FCC PART 15 SUBPART C TEST REPORT

FCC PART 15 C(15.249)

Report Reference No...... GTS20220218002-1-2

FCC ID.....: 2A4SM-M618

Compiled by

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Date of issue Feb.26, 2022

Representative Laboratory Name.: Shenzhen Global Test Service Co. Ltd.

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative

Address Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu

Street, Longgang District, Shenzhen, Guangdong, China

Applicant's name...... SHENZHEN JOT TECHNOLOGY CO., LTD

BAOAN DIST.SHENZHEN

Test specification:

Standard FCC CFR 47 PART 15 C(15.249)

ANSI C63.10-2013

TRF Originator...... Shenzhen Global Test Service Co.,Ltd.

Master TRF Dated 2014-12

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Test item description: Mouse

Trade Mark: N/A

Manufacturer: SHENZHEN JOT TECHNOLOGY CO., LTD

Model/Type reference M618
Listed Models N/A

Modulation Type GFSK

Operation Frequency...... From 2402-2480MHz

Hardware Version N/A
Software Version N/A

Rating DC 3.0V by AAA*2

Result PASS

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TEST REPORT

Test Report No. :	GTS20220218002-1-2	Feb.26, 2022
	O1020220210002-1-2	Date of issue

Equipment under Test : Mouse

Model /Type : M618

Listed model : N/A

Applicant : SHENZHEN JOT TECHNOLOGY CO., LTD

Address 4F, B2 BUILDING, WAN AN ROAD, MA AN SHAN, SHAJING TOWN,

BAOAN DIST.SHENZHEN

Manufacturer : SHENZHEN JOT TECHNOLOGY CO., LTD

Address : 4F, B2 BUILDING, WAN AN ROAD, MA AN SHAN, SHAJING TOWN,

BAOAN DIST.SHENZHEN

Test Result:	PASS
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHZ, and 24.0-24.25 GHz.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices KDB558074 D01 DTS Meas Guidance v05r02: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247.

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2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Feb.19, 2022
Testing commenced on	• •	Feb.19, 2022
Testing concluded on	:	Feb.26, 2022

2.2. Product Description

Product Name	Mouse
Trade Mark	N/A
Model/Type reference	M618
List Models	N/A
Model Declaration	N/A
Power supply:	DC 3.0V by AAA*2
Sample ID	GTS20220218002-1-1# & GTS20220218002-1-2#
SRD	
Frequency Range	2402-2480MHz
Channel Number	3Channels
Modulation Type	GFSK
Antenna Description	PCB Antenna, 0.50dBi(Max.)

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2.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	0	230V / 50 Hz	0	120V / 60Hz
		0	12 V DC	0	24 V DC
		•	Other (specified in blank below)		

DC 3.0V

2.4. Short description of the Equipment under Test (EUT)

This is a Mouse .

For more details, refer to the user's manual of the EUT.

2.5. EUT operation mode

Mode of Operations	Frequency Range (MHz)		Data Rate (Mbps)	
	24	102	1	
SRD	2440		1	
	2480		1	
For Conducted Emission				
Test Mode		TX Mode		
For Radiated Emission				
Test Mode			TX Mode	

Channel	Frequency(MHz)
1	2402
2	2440
3	2480

The EUT has been tested under operating condition.

This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in X position.

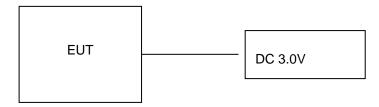
AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/60Hz modes, recorded worst case.

Worst-case mode and channel used for 150 KHz-30 MHz power line conducted emissions was the mode and channel with the highest output power, which was determined to be SRD mode.

Worst-case mode and channel used for 9 KHz-1000 MHz radiated emissions was the mode and channel with the highest output power, that was determined to be SRD mode.

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2.6. Block Diagram of Test Setup



2.7. EUT Exercise Software

The product continues to transmit signals after power on.

