

FCC

RF

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Tablet

ISSUED TO
Alco Electronics Ltd.

11/F Zung Fu Industrial Building, 1067 King's Road, Quarry
Bay, Hong Kong



Tested by:

Cao Shaocong
Cao Shaocong
(Engineer)

Date

May 23, 2016

Approved by:

Wei Yanquan
Wei Yanquan
(Chief Engineer)

Date

May 23, 2016

Report No.: BL-SZ1640028-603

EUT Type: Tablet

Model Name: RCT6603W47

Brand Name: Venturer, RCA

Test Standard: 47 CFR Part 15 Subpart C

FCC ID: A2HRCT6603W

Test conclusion: Pass

Test Date: May 3, 2016 ~ May 10, 2016

Date of Issue: May 23, 2016

NOTE: This test report can be duplicated completely for the legal use with the approval of the applicant; it shall not be reproduced except in full, without the written approval of Shenzhen BALUN Technology Co., Ltd. BALUN Laboratory. Any objections should be raised within thirty days from the date of issue. To validate the report, please visit BALUN website.

Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
Rev. 01	May 18, 2016	Initial Issue
Rev. 02	May 23, 2016	Radiated Emissions: Update the limit for fundamental

TABLE OF CONTENTS

1	ADMINISTRATIVE DATA (GENERAL INFORMATION)	5
1.1	Identification of the Testing Laboratory.....	5
1.2	Identification of the Responsible Testing Location	5
1.3	Laboratory Condition	5
1.4	Announce.....	6
2	PRODUCT INFORMATION	7
2.1	Applicant Information.....	7
2.2	Manufacturer Information	7
2.3	Factory Information	7
2.4	General Description for Equipment under Test (EUT)	7
2.5	Ancillary Equipment.....	7
2.6	Technical Information	8
2.7	Additional Instructions	9
3	SUMMARY OF TEST RESULTS	10
3.1	Test Standards.....	10
3.2	Verdict.....	10
4	GENERAL TEST CONFIGURATIONS	11
4.1	Test Environments	11
4.2	Test Equipment List.....	11
4.3	Description of Test Setup	12
4.3.1	For Antenna Port Test	12
4.3.2	For AC Power Supply Port Test.....	12
4.3.3	For Radiated Test (Below 30 MHz).....	13
4.3.4	For Radiated Test (30 MHz-1 GHz)	13

4.3.5	For Radiated Test (Above 1 GHz)	14
5	TEST ITEMS	15
5.1	Antenna Requirements	15
5.1.1	Standard Applicable	15
5.1.2	Antenna Anti-Replacement Construction	15
5.1.3	Antenna Gain	15
5.2	20 dB Bandwidth	16
5.2.1	Limit	16
5.2.2	Test Setups	16
5.2.3	Test Procedure	16
5.2.4	Test Result	16
5.3	AC Conducted Emission	17
5.3.1	Limit	17
5.3.2	Test Setups	17
5.3.3	Test Procedure	17
5.3.4	Test Result	17
5.4	Radiated Spurious Emission	18
5.4.1	Limit	18
5.4.2	Test Setups	18
5.4.3	Test Procedure	18
5.4.4	Test Result	19
5.5	Band Edge	20
5.5.1	Limit	20
5.5.2	Test Setups	20
5.5.3	Test Procedure	20
5.5.4	Test Result	20
ANNEX A	TEST RESULT	21
A.1	20dB bandwidth	21
A.2	AC Conducted Emission	22
A.3	Radiated Emission	27
A.4	Band Edge	33

ANNEX B	TEST SETUP PHOTOS	35
ANNEX C	EUT EXTERNAL PHOTOS	35
ANNEX D	EUT INTERNAL PHOTOS.....	35

1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6683 3402
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20 to 25°C
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v4.1.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Alco Electronics Ltd.
Address	11/F Zung Fu Industrial Building, 1067 King's Road, Quarry Bay, Hong Kong

2.2 Manufacturer Information

Manufacturer	Alco Electronics (Dongguan) Limited
Address	Gong Ye Xi Road, Houjie Technology Industrial Park, Houjie, Dongguan, Guangdong, P.R.C. Postal Code: 523960

2.3 Factory Information

Factory	Alco Electronics (Dongguan) Limited
Address	Gong Ye Xi Road, Houjie Technology Industrial Park, Houjie, Dongguan, Guangdong, P.R.C. Postal Code: 523960

2.4 General Description for Equipment under Test (EUT)

EUT Type	Tablet
Model Name Under Test	RCT6603W47
Series Model Name	CT9603W47, CT9603W87DK, CT9603W97DK, CT9503W87M, CT9503W87MDK, RCT6603W87DK, RCT6603W97DK, RCT6303W87M, RCT6303W87MDK, CT9603W87, CT9503W87, CT9503W87DK, CT9503W87DKF, RCT6603W87, RCT6303W87, RCT6303W87DK, RCT6303W87DKF, RCT6603W47
Description of Model name differentiation	All models are same with electrical parameters and internal circuit structure, but only differ in model name and brand name serves as marketing strategy.
Hardware Version	V6.4
Software Version	V03-V1.12.0
Dimensions (Approx.)	257 × 165 x 9mm
Weight (Approx.)	550 g
Network and Wireless connectivity	Bluetooth 4.0, WIFI 802.11b, 802.11g, 802.11n (HT20/40), Bluetooth 3.0

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery 1	
	Brand Name	POWTECH
	Model No.	PT2870121-2P
	Serial No.	N/A
	Capacitance	5000 mAh
	Rated Voltage	3.7 V

	Extreme Voltage	5.0 V
Ancillary Equipment 2	Battery 2	
	Brand Name	POWTECH
	Model No.	PT3090135
	Serial No.	N/A
	Capacitance	4000 mAh
	Rated Voltage	3.7 V
	Extreme Voltage	5.0 V
Ancillary Equipment 3	Charger 1	
	Brand Name	Dokocom
	Model No.	LPL-B008050150ZW
	Serial No.	N/A
	Rated Input	100-240 V ~, 50/60 Hz, 250 mA
	Rated Output	5.0 V =, 1500 mA
Ancillary Equipment 4	Charger 2	
	Brand Name	ACT
	Model No.	APS-N009050150W-G
	Serial No.	N/A
	Rated Input	100-240 V ~, 50/60 Hz, 350 mA
	Rated Output	5.0 V =, 1500 mA

Note 1: Their have two types of chargers, all of them were tested in this report. The Dokocom as the main for tested and the ACT as confirmatory test.

2.6 Technical Information

The requirement for the following technical information of the EUT was tested in this report:

Modulation Technology	FHSS
Modulation Type	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Transfer Rate	1 Mbps, 2 Mbps, 3 Mbps
Product Type	Mobile and portable
Frequency Range	The frequency range used is 2402 MHz – 2480 MHz; The frequency block is 2400 MHz to 2483.5 MHz.
Number of channel	79 (at intervals of 1 MHz)
Tested Channel	0 (2402 MHz), 39 (2441 MHz), 78 (2480 MHz).
Antenna Type	PIFA Antenna
Antenna Gain	0 dBi (All involve the antenna gain test item, has been included in the final results)
About the Product	Only the Bluetooth 3.0 was tested in this report.

2.7 Additional Instructions

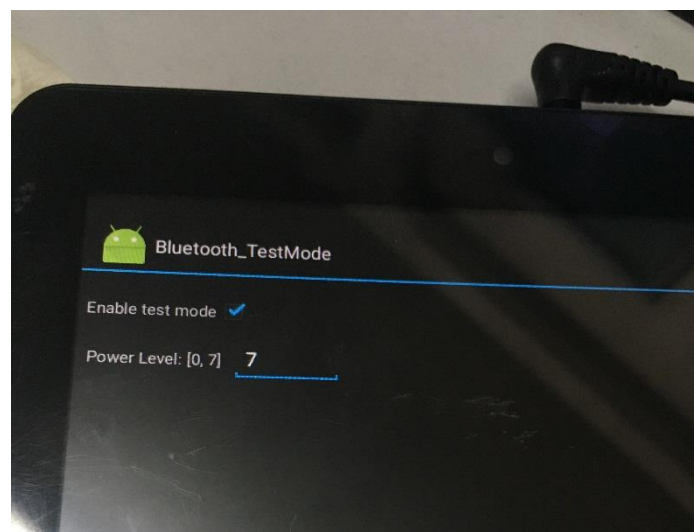
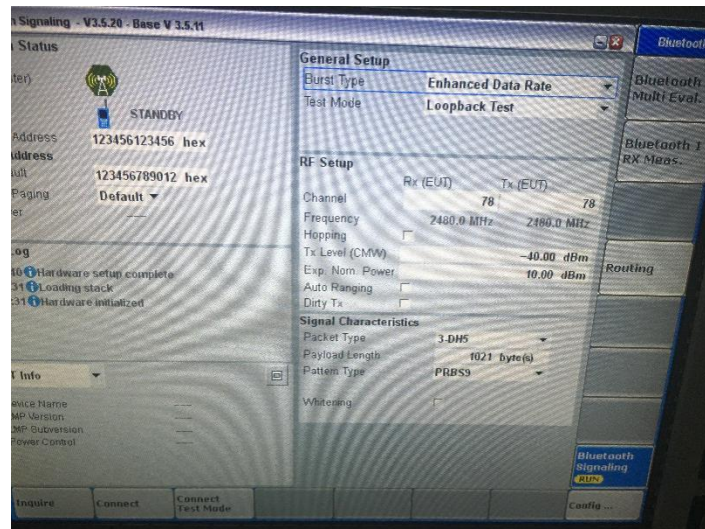
EUT Software Settings:

Mode	☒ Bluetooth test mode loop back enabled. EUT is controlled over CBT / CMU.
------	---

During testing. Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power level setup in software		
Test Software Version	Bluetooth Signaling – V3.5.20	
Mode	Channel	Soft Set
DH5	All	7
2DH5	All	7
3DH5	All	7

Run Software:



3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C (10-1-14 Edition)	Intentional Radiators
2	ANSI C63.10-2014	American National Standard for Testing Unlicensed Wireless Devices

3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict	Remark
1	Antenna Requirement	15.203	--	Pass	Note1
2	20 dB Bandwidth	15.215(c)	ANNEX A.1	Pass	
3	AC Conducted Emission	15.207	ANNEX A.2	Pass	
4	Radiated Spurious Emission	15.249(a)	ANNEX A.3	Pass	
5	Band Edge	15.249(a)	ANNEX A.4	Pass	

Note 1: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% - 55%	
Atmospheric Pressure	100 kPa - 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	120 V/ 60 Hz

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2015.07.16	2016.07.15
Vector Signal Generator	ROHDE&SCHWARZ	SMBV100A	177746	2015.07.16	2016.07.15
Signal Generator	ROHDE&SCHWARZ	SMB100A	260592	2015.07.01	2016.06.30
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2015.07.16	2016.07.15
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2015.10.18	2016.10.17
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2015.07.14	2016.07.13
LISN	SCHWARZBECK	NSLK 8127	8127-687	2015.07.14	2016.07.13
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2015.07.16	2016.07.15
Power Splitter	KMW	DCPD-LDC	1305003215	2015.07.01	2016.06.30
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2015.07.21	2016.07.20
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2015.07.17	2016.07.16
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2015.08.07	2016.08.06
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2015.07.22	2017.07.21
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2015.07.22	2017.07.21
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2015.07.22	2017.07.21
Test Antenna-Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2015.07.22	2017.07.21
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2015.02.28	2017.02.27
Shielded Enclosure	ChangNing	CN-130701	130703	--	--

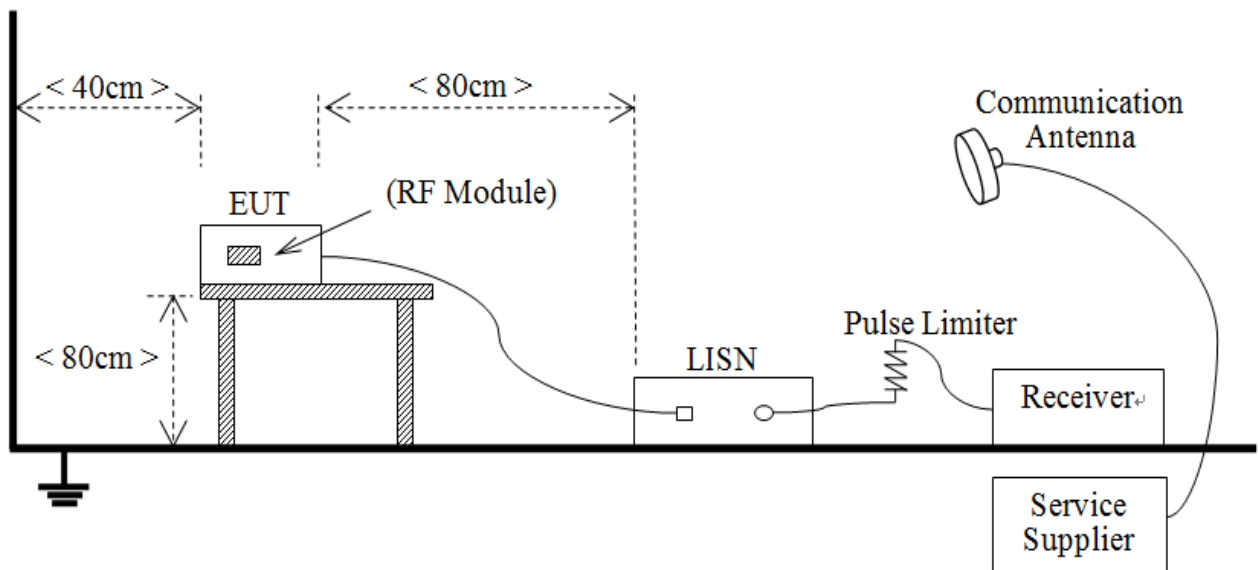
4.3 Description of Test Setup

4.3.1 For Antenna Port Test



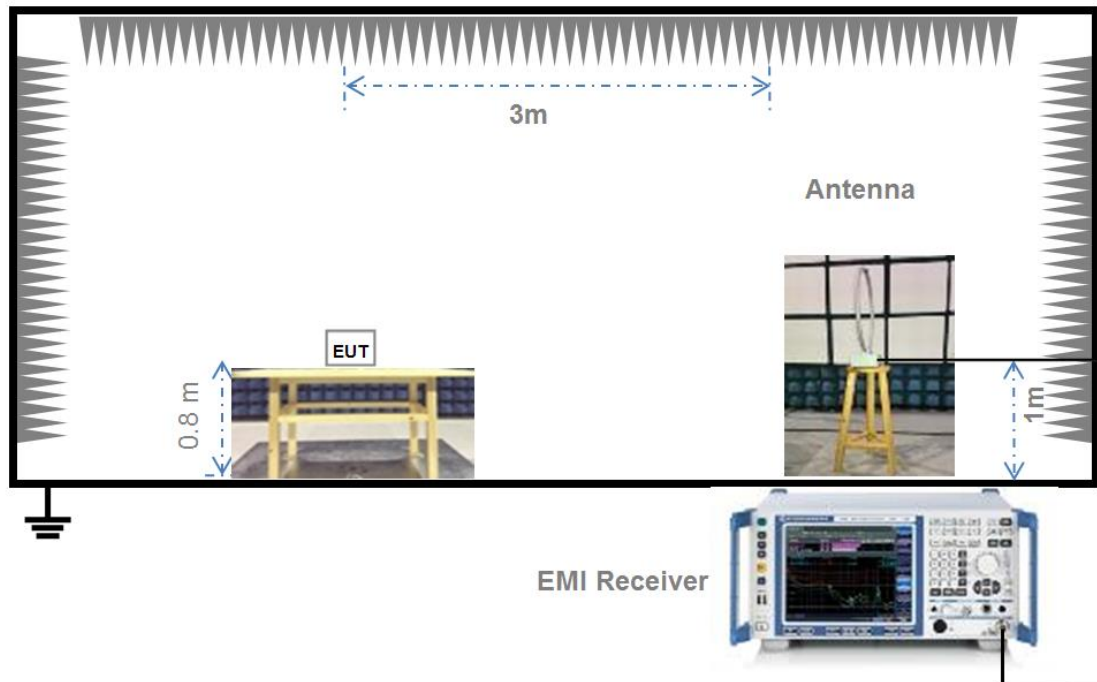
(Diagram 1)

