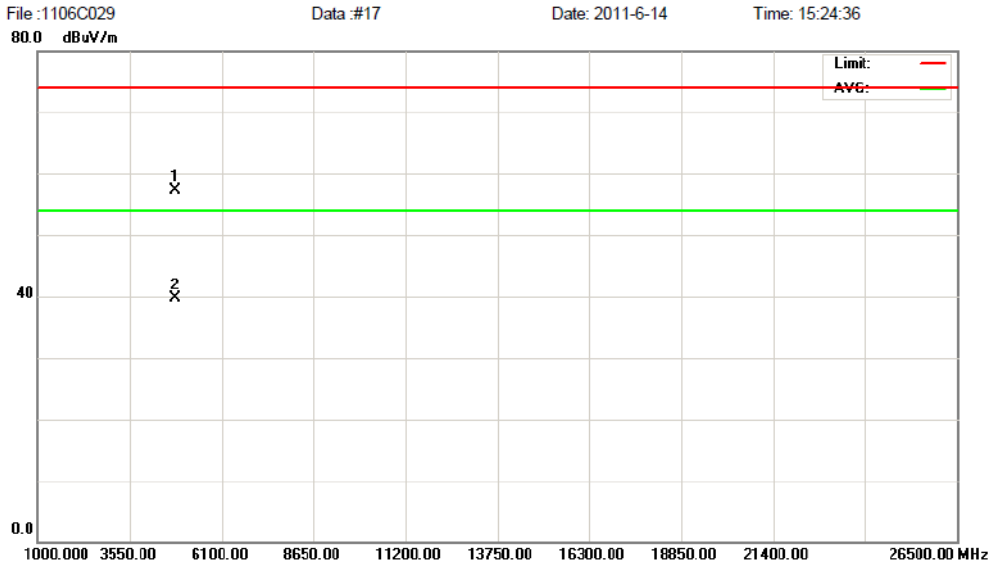
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2402

Polarization: ***Horizontal***
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4803.740	52.30	4.98	57.28	74.00	-16.72	peak	
2	*	4803.990	34.73	4.98	39.71	54.00	-14.29	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

Test Graph of Spurious emissions, Middle channel, mode A

Neutron Engineering Inc.
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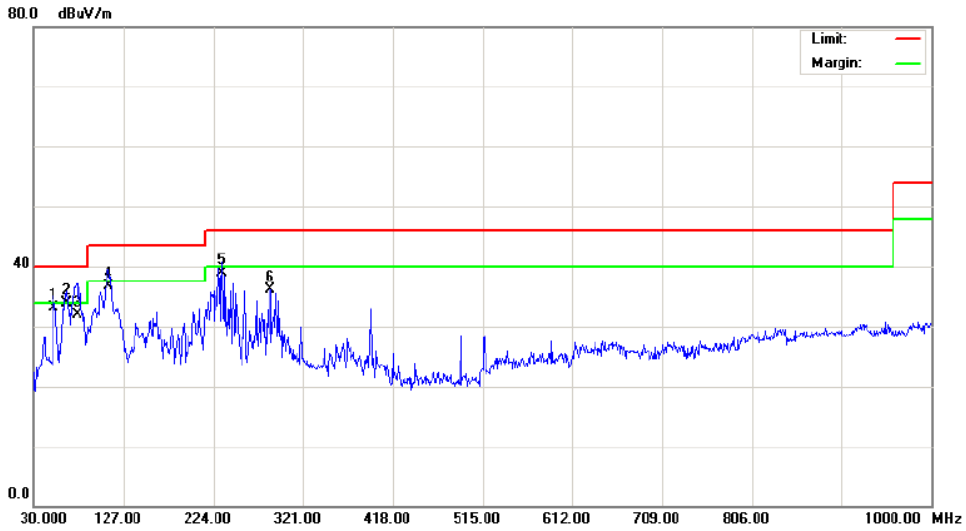
Radiated Emission Measurement

File :1106C029 Data :#20 Date: 2011-6-14 Time: 15:28:12



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2441

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

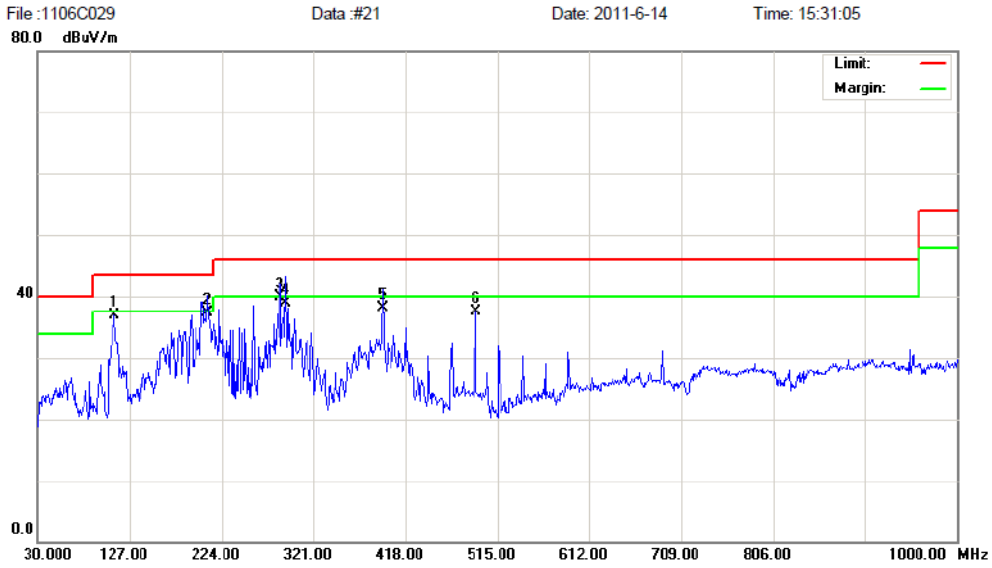
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		51.3400	50.51	-17.46	33.05	40.00	-6.95	QP	
2	*	65.8900	51.59	-17.73	33.86	40.00	-6.14	QP	
3		76.5600	50.75	-18.88	31.87	40.00	-8.13	QP	
4		110.5100	54.97	-18.36	36.61	43.50	-6.89	QP	
5		233.7000	54.32	-15.45	38.87	46.00	-7.13	QP	
6		285.1100	48.54	-12.34	36.20	46.00	-9.80	peak	

*:Maximum data x:Over limit !:over margin ⟨Reference Only

Engineer Signature:

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2441

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		110.5100	55.34	-18.36	36.98	43.50	-6.52	peak	
2		208.4800	53.60	-16.35	37.25	43.50	-6.25	QP	
3	*	285.1100	52.21	-12.34	39.87	46.00	-6.13	QP	
4		291.9000	51.05	-12.06	38.99	46.00	-7.01	QP	
5		393.7500	47.31	-9.25	38.06	46.00	-7.94	QP	
6		491.7200	44.95	-7.48	37.47	46.00	-8.53	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

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Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
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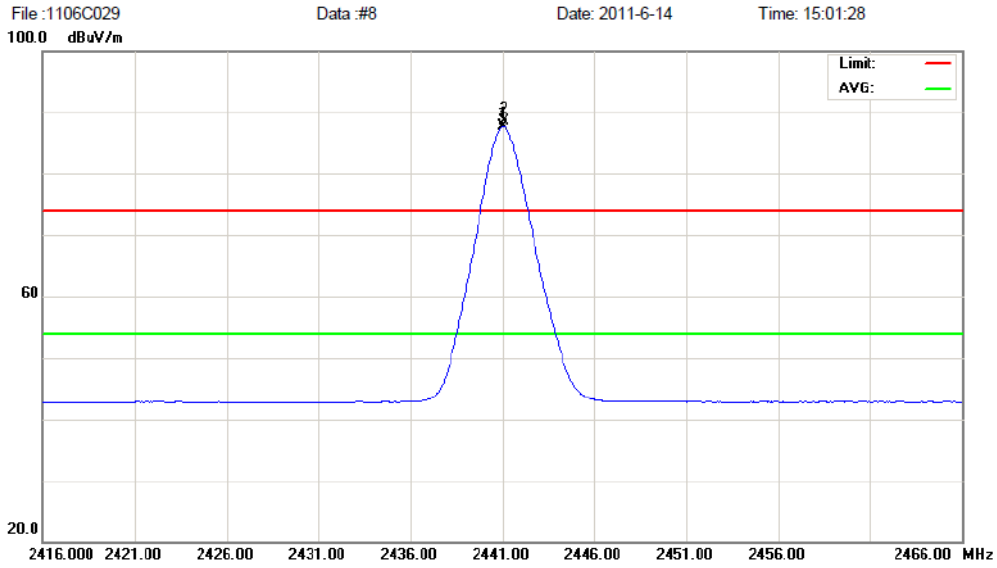
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2441

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2441.050	56.15	31.63	87.78	54.00	33.78	AVG	
2	X	2441.100	56.91	31.63	88.54	74.00	14.54	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

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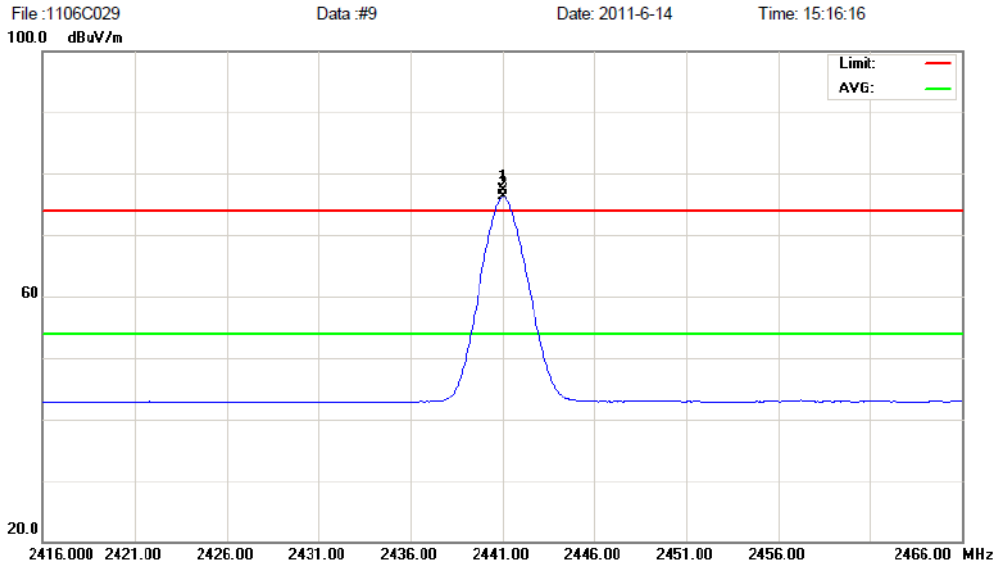
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2441