2.8. Special Accessories

Manufacturer	Description	Model	Serial Number	Certificate
/	/	/	/	/

2.9. External I/O Cable

I/O Port Description	Quantity	Cable
/	/	/

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

This submittal(s) (test report) is intended for **FCC ID: 2A4SM-M618** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.11. Modifications

No modifications were implemented to meet testing criteria.

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3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Global Test Service Co.,Ltd.

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong, China.

3.2. Test Facility

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

CNAS (No. CNAS L8169)

Shenzhen Global Test Service 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: 2019 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA (Certificate No. 4758.01)

Shenzhen Global Test Service Co., Ltd. has been assessed by the American Association for Laboratory Accreditation (A2LA). Certificate No. 4758.01.

Industry Canada Registration Number. is 24189.

FCC Designation Number is CN1234.

FCC Registered Test Site Number is165725.

3.3. Environmental conditions

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

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods — Part 4: Uncertainty in EMC Measurements" and is documented in the Shenzhen Global Test Service Co.,Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen GTS laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10 dB	(1)
Radiated Emission	1~18GHz	4.32 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.12 dB	(1)

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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3.5. Test Description

Applied Standard: FCC Part 15 Subpart C									
FCC Rules	Description of Test	Test Sample	Result	Remark					
§15.207(a)	Conduction Emissions	GTS20220218002-1-1#	N/A	N/A					
§15.205(a) §15.209(a) §15.249(a) §15.249(c)	Radiated Emissions Measurement	GTS20220218002-1-1#	Compliant	Note 1					
§15.249	Band Edges Measurement	GTS20220218002-1-2#	Compliant	Note 1					
§15.249, §15.215	20 dB Bandwidth	GTS20220218002-1-2#	Compliant	Note 1					
§15.203	Antenna Requirements	/	Compliant	Note 1					

Remark:

- The measurement uncertainty is not included in the test result.
- 2.
- 3.
- NA = Not Applicable; NP = Not Performed
 Note 1 Test results inside test report;
 Note 2 Test results in other test report (MPE Report). 4.
- We tested all test mode and recorded worst case in report

