TEST REPORT

For

NFC Android Reader

Model Number: FX105F

FCC ID: 2AGQIFX105F

Report Number : WT208000772

Test Laboratory : Shenzhen Academy of Metrology and Quality

Inspection

Site Location : NETC Building, No.4 Tongfa Rd., Xili, Nanshan,

Shenzhen, China

Tel : 0086-755-86928965

Fax : 0086-755-86009898-31396

Web : www.smq.com.cn E-mail : emcrf@smq.com.cn

Report No.:WT208000772 Page 1 of 44

TEST REPORT DECLARATION

Applicant : FAMOCO SAS

Address : 59 avenue Victor Hugo, Paris, France

Manufacturer : FAMOCO SAS

Address : 59 avenue Victor Hugo, Paris, France

EUT Description : NFC Android Reader

Model No. : FX105F

Trade mark : Famoco

Serial Number : /

FCC ID : 2AGQIFX105F

Test Standards:

FCC Part 15 15.207, 15.209, 15.247 (2019)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Project Engineer:	JEB.	_ Date:	Jun.03, 2020
	(Zhou Fangai 周芳媛)		
Checked by:	相直钢	Date:	Jun.03, 2020
	(Lin Yixiang 林奕翔)		
Approved by:	种和	Date:	Jun.03, 2020
	(Lin Bin 林斌)		

Report No.:WT208000772 Page 2 of 44

TABLE OF CONTENTS

TEST	REPC	ORT DECLARATION	2
1.	TEST	RESULTS SUMMARY	5
2.	GENE	ERAL INFORMATION	6
	2.1.	Report information	
	2.2.	Laboratory Accreditation and Relationship to Customer	
	2.3.	Measurement Uncertainty	
3.	PROD	DUCT DESCRIPTION	
	3.1.	EUT Description	
	3.2.	Related Submittal(s) / Grant (s)	
	3.3.	Block Diagram of EUT Configuration	
	3.4. 3.5.	Operating Condition of EUT Directional Antenna Gain	
	3.6.	Support Equipment List	
	3.7.	Test Conditions	
	3.8.	Special Accessories	
	3.9.	Equipment Modifications	9
4.	TEST	EQUIPMENT USED	10
5.	6DB I	BANDWIDTH MEASUREMENT	11
	5.1.	LIMITS OF 6dB BANDWIDTH MEASUREMENT	11
	5.2.	TEST PROCEDURE	
	5.3.	TEST SETUP	
	5.4.	Test Data	
6.		MUM CONDUCTED OUTPUT POWER MEASUREMENT	
	6.1.	LIMITS OF Maximum Conducted Output Power Measurement	
	6.2. 6.3.	TEST PROCEDURE	
	6.4.	TEST SETUP TEST DATA	
7.	-	MUM POWER SPECTRAL DENSITY LEVEL MEASUREMENT	
/٠	7.1.	LIMITS OF Maximum Power Spectral Density Level Measurement	
	7.1. 7.2.	TEST PROCEDURE	
	7.3.	TEST DATA	
8.	CONI	DUCTED BANDEDGE AND SPURIOUS MEASURMENT	
	8.1.	LIMITS OF Conducted Bandedge and Spurious Measurement	17
	8.2.	TEST PROCEDURE	
	8.3.	TEST DATA	
9.	RADI	ATED BANDEDGE AND SPURIOUS MEASUREMENT	21
	9.1.	LIMITS OF Radiated Bandedge and Spurious Measurement	
	9.2.	TEST PROCEDURE	
	9.3.	TEST DATA	
10.		DUCTED EMISSION TEST FOR AC POWER PORT MEASUREMENT	
	10.1.	Test Standard and Limit	
	10.2.	Test Procedure	40

	10.3.	Test Arrangement	40
		Test Data	
11.	ANTE	NNA REQUIREMENTS	44
	11.1.	Applicable requirements	44
	11.2.	Antenna Connector	44
	11.3.	Antenna Gain	44

1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results					
6dB DTS bandwidth	15.247 (a) (2)	Pass					
Maximum Peak Conducted Power	15.247 (b) (3)	Pass					
Maximum Power Spectral Density Level	15.247 (3)	Pass					
Conducted Bandedge and Spurious	15.247 (d)	Pass					
Radiated Bandedge and Spurious	15.247 (d) 15.209 15.205	Pass					
Conducted emission test for AC power port	15.207	Pass					
Antenna Requirement	15.203	Pass					

Remark: "N/A" means "Not applicable."

Report No.:WT208000772

Page 5 of 44

2. GENERAL INFORMATION

2.1.Report information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Innovation, Science and Economic Development (ISED), and the registration number is 11177A.

The Laboratory is registered to perform emission tests with VCCI, and the registration number are C-20048, G20076, R-20077, R-20078 and T-20047.

The Laboratory is Accredited Testing Laboratory of American Association for Laboratory Accreditation (A2LA) and certificate number is 3292.01.

2.3. Measurement Uncertainty

Conducted Emission 9 kHz~30MHz 2.9dB

Radiated Emission 30MHz~1000MHz 5.1dB 1GHz~6GHz 5.04dB 6GHz~18GHz 5.54dB 18GHz~26.5GHz 5.54dB

3. PRODUCT DESCRIPTION

3.1.EUT Description

Description : NFC Android Reader

Manufacturer : FAMOCO SAS

Model Number : FX105F

Operate : 2.402GHz~2.480GHz

Frequency

Antenna

Designation : BT: PIFA ANTENNA

Operating voltage : 3.6V (Low)/3.7V (Nominal)/ 4.2V (Max)

Software Version : MOLY.LR12A.R2.MP.V44.1

Hardware Version : F205_MB_V2.0

Remark: EUT, adaptor, Docking Station and USB Cable all come

in two colors, white and black.

