

TEST REPORT

Product : Scalextric ARC PRO
Trade mark : Scalextric ARC™
Model/Type reference : SSA-00186
Serial Number : N/A
Report Number : EED32I00288901
FCC ID : 2ACUF-SSA00185
Date of Issue : Jan. 17, 2017
Test Standards : 47 CFR Part 15Subpart C (2015)
Test result : PASS

Prepared for:

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Date:

Jan. 17, 2017

Check No.: 1022501387

2 Version

Version No.	Date	Description
00	Jan. 17, 2017	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
AC Power Line Conducted Emission	47 CFR Part 15Subpart C Section 15.207	ANSI C63.10-2013	PASS
Radiated Spurious Emissions	47 CFR Part 15Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Remark:

Test according to ANSI C63.4-2014 & ANSI C63.10-2013.

The tested samples and the sample information are provided by the client.

Model No.:SSA-00186, SSA-00185

This test report (Ref. No.: EED32I00288901) is only valid with the original test report (Ref. No.: EED32H00122801).

The model SSA-00186 Scalextric ARC PRO powerbase is the higher-grade version of model SSA-00185 Scalextric ARC AIR powerbase. Both models are slot car controller, working with SSA-00189/SSA-00190 2.4GHz RF hand controllers for slot car control, and sending lap counting signal to smart device by Blue tooth 4.0. Only adapter different, SSA-00186 works with 15V 4A adapter for supporting up to 6 digital cars, SSA-00185 works with 15V 1A adapter.

Therefore in this report AC Power Line Conducted Emission and Radiated Spurious Emissions were fully retested on model EED32I00288901 and shown the data in this report, other tests please refer to original report EED32H00122801.

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5 Test Requirement

5.1 Test setup

5.1.1 For Radiated Emissions test setup

Radiated Emissions setup:

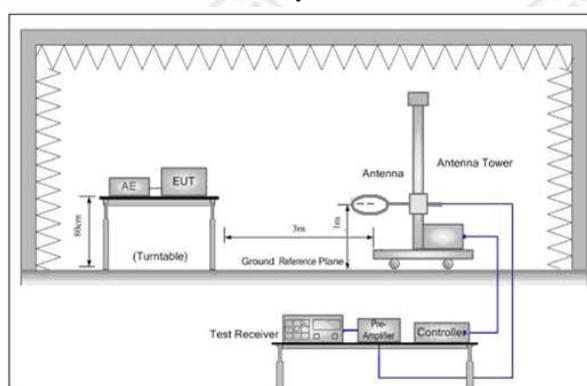


Figure 1. Below 30MHz

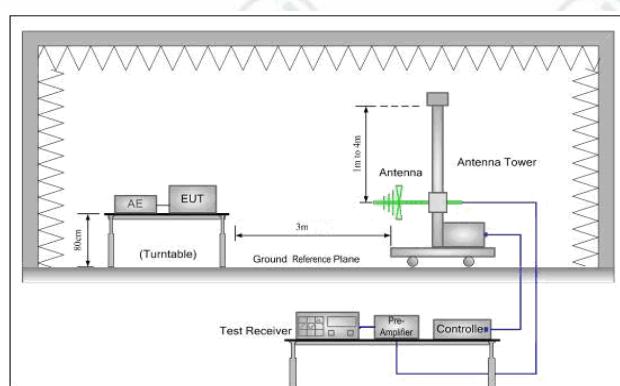


Figure 2. 30MHz to 1GHz

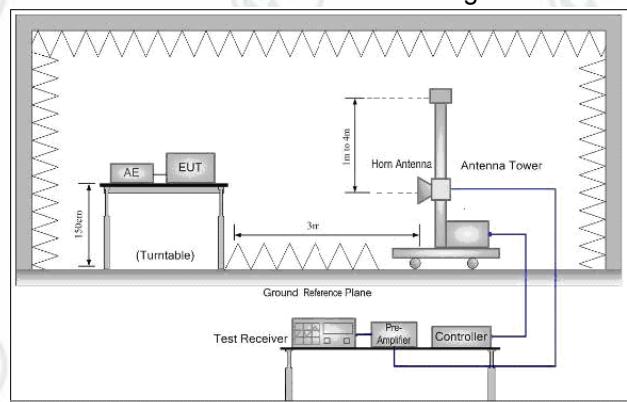
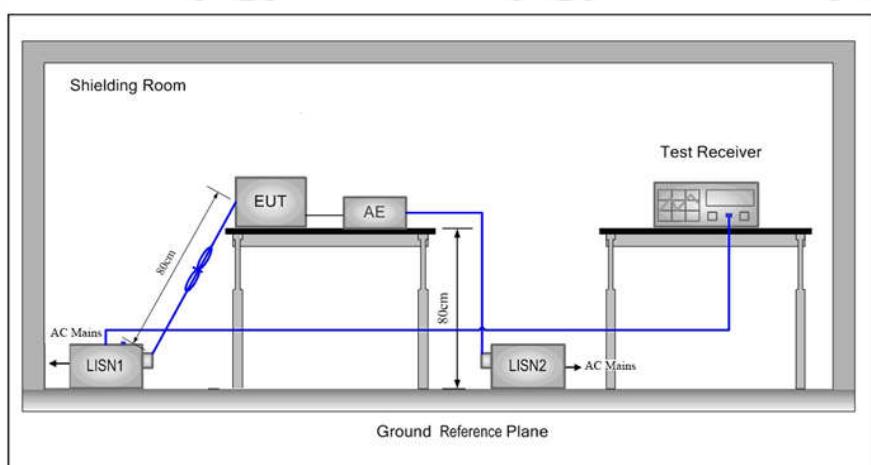


Figure 3. Above 1GHz

5.1.2 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	24°C
Humidity:	50% RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

Test Mode	Tx	RF Channel		
		Low(L)	Middle(M)	High(H)
GFSK	2402MHz ~2480 MHz	Channel 1	Channel 20	Channel 40
		2402MHz	2440MHz	2480MHz
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.			

6 General Information

6.1 Client Information

Applicant:	Hornby Hobbies Ltd.
Address of Applicant:	Enterprise Road Westwood Industrial Estate CT9 4JX United Kingdom
Manufacturer:	The Refined Industry Co., Ltd.
Address of Manufacturer:	7/F., Sun King Factory Building, 1-7, shing chuen Road, Shatin, N.T. Hong Kong.

6.2 General Description of EUT

Product Name:	Scalextric ARC PRO	
Model No.(EUT):	SSA-00186	
Trade mark:	Scalextric ARC™	
EUT Supports Radios application:	Bluetooth V4.0 BLE, 2.4G	
Power Supply:	Adapter:	Cat. No.: SA1960-150400UK PRI: AC 220-240V, 1.5A, 50/60Hz SEC: DC 15V - - 4.0A
	Battery:	Remote: 2*1.5(AA)=3.0V
Sample Received Date:	Nov. 24, 2016	
Sample tested Date:	Nov. 24, 2016 to Jan. 11, 2017	

6.3 Product Specification subjective to this standard

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	4.0
Modulation Type:	GFSK
Number of Channel:	40
Test Power Grade:	N/A (manufacturer declare)
Test Software of EUT:	NORDIC(manufacturer declare)
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Test Voltage:	AC 120V, 60Hz

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	11	2422MHz	21	2442MHz	31	2462MHz
2	2404MHz	12	2424MHz	22	2444MHz	32	2464MHz
3	2406MHz	13	2426MHz	23	2446MHz	33	2466MHz
4	2408MHz	14	2428MHz	24	2448MHz	34	2468MHz
5	2410MHz	15	2430MHz	25	2450MHz	35	2470MHz
6	2412MHz	16	2432MHz	26	2452MHz	36	2472MHz
7	2414MHz	17	2434MHz	27	2454MHz	37	2474MHz
8	2416MHz	18	2436MHz	28	2456MHz	38	2476MHz
9	2418MHz	19	2438MHz	29	2458MHz	39	2478MHz
10	2420MHz	20	2440MHz	30	2460MHz	40	2480MHz

6.4 Description of Support Units

The EUT has been tested independently.