4.3.2 For AC Power Supply Port Test



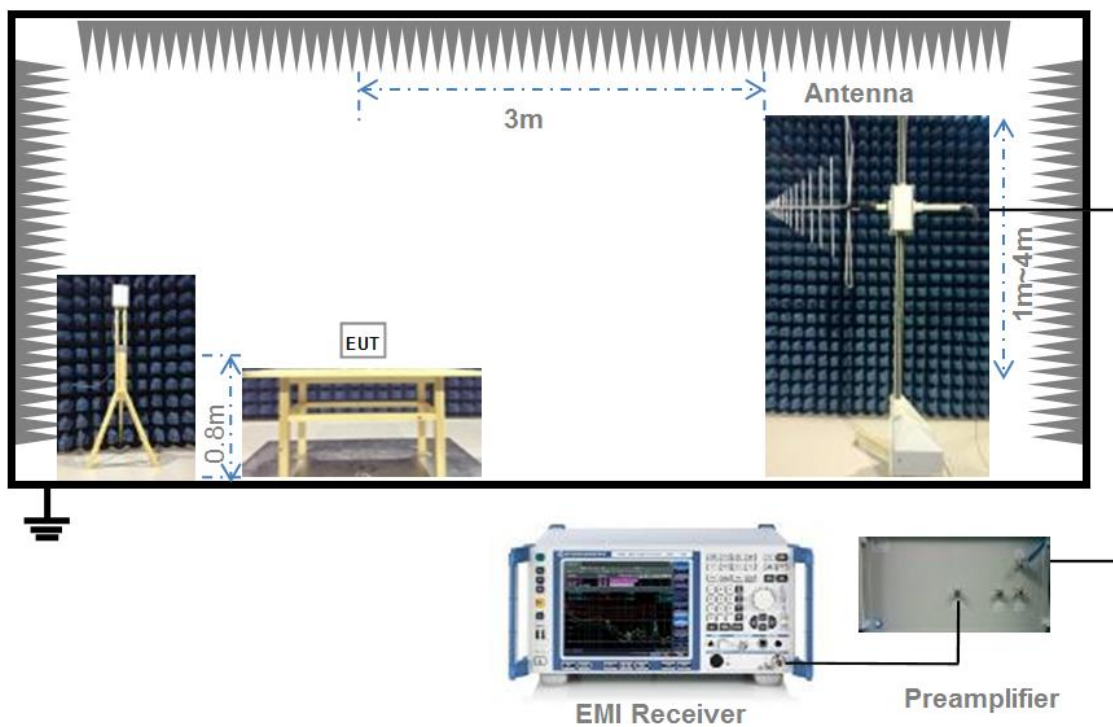
(Diagram 2)

4.3.3 For Radiated Test (Below 30 MHz)



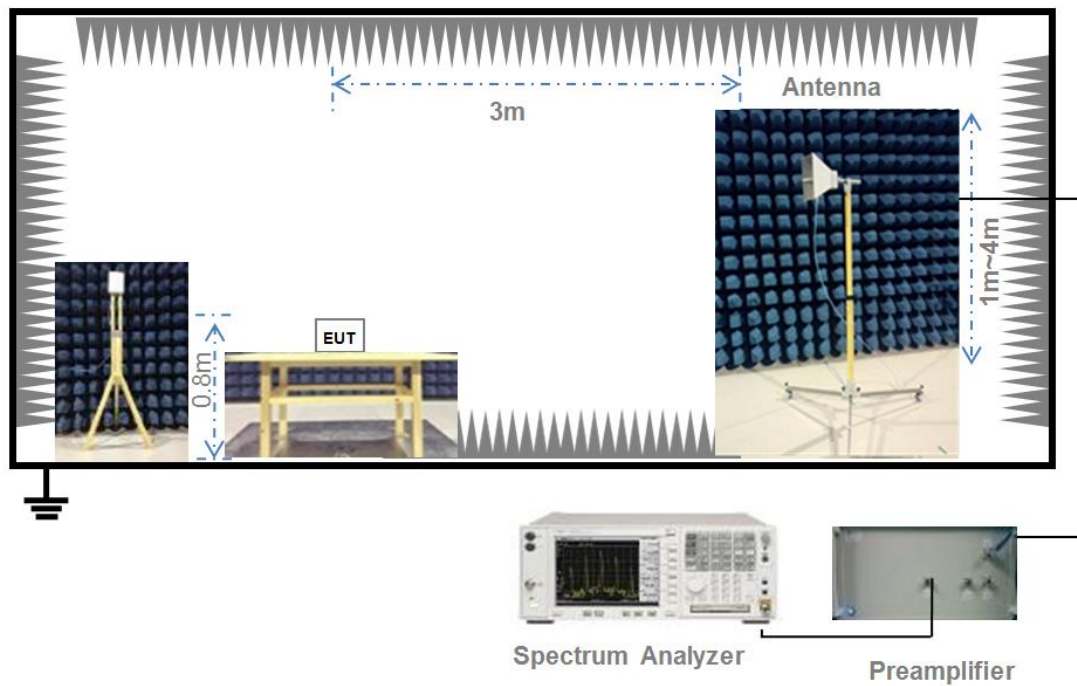
(Diagram 3)

4.3.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.3.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Standard Applicable

FCC §15.203 & 15.247(b)

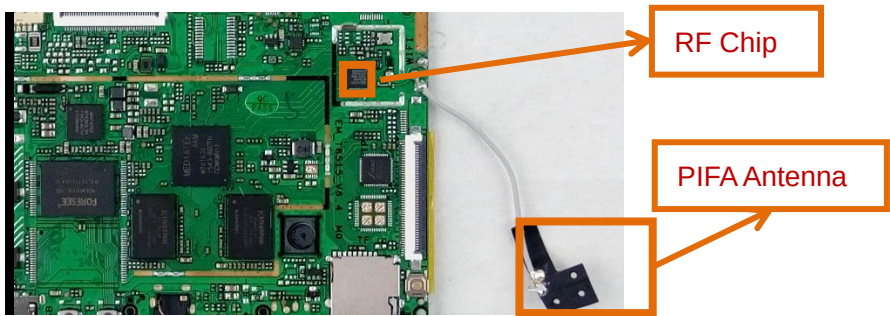
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is An embedded-in	An embedded-in antenna design is used.

Reference Documents	Item
Photo	

5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 20 dB Bandwidth

5.2.1 Limit

FCC §15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.2.2 Test Setups

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW $\geq$ 1% of the 20 dB bandwidth

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 AC Conducted Emission

5.3.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.3.2 Test Setups

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Radiated Spurious Emission

5.4.1 Limit

FCC §15.249(a)

Except as provided in paragraph (a) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Frequency (MHz)	Field Strength of Fundamental (mV/m)	Field Strength of Harmonics (μV/m)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note:

1. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
2. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.4.2 Test Setups

See section 4.1.2-4.4.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented. The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Band Edge

5.5.1 Limit

FCC §15.249(a)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.5.2 Test Setups

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation

RBW $\geq$ 1% of the span

VBW $\geq$ RBW

Sweep = auto

Detector function = peak /AV

Trace = max hold

Allow the trace to stabilize.

$E \text{ [dB}\mu\text{V/m]} = UR + AT + A\text{Factor [dB]}; AT = LCable \text{ loss [dB]} - G\text{preamp [dB]}$

AT: Total correction Factor except Antenna

UR: Receiver Reading

Gpreamp: Preamplifier Gain

AFactor: Antenna Factor at 3m

5.5.4 Test Result

Please refer to ANNEX A.4.

ANNEX A TEST RESULT

A.1 20dB bandwidth

Test Data

DH5 Mode:

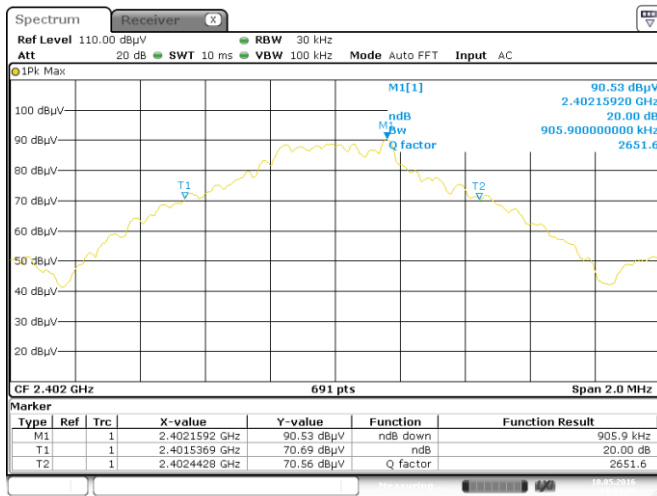
Channel	20 dB Bandwidth (MHz)
Low	0.9059
Middle	0.9059
High	0.9059

3DH5 Mode:

Channel	20 dB Bandwidth (MHz)
Low	1.2590
Middle	1.2894
High	1.2634

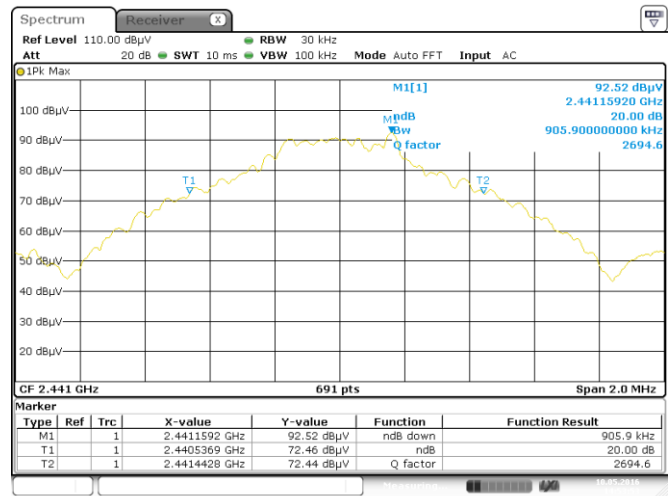
Test plots

DH5 LOW CHANNEL



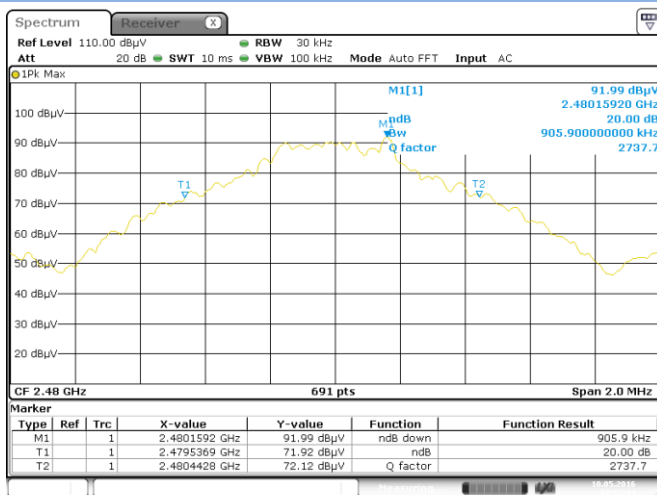
Date: 10.MAY.2016 14:54:25

DH5 MIDDLE CHANNEL



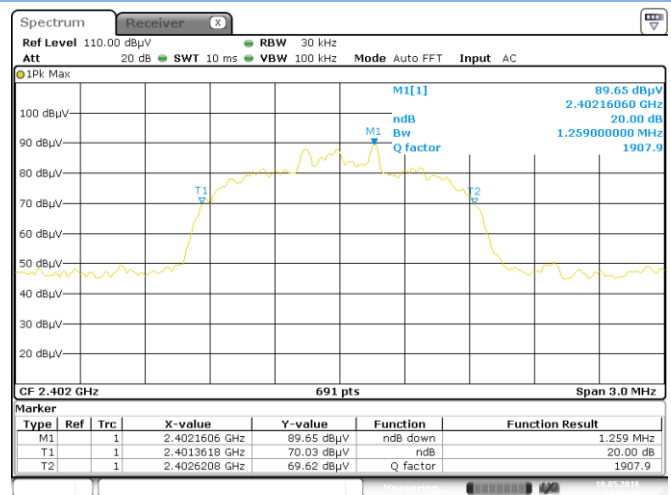
Date: 10.MAY.2016 14:53:53

DH5 HIGH CHANNEL



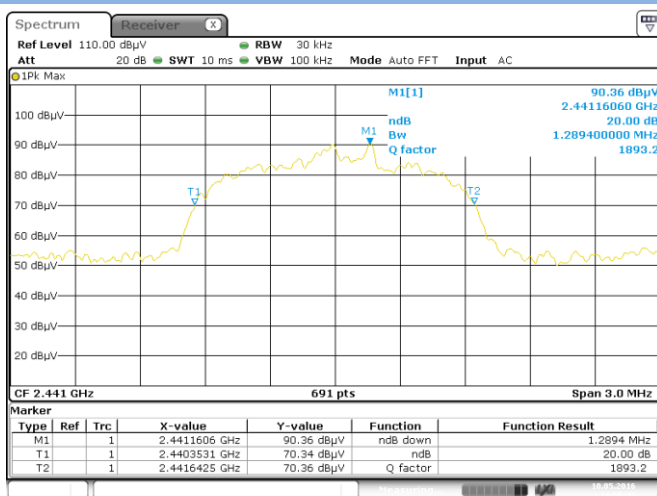
Date: 10.MAY.2016 14:53:14

3DH5 LOW CHANNEL



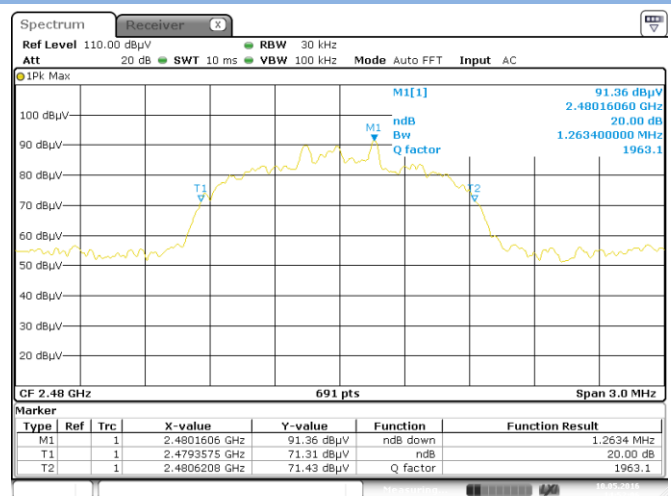
Date: 10.MAY.2016 14:48:44

3DH5 MIDDLE CHANNEL



Date: 10.MAY.2016 14:50:43

3DH5 HIGH CHANNEL



Date: 10.MAY.2016 14:52:07

A.2 AC Conducted Emission

Note 1: The configuration is normal link mode.

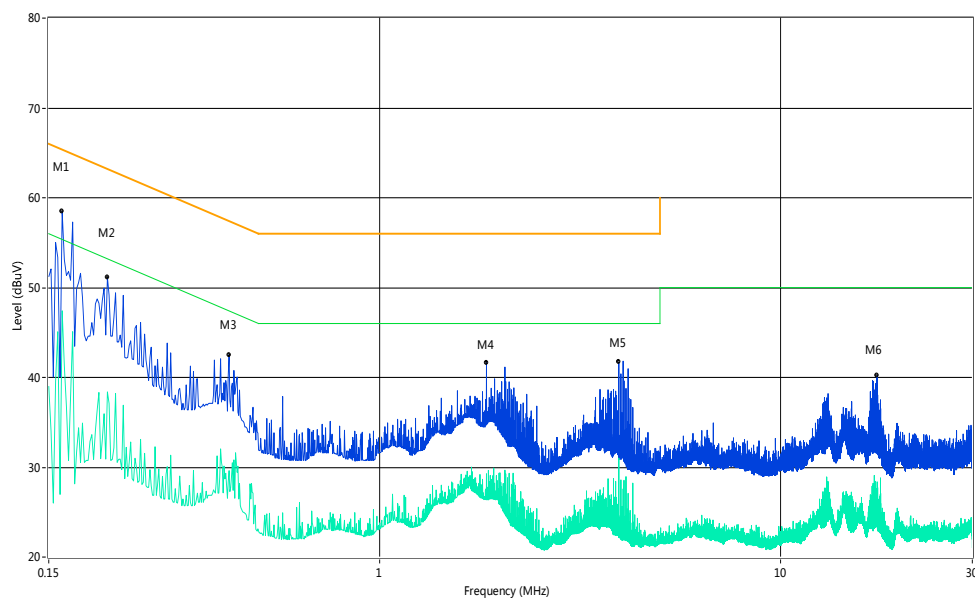
Note 1: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note 3: Their have two types of chargers, all of them were tested in this report. For the test data, show EUT with charger Dokocom and EUT with ACT.