Bluetooth Low Energy:

Table 2 Working Frequency List

Regulatory Range	RF Channels
2.400-2.4835 GHz	f=2402+k*2 MHz, k=0, ··· ,39

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **2AGQIFX105F** filing to comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

3.3. Block Diagram of EUT Configuration



Figure 1 EUT setup

3.4. Operating Condition of EUT

Worst-case mode and channel used for 30-1000 MHz radiated and power line conducted emissions was the mode and channel with the highest output power. Worst-case data rates as provided by the client were:

Report No.:WT208000772 Page 8 of 44

Bluetooth low energy
Test mode is configured to be with duty cycle >98%

3.5. Directional Antenna Gain

The EUT does NOT support a WIFI MIMO function. Directional gain need NOT to be considered.

3.6. Support Equipment List

Table 3 Support Equipment List

Name	Model No	S/N	Manufacturer
Adaptor for EUT	HJ-0501000E1-US		Shenzhen HuaJin Electronics CO.,LTD
Battery for EUT	FX105 series		Shen Zhen JiaYuan TongDa Technoligy Co.,Ltd
USB for EUT			

3.7. Test Conditions

Date of test: May.13, 2020- May.28, 2020

Date of EUT Receive: Apr.26, 2020

Temperature: 22°C-26 °C Relative Humidity: 41%-53%

3.8. Special Accessories

Not available for this EUT intended for grant.

3.9. Equipment Modifications

Not available for this EUT intended for grant.

Report No.:WT208000772

4. TEST EQUIPMENT USED

Table 4 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB9058/05	Test Receiver	R&S	ESCI 3	Sep.27,2019	1 Year
SB4357	AMN	R&S	ENN216	Aug.27,2019	1 Year
SB3436	Test Receiver	R&S	ESI26	Nov.07,2019	1 Year
SB3955	Broadband Antenna	Schwarzbeck	VULB 9163	Jan.10,2020	1 Year
SB8501/09	Test Receiver	R&S	ESU40	Feb.14,2020	1 Year
SB3435	Horn Antenna	R&S	HF906	Dec.17,2019	1 Year
SB5472/02	Broadband Antenna	Schwarzbeck	VULB 9163	Jan.10,2020	1 Year
SB9058/03	Pre-Amplifier	R&S	SCU 18	Feb.14,2020	1 Year
SB8501/10	Horn Antenna	R&S	3160-09	Mar.10,2020	3 Years
SB8501/11	Horn Antenna	R&S	3160-09	Mar.09,2020	3 Years
SB8501/12	Horn Antenna	R&S	3160-10	Mar.17,2020	3 Years
SB8501/13	Horn Antenna	R&S	3160-10	Mar.10,2020	3 Years
SB3345	Loop Antenna	Schwarzbeck	FMZB1516-113	Feb.14,2020	1 Year
SB8501/14	Pre-Amplifier	R&S	SCU-03	Feb.14,2020	1 Year
SB8501/15	Pre-Amplifier	R&S	SCU-03	Feb.14,2020	1 Year
SB8501/16	Pre-Amplifier	R&S	SCU 26	Feb.14,2020	1 Year
SB8501/17	Pre-Amplifier	R&S	SCU-18	Feb.14,2020	1 Year
SB9060	Signal Analyzer	R&S	FSQ40	May.18, 2020	1 Year
SB13989	Wireless Wideband Communication Tester	R&S	CMW270	May.18, 2020	1 Year

Report No.:WT208000772 Page 10 of 44

5. 6DB BANDWIDTH MEASUREMENT

5.1.LIMITS OF 6dB BANDWIDTH MEASUREMENT

CFR 47 (FCC) part 15.247 (a) (2), 558074 D01 DTS Meas Guidance v05r02

5.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times RBW$.
- c) Detector = Peak.
- d)Trace mode = max hold.
- e)Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3. TEST SETUP

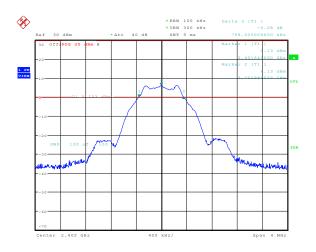


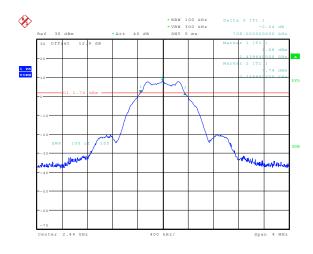
Report No.:WT208000772 Page 11 of 44

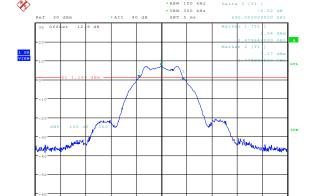
5.4. Test Data

Table 5 6dB Bandwidth Test Data BLE

Table of the Ballattian Tool Balla BEE						
CHANNEL	6dB					
FREQUENCY	BANDWIDTH	results				
(MHz)	(MHz)					
2402	0.708	Pass				
2440	0.708	Pass				
2480	0.696	Pass				







Date: 1.JAN.2003 11:22:55

Date: 1.JAN.2003 11:29:50

Date: 1.JAN.2003 11:18:28

6. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

6.1.LIMITS OF Maximum Conducted Output Power Measurement

CFR 47 (FCC) part 15.247 (b) (3), 558074 D01 DTS Meas Guidance v05r02

6.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

- a)Set the RBW ≥ DTS bandwidth.
- b)Set VBW \geq 3 x RBW.
- c)Set span ≥ 3 x RBW
- d)Sweep time = auto couple.
- e)Detector = peak.
- f)Trace mode = max hold.
- g)Allow trace to fully stabilize.
- h)Use peak marker function to determine the peak amplitude level.