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

6.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1910

Centre Testing International Group Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories..

A2LA-Lab Cert. No. 3061.01

Centre Testing International Group Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 886427

Centre Testing International Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 886427.

IC-Registration No.: 7408A-2

The 3m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408A-2 .

IC-Registration No.: 7408B-1

The 10m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408B-1.

NEMKO-Aut. No.: ELA503

Centre Testing International Group Co., Ltd. has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

VCCI

The Radiation 3 &10 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-4096.

Main Ports Conducted Interference Measurement of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-4563.

Telecommunication Ports Conducted Disturbance Measurement of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-2146.

The Radiation 3 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-758

6.7 Deviation from Standards

None.

6.8 Abnormalities from Standard Conditions

None.

6.9 Other Information Requested by the Customer

None.

6.10 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.31dB (30MHz-1GHz)
		0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz)
		3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

7 Equipment List

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100009	06-16-2016	06-15-2017
Temperature/ Humidity Indicator	TAYLOR	1451	1905	04-27-2016	04-26-2017
LISN	R&S	ENV216	100098	06-16-2016	06-15-2017
LISN	schwarzbeck	NNLK8121	8121-529	06-16-2016	06-15-2017
Voltage Probe	R&S	ESH2-Z3	--	07-09-2014	07-07-2017
Current Probe	R&S	EZ17	100106	06-16-2016	06-15-2017
ISN	TESEQ GmbH	ISN T800	30297	01-29-2015	01-27-2017

3M Semi/full-anechoic Chamber

Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06-05-2016	06-05-2019
TRILOG Broadband Antenna	SCHWARZBEC K	VULB9163	9163-484	05-23-2016	05-22-2017
Microwave Preamplifier	Agilent	8449B	3008A02425	02-04-2016	02-03-2017
Horn Antenna	ETS-LINDGREN	3117	00057407	07-20-2015	07-18-2018
Loop Antenna	ETS	6502	00071730	07-30-2015	07-28-2017
Spectrum Analyzer	R&S	FSP40	100416	06-16-2016	06-15-2017
Receiver	R&S	ESCI	100435	06-16-2016	06-15-2017
Multi device Controller	maturo	NCD/070/10711 112	---	01-12-2016	01-11-2017
LISN	schwarzbeck	NNBM8125	81251547	06-16-2016	06-15-2017
LISN	schwarzbeck	NNBM8125	81251548	06-16-2016	06-15-2017
Signal Generator	Agilent	E4438C	MY45095744	04-01-2016	03-31-2017
Signal Generator	Keysight	E8257D	MY53401106	04-01-2016	03-31-2017
Temperature/ Humidity Indicator	TAYLOR	1451	1905	04-27-2016	04-26-2017
Cable line	Fulai(7M)	SF106	5219/6A	01-12-2016	01-11-2017
Cable line	Fulai(6M)	SF106	5220/6A	01-12-2016	01-11-2017
Cable line	Fulai(3M)	SF106	5216/6A	01-12-2016	01-11-2017
Cable line	Fulai(3M)	SF106	5217/6A	01-12-2016	01-11-2017
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-12-2016	01-11-2017
High-pass filter	MICRO- TRONICS	SPA-F-63029-4	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX01CA09 CL12-0395-001	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX01CA08 CL12-0393-001	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX02CA04 CL12-0396-002	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX02CA03 CL12-0394-001	---	01-12-2016	01-11-2017

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C (2015)	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.207	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix A)
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix B)

Appendix A): AC Power Line Conducted Emission

Test Procedure:	<p>Test frequency range :150KHz-30MHz</p> <p>1)The mains terminal disturbance voltage test was conducted in a shielded room.</p> <p>2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.</p> <p>3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,</p> <p>4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.</p> <p>5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.</p>														
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBμV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table> <p>* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.</p> <p>NOTE : The lower limit is applicable at the transition frequency</p>	Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

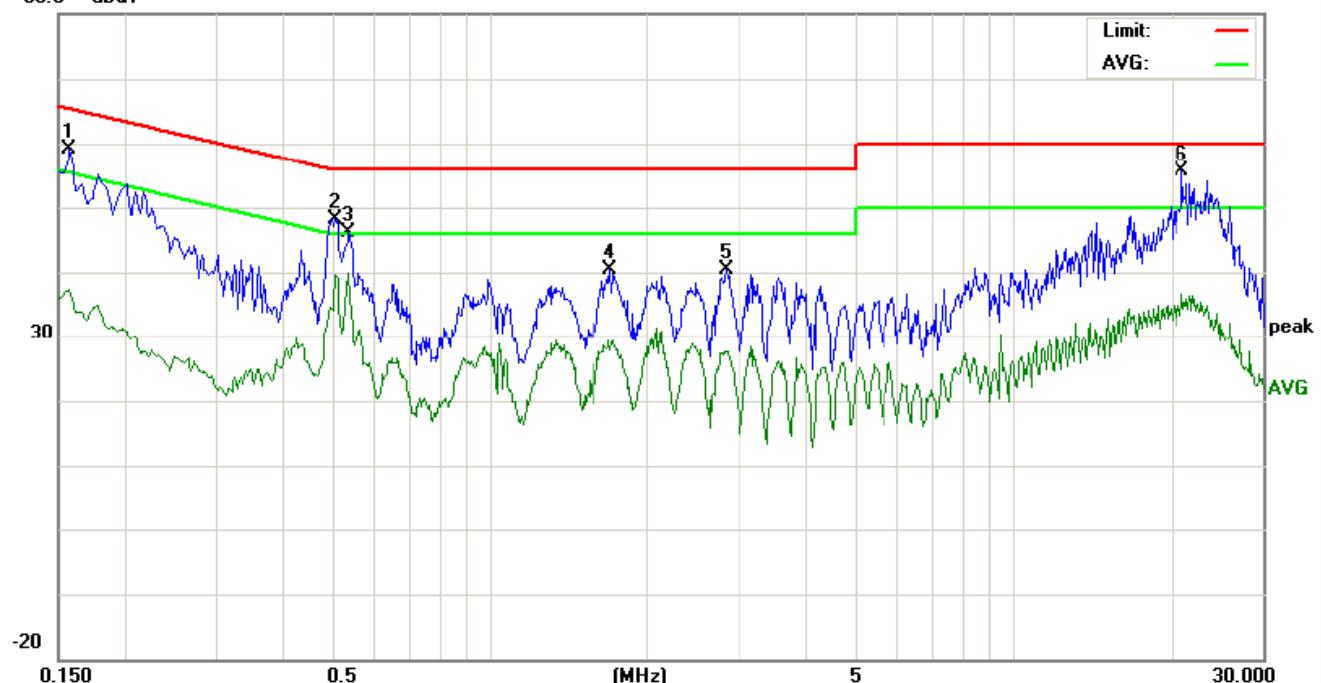
Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:

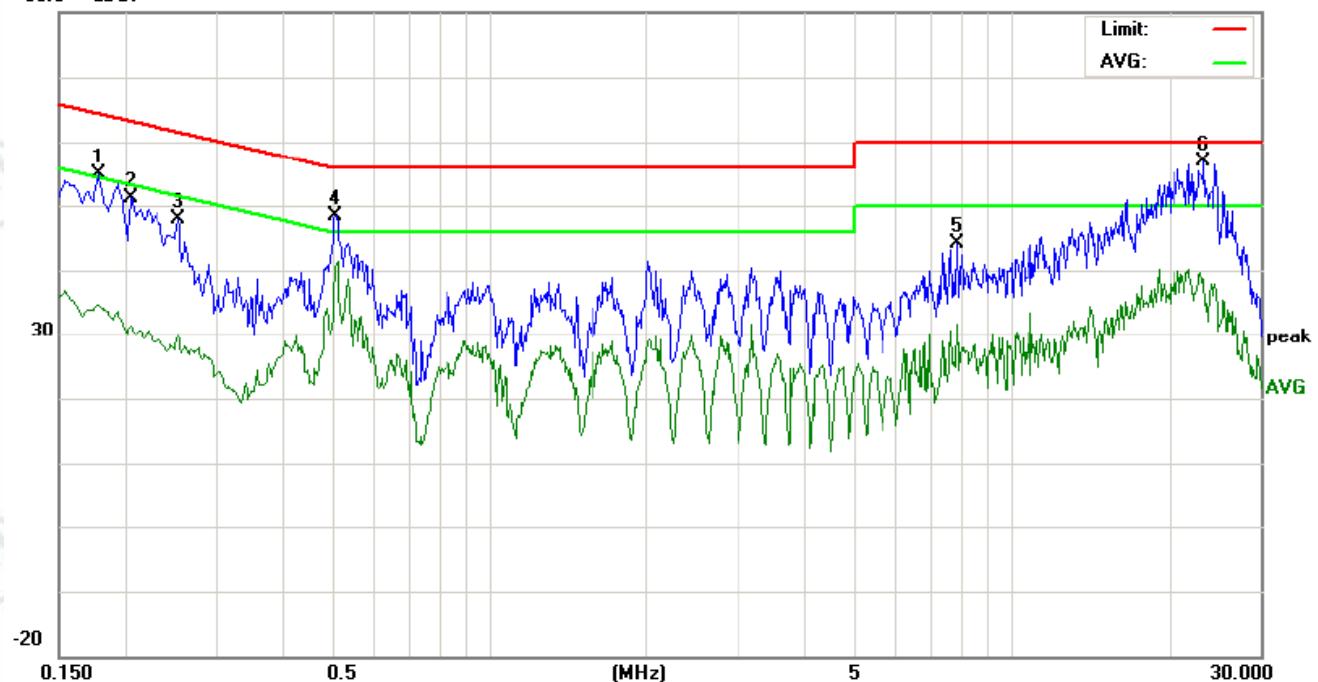
80.0 dBuV



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)			Margin (dB)			
		MHz	Peak	QP	Avg	dB	peak	QP	Avg	QP	Avg	QP	Avg	P/F	Comment
1	0.1580	49.23				27.54	9.80	59.03		37.34	65.56	55.56	-6.53	-18.22	P
2	0.5100	38.20				29.72	9.90	48.10		39.62	56.00	46.00	-7.90	-6.38	P
3	0.5380	36.17				29.90	9.90	46.07		39.80	56.00	46.00	-9.93	-6.20	P
4	1.7020	30.39				17.97	9.91	40.30		27.88	56.00	46.00	-15.70	-18.12	P
5	2.8300	30.38				17.56	10.00	40.38		27.56	56.00	46.00	-15.62	-18.44	P
6	21.0740	45.88	36.03	25.70	9.80	55.68	45.83	35.50	60.00	50.00	-14.17	-14.50		P	

Neutral line:

80.0 dBuV



No.	Freq.	Reading_Level (dBuV)			Correct Factor			Measurement (dBuV)			Limit (dBuV)			Margin (dB)	
		MHz	Peak	QP	AVG	dB	peak	QP	Avg	QP	Avg	QP	Avg	P/F	Comment
1	0.1780	45.08		24.94	9.80	54.88		34.74	64.57	54.57	-9.69	-19.83	P		
2	0.2060	41.34		21.68	9.80	51.14		31.48	63.36	53.36	-12.22	-21.88	P		
3	0.2540	38.09		20.13	9.80	47.89		29.93	61.62	51.62	-13.73	-21.69	P		
4	0.5100	38.38		30.37	9.90	48.28		40.27	56.00	46.00	-7.72	-5.73	P		
5	7.8780	34.11		21.73	10.00	44.11		31.73	60.00	50.00	-15.89	-18.27	P		
6	23.3940	47.12	46.21	28.84	9.80	56.92	56.01	38.64	60.00	50.00	-3.99	-11.36	P		

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

Appendix B): Radiated Spurious Emissions

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark	
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak	
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average	
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak	
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak	
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average	
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak	
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak	
Above 1GHz		Peak	1MHz	3MHz	Peak	
		Peak	1MHz	10Hz	Average	

Test Procedure:

Below 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

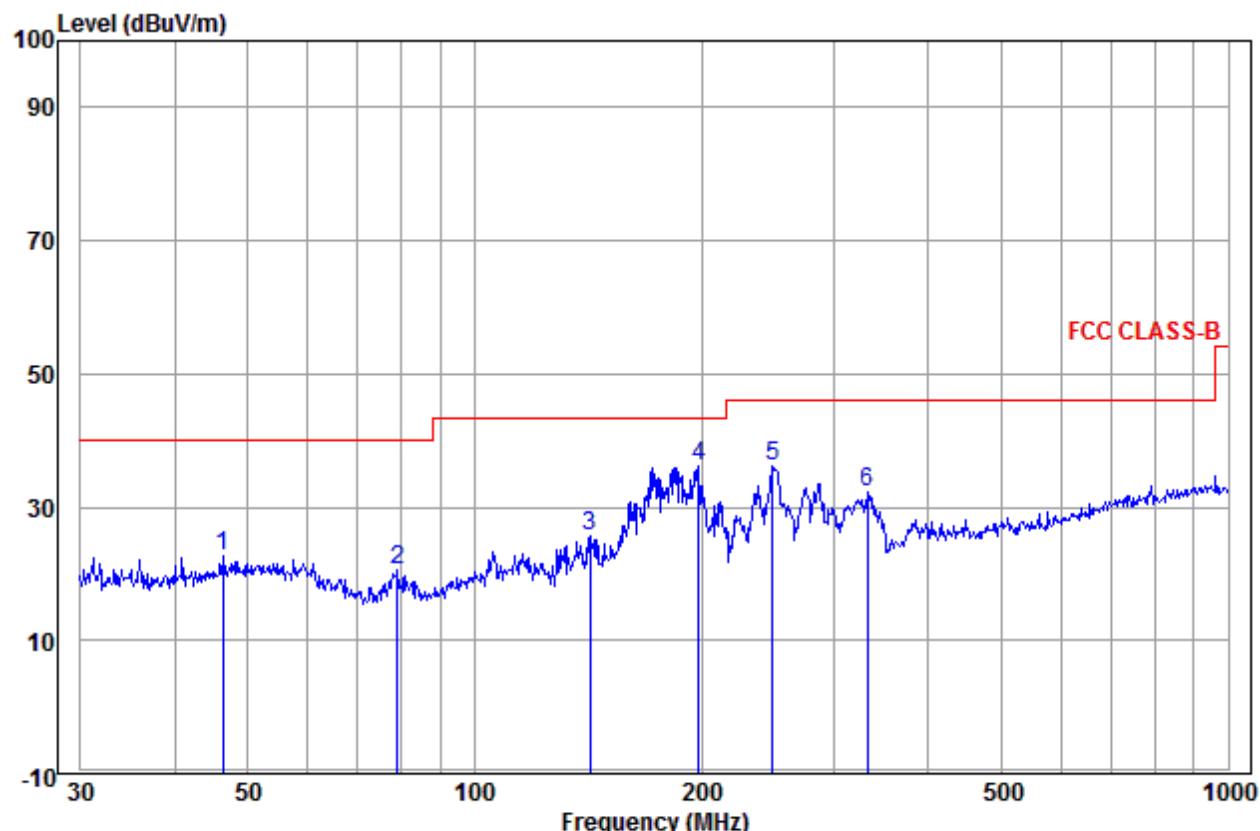
- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
- Test the EUT in the lowest channel ,the middle channel ,the Highest channel
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
- Repeat above procedures until all frequencies measured was complete.