Test Data and Plots

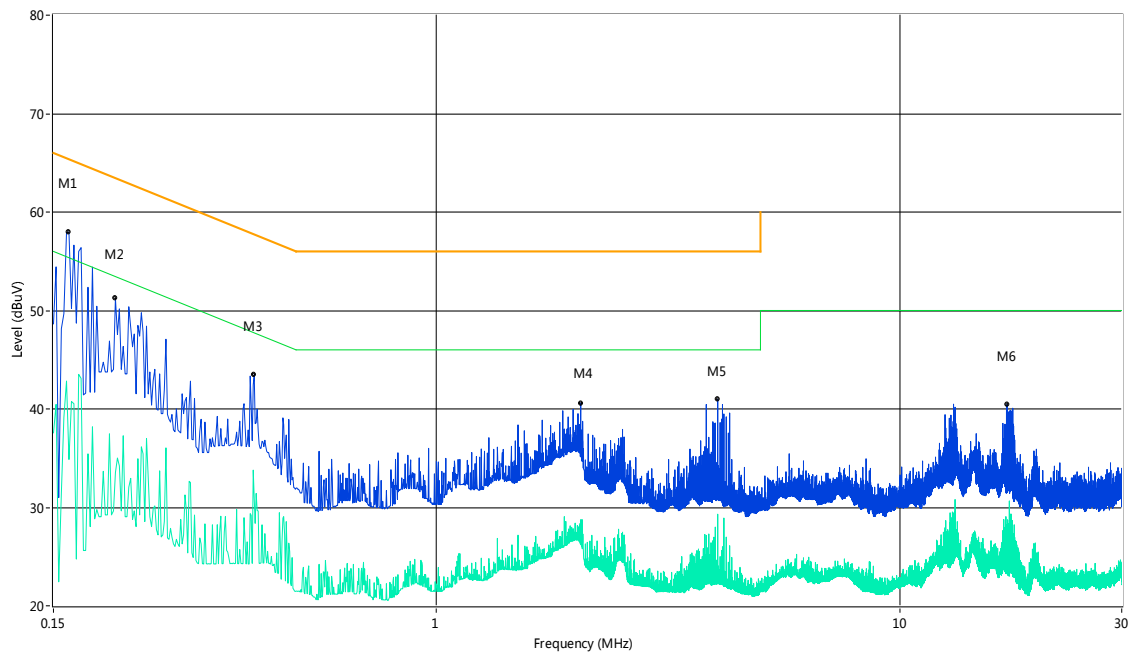
EUT with Charger Dokocom

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.16	58.5	13.00	65.7	7.20	QP	L Line	Pass
1**	0.16	47.4	13.00	55.7	8.30	AV	L Line	Pass
2	0.21	51.1	13.00	64.3	13.20	QP	L Line	Pass
2**	0.21	38.4	13.00	54.3	15.90	AV	L Line	Pass
3	0.42	42.5	13.00	58.2	15.70	QP	L Line	Pass
3**	0.42	29.6	13.00	48.2	18.60	AV	L Line	Pass
4	1.85	41.7	13.00	56.0	14.30	QP	L Line	Pass
4**	1.85	29.3	13.00	46.0	16.70	AV	L Line	Pass
5	3.95	41.7	13.00	56.0	14.30	QP	L Line	Pass
5**	3.95	31.0	13.00	46.0	15.00	AV	L Line	Pass
6	17.38	40.2	13.00	60.0	19.80	QP	L Line	Pass
6**	17.38	28.4	13.00	50.0	21.60	AV	L Line	Pass

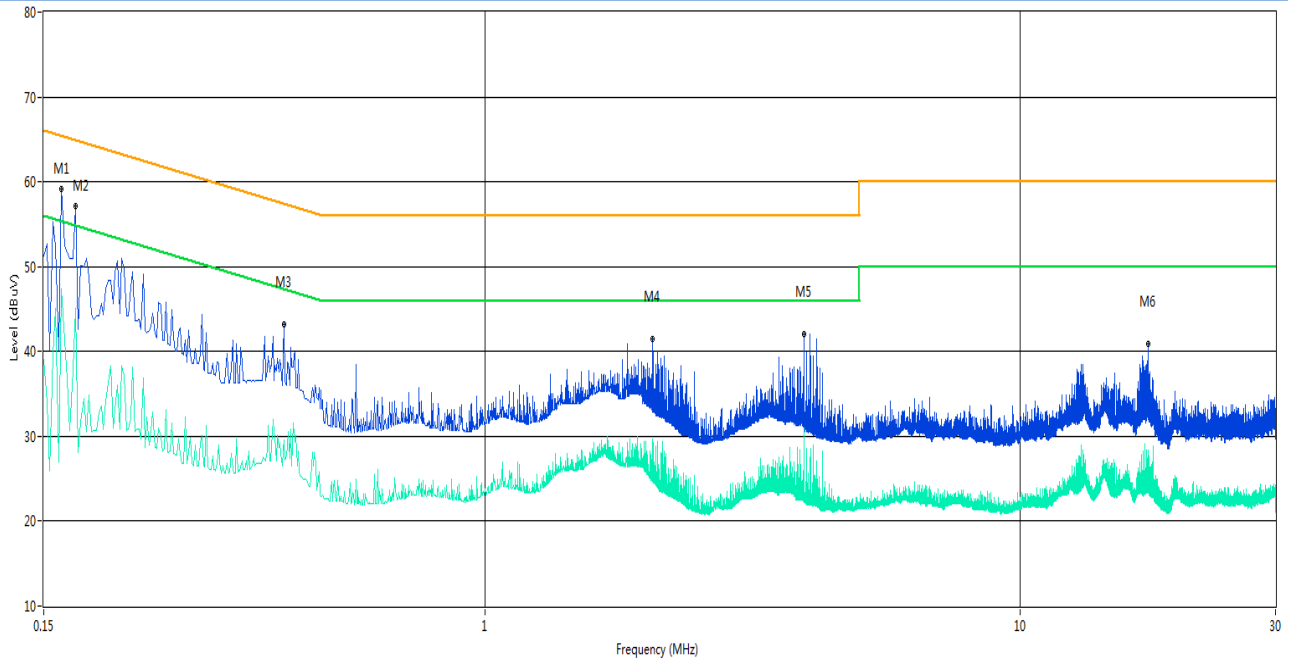
PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.16	57.9	13.00	65.7	7.80	QP	N Line	Pass
1**	0.16	34.9	13.00	55.7	20.80	AV	N Line	Pass
2	0.20	51.2	13.00	64.5	13.30	QP	N Line	Pass
2**	0.20	33.5	13.00	54.5	21.00	AV	N Line	Pass
3	0.41	43.5	13.00	58.7	15.20	QP	N Line	Pass
3**	0.41	30.9	13.00	48.7	17.80	AV	N Line	Pass
4	2.05	40.6	13.00	56.0	15.40	QP	N Line	Pass
4**	2.05	28.7	13.00	46.0	17.30	AV	N Line	Pass
5	4.04	41.0	13.00	56.0	15.00	QP	N Line	Pass
5**	4.04	29.3	13.00	46.0	16.70	AV	N Line	Pass
6	16.99	40.5	13.00	60.0	19.50	QP	N Line	Pass
6**	16.99	28.2	13.00	50.0	21.80	AV	N Line	Pass

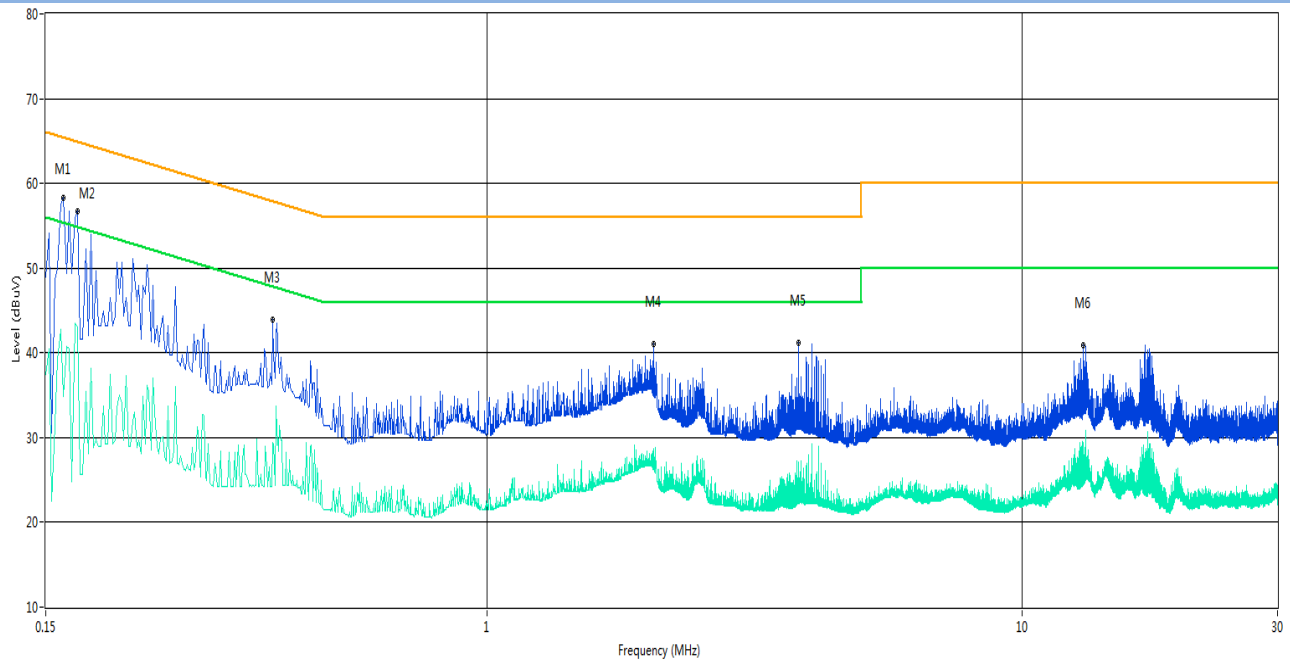
EUT with Charger ACT

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.16	59.1	13.00	65.7	6.60	QP	L Line	Pass
1**	0.16	47.4	13.00	55.7	8.30	AV	L Line	Pass
2	0.17	57.1	13.00	65.4	8.30	QP	L Line	Pass
2**	0.17	45.1	13.00	55.4	10.30	AV	L Line	Pass
3	0.42	43.3	13.00	58.2	14.90	QP	L Line	Pass
3**	0.42	29.6	13.00	48.2	18.60	AV	L Line	Pass
4	2.05	41.4	13.00	56.0	14.60	QP	L Line	Pass
4**	2.05	29.7	13.00	46.0	16.30	AV	L Line	Pass
5	3.95	42.0	13.00	56.0	14.00	QP	L Line	Pass
5**	3.95	31.0	13.00	46.0	15.00	AV	L Line	Pass
6	17.38	40.8	13.00	60.0	19.20	QP	L Line	Pass
6**	17.38	28.4	13.00	50.0	21.60	AV	L Line	Pass

