
FCC Test Report

Report No.: AGC05322151101FE01

FCC ID : 2ABH3-DV5XXX
PRODUCT DESIGNATION : DVD Stereo
BRAND NAME : Furrion
MODEL NAME : DV5700, DV5XXX
CLIENT : Furrion Ltd.
DATE OF ISSUE : Nov.23,2015
STANDARD(S) : FCC CFR Title 47 Part 15 Subpart B:2015
REPORT VERSION : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Nov.23,2015	Valid	Original Report

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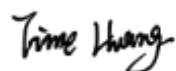
1. VERIFICATION OF CONFORMITY

Applicant	Furrion Ltd.
Address	Units 1603-05, 16/F, Pacific Plaza, 410 Des Voeux Road West, Sai Wan, Hong Kong
Manufacturer	Furrion Ltd.
Address	Units 1603-05, 16/F, Pacific Plaza, 410 Des Voeux Road West, Sai Wan, Hong Kong
Product Designation	DVD Stereo
Brand Name	Furrion
Test Model	DV5700
Series Model	DV5XXX(where X represents 0-9 or A-Z)
Difference description	All the same except for the outlook of panel 1. Different color of panel. 2. Different outlook of buttons. 3. Location of part buttons on the panel is slightly different.
Measurement Procedure	ANSI C63.4: 2009
Date of test	Nov.19,2015 to Nov.23,2015
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-US-IT/AC(2013-03-01)

The above equipment was tested by Dongguan Precise Testing Service Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2009. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested By



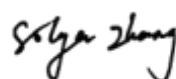
Time Huang(Huang Nanhui) Nov.23,2015

Checked By



Forrest Lei(Lei Yonggang) Nov.23,2015

Authorized By



Solger Zhang(Zhang Hongyi) Nov.23,2015

2. SYSTEM DESCRIPTION

TEST MODE DESCRIPTION		
NO.	TEST MODE DESCRIPTION	WORST
1	Aux in	V
2	USB	
3	DVD	
4	SD Card	
5	FM/AM	
Note: 1. V means EMI worst mode 2. Only worst mode data recorded in the test report		

3. MEASUREMENT UNCERTAINTY

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2dB

4. PRODUCT INFORMATION

Housing Type	Plastic and metal
Power Supply	DC 12V

I/O Port Information (☒ Applicable ☐ Not Applicable)

I/O Port of EUT			
I/O Port Type	Number	Cable Description	Tested With
USB	1	--	1
Line in	1	--	1
Line out	1	--	1

5. SUPPORT EQUIPMENT

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
IPOD	APPLE	A1367	--	--	--
Earphone	--	N5	--	--	--

6. TEST FACILITY

Site	Dongguan Precise Testing Service Co., Ltd.
Location	Building D,Baoding Technology Park,Guangming Road2,Dongcheng District, Dongguan, Guangdong, China,
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009.

TEST EQUIPMENT

FOR RADIATED EMISSION TEST (BELOW 1GHZ)

Radiated Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016
Trilog Broadband Antenna (25M-1GHz)	SCHWARZBECK	VULB9160	9160-3355	July 4, 2015	July 3, 2016
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 4, 2015	July 3, 2016
RF Cable	SCHWARZBECK	AK9515E	96221	July 4, 2015	July 3, 2016
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2015	June 5, 2016
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	June 6, 2015	June 5, 2016
Spectrum analyzer	Agilent	E4407B	MY46185649	June 6, 2015	June 5, 2016

7. FCCLINE CONDUCTED EMISSION TEST

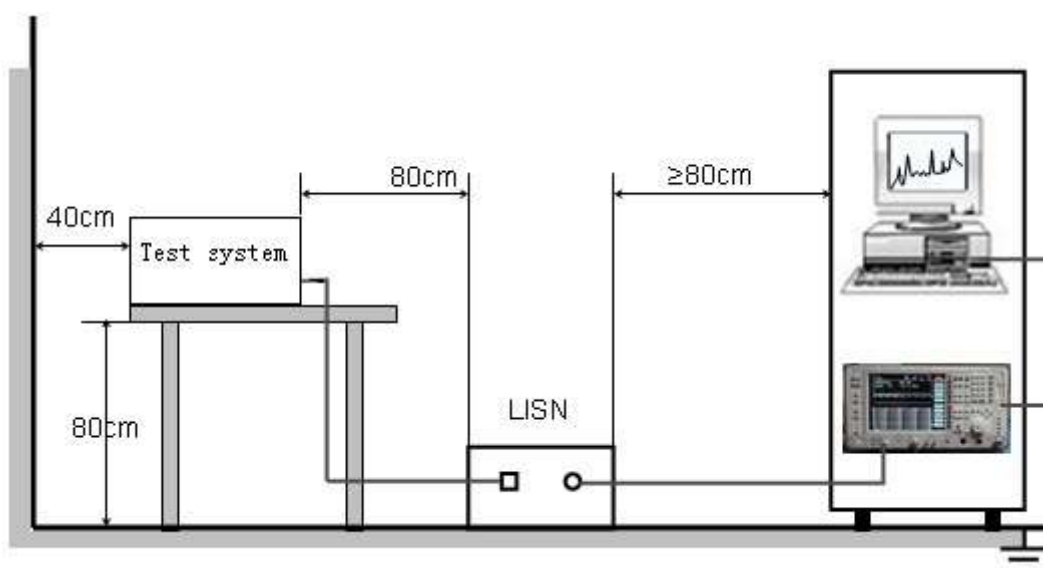
7.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz-500kHz	66-56	56-46
500kHz-5MHz	56	46
5MHz-30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

7.2. BLOCK DIAGRAM OF TEST SETUP



7.3. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- (1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- (2) Support equipment, if needed, was placed as per ANSI C63.4.
- (3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- (4) The EUT received DC5V power from PC with receive 120V/60Hz power from a LISN.
- (5) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- (6) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- (7) During the above scans, the emissions were maximized by cable manipulation.
- (8) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- (9) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

The test data of the worst case condition (mode 1) was reported on the Summary Data page.