Limit:	Frequency	Field strength (microvolt/meter)	Limit (dB μ V/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

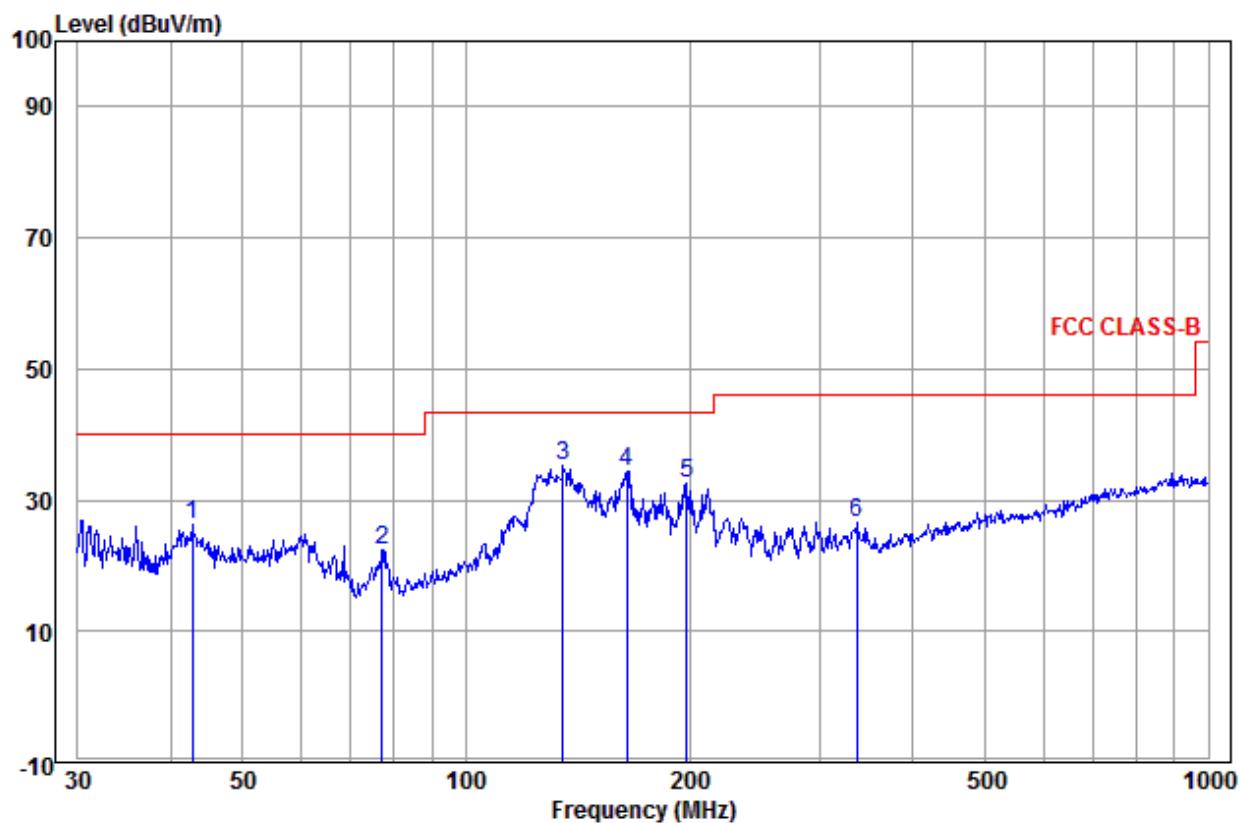
**Radiated Spurious Emissions test Data:
Radiated Emission below 1GHz**

30MHz~1GHz (QP)		
Test mode:	Transmitting	Horizontal



Freq	Ant Factor	Cable Loss	Read Level		Limit Line	Over Limit	Over Line Pol/Phase	Remark
			MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m
1	46.340	14.79	1.10	6.81	22.70	40.00	-17.30	Horizontal
2	78.965	8.78	1.56	10.18	20.52	40.00	-19.48	Horizontal
3	142.324	10.15	1.58	14.00	25.73	43.50	-17.77	Horizontal
4 pp	198.588	11.55	2.19	22.34	36.08	43.50	-7.42	Horizontal
5	248.552	12.38	2.35	21.31	36.04	46.00	-9.96	Horizontal
6	332.519	14.37	2.60	15.21	32.18	46.00	-13.82	Horizontal

Test mode:	Transmitting	Vertical
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	Ant Freq	Cable Factor	Read Loss	Level	Limit Level	Limit Line	Over Limit	Over Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	42.750	14.47	0.79	10.98	26.24	40.00	-13.76	Vertical	
2	77.051	9.11	1.54	11.64	22.29	40.00	-17.71	Vertical	
3 pp	135.032	10.61	1.58	23.01	35.20	43.50	-8.30	Vertical	
4	164.908	10.33	1.79	22.14	34.26	43.50	-9.24	Vertical	
5	198.588	11.55	2.19	18.92	32.66	43.50	-10.84	Vertical	
6	336.035	14.46	2.62	9.48	26.56	46.00	-19.44	Vertical	

Transmitter Emission above 1GHz

Worse case mode:		GFSK		Test channel:		Lowest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Final Level (dB μ V/m)	Limit Line (dB μ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1195.049	30.21	2.51	34.97	46.38	44.13	74.00	-29.87	Pass	H
1646.948	31.14	2.96	34.55	46.01	45.56	74.00	-28.44	Pass	H
2102.853	31.93	3.53	34.32	45.93	47.07	74.00	-26.93	Pass	H
4804.000	34.69	5.11	34.35	41.63	47.08	74.00	-26.92	Pass	H
7206.000	36.42	6.66	34.90	39.75	47.93	74.00	-26.07	Pass	H
9608.000	37.88	7.73	35.08	39.77	50.30	74.00	-23.70	Pass	H
1192.011	30.21	2.51	34.97	46.75	44.50	74.00	-29.50	Pass	V
1842.139	31.46	3.11	34.41	45.85	46.01	74.00	-27.99	Pass	V
2310.537	32.38	4.08	34.37	46.04	48.13	74.00	-25.87	Pass	V
4804.000	34.69	5.11	34.35	43.32	48.77	74.00	-25.23	Pass	V
7206.000	36.42	6.66	34.90	42.70	50.88	74.00	-23.12	Pass	V
9608.000	37.88	7.73	35.08	38.12	48.65	74.00	-25.35	Pass	V