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.16	58.2	13.00	65.7	7.50	QP	N Line	Pass
1**	0.16	34.9	13.00	55.7	20.80	AV	N Line	Pass
2	0.17	56.7	13.00	65.4	8.70	QP	N Line	Pass
2**	0.17	43.1	13.00	55.4	12.30	AV	N Line	Pass
3	0.40	43.9	13.00	58.9	15.00	QP	N Line	Pass
3**	0.40	29.4	13.00	48.9	19.50	AV	N Line	Pass
4	2.05	41.0	13.00	56.0	15.00	QP	N Line	Pass
4**	2.05	28.8	13.00	46.0	17.20	AV	N Line	Pass
5	3.82	41.2	13.00	56.0	14.80	QP	N Line	Pass
5**	3.82	27.2	13.00	46.0	18.80	AV	N Line	Pass
6	13.03	40.9	13.00	60.0	19.10	QP	N Line	Pass
6**	13.03	26.6	13.00	50.0	23.40	AV	N Line	Pass

A.3 Radiated Emission

Note 1: The symbol of “--” in the table which means not application.

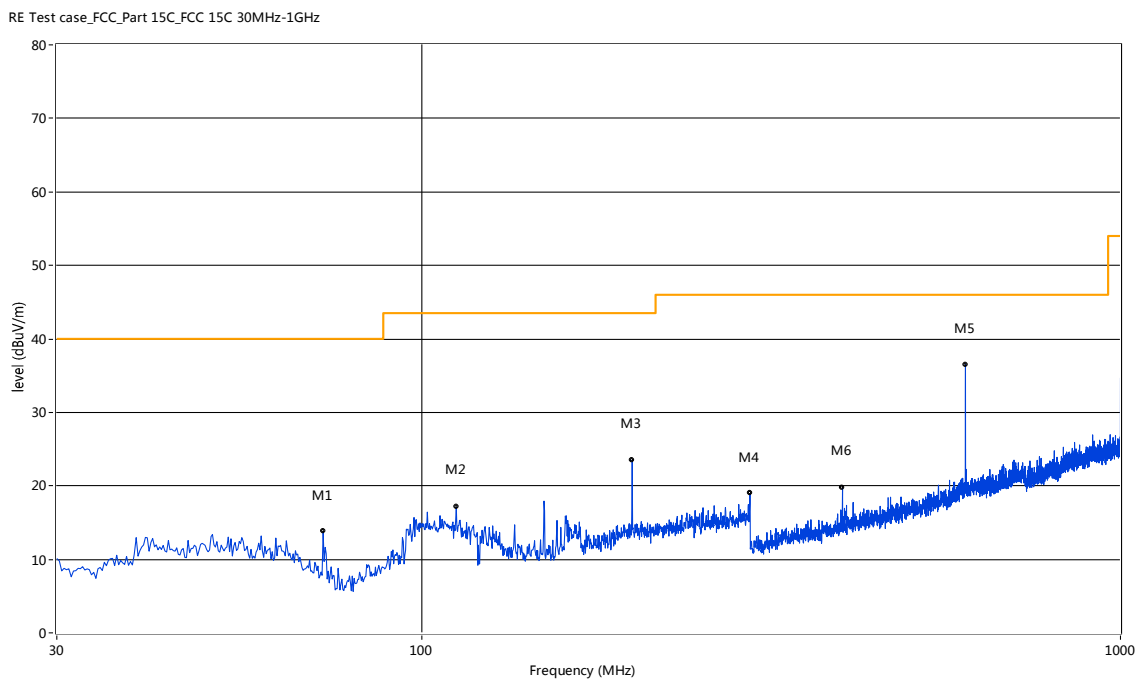
Note 2: For the test data above 1 GHz, according the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: Their have two types of chargers, all of them were tested. The Dokocom as the main for tested and the ACT as confirmatory test. For the test data, only EUT with charger Dokocom were shown.

Note 4: Below 1 GHz, the configuration is normal link mode.

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

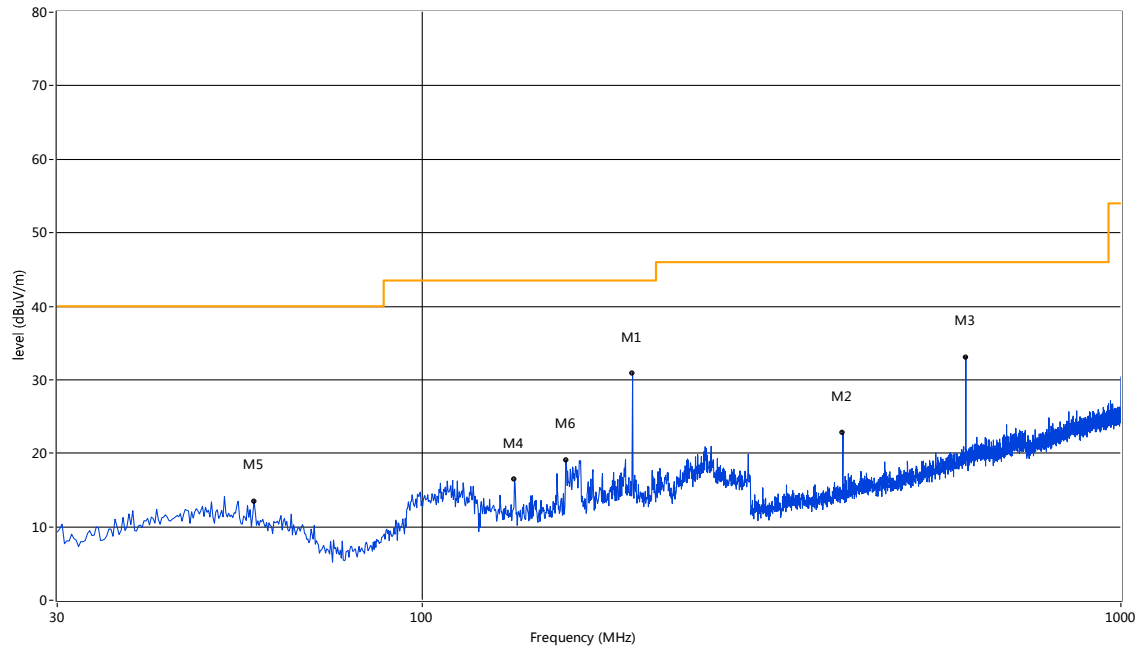
30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	72.18	13.77	-23.60	40.0	26.23	Peak	80.30	100	Vertical	Pass
2	111.94	17.13	-20.52	43.5	26.37	Peak	339.60	100	Vertical	Pass
3	199.95	23.52	-20.22	43.5	19.98	Peak	49.80	100	Vertical	Pass
4	294.74	18.97	-17.84	46.0	27.03	Peak	252.10	100	Vertical	Pass
5	599.98	36.52	-10.76	46.0	9.48	Peak	70.30	100	Vertical	Pass
6	399.96	19.78	-15.13	46.0	26.22	Peak	206.20	100	Vertical	Pass

30 MHz to 1 GHz, ANT H

RE Test case_FCC_Part 15C_FCC 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	199.95	25.89	-20.22	43.5	17.61	Peak	1.20	100	Horizontal	Pass
2	399.96	20.22	-15.13	46.0	25.78	Peak	37.40	100	Horizontal	Pass
3	599.98	33.06	-10.76	46.0	12.94	Peak	12.40	100	Horizontal	Pass
4	135.46	16.36	-23.49	43.5	27.14	Peak	97.20	100	Horizontal	Pass
5	57.40	13.45	-19.63	40.0	26.55	Peak	1.20	100	Horizontal	Pass
6	160.43	19.06	-23.02	43.5	24.44	Peak	92.00	100	Horizontal	Pass

Test Data and Plots (1 GHz ~ 10th Harmonic)

Note 1: The marked spikes near 2400 MHz is the fundamental signal.

Note 2: Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Note 3: Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20 dB from the applicable limit) and considered that's already beyond the background noise floor.