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2441.050	45.65	31.63	77.28	74.00	3.28	peak	
2	*	2441.050	44.60	31.63	76.23	54.00	22.23	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
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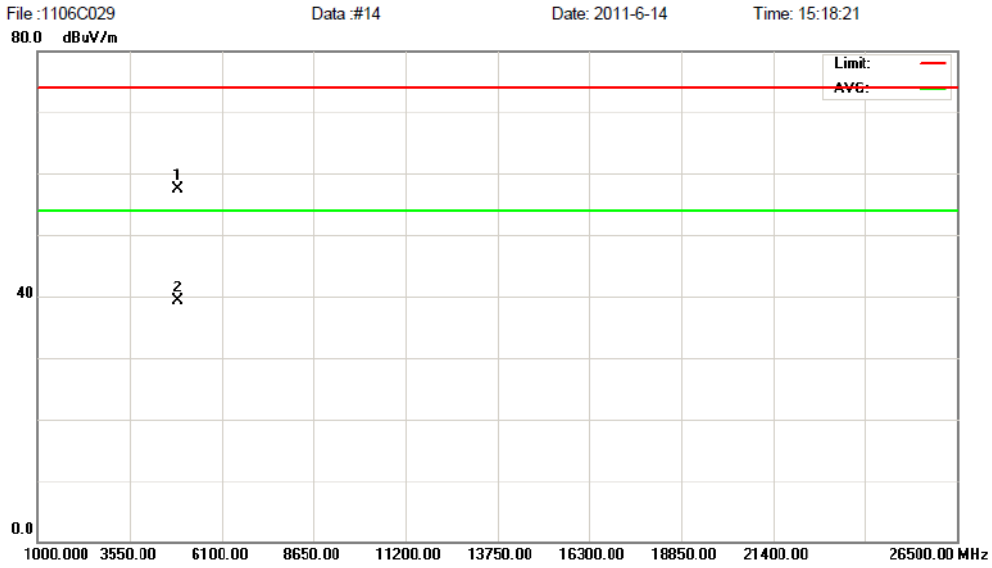
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2441

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4882.360	52.30	5.21	57.51	74.00	-16.49	peak	
2	*	4882.360	34.02	5.21	39.23	54.00	-14.77	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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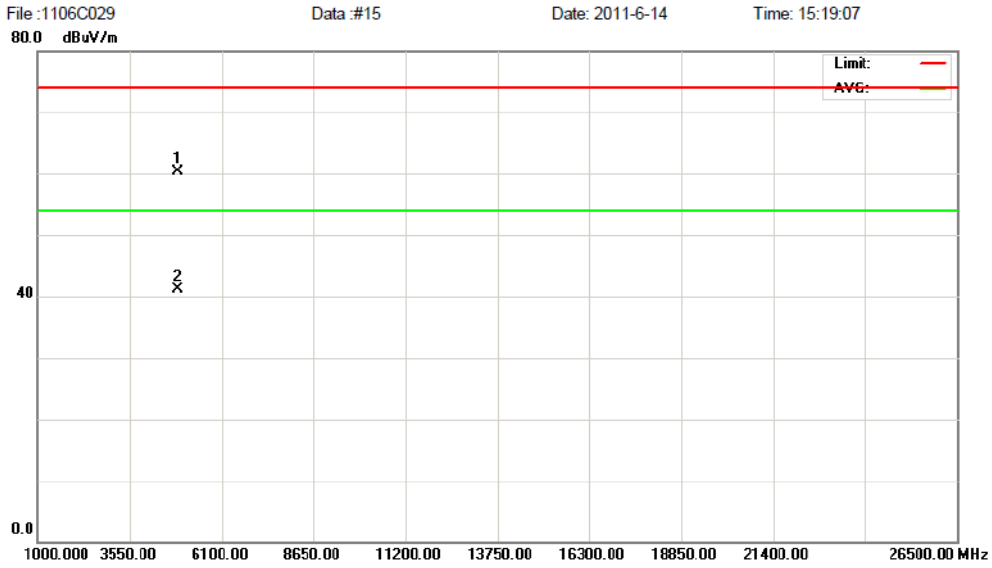
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2441

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4882.310	55.02	5.21	60.23	74.00	-13.77	peak	
2	*	4882.310	35.98	5.21	41.19	54.00	-12.81	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

Test Graph of Spurious emissions, High channel, mode A

Neutron Engineering Inc.
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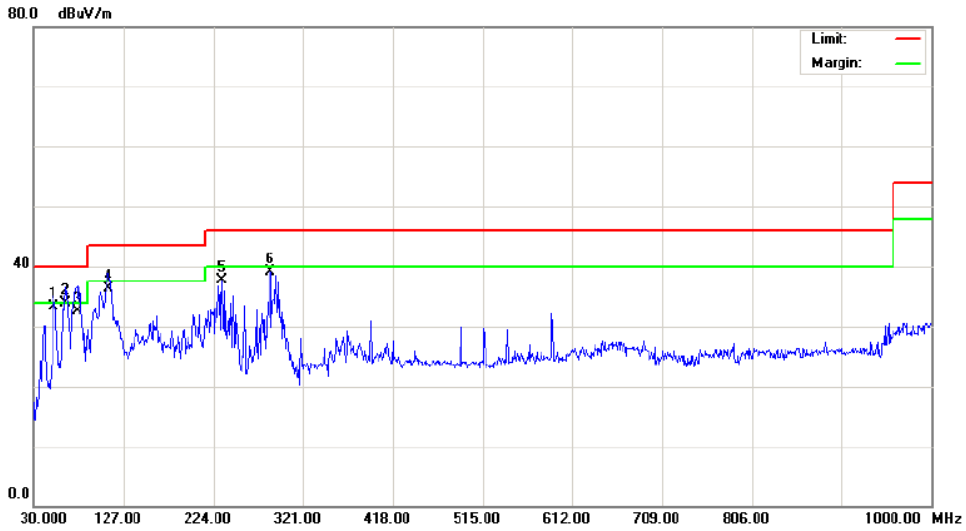
Radiated Emission Measurement

File :1106C029 Data :#22 Date: 2011-6-14 Time: 15:33:50



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2480

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		51.3400	50.70	-17.46	33.24	40.00	-6.76	QP	
2	*	63.9500	51.45	-17.58	33.87	40.00	-6.13	QP	
3		76.5600	51.46	-18.88	32.58	40.00	-7.42	QP	
4		110.5100	54.64	-18.36	36.28	43.50	-7.22	QP	
5		233.7000	53.25	-15.45	37.80	46.00	-8.20	peak	
6		285.1100	51.54	-12.34	39.20	46.00	-6.80	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

Engineer Signature:

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
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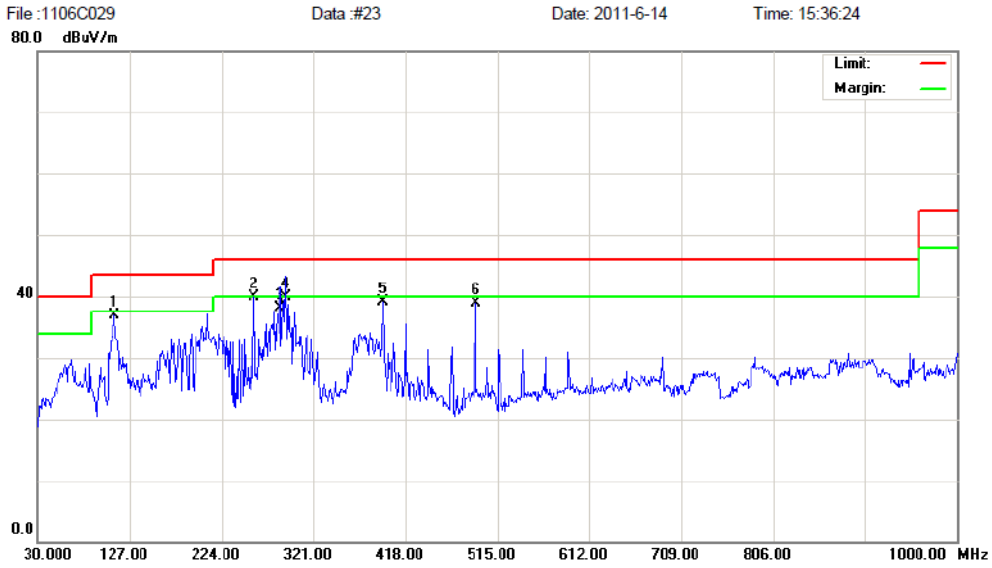
Radiated Emission Measurement



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2480

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		110.5100	55.34	-18.36	36.98	43.50	-6.52	peak	
2	*	257.9500	53.92	-14.00	39.92	46.00	-6.08	peak	
3		285.1100	50.40	-12.34	38.06	46.00	-7.94	QP	
4		291.9000	51.93	-12.06	39.87	46.00	-6.13	QP	
5		393.7500	48.30	-9.25	39.05	46.00	-6.95	peak	
6		491.7200	46.45	-7.48	38.97	46.00	-7.03	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

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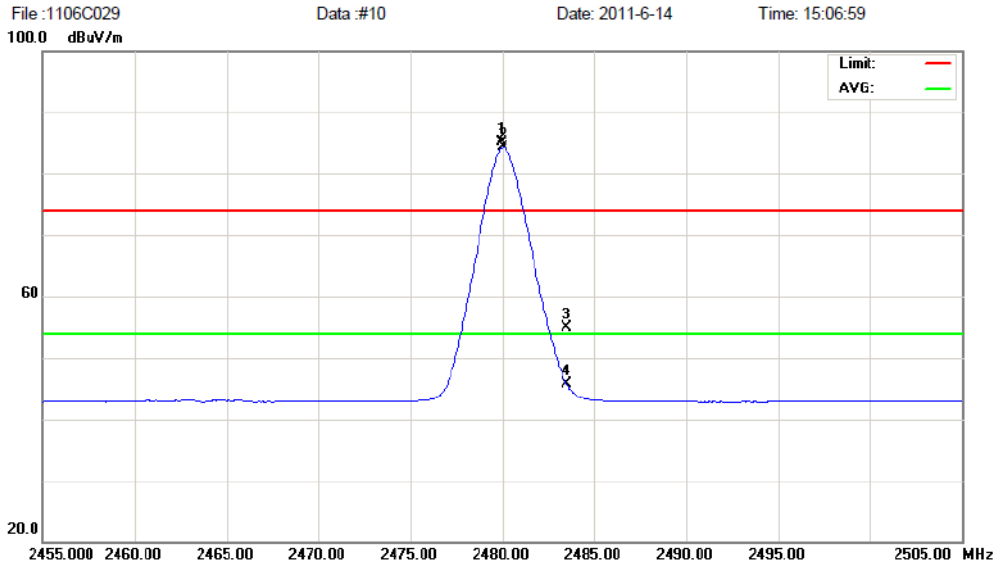
Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2480

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2479.950	53.37	31.69	85.06	74.00	11.06	peak	
2	*	2480.050	52.62	31.69	84.31	54.00	30.31	AVG	
3		2483.500	23.30	31.70	55.00	74.00	-19.00	peak	
4		2483.500	13.98	31.70	45.68	54.00	-8.32	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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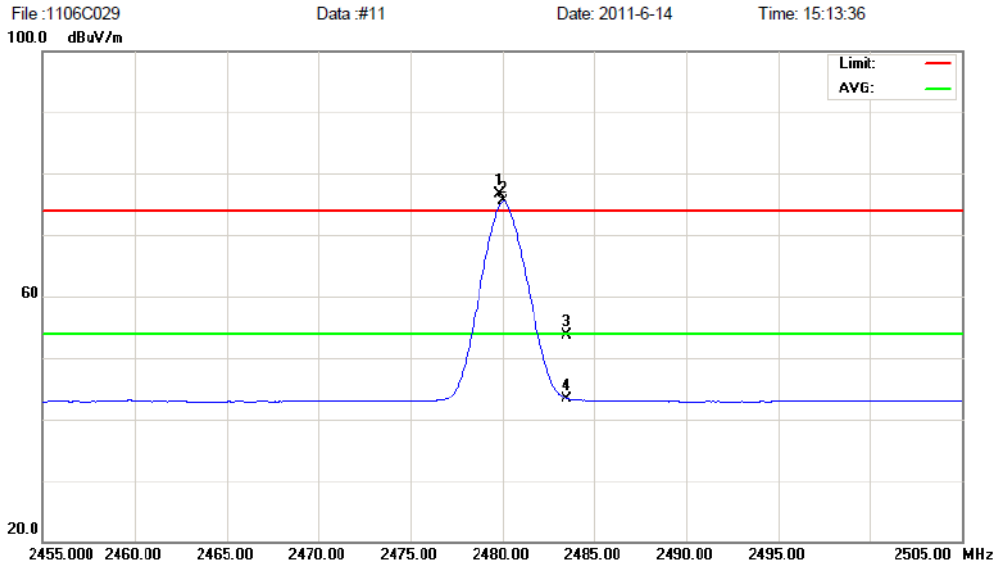
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2480