6.3. TEST SETUP

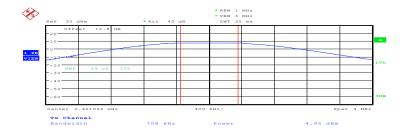


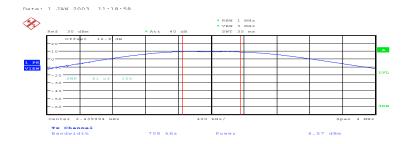
6.4. TEST DATA

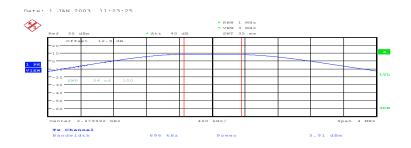
Report No.:WT208000772 Page 13 of 44

Table 6 Maximum Conducted Output Power Test Data BLE

Center	Meas. Level	Limit [dBm]	Result
Freq.[MHz]	(Cond.) [dBm]		
2402	4.95	< 30	Pass
2440	6.57	< 30	Pass
2480	5.91	< 30	Pass







7. MAXIMUM POWER SPECTRAL DENSITY LEVEL MEASUREMENT

7.1.LIMITS OF Maximum Power Spectral Density Level Measurement

CFR 47 (FCC) part 15.247 (e), 558074 D01 DTS Meas Guidance v05r02

7.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

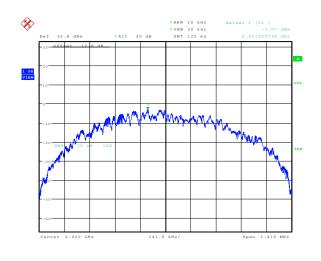
- a)Set analyzer center frequency to DTS channel center frequency.
- b) Set the span to 1.5 times the DTS bandwidth.
- c) Set RBW to: 3kHz≤RBW≤100 kHz.
- d) Set VBW \geq 3 x RBW.
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h)Allow trace to fully stabilize.
- i)Use the peak marker function to determine the maximum amplitude level within the RBW.
- j)If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

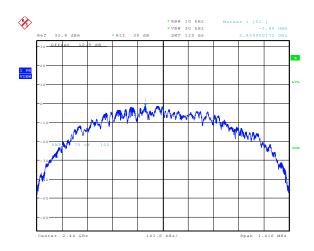
7.3.TEST DATA

Report No.:WT208000772 Page 15 of 44

Table 7 Maximum Power Spectral Density Level Test Data BLE

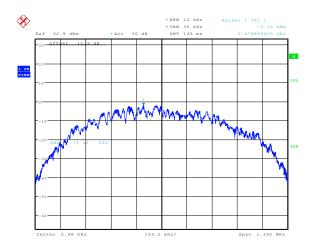
Freq.[MHz]	PSD [dBm]	Limit [dBm]	Result
2402	-3.07	8	Pass
2440	-1.49	8	Pass
2480	-2.15	8	Pass





Date: 1.JAN.2003 11:19:23

Date: 1.JAN.2003 11:23:50



Date: 1.JAN.2003 11:30:44

8. CONDUCTED BANDEDGE AND SPURIOUS MEASURMENT

8.1.LIMITS OF Conducted Bandedge and Spurious Measurement

CFR 47 (FCC) part 15.247 (d) and 558074 D01 DTS Meas Guidance v05r02

8.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer.

Establish a reference level by using the following procedure:

- a)Set instrument center frequency to DTS channel center frequency.
- b)Set the span to \geq 1.5 times the DTS bandwidth.
- c)Set the RBW = 100 kHz.
- d)Set the VBW \geq 3 x RBW.
- e)Detector = peak.
- f)Sweep time = auto couple.
- g)Trace mode = max hold.
- h)Allow trace to fully stabilize.
- i)Use the peak marker function to determine the maximum PSD level.

Emission level measurement

a)Set the center frequency and span to encompass frequency range to be measured.

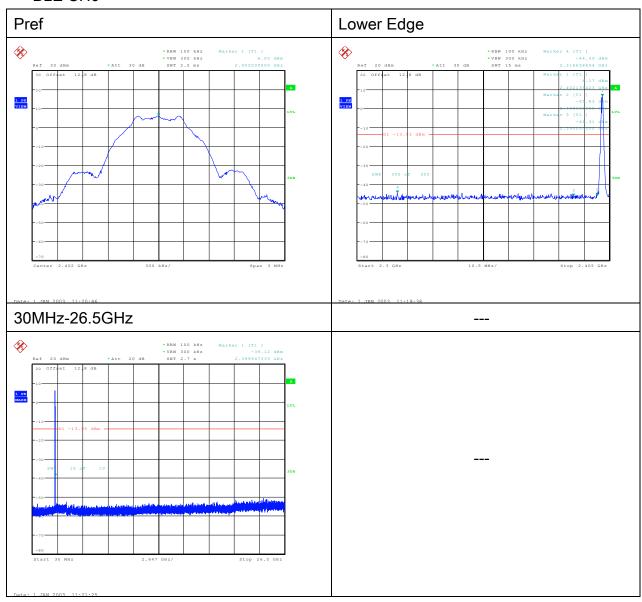
Page 17 of 44

- b)Set the RBW = 100 kHz.
- c)Set the VBW \geq 3 x RBW.
- d)Detector = peak.
- e)Ensure that the number of measurement points ≥ span/RBW
- f)Sweep time = auto couple.
- g)Trace mode = max hold.
- h)Allow trace to fully stabilize.
- i)Use the peak marker function to determine the maximum amplitude level.