3.6. Equipments Used during the Test

Test Equipment						
LISN	Test Equipment	Manufacturer	Model No.	Serial No.		
EMI Test Receiver R&S ESPI3 101841-cd 2021/07/17 2022/07/16 EMI Test Receiver R&S ESCI7 101102 2021/09/19 2022/09/18 Spectrum Analyzer Agilent N9020A MY48010425 2021/09/19 2022/07/16 Spectrum Analyzer R&S FSV40 100019 2021/07/17 2022/07/16 Vector Signal generator Agilent N5181A MY49060502 2021/07/17 2022/07/16 Signal generator Agilent N5182A 3610A01069 2021/09/19 2022/09/18 Cimate Chamber ESPEC EL-10KA A20120523 2021/09/19 2022/09/18 Controller EM Electronics Controller EM 1000 N/A N/A N/A Active Loop Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/06 Bilog Antenna Schwarzbeck VULB9163 000976 2021/07/23 2022/07/22 Broadband Horn Antenna Schwarzbeck BBHA 9170 791 2021/07/07 2022/07/07/23 2022/07	LISN	CYBERTEK	EM5040A	E1850400105	2021/07/17	2022/07/16
EMI Test Receiver R&S ESCI7 101102 2021/09/19 2022/09/18 Spectrum Analyzer Agilent N9020A MY48010425 2021/09/19 2022/09/18 Spectrum Analyzer R&S FSV40 100019 2021/07/17 2022/07/16 Vector Signal generator Agilent N5181A MY49060502 2021/07/17 2022/07/16 Signal generator Agilent N5182A 3610A01069 2021/09/19 2022/09/18 Climate Chamber ESPEC EL-10KA A20120523 2021/09/19 2022/09/18 Controller EM Electronics Controller FM 1000 N/A N/A N/A Active Loop Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/06 Bilog Antenna Schwarzbeck BBHA 9120D 15006 2021/07/23 2022/07/22 Broadband Horn Antenna Schwarzbeck BBHA 9170 791 2021/07/23 2022/07/22 Broadband Horn Antenna Schwarzbeck BBV 9743 #202 2021/07/17 2022/07/16	LISN	R&S	ESH2-Z5	893606/008	2021/07/17	2022/07/16
Spectrum Analyzer Agilent N9020A MY48010425 2021/09/19 2022/09/18 Spectrum Analyzer R&S FSV40 100019 2021/07/17 2022/07/16 Vector Signal generator agenerator Agilent N5181A MY49060502 2021/07/17 2022/07/16 Signal generator Agilent N5182A 3610AO1069 2021/09/19 2022/09/18 Controller EM Electronics Controller EM 1000 N/A AVA N/A Hom Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/09 Active Loop Antenna Schwarzbeck BBHA 9120D 01622 2021/10/10 2022/11/09 Active Loop Antenna Schwarzbeck BBHA 9120D 01622 2021/10/10 2022/11/09 Active Loop Antenna Schwarzbeck BBHA 9120D 01622 2021/10/10 2022/11/09 Active Loop Antenna Schwarzbeck BBHA 9170 791 2021/07/23 2022/07/12 Active Loop Antenna Schwarzbeck BBW 9743 #202 2021/07/17 <td< td=""><td>EMI Test Receiver</td><td>R&S</td><td>ESPI3</td><td>101841-cd</td><td>2021/07/17</td><td>2022/07/16</td></td<>	EMI Test Receiver	R&S	ESPI3	101841-cd	2021/07/17	2022/07/16
Spectrum Analyzer R&S FSV40 100019 2021/07/17 2022/07/16 Vector Signal generator Agilent N5181A MY49060502 2021/07/17 2022/07/16 Signal generator Agilent N5182A 3610AO1069 2021/09/19 2022/09/18 Climate Chamber ESPEC EL-10KA A20120523 2021/09/19 2022/09/18 Controller EM Electronics Controller EM 1000 N/A N/A N/A Horn Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/09 Active Loop Antenna Beijing Da Ze Technology Co., Ltd. BSHA 9120D 01622 2021/10/10 2022/11/09 Active Loop Antenna Schwarzbeck BBHA 9170D 15006 2021/07/23 2022/11/09 Active Loop Antenna Schwarzbeck BBHA 9170 791 2021/07/23 2022/07/22 Broadband Horn Antenna Schwarzbeck BBHA 9170 791 2021/07/17 2022/07/12 Broadband Horn Antenna Schwarzbeck BBV 9179 9719-025 2021/07/17<	EMI Test Receiver	R&S	ESCI7	101102	2021/09/19	2022/09/18