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2479.850	44.94	31.69	76.63	74.00	2.63	peak	
2	*	2480.050	43.79	31.69	75.48	54.00	21.48	AVG	
3		2483.500	22.00	31.70	53.70	74.00	-20.30	peak	
4		2483.500	11.68	31.70	43.38	54.00	-10.62	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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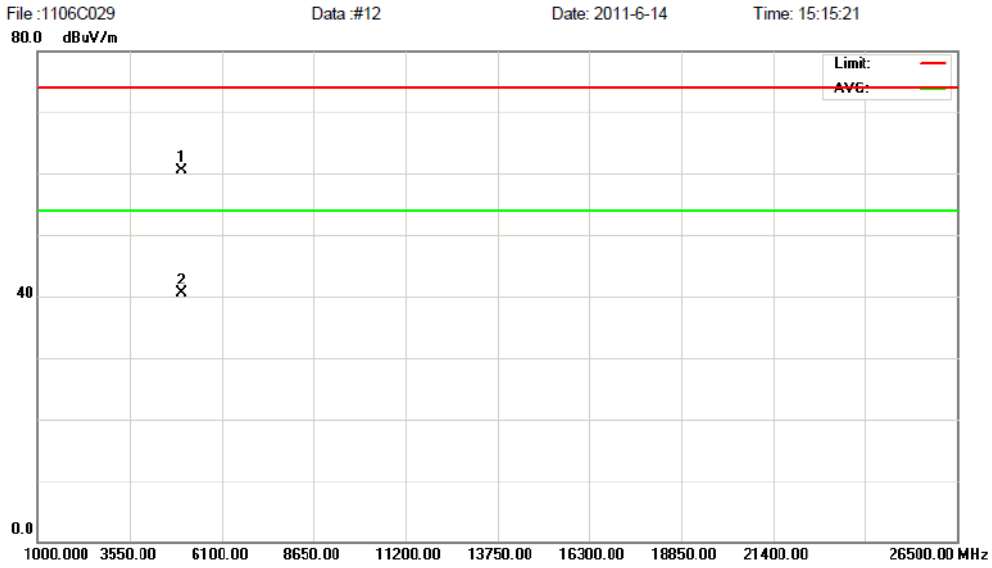
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2480

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4960.010	55.13	5.45	60.58	74.00	-13.42	peak	
2		4960.010	35.02	5.45	40.47	54.00	-13.53	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

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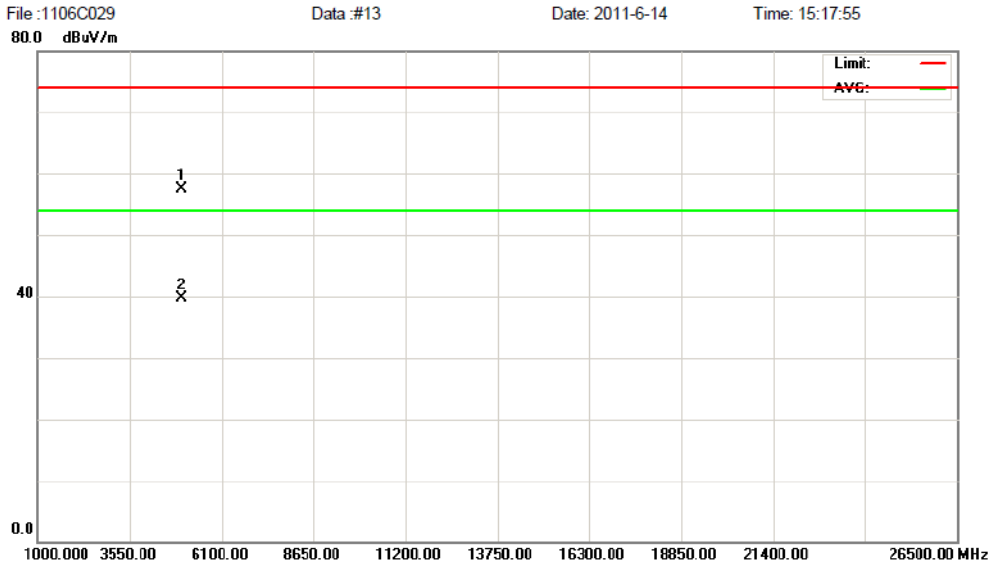
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: TX
Note: TX 2480

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.010	52.02	5.45	57.47	74.00	-16.53	peak	
2	*	4960.010	34.31	5.45	39.76	54.00	-14.24	AVG	

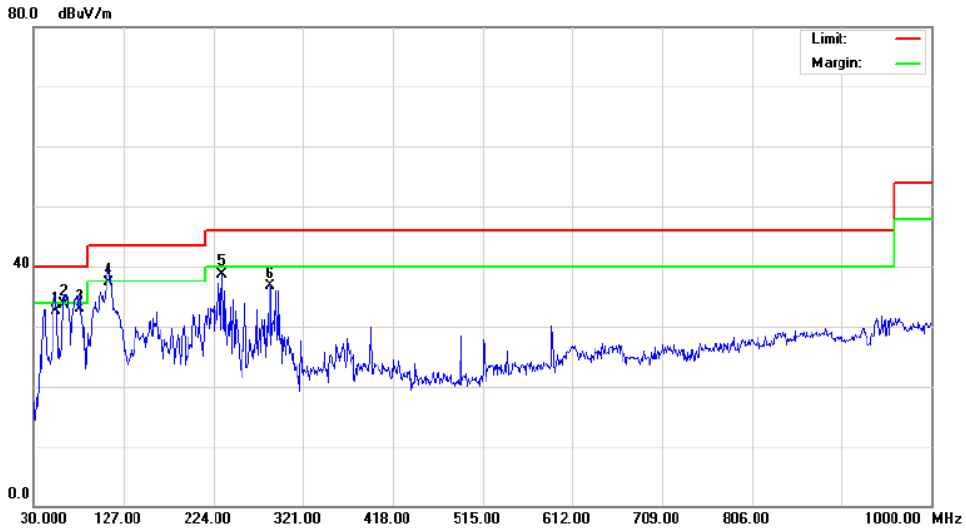
*:Maximum data x:Over limit !:over margin (Reference Only

Test Graph of Spurious emissions, Low channel, mode B

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#7 Date: 2011-6-14 Time: 16:04:36



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2402

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

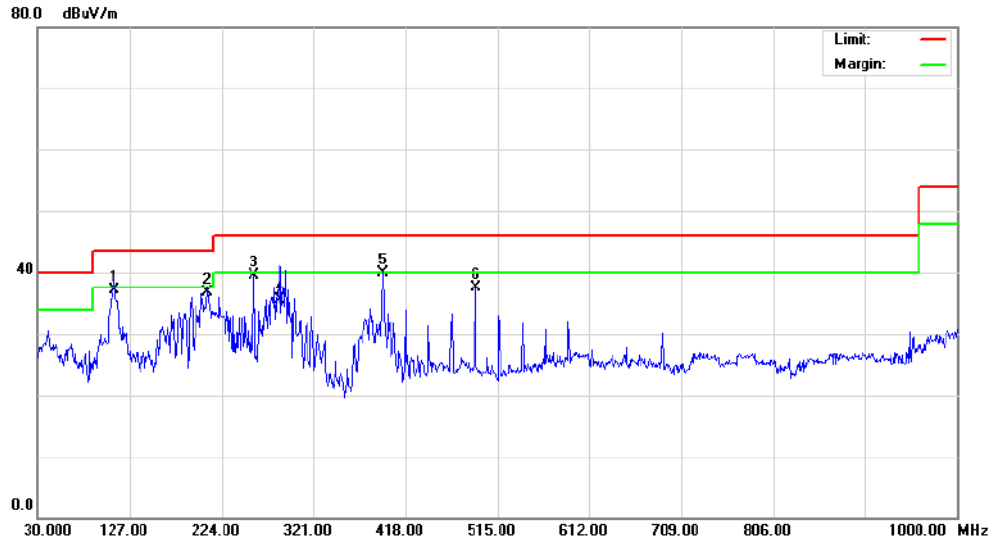
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		53.2800	50.10	-17.52	32.58	40.00	-7.42	QP	
2		62.9800	51.22	-17.55	33.67	40.00	-6.33	QP	
3		79.4700	51.91	-19.04	32.87	40.00	-7.13	QP	
4	*	110.5100	55.60	-18.36	37.24	43.50	-6.26	QP	
5		233.7000	54.25	-15.45	38.80	46.00	-7.20	peak	
6		285.1100	49.04	-12.34	36.70	46.00	-9.30	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#8 Date: 2011-6-14 Time: 16:05:57



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2402

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

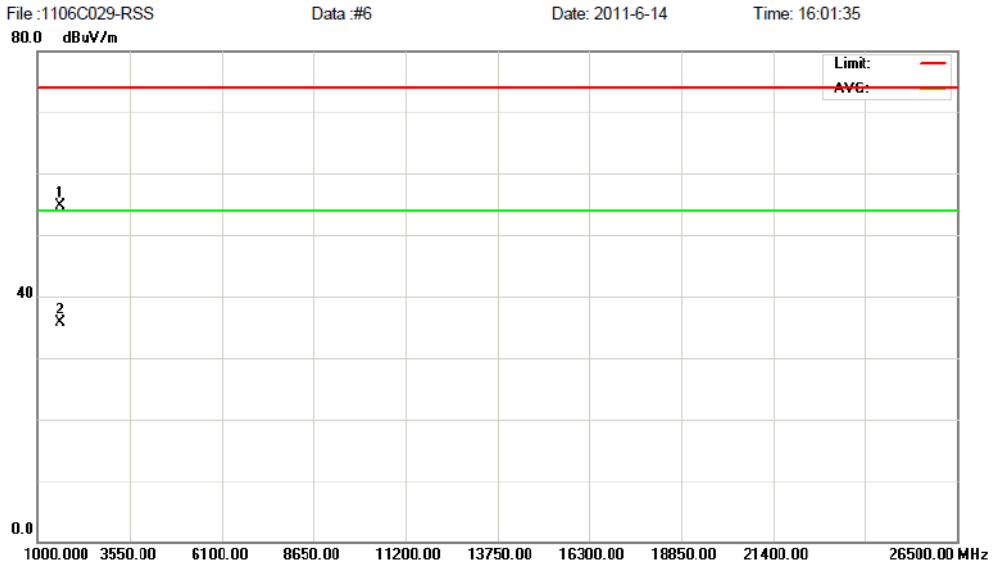
Temperature: 22
Humidity: 45 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		110.5100	55.48	-18.36	37.12	43.50	-6.38	QP	
2		208.4800	53.03	-16.35	36.68	43.50	-6.82	QP	
3		257.9500	53.42	-14.00	39.42	46.00	-6.58	peak	
4		285.1100	47.87	-12.34	35.53	46.00	-10.47	QP	
5	*	393.7500	49.12	-9.25	39.87	46.00	-6.13	QP	
6		491.7200	44.95	-7.48	37.47	46.00	-8.53	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2402