Worse case mode:		GFSK		Test channel:		Middle	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Final Level (dB μ V/m)	Limit Line (dB μ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1182.943	30.18	2.50	34.98	47.09	44.79	74.00	-29.21	Pass	H
1634.419	31.12	2.95	34.56	45.20	44.71	74.00	-29.29	Pass	H
1875.258	31.51	3.14	34.38	46.00	46.27	74.00	-27.73	Pass	H
4880.000	34.85	5.08	34.33	40.45	46.05	74.00	-27.95	Pass	H
7320.000	36.43	6.77	34.90	41.78	50.08	74.00	-23.92	Pass	H
9760.000	38.05	7.60	35.05	39.47	50.07	74.00	-23.93	Pass	H
1207.279	30.24	2.52	34.96	46.79	44.59	74.00	-29.41	Pass	V
1457.523	30.79	2.79	34.71	46.12	44.99	74.00	-29.01	Pass	V
1672.296	31.18	2.98	34.53	46.09	45.72	74.00	-28.28	Pass	V
4880.000	34.85	5.08	34.33	40.55	46.15	74.00	-27.85	Pass	V
7320.000	36.43	6.77	34.90	38.65	46.95	74.00	-27.05	Pass	V
9760.000	38.05	7.60	35.05	38.54	49.14	74.00	-24.86	Pass	V

Worse case mode:		GFSK		Test channel:		Highest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Final Level (dB μ V/m)	Limit Line (dB μ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1198.095	30.22	2.51	34.97	46.61	44.37	74.00	-29.63	Pass	H
1642.761	31.13	2.95	34.56	46.30	45.82	74.00	-28.18	Pass	H
2092.175	31.91	3.50	34.32	45.52	46.61	74.00	-27.39	Pass	H
4960.000	35.02	5.05	34.31	39.98	45.74	74.00	-28.26	Pass	H
7440.000	36.45	6.88	34.90	40.84	49.27	74.00	-24.73	Pass	H
9920.000	38.22	7.47	35.02	39.27	49.94	74.00	-24.06	Pass	H
1192.011	30.21	2.51	34.97	46.94	44.69	74.00	-29.31	Pass	V
1626.120	31.10	2.94	34.57	45.76	45.23	74.00	-28.77	Pass	V
2092.175	31.91	3.50	34.32	45.30	46.39	74.00	-27.61	Pass	V
4960.000	35.02	5.05	34.31	40.15	45.91	74.00	-28.09	Pass	V
7440.000	36.45	6.88	34.90	40.99	49.42	74.00	-24.58	Pass	V
9920.000	38.22	7.47	35.02	40.12	50.79	74.00	-23.21	Pass	V

Note:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

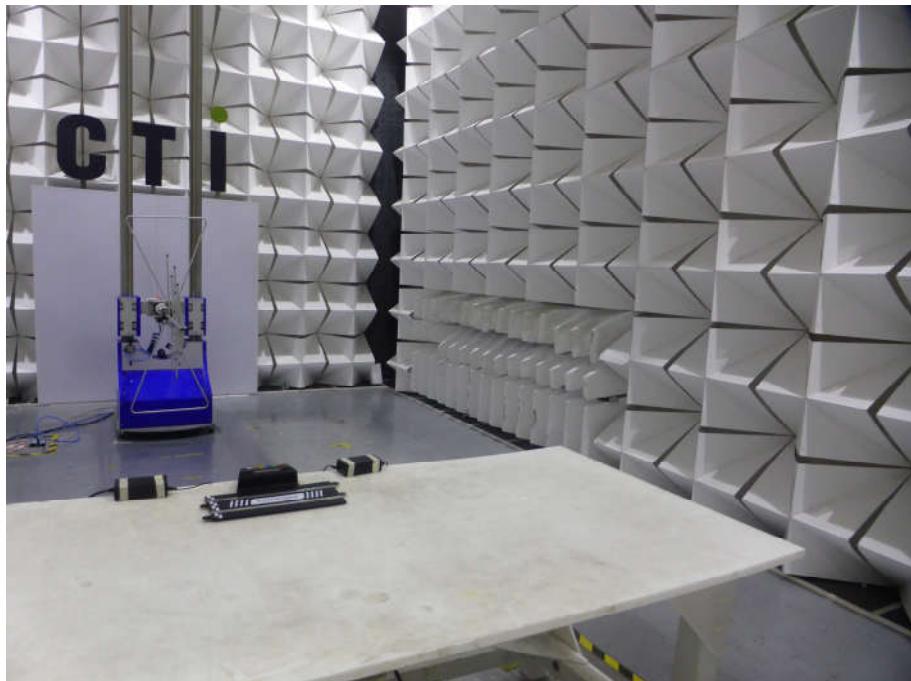
Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

2) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

PHOTOGRAPHS OF TEST SETUP

Test model No.: SSA-00186



Radiated spurious emission Test Setup-1(Below 1GHz)



Radiated spurious emission Test Setup-2(Above 1GHz)