7.4. TEST RESULT OF LINE CONDUCTED EMISSION TEST

N/A

8. FCC RADIATED EMISSION TEST

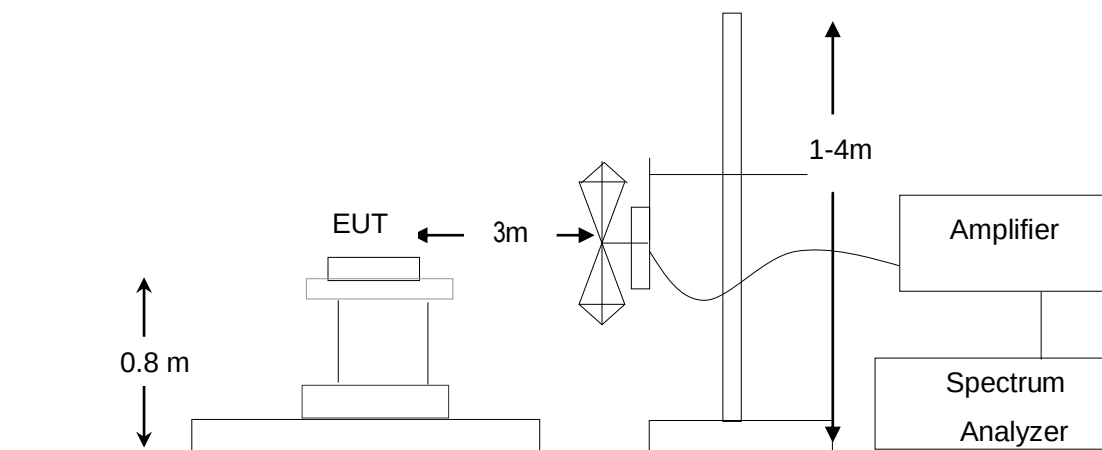
8.1. LIMITS OF RADIATED EMISSION TEST

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ Q.P.)
30~88	3	40.0
88~216	3	43.5
216~960	3	46.0
Above 960	3	54.0

Note: The lower limit shall apply at the transition frequency.

8.2. BLOCK DIAGRAM OF TEST SETUP

System Diagram of Connections between EUT and Simulators



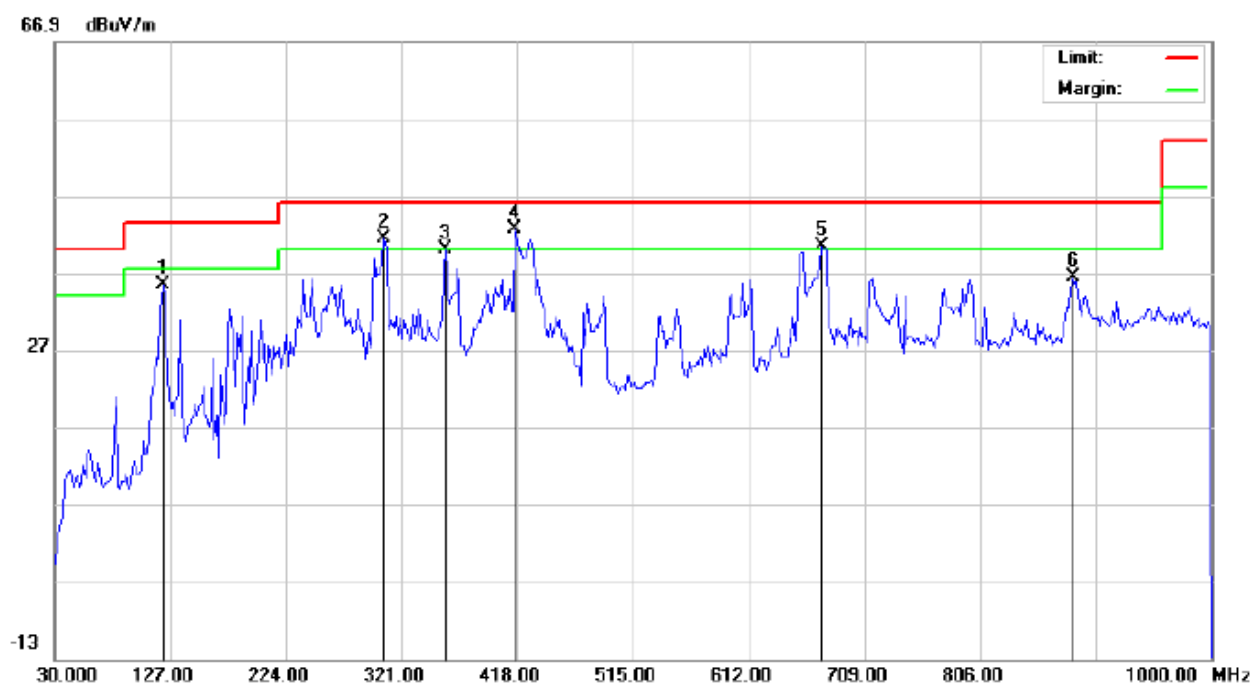
8.3. PROCEDURE OF RADIATED EMISSION TEST