Vector Signal generator Agilent N5181A MY49060502 2021/07/17 2022/07/16 Signal generator Agilent N5182A 3610AO1069 2021/09/19 2022/09/18 Climate Chamber ESPEC EL-10KA A20120523 2021/09/19 2022/09/18 Controller EM Electronics Controller EM 1000 N/A N/A N/A Horn Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/06 Active Loop Antenna Schwarzbeck BBHA 9120D 15006 2021/10/10 2022/11/09 Bilog Antenna Schwarzbeck VULB9163 000976 2021/07/23 2022/07/22 Broadband Horn Antenna SCHWARZBECK BBHA 9170 791 2021/07/23 2022/07/22 Amplifier Schwarzbeck BBV 9473 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV 9473 #79-9-025 2021/07/17 2022/07/16 Amplifier EMC EMCOS1845B 980355 2021/07/17 2022/07/16	Spectrum Analyzer	Agilent	N9020A	MY48010425	2021/09/19	2022/09/18
generator Aglient NS161A M149000002 2021/07/10 2022/07/16 Signal generator Aglient NS182A 3610AO1069 2021/09/19 2022/09/18 Climate Chamber ESPEC EL-10KA A20120523 2021/09/19 2022/09/18 Controller EM Electronics Controller EM 1000 N/A N/A N/A Horn Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/06 Active Loop Antenna Schwarzbeck BBHA 9120D 15006 2021/07/23 2022/07/12 Bilog Antenna Schwarzbeck VULB9163 000976 2021/07/23 2022/07/22 Broadband Horn Antenna Schwarzbeck BBHA 9170 791 2021/10/07 2022/07/12 Amplifier Schwarzbeck BBV 9743 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Temperature/Humidi ty Meter Gangxing CTH-608 02 2021/07/17 2022/07/16	Spectrum Analyzer	R&S	FSV40	100019	2021/07/17	2022/07/16
Climate Chamber ESPEC EL-10KA A20120523 2021/09/19 2022/09/18 Controller EM Electronics Controller EM 1000 N/A N/A N/A Horn Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/06 Active Loop Antenna Beijing Da Ze Technology Co., Ltd. ZN30900C 15006 2021/07/23 2022/07/22 Bilog Antenna Schwarzbeck VULB9163 000976 2021/07/23 2022/07/22 Broadband Horn Antenna Schwarzbeck BBHA 9170 791 2021/11/07 2022/11/06 Amplifier Schwarzbeck BBW 9743 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Temperature/Humidi ty Meter Gangxing CTH-608 92 2021/07/17 2022/07/16 High-Pass Filter K&L 270/07/1270-0 KL142031 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/0	•	Agilent	N5181A	MY49060502	2021/07/17	2022/07/16
Controller EM Electronics Controller EM 1000 N/A N/A N/A Horn Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/08 Active Loop Antenna Beijing Da Ze Technology Technology Co.,Ltd. ZN30900C 15006 2021/10/10 2022/11/09 Bilog Antenna Schwarzbeck VULB9163 000976 2021/07/23 2022/07/22 Broadband Horn Antenna SCHWARZBECK BBHA 9170 791 2021/11/07 2022/11/06 Amplifier Schwarzbeck BBV 9743 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Amplifier EMCI EMC051845B 980355 2021/07/17 2022/07/16 Temperature/Humidi ty Meter K&L 295H10- 295H10- 2021/07/17 2022/07/16 High-Pass Filter K&L 2700/X12750- KL142031 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022	Signal generator	Agilent	N5182A	3610AO1069	2021/09/19	2022/09/18
Horn Antenna Schwarzbeck BBHA 9120D 01622 2021/11/07 2022/11/06	Climate Chamber	ESPEC	EL-10KA	A20120523	2021/09/19	2022/09/18