Note 4: Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

DH5 LOW CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1183.95	44.25	-5.55	74.0	29.75	Peak	356.60	100	Vertical	Pass
2	2402.15	101.63	-0.34	114.0	12.37	Peak	254.2	100	Vertical	Pass ^{Note1}
2**	2402.15	80.37	-0.34	94.0	13.63	AV	254.2	100	Vertical	Pass ^{Note1}
3	2819.05	51.28	2.13	74.0	22.72	Peak	95.90	100	Vertical	Pass
4	1556.86	44.92	-4.01	74.0	29.08	Peak	330.50	100	Vertical	Pass
5	4702.82	52.33	13.31	74.0	21.67	Peak	0.80	100	Vertical	Pass
6	5507.37	51.34	15.18	74.0	22.66	Peak	215.40	100	Vertical	Pass

DH5 LOW CHANNEL 1 GHz to 25 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1765.81	45.49	-3.80	74.0	28.51	Peak	40.90	100	Horizontal	Pass
2	1350.91	44.70	-4.53	74.0	29.30	Peak	224.40	100	Horizontal	Pass
3	2401.65	100.16	-0.27	114.0	13.84	Peak	281.2	100	Vertical	Pass ^{Note1}
3**	2401.65	78.9	-0.27	94.0	15.1	AV	281.2	100	Vertical	Pass ^{Note1}
4	2698.58	50.65	1.60	74.0	23.35	Peak	40.90	100	Horizontal	Pass
5	4689.33	51.57	13.23	74.0	22.43	Peak	357.90	100	Horizontal	Pass
6	3581.10	46.83	9.98	74.0	27.17	Peak	358.60	100	Horizontal	Pass

DH5 MIDDLE CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2441.14	101.45	-0.38	114.0	12.55	Peak	254.8	100	Vertical	Pass ^{Note1}
1**	2441.14	80.19	-0.38	94.0	13.81	AV	254.8	100	Vertical	Pass ^{Note1}
2	1300.42	44.64	-4.71	74.0	29.36	Peak	148.80	100	Vertical	Pass
3	2199.20	48.56	-0.44	74.0	25.44	Peak	53.60	100	Vertical	Pass
4	2841.04	51.12	1.89	74.0	22.88	Peak	72.40	100	Vertical	Pass
5	4855.04	52.06	13.56	74.0	21.94	Peak	359.00	100	Vertical	Pass
6	5733.82	51.44	15.35	74.0	22.56	Peak	163.90	100	Vertical	Pass

DH5 MIDDLE CHANNEL 1 GHz to 25 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2440.64	99.41	-0.41	114.0	14.59	Peak	73	100	Vertical	Pass ^{Note1}
1**	2440.64	78.15	-0.41	94.0	15.85	AV	73	100	Vertical	Pass ^{Note1}
2	1605.85	45.83	-4.35	74.0	28.17	Peak	349.60	100	Horizontal	Pass
3	1891.78	47.08	-2.95	74.0	26.92	Peak	137.00	100	Horizontal	Pass
4**	4881.83	36.01	13.60	54.0	17.99	AV	208.00	109.00	Horizontal	Pass
4	4881.83	49.15	13.60	74.0	24.85	Peak	208.00	109.00	Horizontal	Pass
5	2998.50	49.15	2.40	74.0	24.85	Peak	273.70	100	Horizontal	Pass
6	5289.18	50.77	14.46	74.0	23.23	Peak	357.00	100	Horizontal	Pass

DH5 HIGH CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480.13	100.59	-0.6	114.0	13.41	Peak	249.2	100	Vertical	Pass ^{Note1}
1**	2480.13	79.33	-0.6	94.0	14.67	AV	249.2	100	Vertical	Pass ^{Note1}
2	1094.98	43.76	-6.18	74.0	30.24	Peak	356.60	100	Vertical	Pass
3	1599.35	44.25	-4.32	74.0	29.75	Peak	360.00	100	Vertical	Pass
4	1926.27	46.08	-2.36	74.0	27.92	Peak	359.60	100	Vertical	Pass
5	2853.04	51.57	1.97	74.0	22.43	Peak	130.10	100	Vertical	Pass
6	4465.88	51.49	12.47	74.0	22.51	Peak	229.00	100	Vertical	Pass

DH5 HIGH CHANNEL 1 GHz to 25 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1895.28	49.12	-2.93	74.0	24.88	Peak	167.40	100	Horizontal	Pass
2	1489.38	44.57	-4.51	74.0	29.43	Peak	356.90	100	Horizontal	Pass
3	2992.50	50.47	2.37	74.0	23.53	Peak	1.90	100	Horizontal	Pass
4	3134.22	47.51	9.12	74.0	26.49	Peak	117.50	100	Horizontal	Pass
5	2480.13	99.21	-0.6	114.0	14.79	Peak	280.1	100	Vertical	Pass ^{Note1}
5**	2480.13	77.95	-0.6	94.0	16.05	AV	280.1	100	Vertical	Pass ^{Note1}
6	4718.57	52.30	13.54	74.0	21.70	Peak	72.40	100	Horizontal	Pass

3DH5 LOW CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1590.35	44.38	-4.28	74.0	29.62	Peak	267.80	100	Vertical	Pass
2	2401.65	100.85	-0.27	114.0	13.15	Peak	255.1	100	Vertical	Pass ^{Note1}
2**	2401.65	79.59	-0.27	94.0	14.41	AV	255.1	100	Vertical	Pass ^{Note1}
3	2967.51	51.04	2.36	74.0	22.96	Peak	358.00	100	Vertical	Pass
4	2663.08	50.30	0.89	74.0	23.70	Peak	319.00	100	Vertical	Pass
5	4864.03	51.94	13.57	74.0	22.06	Peak	-0.30	100	Vertical	Pass
6	5667.83	52.35	15.39	74.0	21.65	Peak	182.10	100	Vertical	Pass

3DH5 LOW CHANNEL 1 GHz to 25 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1204.45	44.59	-5.24	74.0	29.41	Peak	268.10	100	Horizontal	Pass
2	1349.91	44.74	-4.57	74.0	29.26	Peak	123.00	100	Horizontal	Pass
3	2402.15	98.86	-0.34	114.0	15.14	Peak	281.1	100	Vertical	Pass ^{Note1}
3**	2402.15	77.6	-0.34	94.0	16.4	AV	281.1	100	Vertical	Pass ^{Note1}
4	2994.00	49.62	2.45	74.0	24.38	Peak	129.20	100	Horizontal	Pass
5	3728.82	47.52	10.32	74.0	26.48	Peak	359.60	100	Horizontal	Pass
6	4575.36	50.98	12.78	74.0	23.02	Peak	312.60	100	Horizontal	Pass

3DH5 MIDDLE CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2440.64	100.44	-0.41	114.0	13.56	Peak	256.3	100	Vertical	Pass ^{Note1}
1**	2440.64	79.18	-0.41	94.0	14.82	AV	256.3	100	Vertical	Pass ^{Note1}
2	1311.42	44.95	-4.74	74.0	29.05	Peak	319.00	100	Vertical	Pass
3	1782.30	46.29	-3.66	74.0	27.71	Peak	41.10	100	Vertical	Pass
4	2857.54	51.35	2.00	74.0	22.65	Peak	225.50	100	Vertical	Pass
5	4791.30	51.47	13.72	74.0	22.53	Peak	359.40	100	Vertical	Pass
6	5340.91	51.19	14.68	74.0	22.81	Peak	23.60	100	Vertical	Pass

3DH5 MIDDLE CHANNEL 1 GHz to 25 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2441.14	91.62	-0.38	114.0	22.38	Peak	16.4	100	Vertical	Pass ^{Note1}
1**	2441.14	70.36	-0.38	94.0	23.64	AV	16.4	100	Vertical	Pass ^{Note1}
2	1602.35	46.03	-4.32	74.0	27.97	Peak	-0.00	100	Horizontal	Pass
3	2147.71	48.09	-1.18	74.0	25.91	Peak	2.00	100	Horizontal	Pass
4	2816.55	51.40	2.11	74.0	22.60	Peak	111.50	100	Horizontal	Pass
5	4703.57	52.03	13.32	74.0	21.97	Peak	356.60	100	Horizontal	Pass
6	5270.43	50.77	14.60	74.0	23.23	Peak	360.30	100	Horizontal	Pass

3DH5 HIGH CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480.13	100.09	-0.6	114.0	13.91	Peak	255.8	100	Vertical	Pass ^{Note1}
1**	2480.13	78.83	-0.6	94.0	15.17	AV	255.8	100	Vertical	Pass ^{Note1}
2	1540.36	45.29	-4.26	74.0	28.71	Peak	199.40	100	Vertical	Pass
3	1913.77	46.19	-2.61	74.0	27.81	Peak	22.50	100	Vertical	Pass
4	2663.58	50.53	0.97	74.0	23.47	Peak	16.20	100	Vertical	Pass
5	4672.08	51.57	13.15	74.0	22.43	Peak	339.40	100	Vertical	Pass
6	5123.47	51.70	14.99	74.0	22.30	Peak	359.50	100	Vertical	Pass