- (1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- (2) Support equipment, if needed, was placed as per ANSI C63.4.
- (3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- (4) The EUT received DC 12V from DC source.
- (5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- (6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- (7) The test mode(s) were scanned during the test:
- (8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.

The test data of the worst case condition (mode 1) was reported on the Summary Data page.

8.4. TEST RESULT OF RADIATED EMISSION TEST

Radiated Emission Test at 3m Distance-Horizontal

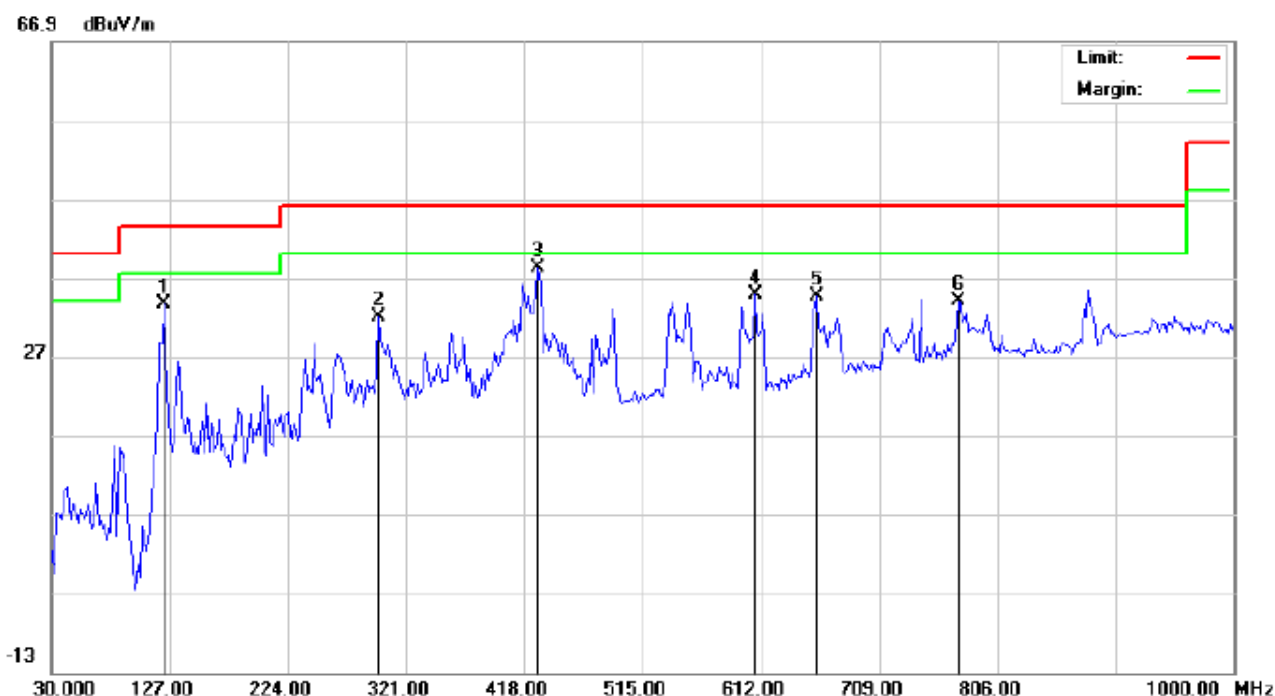


Site: site #1	Polarization: Horizontal	Temperature: 22.7
Limit: FCC Class B 3M Radiation	Power:	Humidity: 53.9 %
EUT: DVD Stereo	Distance: 3m	
M/N: DV5700		
Mode: Aux in		
Note:		

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB		cm	degree	
1		120.5333	23.41	11.95	35.36	43.50	-8.14	peak			
2	!	306.4500	25.56	15.84	41.40	46.00	-4.60	peak			
3	!	358.1833	21.26	18.79	40.05	46.00	-5.95	peak			
4	*	416.3833	23.07	19.57	42.64	46.00	-3.36	peak			
5	!	673.4333	16.00	24.48	40.48	46.00	-5.52	peak			
6		883.6000	8.27	28.18	36.45	46.00	-9.55	peak			

RESULT: PASS

Radiated Emission Test at 3m Distance-Vertical



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: DVD Stereo
M/N: DV5700
Mode: Aux in
Note:

Polarization: **Vertical**
Power:
Distance: 3m

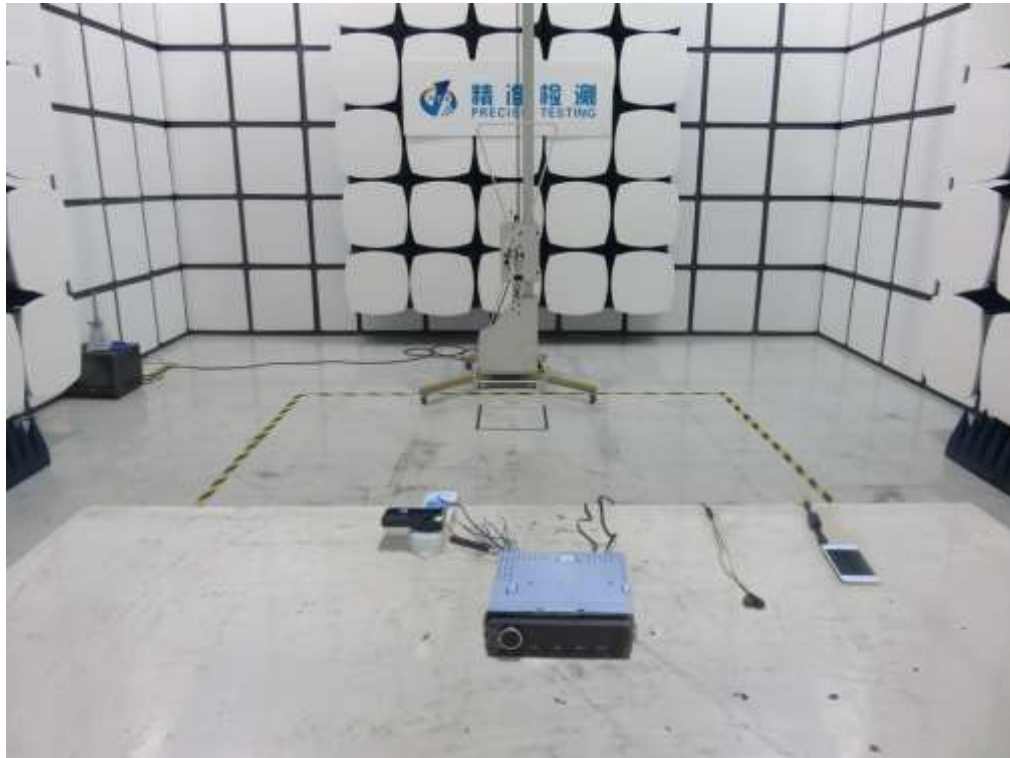
Temperature: 22.7
Humidity: 53.9 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB		cm	degree	
1		122.1500	25.79	7.76	33.55	43.50	-9.95	peak			
2		298.3667	16.55	15.36	31.91	46.00	-14.09	peak			
3	*	429.3167	18.21	19.96	38.17	46.00	-7.83	peak			
4		607.1500	11.98	22.89	34.87	46.00	-11.13	peak			
5		657.2667	10.51	24.04	34.55	46.00	-11.45	peak			
6		773.6667	7.06	26.96	34.02	46.00	-11.98	peak			

RESULT: PASS

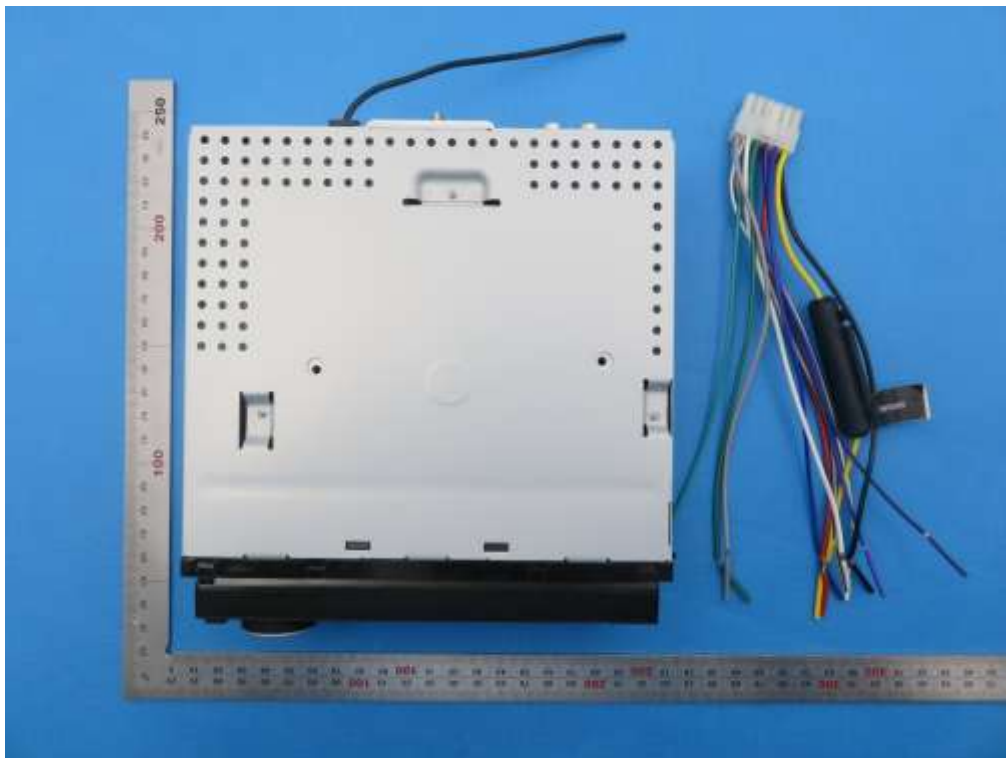
Note: The data above 1GHz have more than 20db margin, no recording in the report
Measurement = Reading + Factor, Over = Measurement – Limit.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP
FCC RADIATED EMISSION TEST SETUP