Conducted Emissions Test Setup

PHOTOGRAPHS OF EUT Constructional Details

Test model No.: SSA-00186



View of Product-1



View of Product-2



View of Product-3



View of Product-4



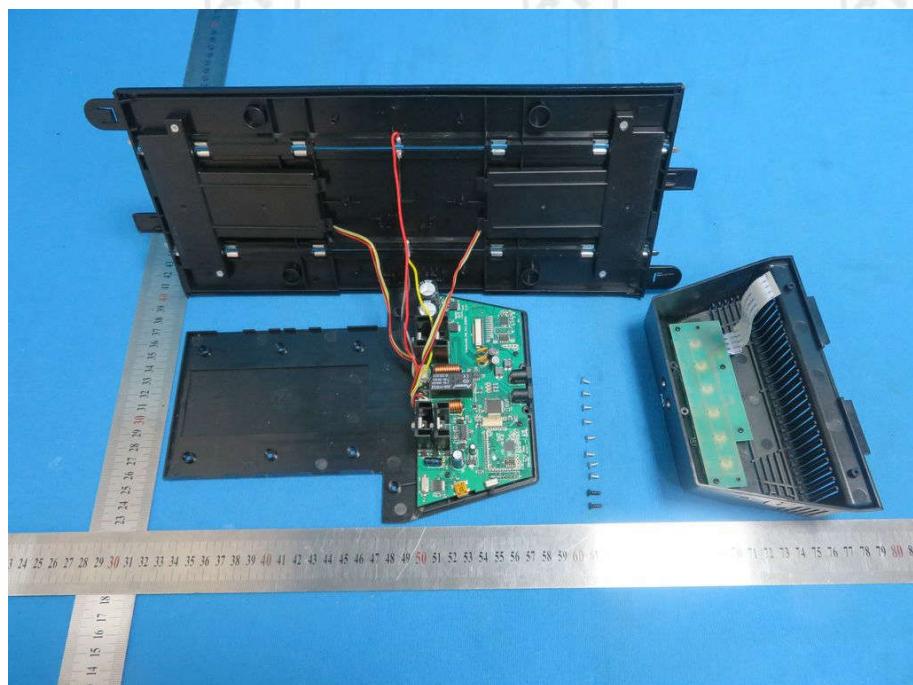
View of Product-5



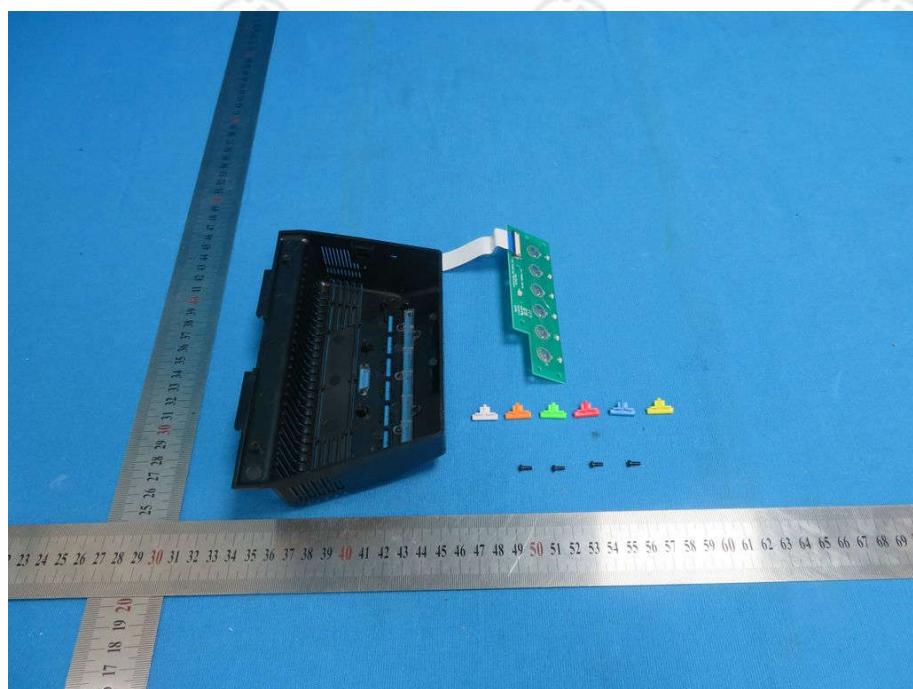
View of Product-6



View of Product-7



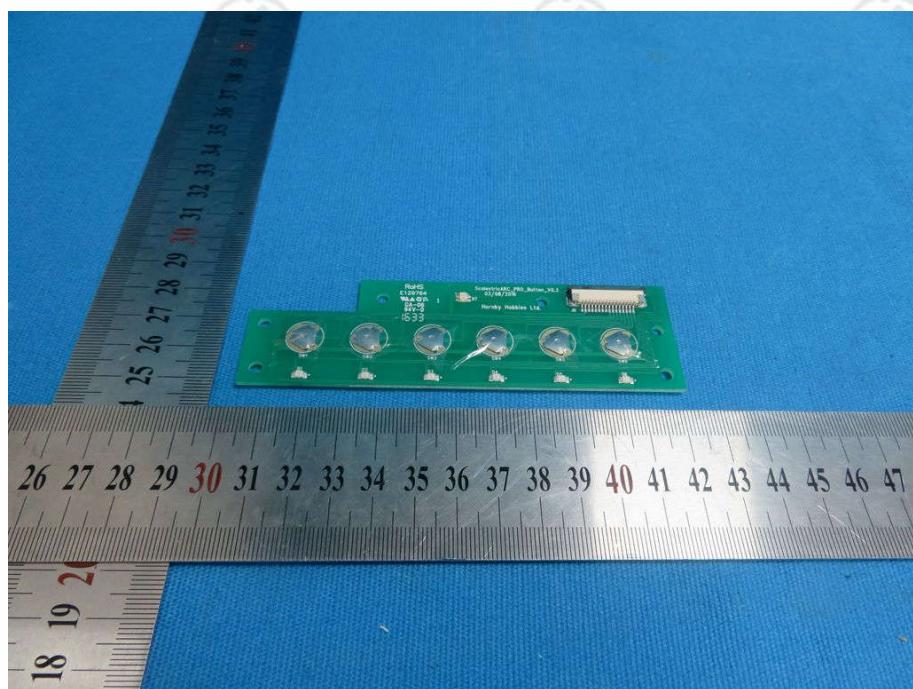
View of Product-8



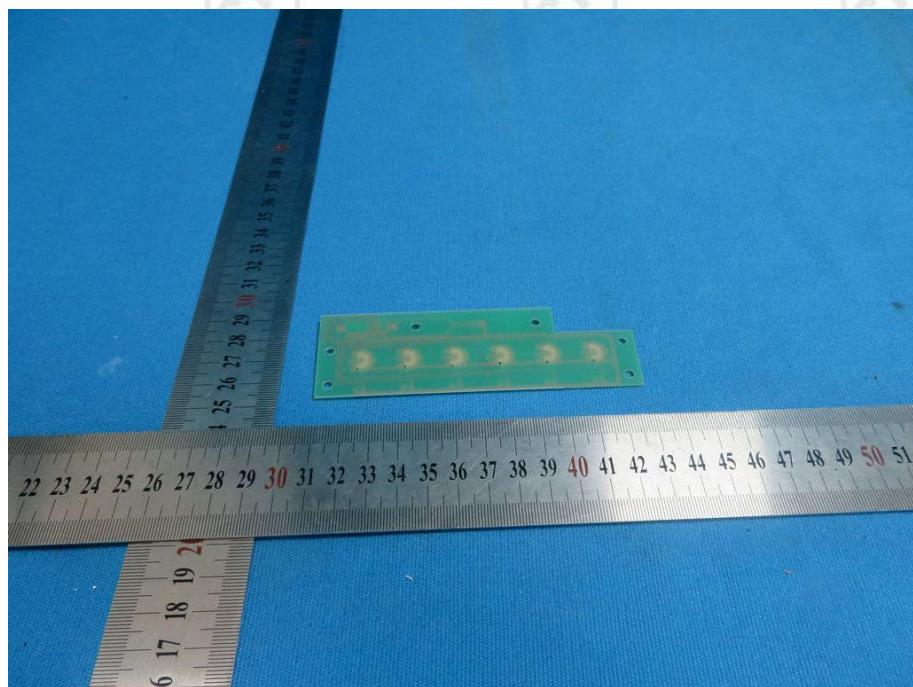