Active Loop Antenna Beijing Da Ze Technology Co., Ltd. ZN30900C 15006 2021/10/10 2022/11/09 Bilog Antenna Schwarzbeck VULB9163 000976 2021/07/23 2022/07/22 Broadband Horn Antenna SCHWARZBECK BBHA 9170 791 2021/11/07 2022/11/06 Amplifier Schwarzbeck BBV 9743 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Amplifier EMCI EMC051845B 980355 2021/07/17 2022/07/16 Temperature/Humidi ty Meter K&L 9SH10-2700/X12750-0/O/O KL142031 2021/07/17 2022/07/16 High-Pass Filter K&L 9SH10-2700/X12750-0/O/O KL142031 2021/07/17 2022/07/16 RF Cable(below 10/Hz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 10/Hz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Power Sensor Agilent U2531A TW53323507 2021	Controller	EM Electronics		N/A	N/A	N/A
Active Loop Antenna Technology Co., Ltd. ZN30900C 15006 2021/10/10 2022/11/09 Bilog Antenna Schwarzbeck VULB9163 000976 2021/07/23 2022/07/22 Broadband Horn Antenna SCHWARZBECK BBHA 9170 791 2021/11/07 2022/11/06 Amplifier Schwarzbeck BBV 9743 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV 9743 #202 2021/07/17 2022/07/16 Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Amplifier EMCI EMC051845B 980355 2021/07/17 2022/07/16 Temperature/Humidi ty Meter Gangxing CTH-608 02 2021/07/17 2022/07/16 High-Pass Filter K&L 29SH10- 2700/X12750- 0/O KL142031 2021/07/17 2022/07/16 RF Cable(below 1GHz) K&L 1375/U12750- 0/O KL142032 2021/07/17 2022/07/16 RF Cable(above 1GHz) R RG214 RE01 2021/07/17 2022/07/16	Horn Antenna	Schwarzbeck	BBHA 9120D	01622	2021/11/07	2022/11/06
Broadband Horn Antenna SCHWARZBECK BBHA 9170 791 2021/11/07 2022/11/06 Amplifier Schwarzbeck BBV 9743 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Amplifier EMCI EMC051845B 980355 2021/07/17 2022/07/16 Temperature/Humidi ty Meter Gangxing CTH-608 02 2021/07/17 2022/07/16 High-Pass Filter K&L 9SH10- 2700/X12750- 0/O KL142031 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 <td>Active Loop Antenna</td> <td>Technology</td> <td>ZN30900C</td> <td>15006</td> <td>2021/10/10</td> <td>2022/11/09</td>	Active Loop Antenna	Technology	ZN30900C	15006	2021/10/10	2022/11/09
Antenna SCHWARZBECK BBHA 91/0 791 2021/11/07 2022/11/06 Amplifier Schwarzbeck BBV 9743 #202 2021/08/08 2022/08/07 Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Amplifier EMCI EMC051845B 980355 2021/07/17 2022/07/16 Temperature/Humidi ty Meter Gangxing CTH-608 02 2021/07/17 2022/07/16 High-Pass Filter K&L 9SH10- 2700/X12750- 0/O KL142031 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16	Bilog Antenna	Schwarzbeck	VULB9163	000976	2021/07/23	2022/07/22
Amplifier Schwarzbeck BBV9179 9719-025 2021/07/17 2022/07/16 Amplifier EMCI EMC051845B 980355 2021/07/17 2022/07/16 Temperature/Humidi ty Meter Gangxing CTH-608 02 2021/07/17 2022/07/16 High-Pass Filter K&L 9SH10-2700/X12750-0/O KL142031 2021/07/17 2022/07/16 High-Pass Filter K&L 41H10-1375/U12750-0/O KL142032 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS1120-1 Ver 2.68.0518 / / </td <td></td> <td>SCHWARZBECK</td> <td>BBHA 9170</td> <td>791</td> <td>2021/11/07</td> <td>2022/11/06</td>		SCHWARZBECK	BBHA 9170	791	2021/11/07	2022/11/06
Amplifier EMCI EMC051845B 980355 2021/07/17 2022/07/16 Temperature/Humidi ty Meter Gangxing CTH-608 02 2021/07/17 2022/07/16 High-Pass Filter K&L 9SH10- 2700/X12750- 0/O KL142031 2021/07/17 2022/07/16 High-Pass Filter K&L 41H10- 1375/U12750- 0/O KL142032 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS31120-3 Ver 2.5 / / </td <td>Amplifier</td> <td>Schwarzbeck</td> <td>BBV 9743</td> <td>#202</td> <td>2021/08/08</td> <td>2022/08/07</td>	Amplifier	Schwarzbeck	BBV 9743	#202	2021/08/08	2022/08/07