Report No.:WT208000772

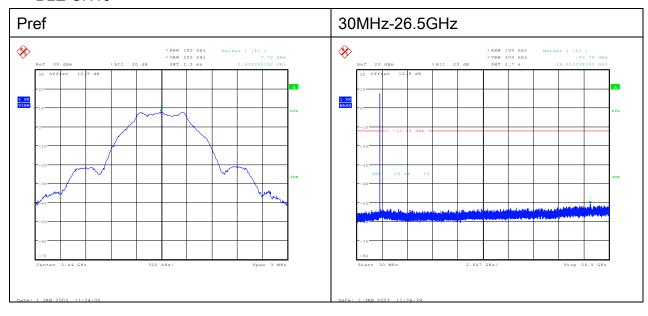
8.3.TEST DATA

BLE CH0

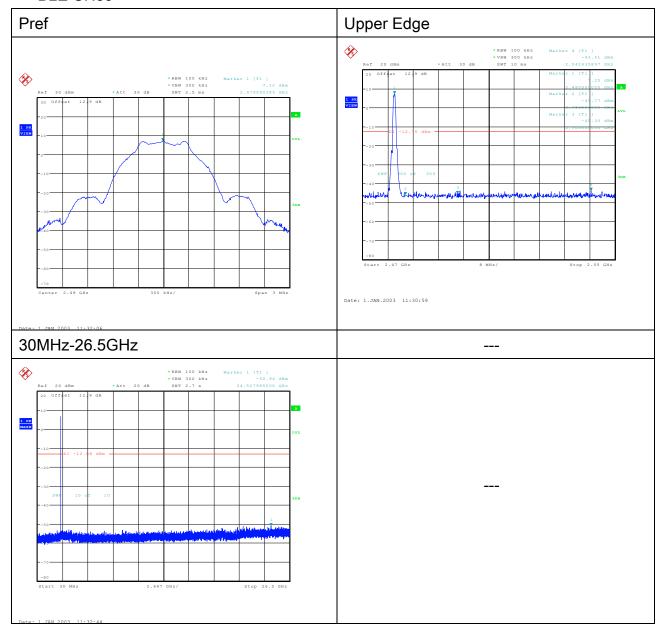


Report No.:WT208000772

BLE CH19



BLE CH39



9. RADIATED BANDEDGE AND SPURIOUS MEASUREMENT

9.1.LIMITS OF Radiated Bandedge and Spurious Measurement

CFR 47 (FCC) part 15.247 (d) and 558074 D01 DTS Meas Guidance v05r02

9.2. TEST PROCEDURE

- 1. The testing follows the guidelines in ANSI C63.10-2013.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
- 3. For measurement below 1GHz, the EUT was placed on a turntable with 0.8meter, above ground. For measurement above 1 GHz, test at FAR, the EUT is placed on a non-conductive table, which is 1.5 meter above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level
- 6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- 7. Use the following spectrum analyzer settings:
- (1) Span shall wide enough to fully capture the emission being measured;
- (2) Set RBW=100 kHz for f < 1 GHz; VBW >= RBW; Sweep = auto; Detector function = peak; Trace = max hold;

Page 21 of 44

- (3) Set RBW = 1 MHz, VBW= 3MHz for f > 1 GHz for peak measurement.
- Set RBW = 1 MHz, and 1/T (on time) for average measurement.

9.3.TEST DATA

Report No.:WT208000772

9 kHz-30MHz

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

Table 8 Radiated Emission Test Data 9k Hz-30MHz

	Table of Radiated Ethiodich Foot Pata of the Comme							
Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Reading (dBµV/m)	Level (dBµV/m)	Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Note
					-		-	

30MHz-1GHz

Worst case is shown below for 30MHz-1GHz only.

The emissions don't show in following result tables are more than 20dB below the limits.

Table 9 Radiated Emission Test Data 30MHz-1GHz

Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Reading (dBµV/m)	Level (dBµV/m)	Polarity (H/V)	Limit (dBµV/m)	Margin (dB)	Note
30.125	0.6	12.3	17.5	30.4	V	40	9.6	QP
38.021	0.7	12.3	13.8	26.8	V	40	13.2	QP
101.923	1.1	13.2	14.9	29.2	V	43.5	14.3	QP
123.306	1.2	10.5	25.4	37.1	V	43.5	6.4	QP
136.913	1.4	10.5	18.2	30.1	V	43.5	13.4	QP
482.531	2.6	16.1	11.1	29.8	V	46	16.2	QP
119.418	1.3	12.3	14.8	28.4	Н	43.5	15.1	QP
123.306	1.2	10.5	16.3	28.0	Н	43.5	15.5	QP
189.485	1.6	9.7	10.6	21.9	Н	43.5	21.6	QP
295.312	2.0	12.7	8.5	23.2	Н	46	22.8	QP
479.298	2.6	15.6	11.9	30.1	Н	46	15.9	QP

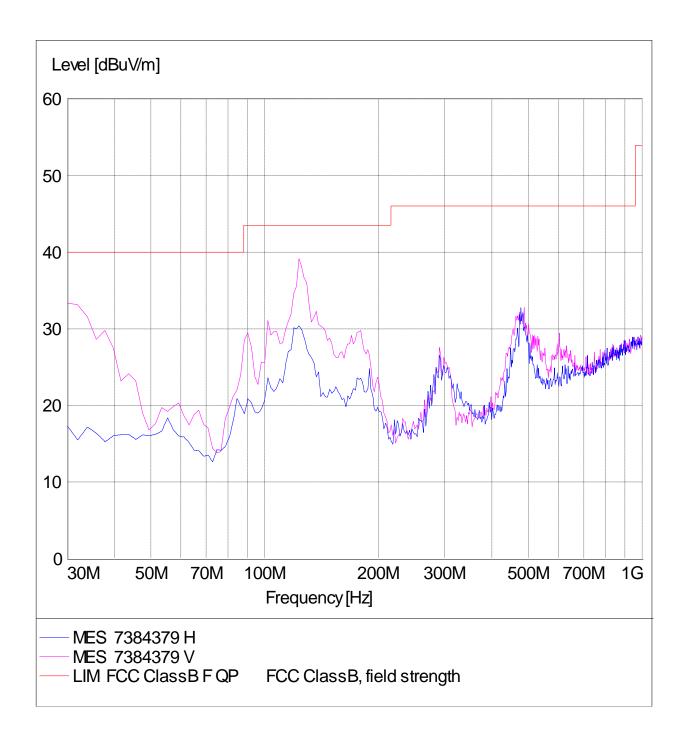
Remark: Emission level (dBuV)=Read Value(dBuV/m) + Antenna Factor(dB)+ Cable Loss +preamp(dB)