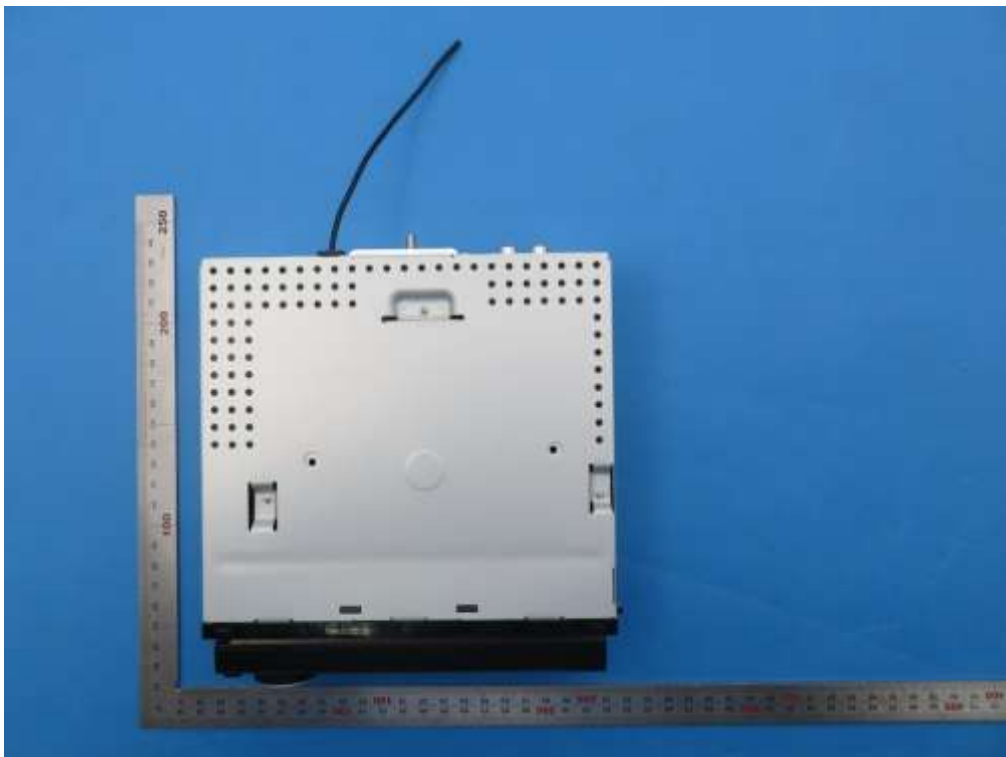


APPENDIX B: PHOTOGRAPHS OF EUT

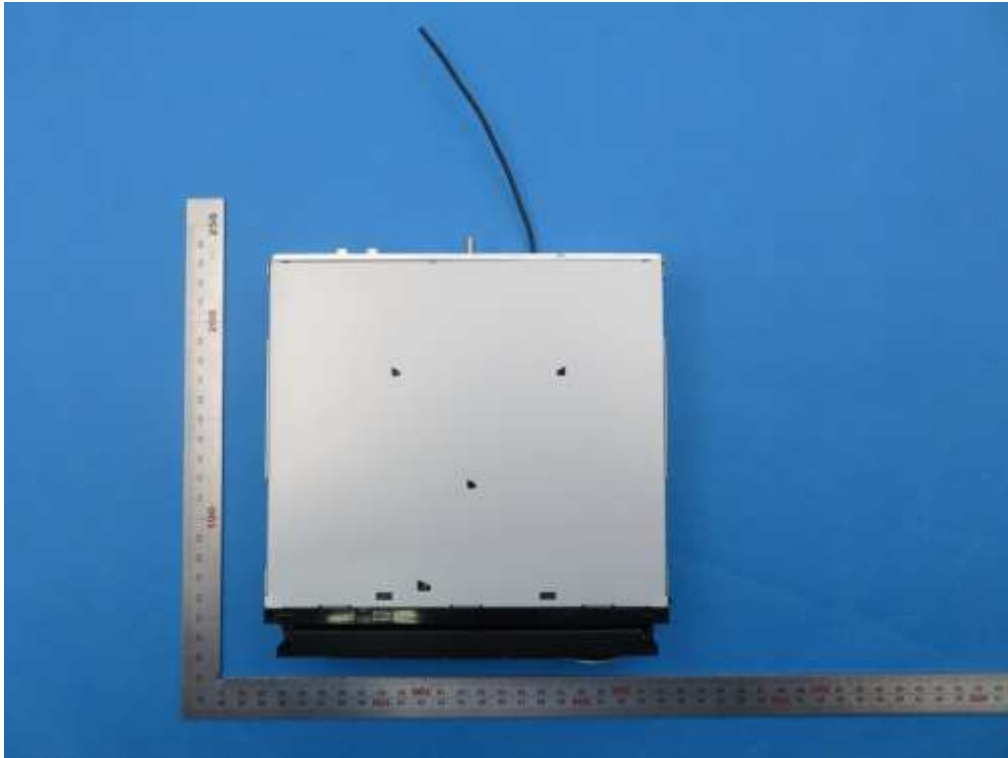
TOTAL VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