3DH5 HIGH CHANNEL 1 GHz to 25 GHz, ANT H

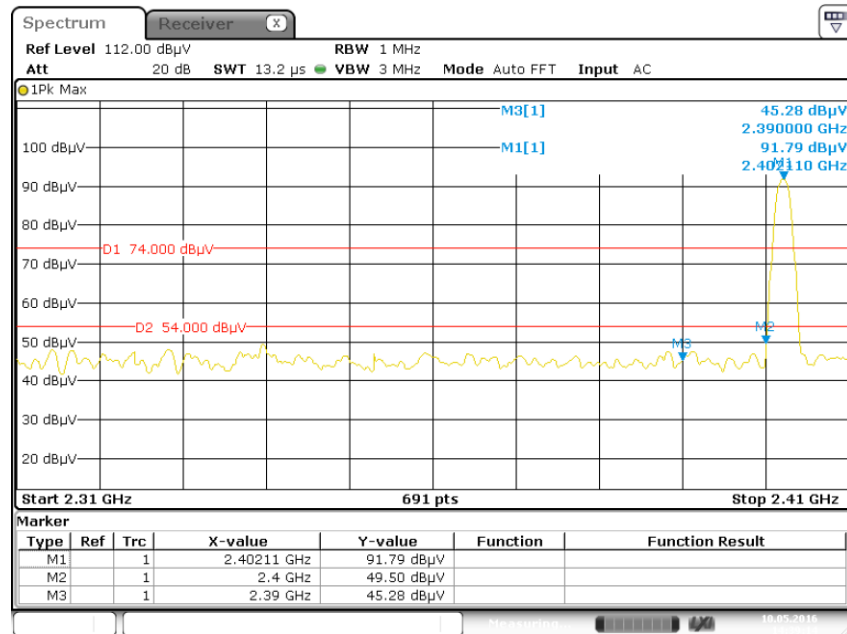
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480.13	98.71	-0.6	114.0	15.29	Peak	281.8	100	Vertical	Pass ^{Note1}
1**	2480.13	77.45	-0.6	94.0	16.55	AV	281.8	100	Vertical	Pass ^{Note1}
2	1924.77	46.29	-2.44	74.0	27.71	Peak	358.60	100	Horizontal	Pass
3	1619.35	44.53	-4.28	74.0	29.47	Peak	225.70	100	Horizontal	Pass
4	2999.00	49.66	2.45	74.0	24.34	Peak	187.80	100	Horizontal	Pass
5	4736.57	51.66	13.61	74.0	22.34	Peak	7.00	100	Horizontal	Pass
6	5865.78	51.59	15.47	74.0	22.41	Peak	352.90	100	Horizontal	Pass

A.4 Band Edge

Test Data and Test Plots

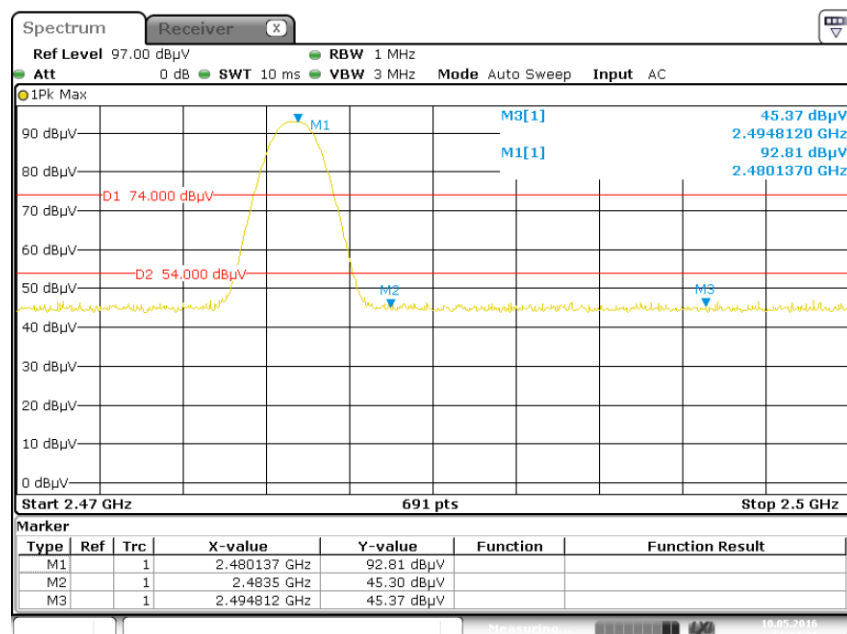
Note 1: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

DH5 LOW CHANNEL



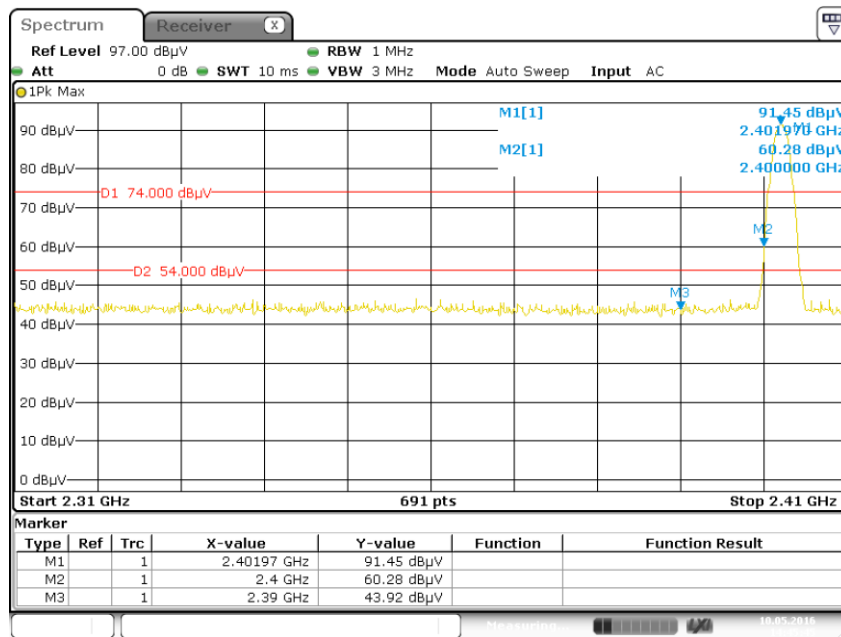
Date: 10.MAY.2016 14:39:15

DH5 HIGH CHANNEL

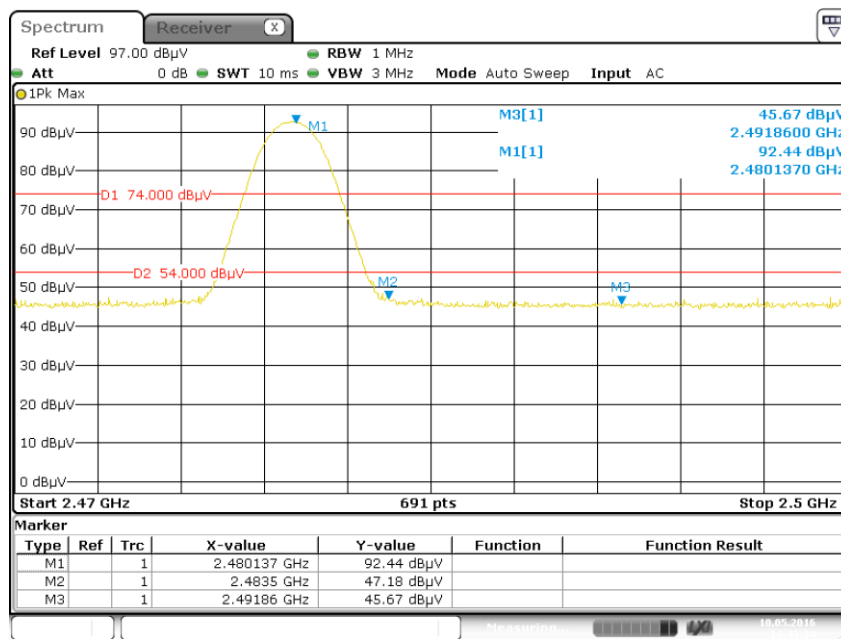


Date: 10.MAY.2016 14:44:31

3DH5 LOW CHANNEL



3DH5 HIGH CHANNEL



ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-SZ1640028-AR.PDF".

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL- SZ1640028-AW.PDF".

ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL- SZ1640028-AI.PDF".

--END OF REPORT--