Page 22 of 44

EUT Name: FX105F

Operating Condition: Charging and Transmitting

Test site: SMQ NETC EMC Lab.
Antenna Position: Vertical & Horizontal
Test Voltage: AC 120V/60Hz



Report No.:WT208000772 Page 23 of 44

1-18G

BLE CH0

Radiated Emission

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH0 TX

Test Voltage: Comment:

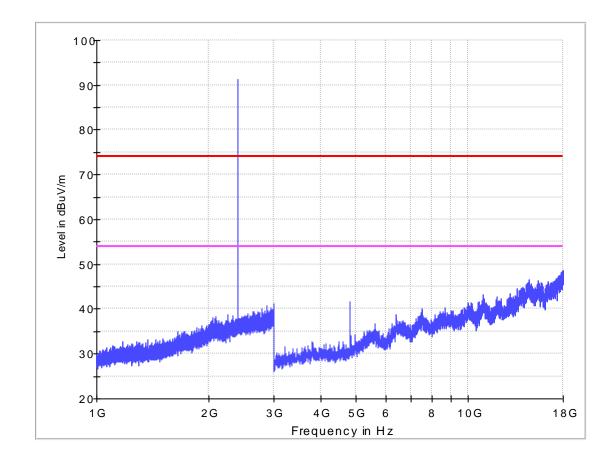
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 24 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH0 TX

Test Voltage: Comment:

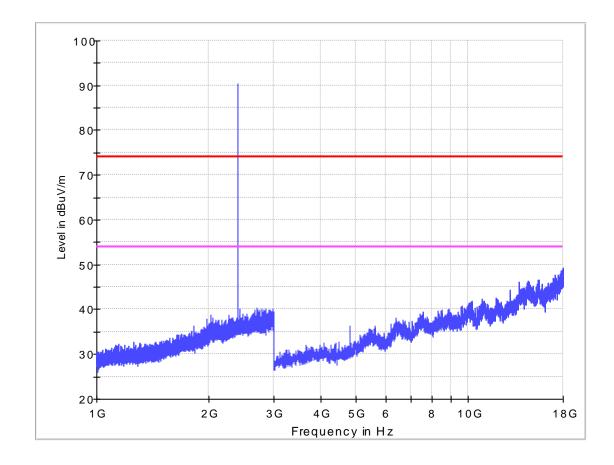
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name: Comment:



Report No.:WT208000772 Page 25 of 44

1-18G

BLE CH19

Radiated Emission

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH19 TX

Test Voltage: Comment:

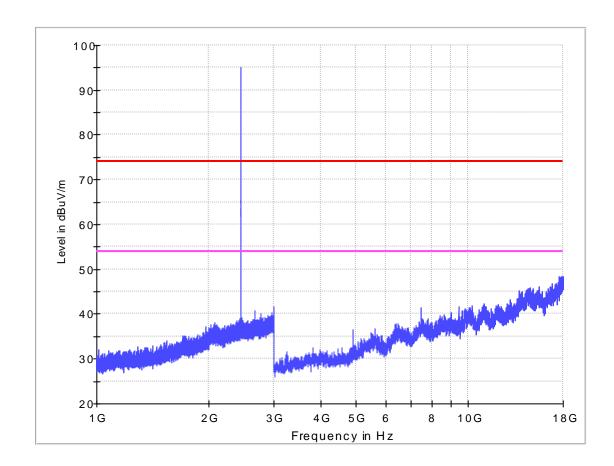
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 26 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH19 TX

Test Voltage: Comment:

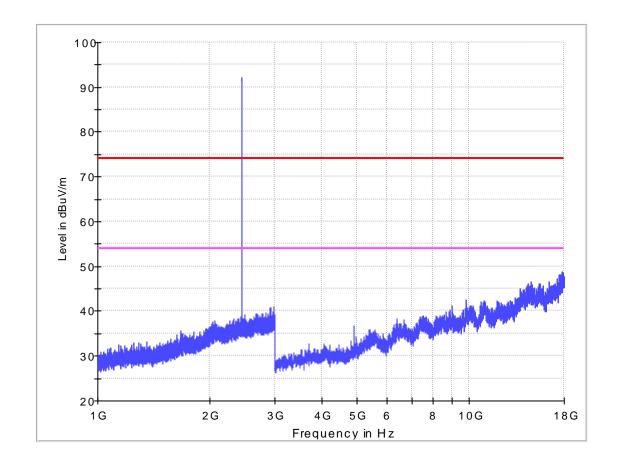
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name: Comment:



Report No.:WT208000772 Page 27 of 44

1-18G

BLE CH39

Radiated Emission

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH39 TX

Test Voltage: Comment:

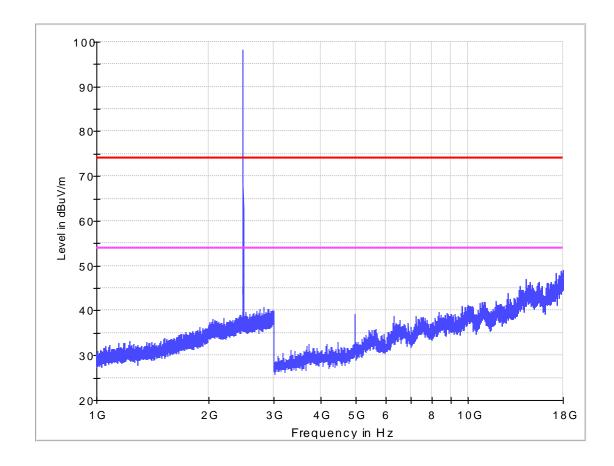
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 28 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH39 TX