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

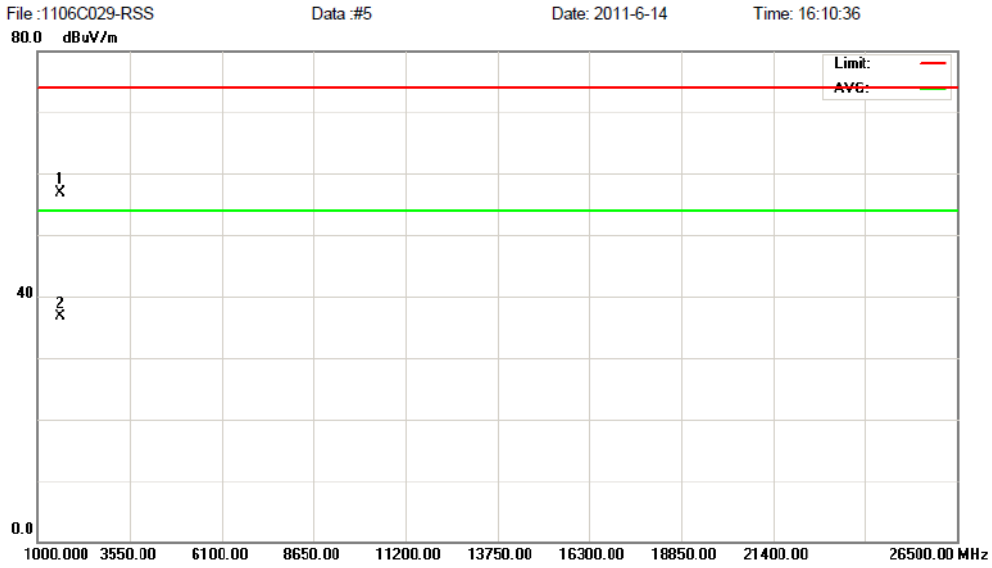
Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1602.010	60.12	-5.41	54.71	74.00	-19.29	peak	
2	*	1602.010	41.02	-5.41	35.61	54.00	-18.39	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2402

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1602.010	62.35	-5.41	56.94	74.00	-17.06	peak	
2		1602.010	42.02	-5.41	36.61	54.00	-17.39	AVG	

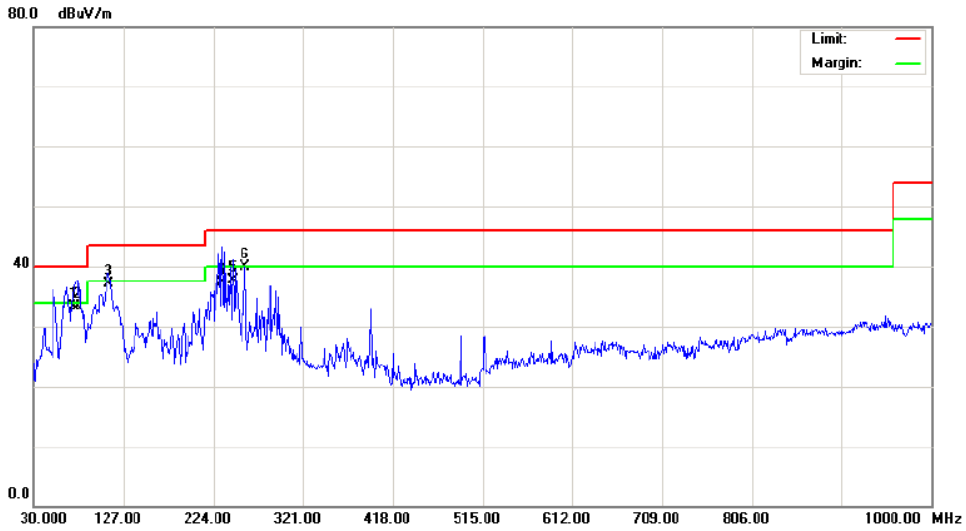
*:Maximum data x:Over limit !:over margin (Reference Only

Test Graph of Spurious emissions, Middle channel, mode B

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#9 Date: 2011-6-14 Time: 16:07:21



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2441

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

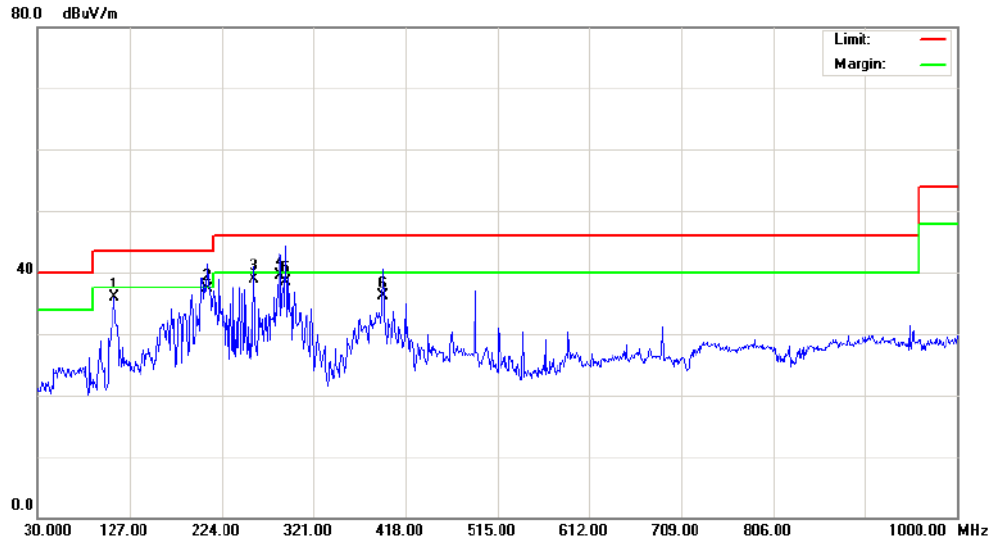
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		73.6500	51.92	-18.68	33.24	40.00	-6.76	QP	
2		76.5600	52.12	-18.88	33.24	40.00	-6.76	QP	
3		110.5100	55.48	-18.36	37.12	43.50	-6.38	QP	
4		233.7000	52.77	-15.45	37.32	46.00	-8.68	QP	
5		245.3400	52.60	-14.85	37.75	46.00	-8.25	QP	
6	*	257.9500	53.93	-14.00	39.93	46.00	-6.07	peak	

*:Maximum data x:Over limit !:over margin 〈Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#10 Date: 2011-6-14 Time: 16:12:57



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2441

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

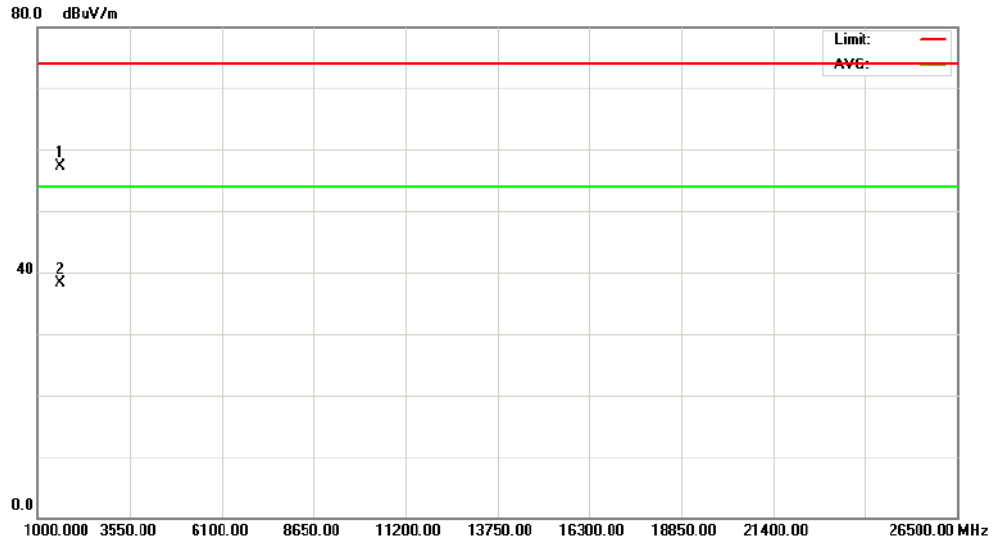
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		110.5100	54.34	-18.36	35.98	43.50	-7.52	peak	
2	*	209.4500	53.57	-16.33	37.24	43.50	-6.26	QP	
3		257.9500	52.89	-14.00	38.89	46.00	-7.11	QP	
4		285.1100	51.85	-12.34	39.51	46.00	-6.49	QP	
5		291.9000	50.63	-12.06	38.57	46.00	-7.43	QP	
6		393.7500	45.27	-9.25	36.02	46.00	-9.98	QP	

*:Maximum data x:Over limit !:over margin (Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#4 Date: 2011-6-14 Time: 16:08:23



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2441

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1627.360	62.60	-5.22	57.38	74.00	-16.62	peak	
2	*	1627.360	43.57	-5.22	38.35	54.00	-15.65	AVG	

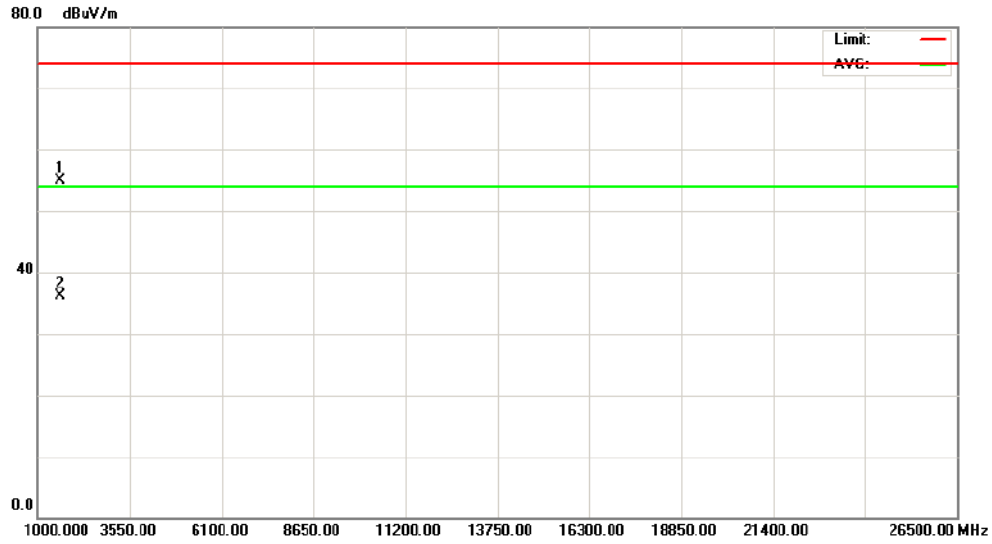
*:Maximum data x:Over limit !:over margin (Reference Only

Engineer Signature:

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#3 Date: 2011-6-14 Time: 16:06:13



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2441

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1627.360	60.12	-5.22	54.90	74.00	-19.10	peak	
2	*	1627.360	41.30	-5.22	36.08	54.00	-17.92	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

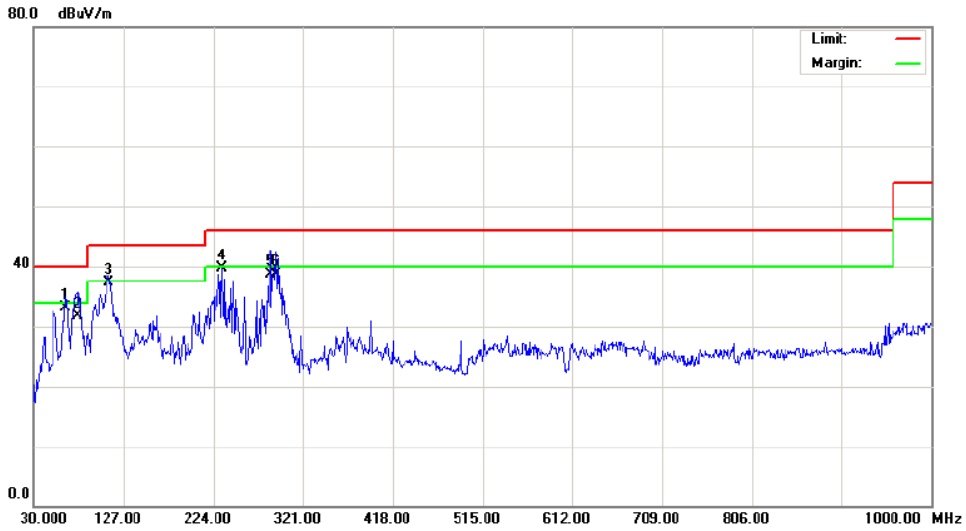
Engineer Signature:

Test Graph of Spurious emissions, High channel, mode B

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#11 Date: 2011-6-14 Time: 16:15:25



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2480

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

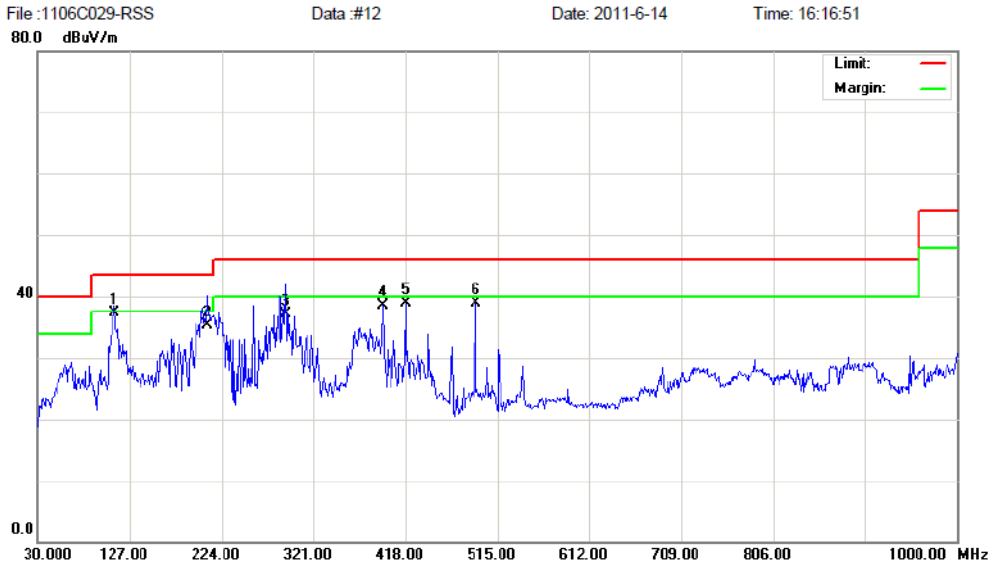
Temperature: 22
Humidity: 45 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		63.9500	50.75	-17.58	33.17	40.00	-6.83	QP	
2		76.5600	50.68	-18.88	31.80	40.00	-8.20	QP	
3		110.5100	55.60	-18.36	37.24	43.50	-6.26	QP	
4	*	233.7000	55.25	-15.45	39.80	46.00	-6.20	peak	
5		285.1100	50.96	-12.34	38.62	46.00	-7.38	QP	
6		291.9000	50.73	-12.06	38.67	46.00	-7.33	QP	

*:Maximum data x:Over limit !:over margin 〈Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2480

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 22
Humidity: 45 %

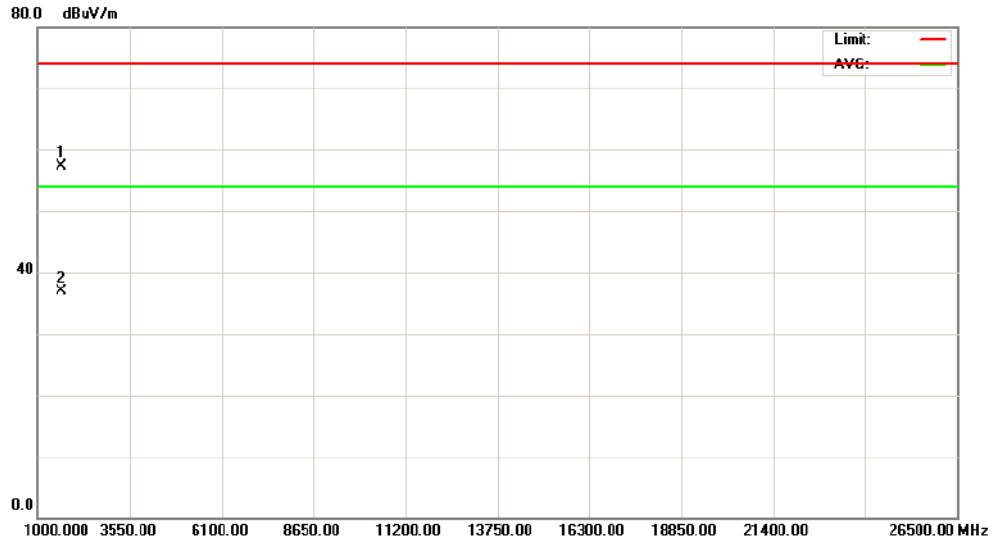
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	110.5100	55.61	-18.36	37.25	43.50	-6.25	QP	
2		208.4800	51.63	-16.35	35.28	43.50	-8.22	QP	
3		291.9000	49.08	-12.06	37.02	46.00	-8.98	QP	
4		393.7500	47.80	-9.25	38.55	46.00	-7.45	peak	
5		418.0000	47.70	-8.70	39.00	46.00	-7.00	peak	
6		491.7200	46.45	-7.48	38.97	46.00	-7.03	peak	

*:Maximum data x:Over limit !:over margin (Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement

File :1106C029-RSS Data :#1 Date: 2011-6-14 Time: 16:02:03



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2480

Polarization: *Vertical*
Power: DC 3.7V
Distance: 3m

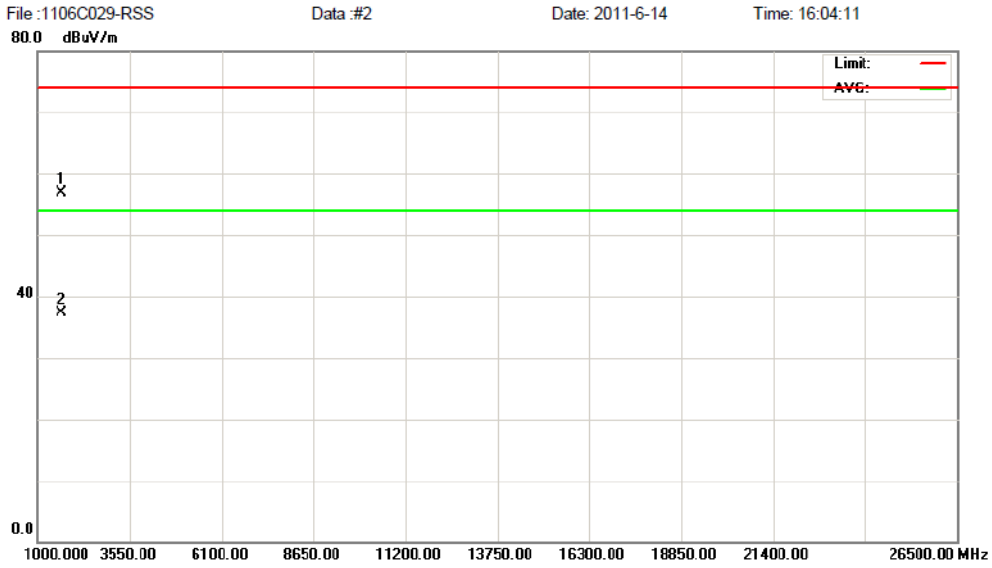
Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1653.020	62.38	-5.02	57.36	74.00	-16.64	peak	
2		1653.020	41.99	-5.02	36.97	54.00	-17.03	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

Neutron Engineering Inc.
No.3.JinShaGang 1st Road,ShiXia,DaLang Town,DongGuan,China.
Tel: (0769)-8318-3000 Fax:(0769)-8319-6000 Post Code: 523792
http://www.btl.org.cn

Radiated Emission Measurement



Site DG-CB03
Limit: FCC_RF_1G-40G_(Peak)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: RX
Note: RX 2480

Polarization: *Horizontal*
Power: DC 3.7V
Distance: 3m

Temperature: 20
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1653.020	61.87	-5.02	56.85	74.00	-17.15	peak	
2	*	1653.020	42.30	-5.02	37.28	54.00	-16.72	AVG	

*:Maximum data x:Over limit !:over margin (Reference Only

5.1.6 Frequency Separation

RESULT: **Passed**

Date of testing	:	2011-06-09 to 2011-06-14
Test standard	:	FCC part 15.247(a)(1) RSS-210 A8.1(b)
Basic standard	:	ANSI C63.4: 2003
Limit	:	≥ 25kHz or two-thirds of 20dB bandwidth, whichever is greater
Kind of test site	:	Shield room

Test setup

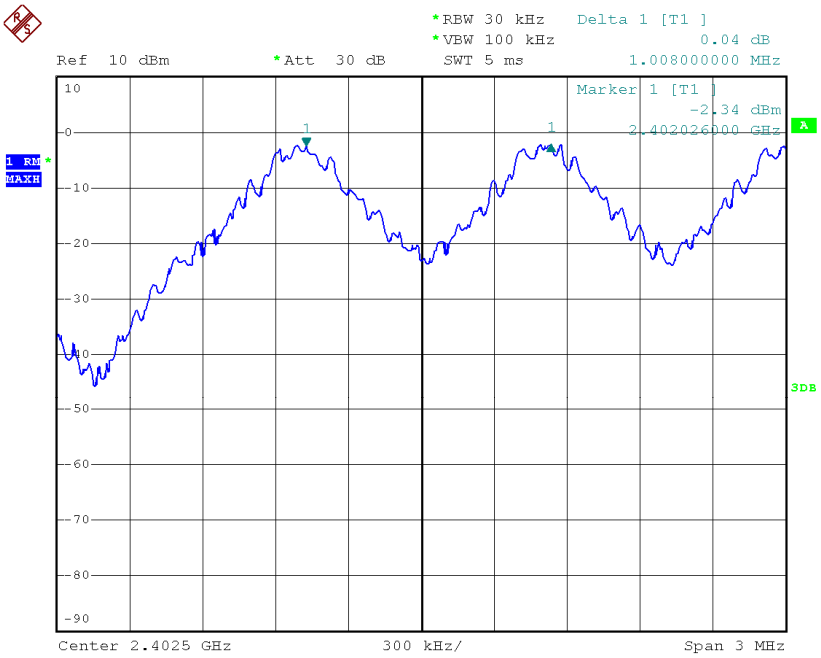
Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Table 8: Test result of Frequency Separation

Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1	≥ 25kHz or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2403			
Mid Channel	2441	1	≥ 25kHz or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2442			
High Channel	2480	1	≥ 25kHz or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2479			

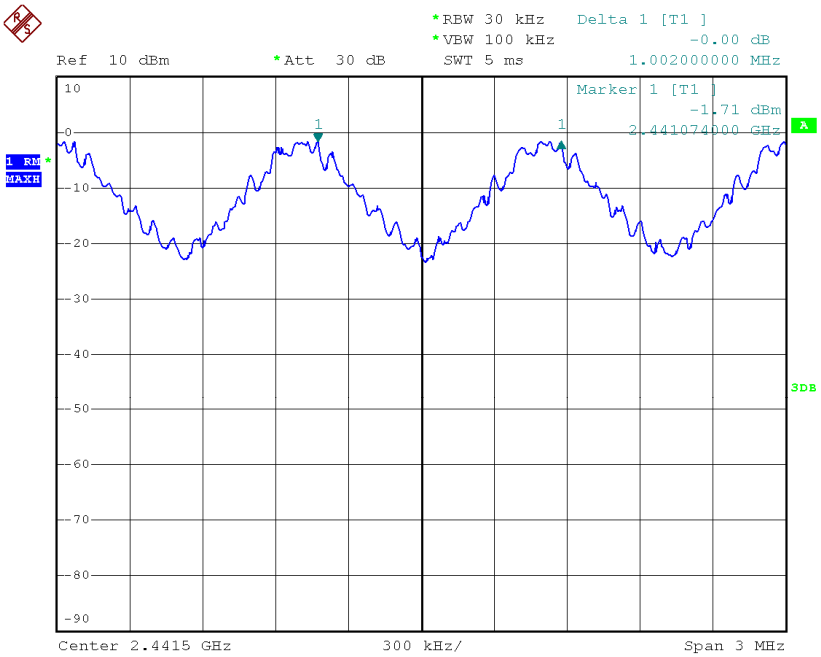
Test Graph of Frequency Separation

Low Channel



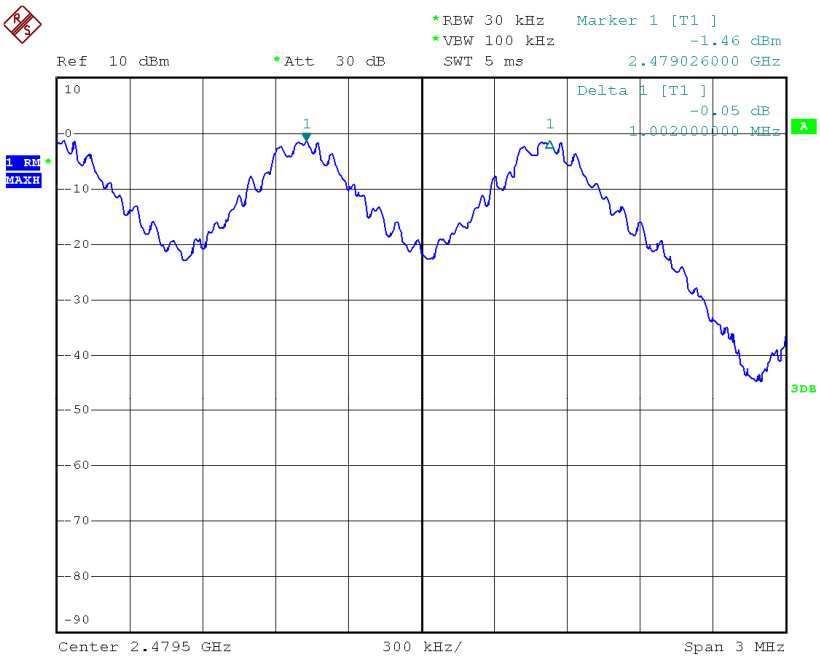
Date: 9.JUN.2011 14:52:51

Middle Channel



Date: 9.JUN.2011 14:53:38

High Channel



Date: 9.JUN.2011 14:54:14

5.1.7 Number of hopping frequency

RESULT: **Passed**

Date of testing	:	2011-06-09 to 2011-06-14
Test standard	:	FCC part 15.247(a)(1)(iii) RSS-210 A8.1(d)
Basic standard	:	ANSI C63.4: 2003
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shield room

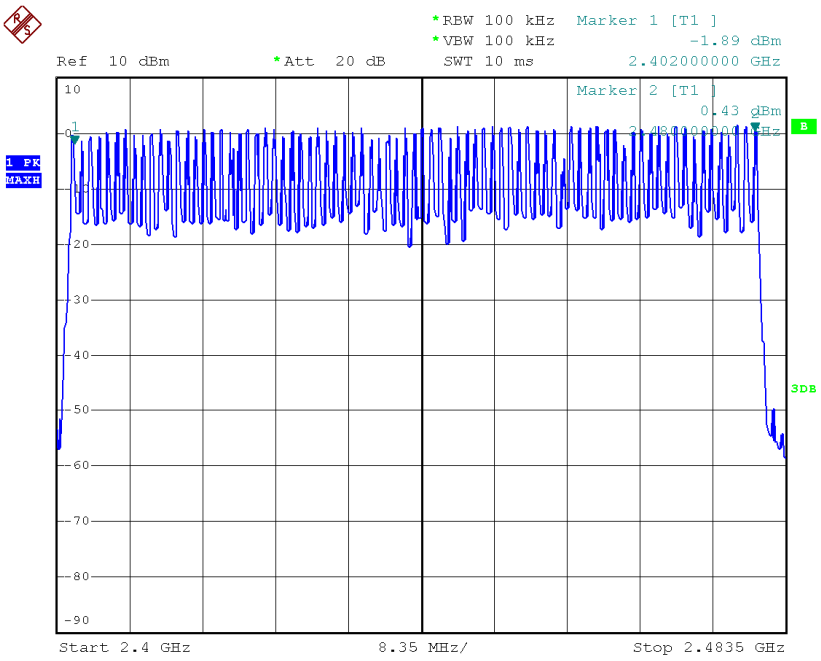
Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Table 9: Test result of Number of hopping frequency

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

Test Graph of Number of hopping frequency



Date: 9.JUN.2011 15:17:57

5.1.8 Time of Occupancy

RESULT: **Passed**

Date of testing	:	2011-06-09 to 2011-06-14
Test standard	:	FCC part 15.247(a)(1)(iii) RSS-210 A8.1(d)
Basic standard	:	ANSI C63.4: 2003
Limits	:	0.4s
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Table 10: Test result of Time of Occupancy

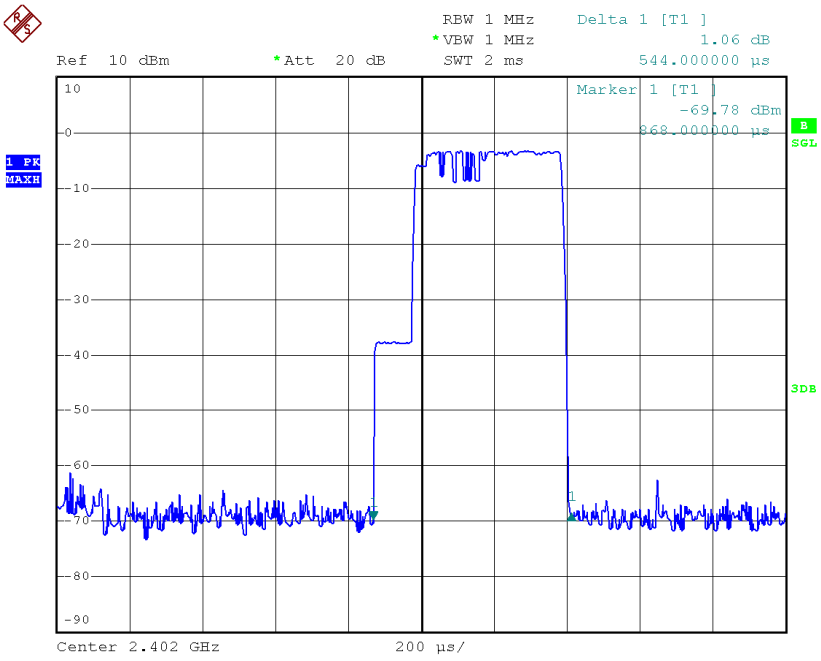
Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	DH1	0.544	0.174	0.4	Pass
Mid Channel	DH1	0.540	0.172	0.4	Pass
High Channel	DH1	0.540	0.172	0.4	Pass

Note:

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

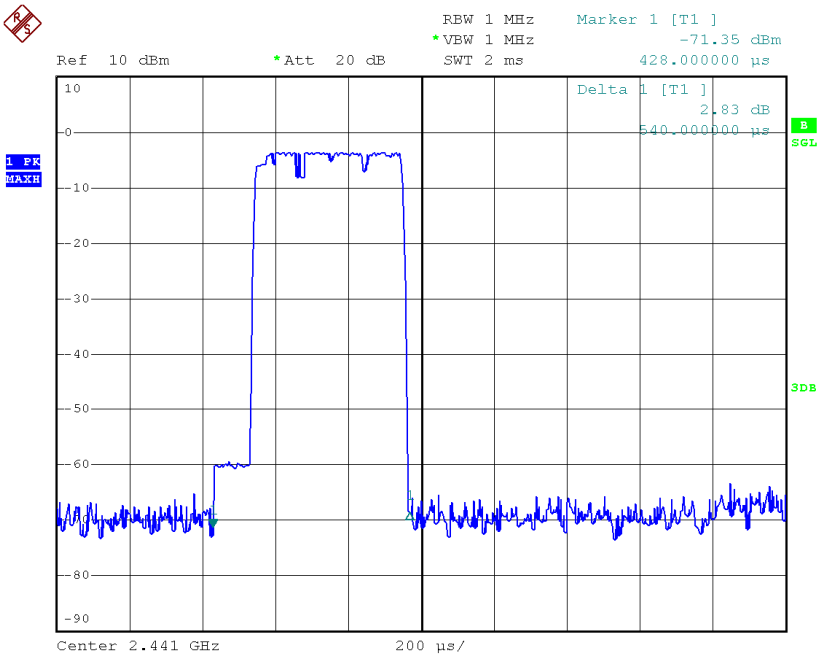
Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