View of Product-9



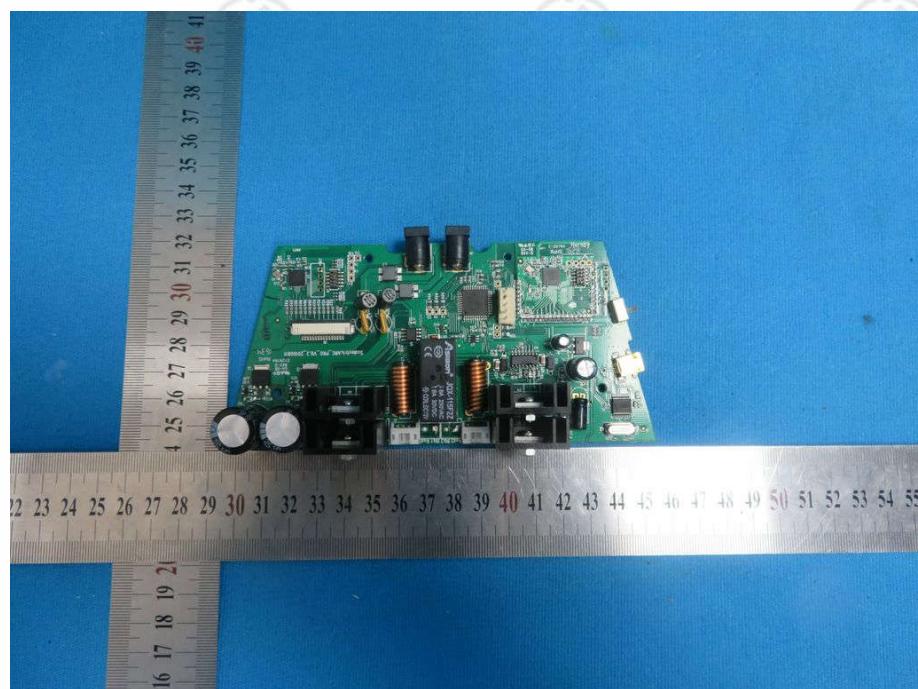
View of Product-10



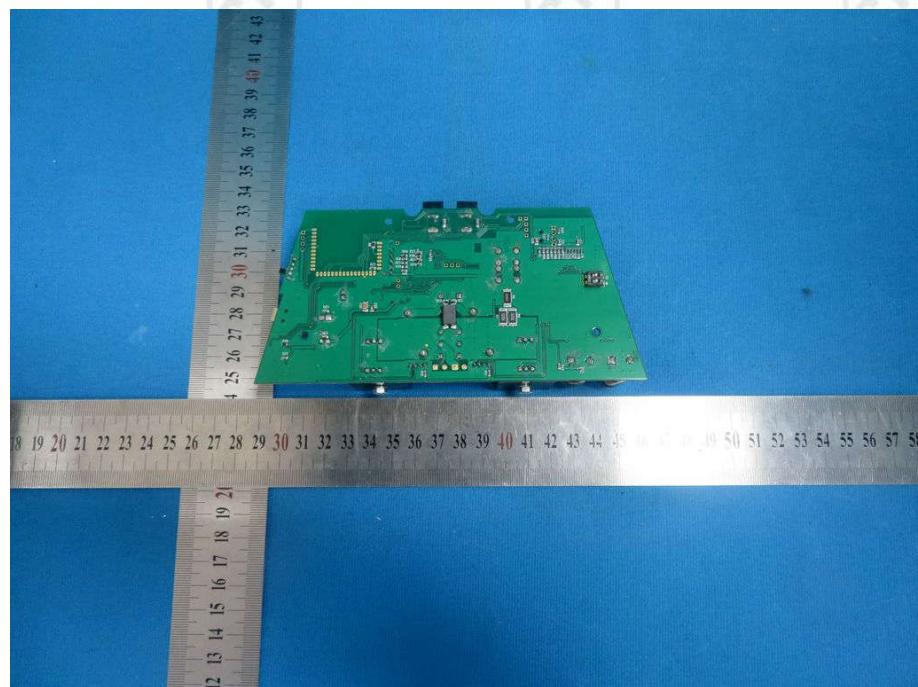
View of Product-11



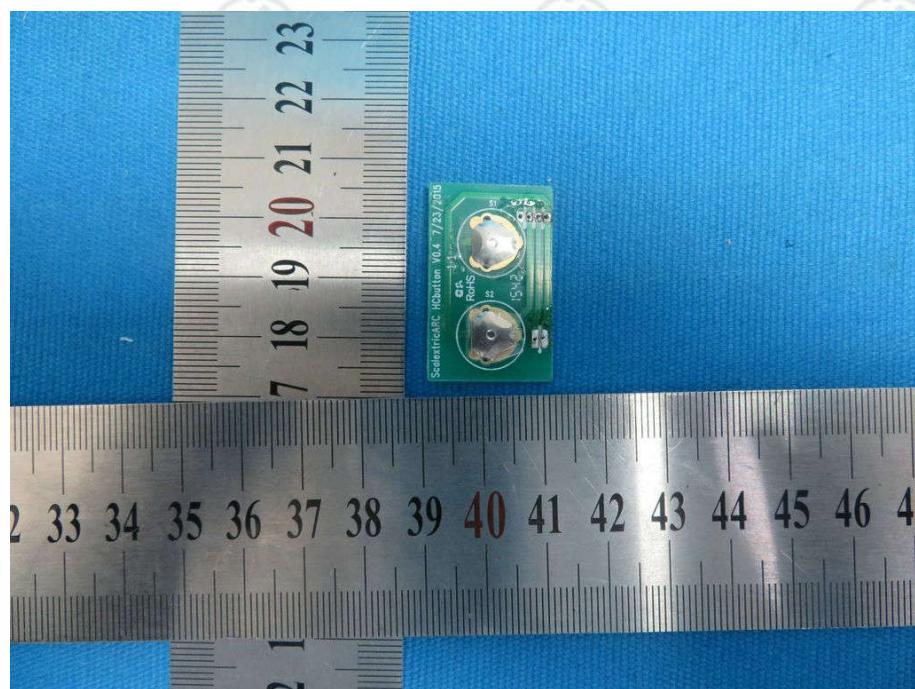
View of Product-12



View of Product-13



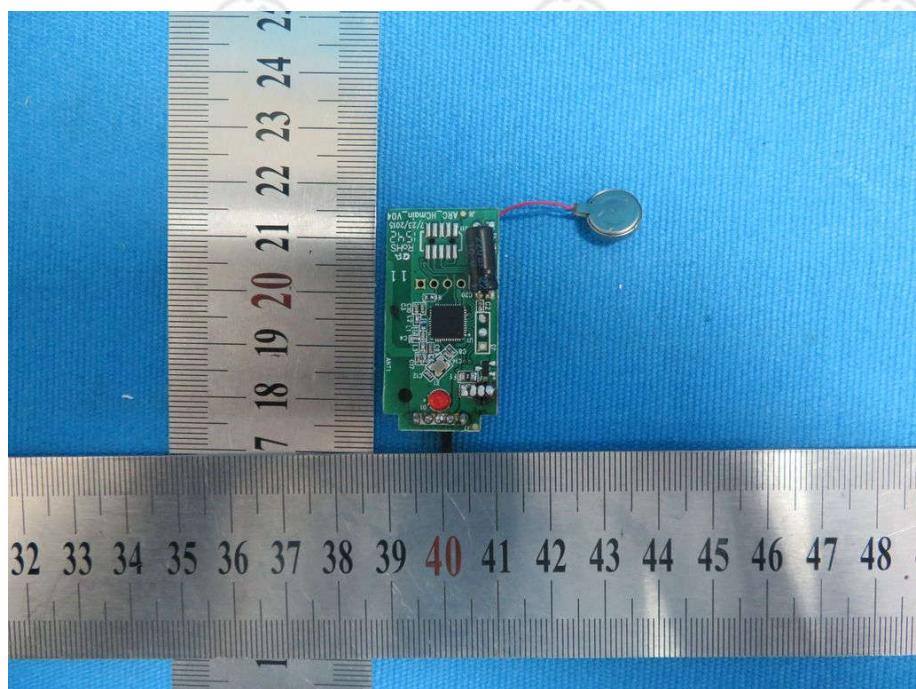
View of Product-14



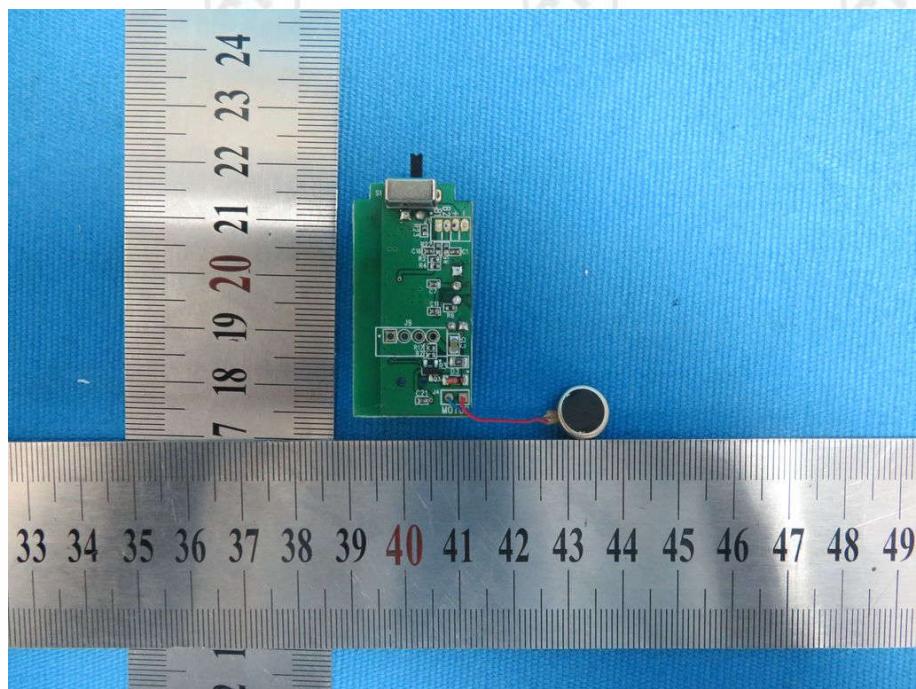
View of Product-15



View of Product-16



View of Product-17



View of Product-18