Temperature/Humidi ty Meter Gangxing CTH-608 02 2021/07/17 2022/07/16 High-Pass Filter K&L 9SH10-2700/X12750-0/O KL142031 2021/07/17 2022/07/16 High-Pass Filter K&L 41H10-1375/U12750-0/O KL142032 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS1120-3 Ver 2.5.77.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / / <td>Amplifier</td> <td>Schwarzbeck</td> <td>BBV9179</td> <td>9719-025</td> <td>2021/07/17</td> <td>2022/07/16</td>	Amplifier	Schwarzbeck	BBV9179	9719-025	2021/07/17	2022/07/16
ty Meter Garigxing CTH-608 02 2021/07/17 2022/07/16 High-Pass Filter K&L 9SH10- 2700/X12750- 0/O KL142031 2021/07/17 2022/07/16 High-Pass Filter K&L 41H10- 1375/U12750- 0/O KL142032 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /	Amplifier	EMCI	EMC051845B	980355	2021/07/17	2022/07/16
High-Pass Filter K&L 2700/X12750- O/O KL142031 2021/07/17 2022/07/16 High-Pass Filter K&L 41H10- 1375/U12750- O/O KL142032 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /		Gangxing	CTH-608	02	2021/07/17	2022/07/16
High-Pass Filter K&L 1375/U12750-O/O KL142032 2021/07/17 2022/07/16 RF Cable(below 1GHz) HUBER+SUHNE R RG214 RE01 2021/07/17 2022/07/16 RF Cable(above 1GHz) HUBER+SUHNE R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS3120-3 Ver 2.5.77.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /	High-Pass Filter	K&L	2700/X12750-	KL142031	2021/07/17	2022/07/16
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1GHz) R RG214 RE02 2021/07/17 2022/07/16 Data acquisition card Agilent U2531A TW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS3120-3 Ver 2.5.777.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /			RG214	RE01	2021/07/17	2022/07/16
Card Agilent U2531A IW53323507 2021/07/17 2022/07/16 Power Sensor Agilent U2021XA MY5365004 2021/07/17 2022/07/16 Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS3120-3 Ver 2.5.77.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /	`		RG214	RE02	2021/07/17	2022/07/16
Test Control Unit Tonscend JS0806-1 178060067 2021/07/17 2022/07/16 Automated filter bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS1120-3 Ver 2.5.77.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /	1	Agilent	U2531A	TW53323507	2021/07/17	2022/07/16
Automated filter bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS1120-3 Ver 2.5.77.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /	Power Sensor	Agilent	U2021XA	MY5365004	2021/07/17	2022/07/16
bank Tonscend JS0806-F 19F8060177 2021/07/17 2022/07/16 EMI Test Software Tonscend JS1120-1 Ver 2.6.8.0518 / / EMI Test Software Tonscend JS1120-3 Ver 2.5.77.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /	Test Control Unit	Tonscend	JS0806-1	178060067	2021/07/17	2022/07/16
EMI Test Software Tonscend JS1120-3 Ver 2.5.77.0418 / / EMI Test Software Tonscend JS32-CE Ver 2.5 / /		Tonscend	JS0806-F	19F8060177	2021/07/17	2022/07/16
EMI Test Software Tonscend JS1120-3 2.5.77.0418 / EMI Test Software Tonscend JS32-CE Ver 2.5 / /	EMI Test Software	Tonscend	JS1120-1	Ver 2.6.8.0518	/	/
	EMI Test Software	Tonscend	JS1120-3		/	/
EMI Test Software Tonscend JS32-RE Ver 2.5.1.8 / /	EMI Test Software	Tonscend	JS32-CE	Ver 2.5	/	/
	EMI Test Software	Tonscend	JS32-RE	Ver 2.5.1.8	/	/