Test Voltage: Comment:

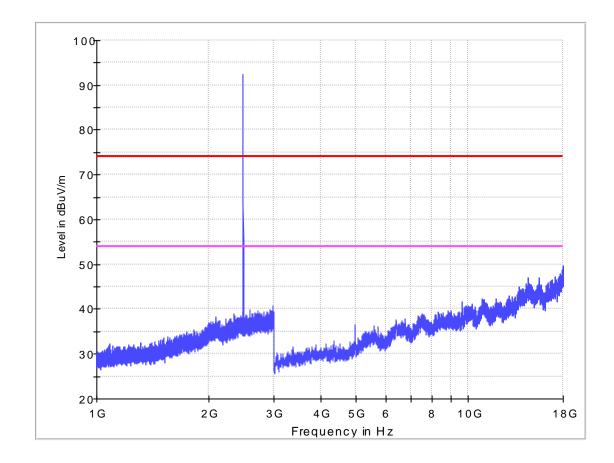
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name: Comment:



Report No.:WT208000772 Page 29 of 44

18-26.5GHz

No Peak found in pre-scan, only worst case result is listed in this report.

Radiated Emission

EUT Information

EUT Model Name: FX105F Operation mode: BLE

Test Voltage: Comment:

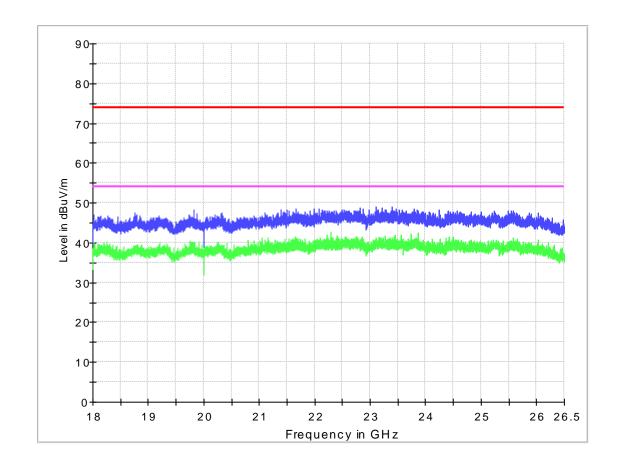
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 30 of 44

EUT Information

EUT Model Name: FX105F Operation mode: BLE

Test Voltage: Comment:

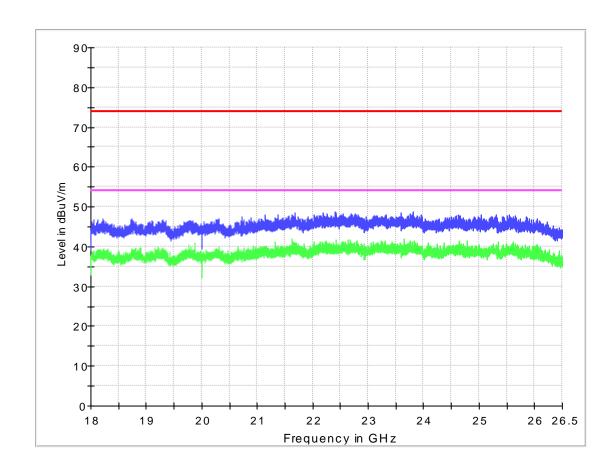
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name: Comment:



Report No.:WT208000772 Page 31 of 44

Band edge BLE CH0

Radiated Emission

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH0 TX
Test Voltage:

Common Information

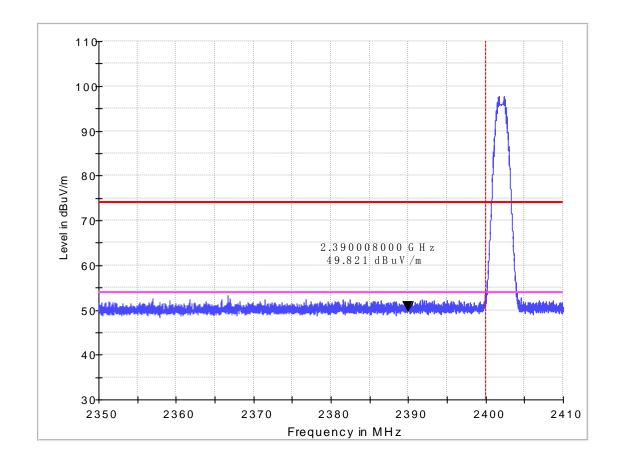
Test Site: SMQ EMC Lab.

Environment

Comment:

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 32 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH0 TX

Test Voltage: Comment:

Common Information

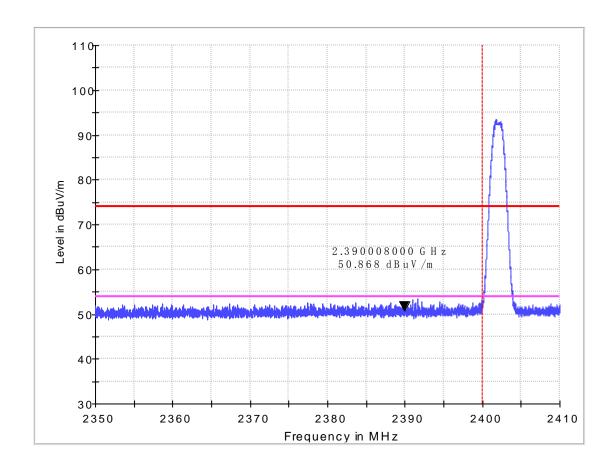
Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name:

Comment:



Report No.:WT208000772 Page 33 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH0 TX

Test Voltage: Comment:

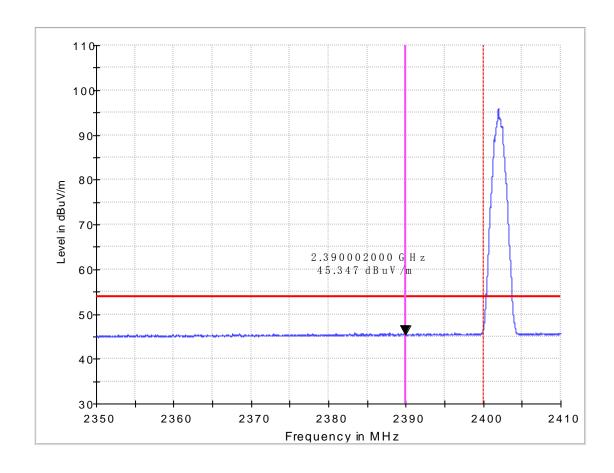
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 34 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH0 TX

Test Voltage: Comment:

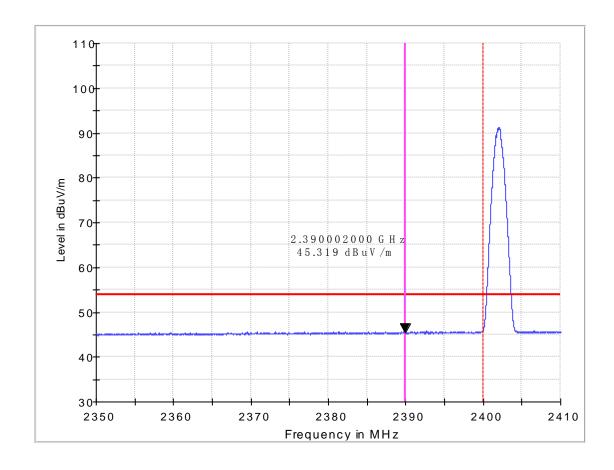
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name: Comment:



Report No.:WT208000772 Page 35 of 44

Band edge BLE CH39

Radiated Emission

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH39 TX

Test Voltage: Comment:

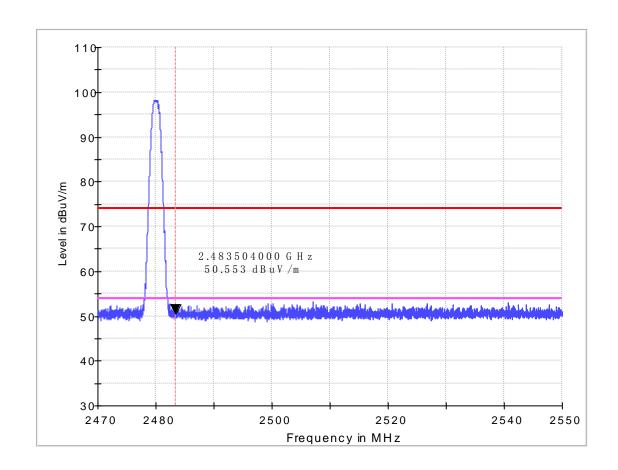
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 36 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH39 TX

Test Voltage: Comment:

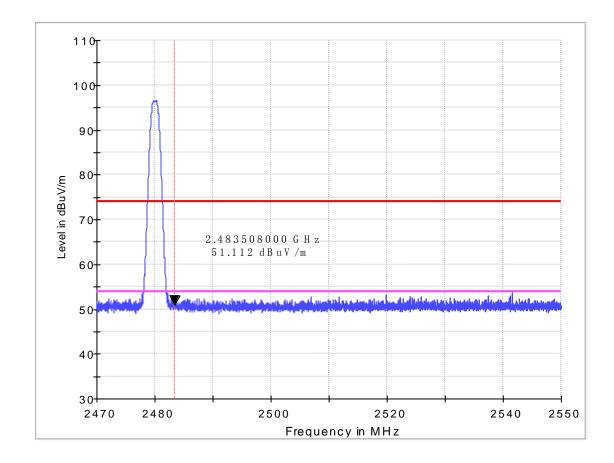
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name: Comment:



Report No.:WT208000772 Page 37 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH39 TX

Test Voltage: Comment:

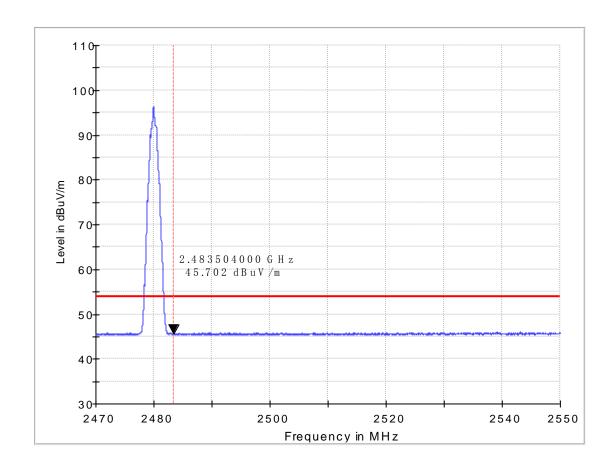
Common Information

Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Horizontal

Operator Name: Comment:



Report No.:WT208000772 Page 38 of 44

EUT Information

EUT Model Name: FX105F

Operation mode: BT BLE CH39 TX

Test Voltage: Comment:

Common Information

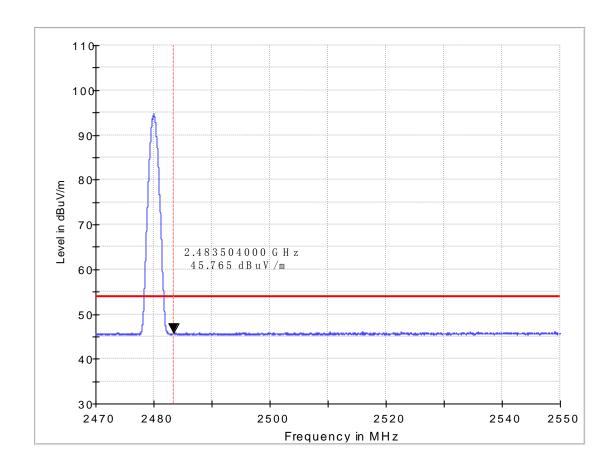
Test Site: SMQ EMC Lab.