View of Product-19



View of Product-20



View of Product-21



View of Product-22



View of Product-23



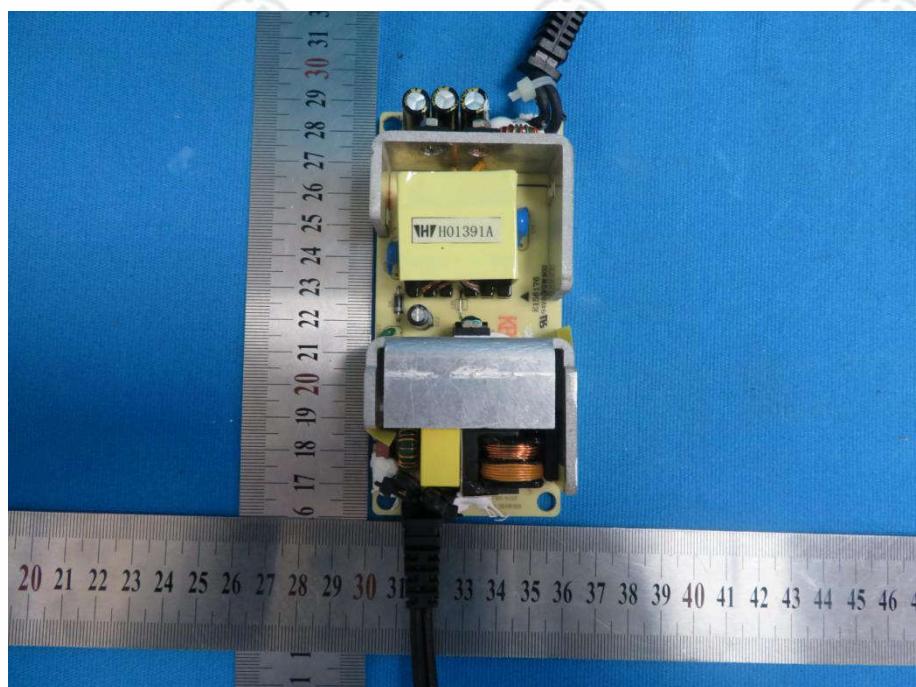
View of Product-24



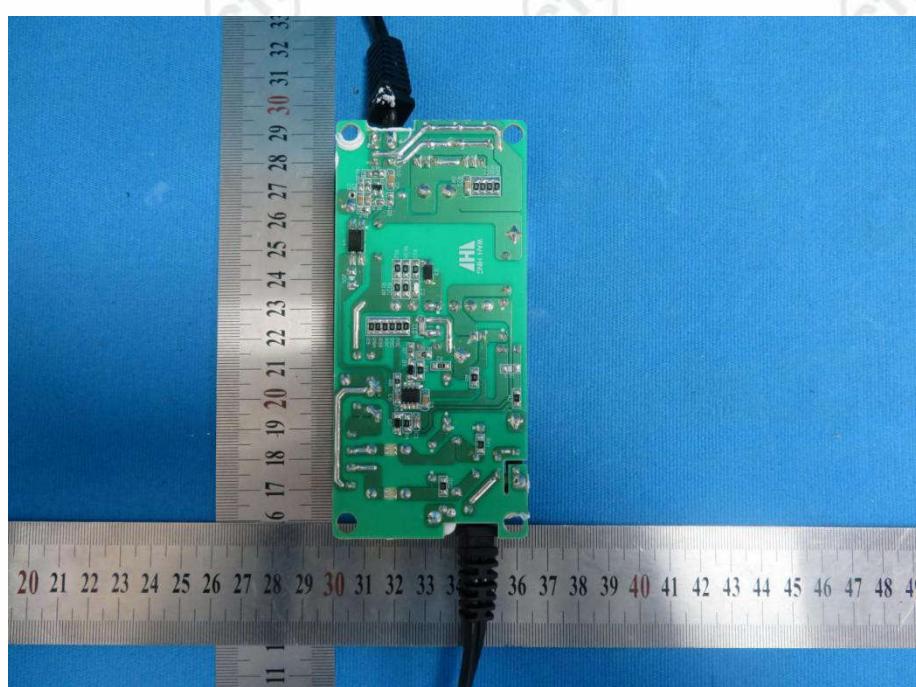
View of Product-25



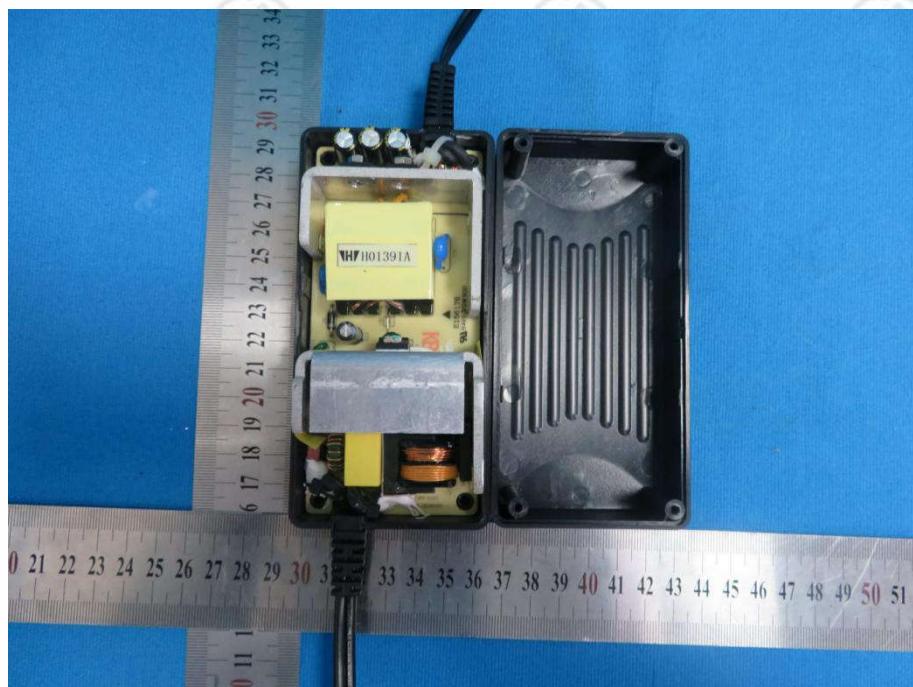
View of Product-26



View of Product-27



View of Product-28



View of Product-29

*** End of Report ***

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