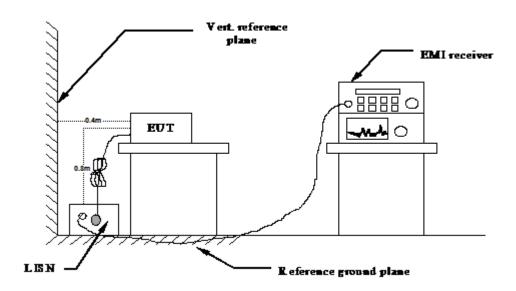
Note: 1. The Cal.Interval was one year.

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4. TEST CONDITIONS AND RESULTS

4.1. AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

- 1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. 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 C63.10-2013.
- 2 Support equipment, if needed, was placed as per ANSI C63.10-2013
- 3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013
- 4 All support equipments received AC power from a second LISN, if any.
- 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.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following:

Fraguency range (MHz)	Limit (dBuV)					
Frequency range (MHz)	Quasi-peak	Average				
0.15-0.5	66 to 56*	56 to 46*				
0.5-5	56	46				
5-30	60	50				
* Decreases with the logarithm of the frequency.						

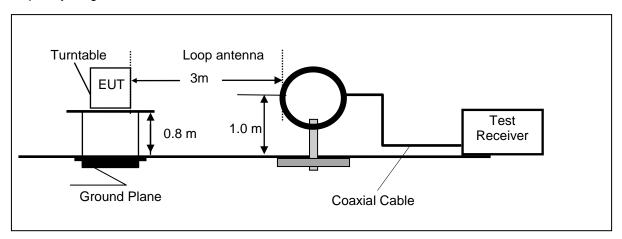
TEST RESULTS

Not applicable (AAA*2 battery power).

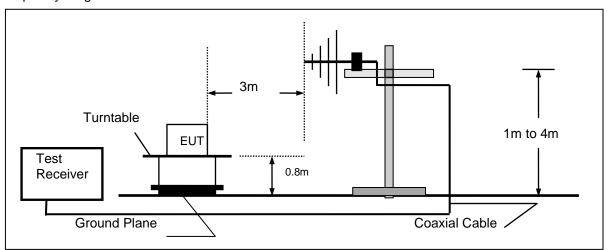
4.2. Radiated Emission

TEST CONFIGURATION

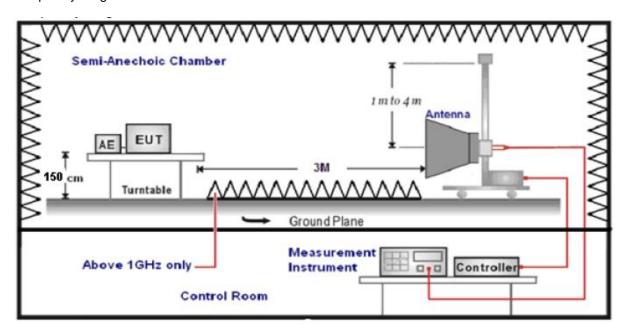
Frequency range 9 KHz - 30MHz



Frequency range 30MHz - 1000MHz



Frequency range above 1GHz-25GHz



TEST PROCEDURE

- 1. The EUT was placed on a turn table which is 0.8m above ground plane when testing frequency range 9 KHz –1GHz;the EUT was placed on a turn table which is 1.5m above ground plane when testing frequency range 1GHz 25GHz.
- 2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C to acquire the highest emissions from EUT.
- And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 4. Repeat above procedures until all frequency measurements have been completed.
- 5. Radiated emission test frequency band from 30MHz to 25GHz.
- 6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Ultra-Broadband Antenna	3
1GHz-18GHz	Double Ridged Horn Antenna	3
18GHz-25GHz	Horn Anternna	1

7. Setting test receiver/spectrum as following table states:

Test	Frequency	Test Receiver/Spectrum Setting	Detector
range			
9KHz-1	50KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KH	z-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz-1GHz		RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP
		Peak Value: RBW=1MHz/VBW=3MHz,	
1GHz-40GHz	Sweep time=Auto	Peak	
TGH2-40GH2		Average Value: RBW=1MHz/VBW=10Hz,	reak
		Sweep time=Auto	

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Transd=AF +CL-AG

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RADIATION LIMIT

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the100kHz bandwidth within the band that contains the highest level of desired power.