Environment

Antenna Polarization: Vertical

Operator Name:

Comment:



Report No.:WT208000772 Page 39 of 44

10. CONDUCTED EMISSION TEST FOR AC POWER PORT MEASUREMENT

10.1.Test Standard and Limit

10.1.1.Test Standard FCC Part 15.207

10.1.2.Test Limit

Table 10 Conducted Emission Test Limit

Fragueray	Maximum RF Line Voltage (dBμV)						
Frequency	Quasi-peak Level	Average Level					
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *					
500kHz~5MHz	56	46					
5MHz~30MHz	60	50					

^{*} Decreasing linearly with logarithm of the frequency

10.2.Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. According to the requirements of ANSI

C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

The bandwidth of EMI test receiver is set at 9kHz.

10.3.Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

10.4.Test Data

The emissions don't show in below are too low against the limits. Refer to the test curves.

^{*} The lower limit shall apply at the transition frequency.

Table 11 Conducted Emission Test Data

Model No	.: FX105F	1 (1)	JIE II CO	illuucieu Ei	111001011 10	or Baia		
	e: Charging ar	nd Transmitting	g					
	Frequency	Correction	Quasi-Peak		Average			
	(MHz)	Factor (dB)	Reading (dBμV)	Emission Level (dBµV)	Limits (dBμV)	Reading (dBμV)	Emission Level (dBµV)	Limits (dBμV)
Line	0.483	9.7	30.8	40.5	56.3	17.0	26.7	46.3
	1.666	9.8	31.3	41.1	56	18.3	28.1	46
	3.714	9.9	29.8	39.7	56	18.2	28.1	46
	4.632	9.9	27.7	37.6	56	16.6	26.5	46
	6.616	10.0	31.3	41.3	60	20.7	30.7	50
	7.026	10.0	31.7	41.7	60	21.7	31.7	50
Neutral	1.666	9.8	28.0	37.8	56	15.8	25.6	46
	3.637	9.9	25.7	35.6	56	15.8	25.7	46
	4.227	9.9	26.2	36.1	56	15.0	24.9	46
	4.974	9.9	27.0	36.9	56	16.3	26.2	46
	6.625	10.0	29.6	39.6	60	19.6	29.6	50
	7.422	10.0	27.6	37.6	60	18.6	28.6	50

REMARKS: 1. Emission level (dBuV) =Read Value (dBuV) + Correction Factor (dB)

- 2. Correction Factor (dB) =LISN Factor (dB) + Cable Factor (dB) +Limiter Factor (dB)
- 3. The other emission levels were very low against the limit.

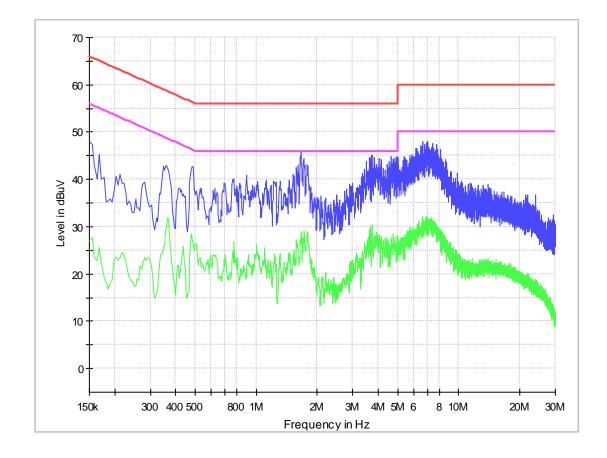
Report No.:WT208000772

EUT: FX105F

Operating Condition: Charging and Transmitting

Test Specification: L
Test Voltage:

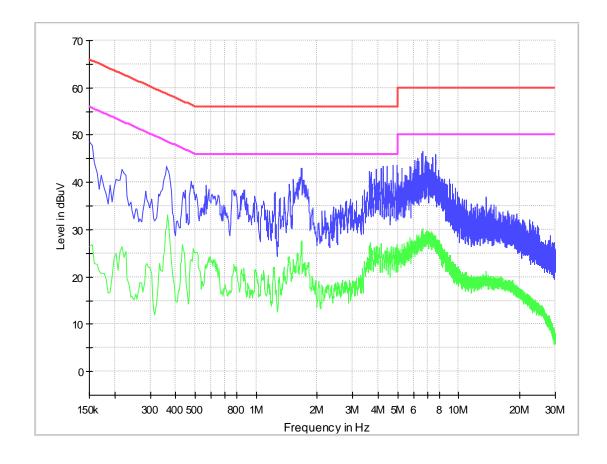
AC 120V/60Hz



Report No.:WT208000772 Page 42 of 44 EUT: FX105F

Operating Condition: Charging and Transmitting

Test Specification: N
Test Voltage: AC 120V/60Hz



11. ANTENNA REQUIREMENTS

11.1.Applicable requirements

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. 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.

11.2.Antenna Connector

Antenna Connector is on the PCB within enclosure and not accessible to user.

11.3.Antenna Gain

The antenna gain of EUT is less than 6 dBi.

-----End of Report-----