LEFT VIEW OF EUT



RIGHT VIEW OF EUT



VIEW OF EUT (USB)



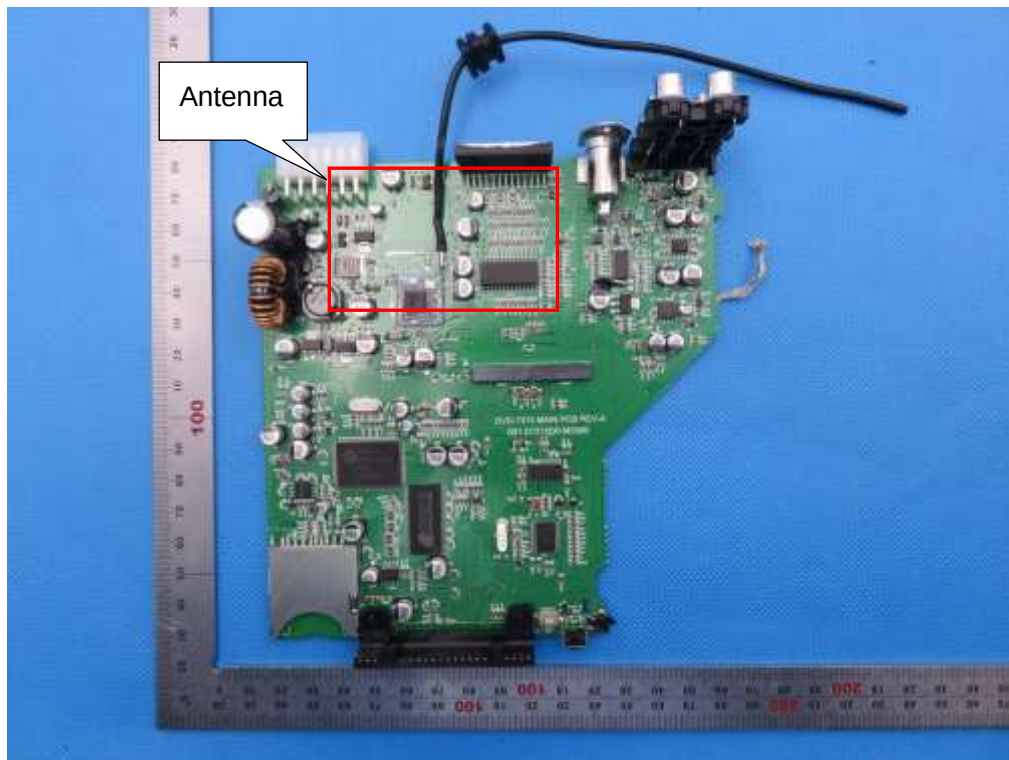
VIEW OF EUT (AUX)