Test Graph of Time of Occupancy
Low Channel



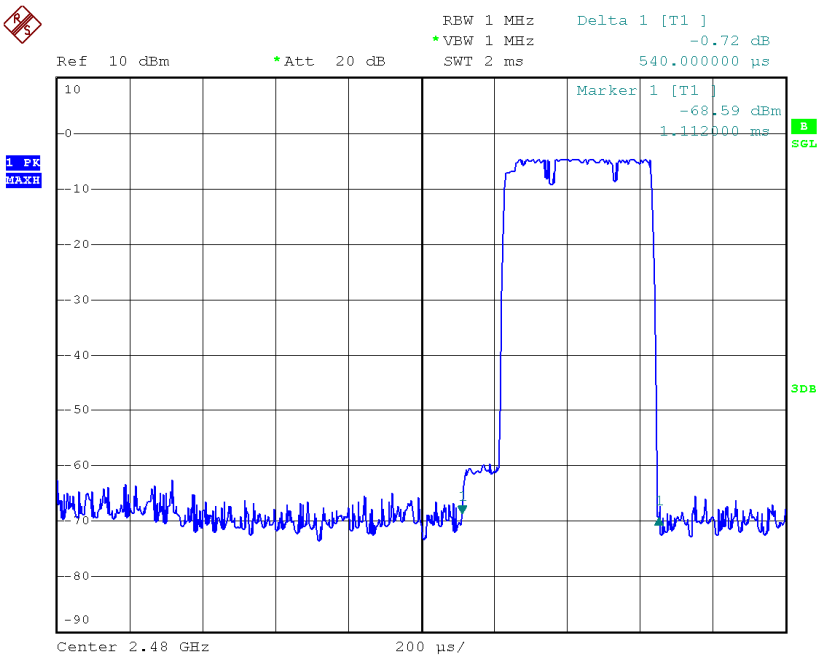
Date: 9.JUN.2011 17:40:11

Middle Channel



Date: 9.JUN.2011 17:40:37

High Channel



Date: 9.JUN.2011 17:41:43

5.1.9 Radiated emissions

RESULT: **Passed**

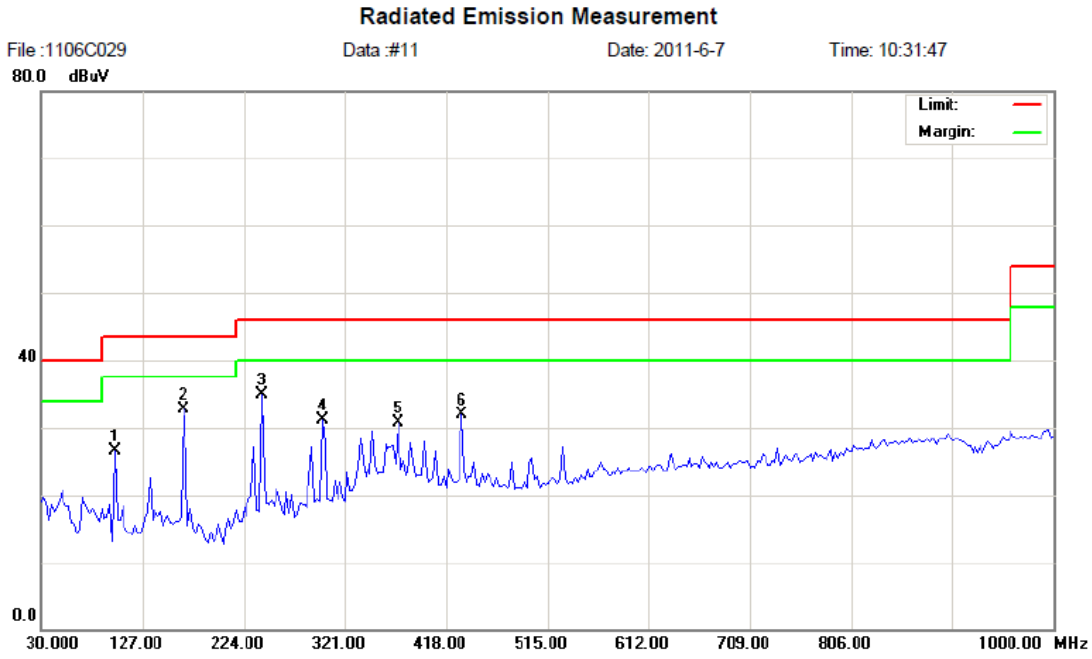
Date of testing	:	2011-06-07 to 2011-06-14
Test standard	:	FCC Part 15.109 RSS-Gen 7.1.4
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	30 – 1000MHz
Limits	:	FCC Part 15.109(a) ICES-003
Kind of test site	:	3m Semi-Anechoic Chamber

Test Setup

Input Voltage	:	DC 5V (Charging by USB port)
Operation Mode	:	C
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Refer to following test graphs for details.

Test Graph of Radiated emissions, mode C, charging by USB port



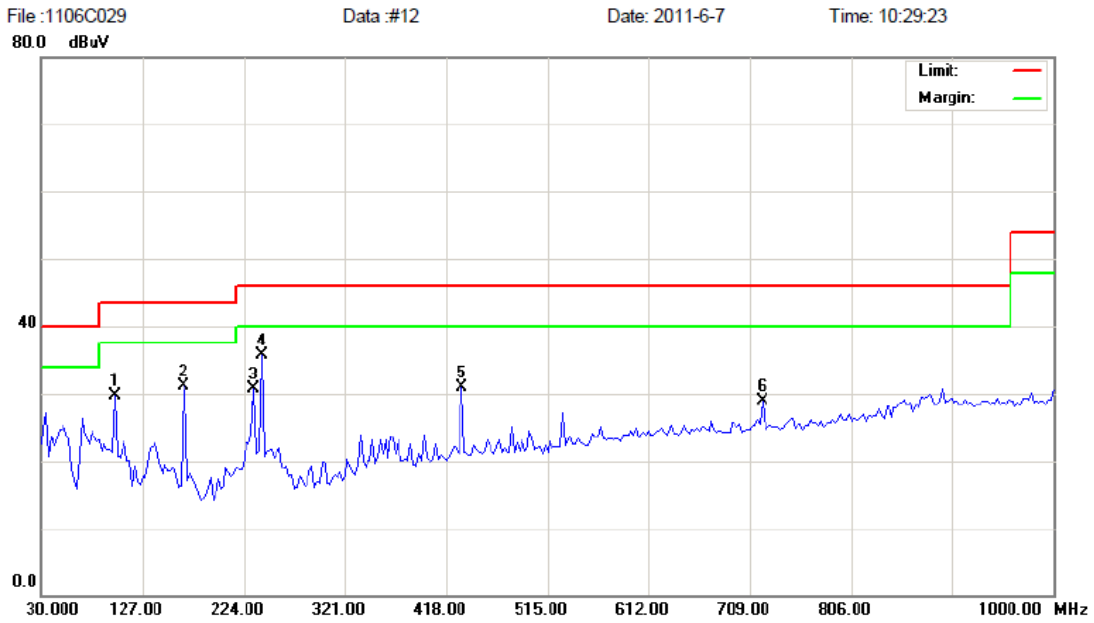
Site CB08
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: CHARGE
Note:

Polarization: ***Horizontal***
Power: AC 120V/60Hz
Distance: 3m

Temperature: 27
Humidity: 47 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		100.3250	47.98	-21.53	26.45	43.50	-17.05	peak	
2	*	165.8000	49.35	-16.73	32.62	43.50	-10.88	peak	
3		240.9750	52.67	-17.69	34.98	46.00	-11.02	peak	
4		299.1750	46.69	-15.63	31.06	46.00	-14.94	peak	
5		371.9250	44.51	-13.79	30.72	46.00	-15.28	peak	
6		432.5500	43.99	-12.17	31.82	46.00	-14.18	peak	

Radiated Emission Measurement



Site CB08
Limit: FCC Class B 3M Radiation
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: CHARGE
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 27
Humidity: 47 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		100.3250	51.27	-21.53	29.74	43.50	-13.76	peak	
2		165.8000	47.90	-16.73	31.17	43.50	-12.33	peak	
3		233.7000	48.97	-18.22	30.75	46.00	-15.25	peak	
4	*	240.9750	53.34	-17.69	35.65	46.00	-10.35	peak	
5		432.5500	43.09	-12.17	30.92	46.00	-15.08	peak	
6		721.1250	35.68	-6.76	28.92	46.00	-17.08	peak	

5.1.10 Conducted emissions

RESULT: **Passed**

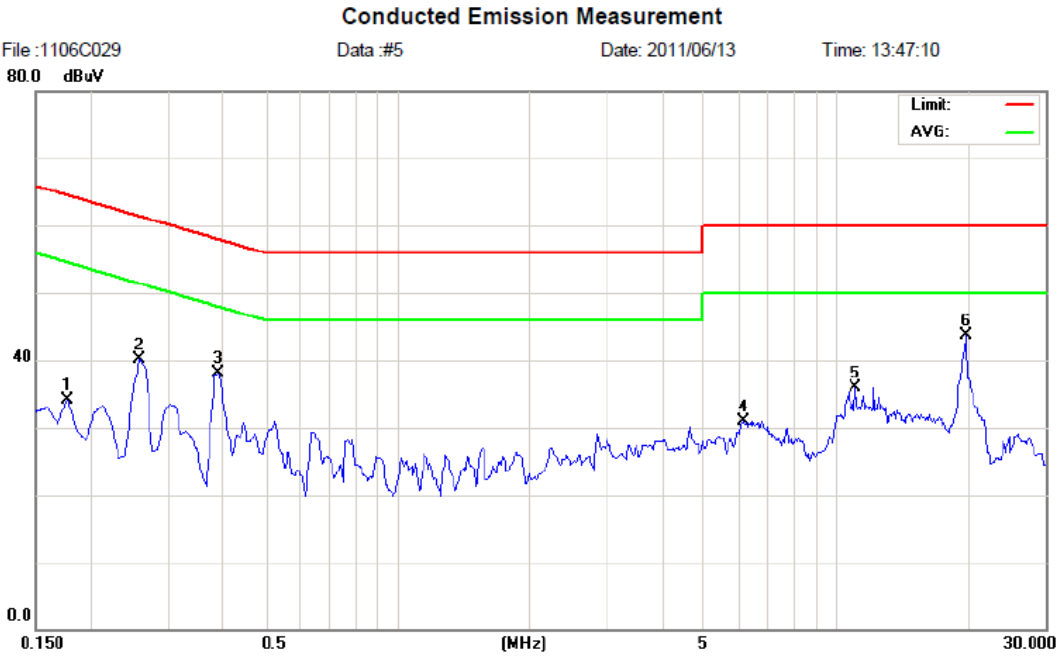
Date of testing	:	2011-06-07 to 2011-06-14
Test standard	:	FCC Part 15.107 RSS-210 Clause 2.6
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	0.15MHz – 30MHz
Limits	:	FCC Part 15.107(a) Table 4 of RSS Gen
Kind of test site	:	Shield Room

Test Setup

Input Voltage	:	DC 5V (Charging by USB port)
Operation Mode	:	C
Ambient temperature	:	24℃
Relative humidity	:	52%
Atmospheric pressure	:	101.0 kPa

Refer to following test graphs for details.