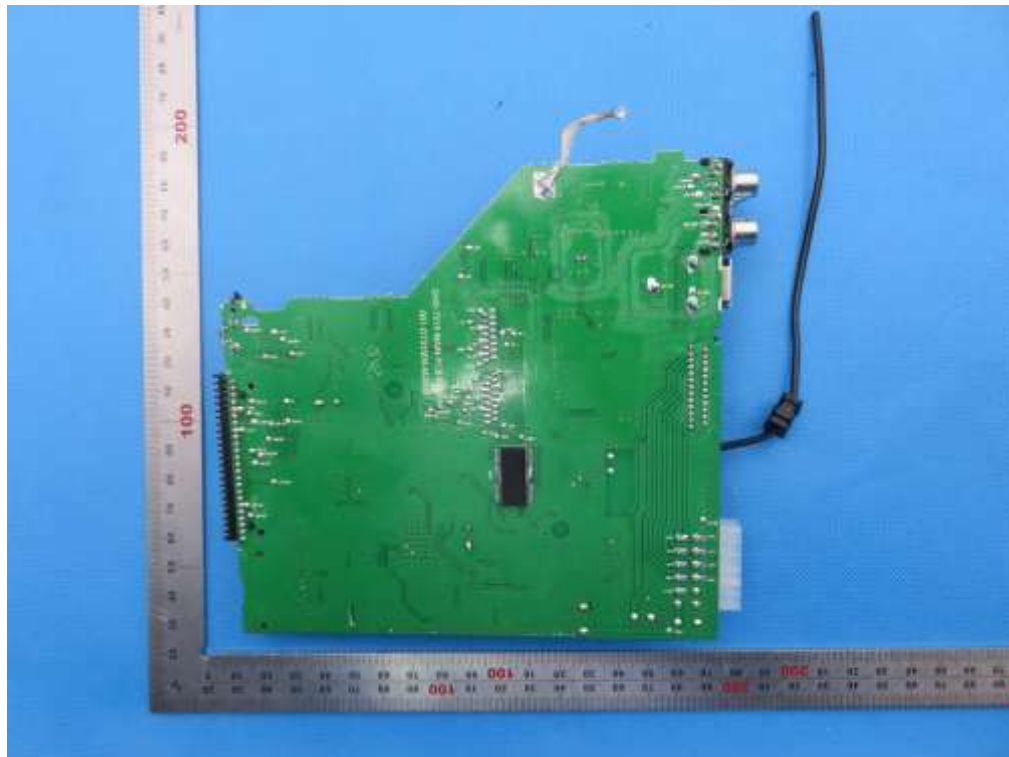
OPEN VIEW OF EUT



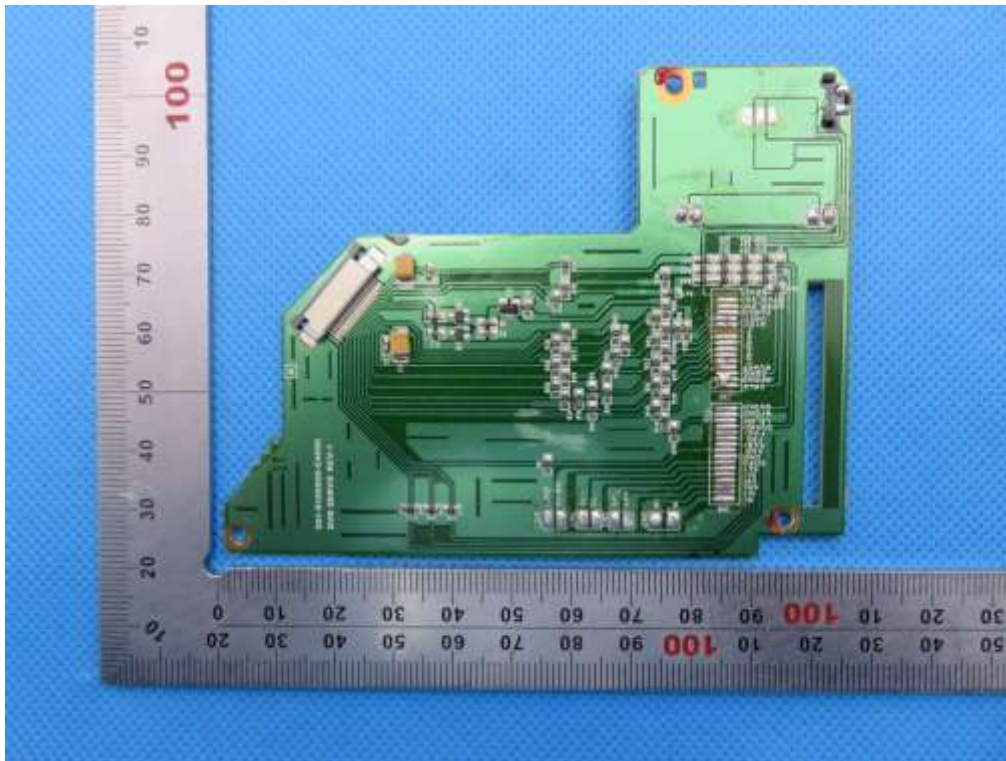
INTERNAL VIEW OF EUT-1



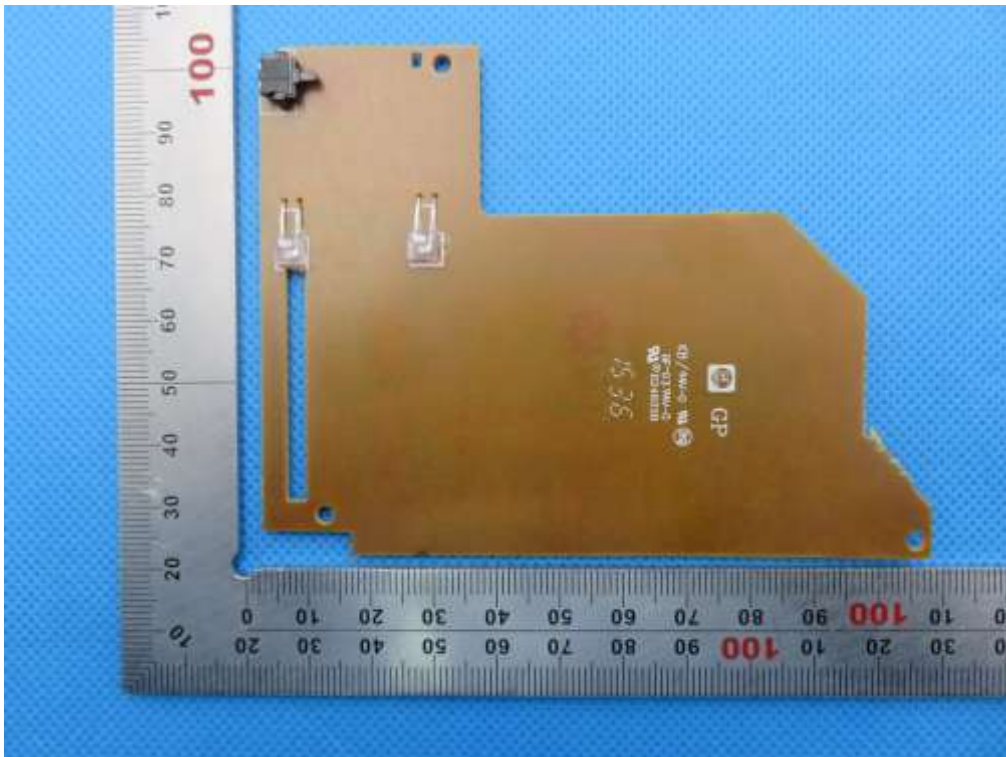
INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



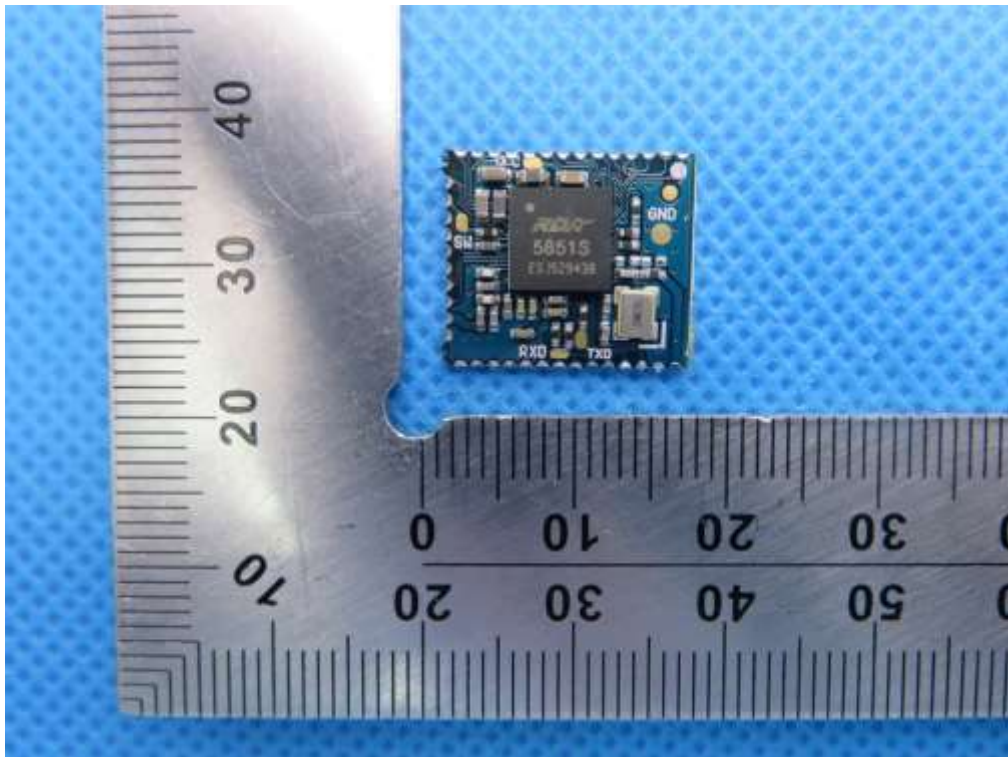
INTERNAL VIEW OF EUT-4



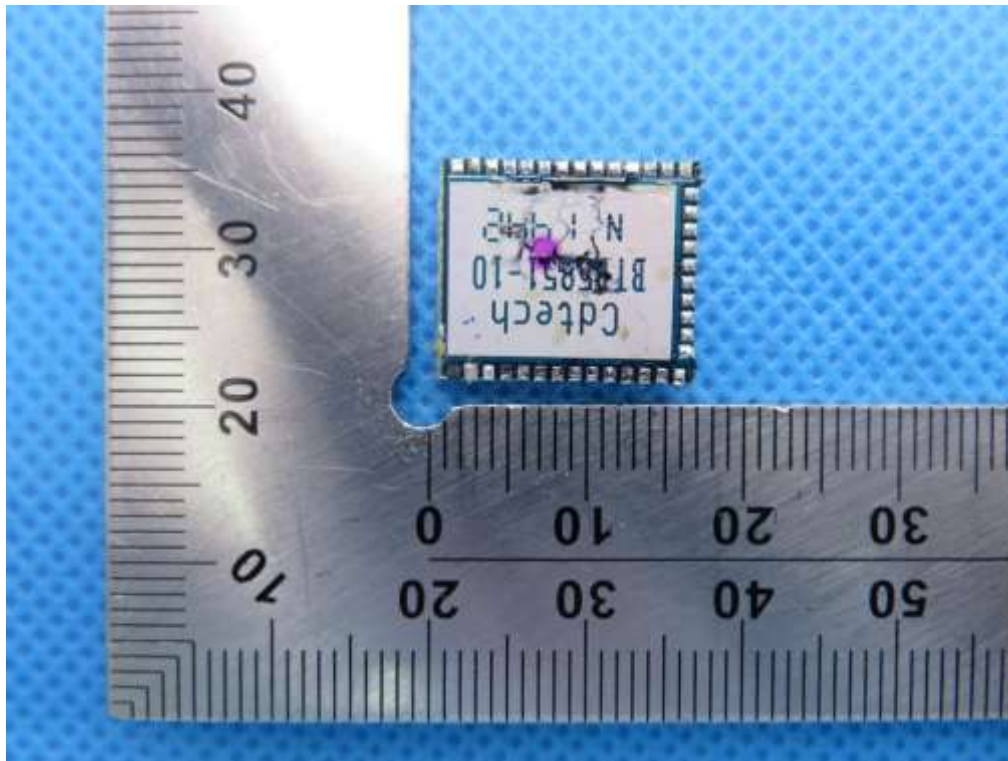
INTERNAL VIEW OF EUT-5



INTERNAL VIEW OF EUT-6



INTERNAL VIEW OF EUT-7



-----END OF REPORT-----