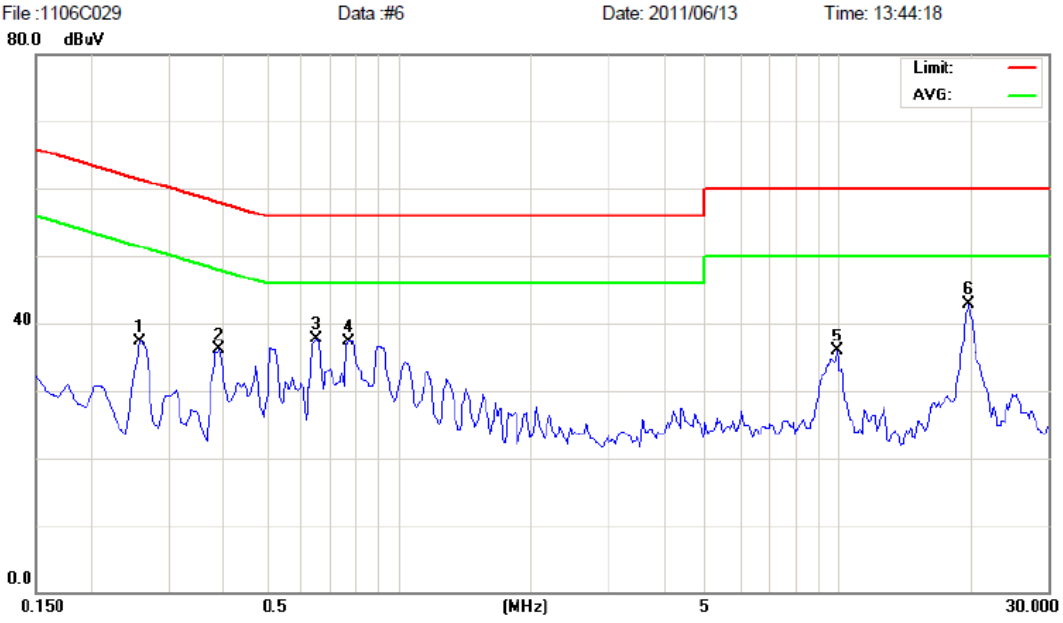
Test Graph of Conducted emissions, mode C, charging by USB port



Site C01 Phase: *L1* Temperature: 23
Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 51 %
EUT: Rocketfish iCapsule Keyboard Distance:
M/N: RF-iCAP14
Mode: USB CHARGE
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1770	24.48	9.69	34.17	64.63	-30.46	peak	
2		0.2580	30.48	9.69	40.17	61.50	-21.33	peak	
3		0.3930	28.47	9.69	38.16	58.00	-19.84	peak	
4		6.1260	21.27	9.73	31.00	60.00	-29.00	peak	
5		11.0400	26.13	9.78	35.91	60.00	-24.09	peak	
6	*	19.7070	33.90	9.88	43.78	60.00	-16.22	peak	

Conducted Emission Measurement



Site C01
Limit: FCC Class B Conduction(QP)
EUT: Rocketfish iCapsule Keyboard
M/N: RF-iCAP14
Mode: USB CHARGE
Note:

Phase: *N*
Power: AC 120V/60Hz
Distance:

Temperature: 23
Humidity: 51 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2580	27.68	9.68	37.36	61.50	-24.14	peak	
2		0.3930	26.37	9.68	36.05	58.00	-21.95	peak	
3		0.6540	27.97	9.71	37.68	56.00	-18.32	peak	
4		0.7710	27.61	9.73	37.34	56.00	-18.66	peak	
5		9.9240	26.19	9.77	35.96	60.00	-24.04	peak	
6	*	19.7520	32.94	9.93	42.87	60.00	-17.13	peak	

6. Safety Human exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT: **Passed**

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

The maximum peak output power of the transmitter is 0.0014mW (1.48dBm) only, which less than 20mW. Hence the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 4.

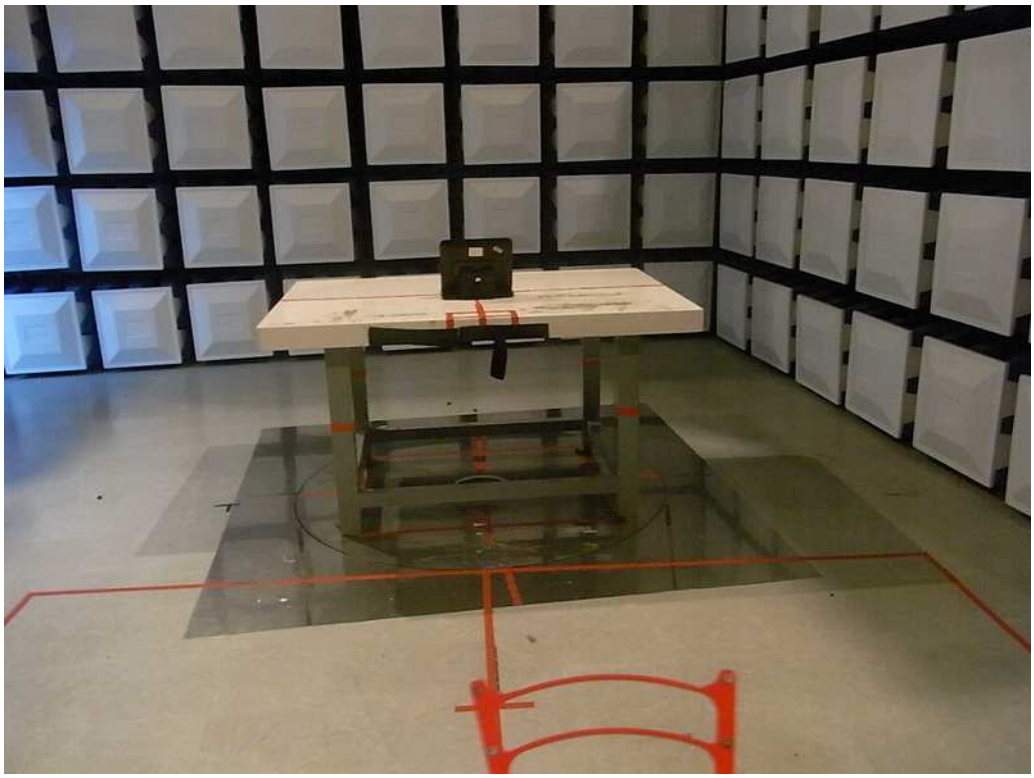
Since maximum peak output power of the transmitter is <60/f (GHz) mW, i.e. 0.0014mW<25(=60/2.4) mW, hence the EUT is exclueded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile Portable RF Exposure.

7. Photographs of the Test Set-Up

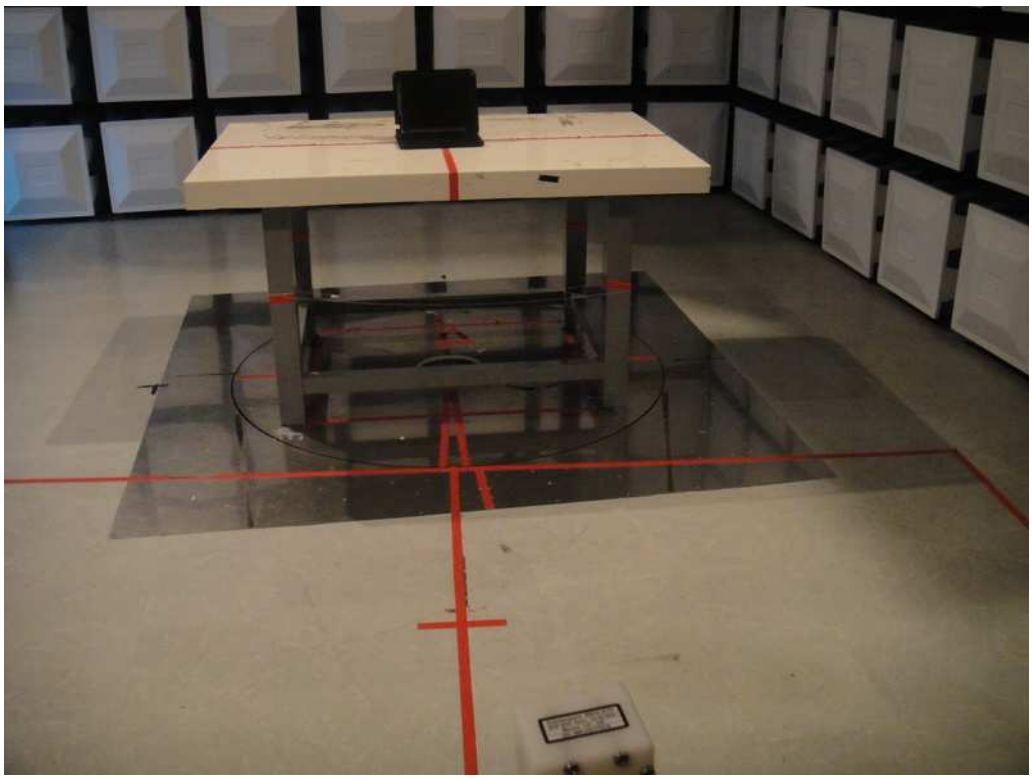
Photograph 1: Set-up for Spurious Emissions (9kHz-30MHz)

Photograph 2: Set-up for Spurious Emissions (30MHz-1GHz)

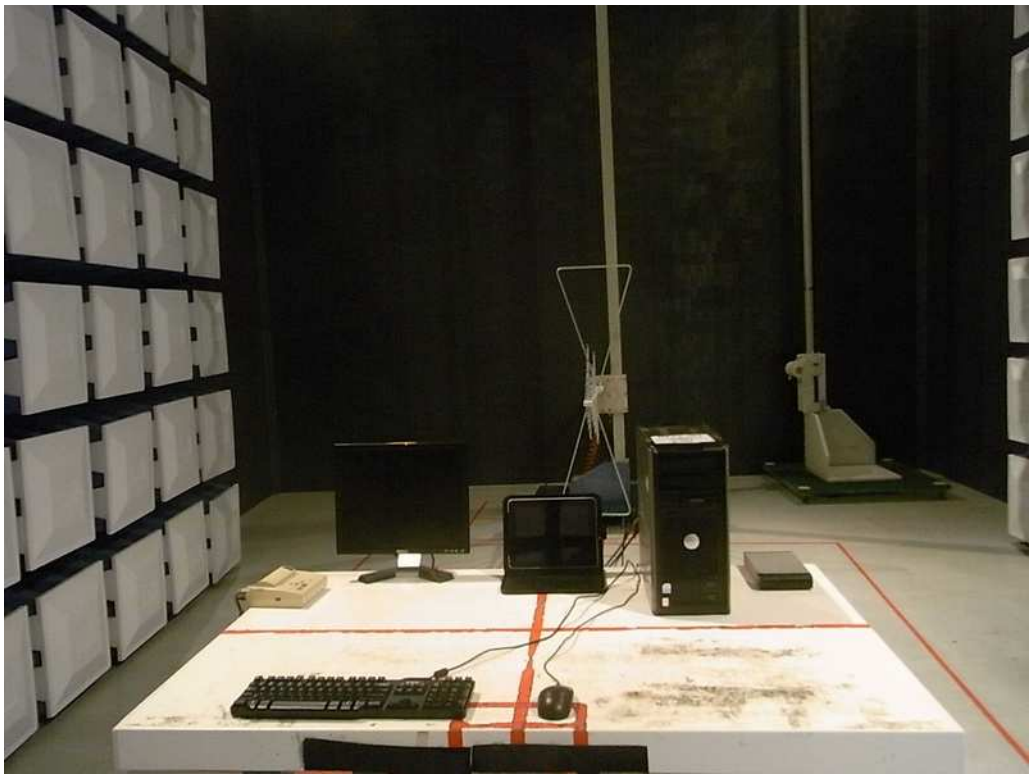
Photograph 3: Set-up for Spurious Emissions (1GHz-18GHz)



Photograph 4: Set-up for Spurious Emissions (18GHz-26GHz)



Photograph 5: Set-up for Radiated emissions



Photograph 6: Set-up for Conducted emissions

8. List of Tables

9. List of Photographs