1. The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos.

Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

2.According to §15.249 (a) & RSS-210§B.10(a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental	Field strength of	of fundamental	Field strength of harmonics			
frequency	millivolts/meter	dBuV/m	microvolts/meter	dBuV/m		
902-928 MHz	50	94	500	54		
2400-2483.5 MHz	50	94	500	54		
5725-5875 MHz	50	94	500	54		
24.0-24.25 GHz	250	108	2500	68		

As shown in §15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth

The field strength limits shall be measured using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using an International Special Committee on Radio Interference (CISPR) quasi-peak detector.

TEST RESULTS

Remark: We measured Radiated Emission at SRD mode from 30 MHz to 10GHz in AC120V and the worst case was recorded.

Temperature	24.1℃	Humidity	53.8%		
Test Engineer	Oliver Ou	Configurations	SRD		

For 9 KHz~30MHz

Freq.	Level	Over Limit	Over Limit	Remark
(MHz)	(dBuV)	(dB)	(dBuV)	
-	-	-	-	See Note

Note:

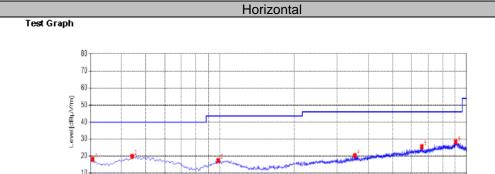
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

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For 30MHz-1GHz



100M

Susp	Suspected List										
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark
		[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	["]			
1	30.4850	27.70	-9.67	18.03	40.00	21.97	100	22	PK	Horizonta	PASS
2	44.0650	26.44	-6.63	19.81	40.00	20.19	100	133	PK	Horizonta	PASS
3	98.3850	25.97	-8.60	17.37	43.50	26.13	100	338	PK	Horizonta	PASS
4	352.5250	26.25	-5.97	20.28	46.00	25.72	100	171	PK	Horizonta	PASS
5	658,5600	26.19	-0.64	25.55	46.00	20.45	100	54	PK	Horizonta	PASS
6	903.0000	25.21	3.05	28.26	46.00	17.74	100	49	PK	Horizonta	PASS

Frequency[Hz]

Note:1. Result (dB μ V/m) = Reading(dB μ V/m) + Factor (dB) .

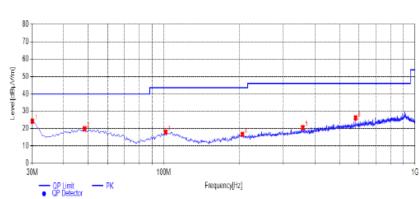
0 ↓ 30M

QP Limit
 QP Detector

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Susp	Suspected List										
NO.	Frequency [MHz]	Reading	Factor	Result	Limit	Margin	Height	Angle	Detector	Polarity	Remark
		[dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[cm]	["]			
1	30.0000	34.00	-9.76	24.24	40.00	15.76	100	303	PK	Vertical	PASS
2	48.4300	26.50	-6.67	19.83	40.00	20.17	100	246	PK	Vertical	PASS
3	101.7800	26.49	-8.46	18.03	43.50	25.47	100	34	PK	Vertical	PASS
4	205.5700	25.59	-8.96	16.63	43.50	26.87	100	132	PK	Vertical	PASS
5	357.8600	26.49	-5.90	20.59	46.00	25.41	100	358	PK	Vertical	PASS
6	580,9600	28.41	-2.23	26.18	46.00	19.82	100	267	PK	Vertical	PASS

Note:1. Result (dB μ V/m) = Reading(dB μ V/m) + Factor (dB) .

 $2.\,Factor\,(dB) = Antenna\,Factor\,(dB/m) + C\,able\,loss\,(dB) - Pre\,\,Am\,plifier\,gain\,(dB).$

Field strength of fundamental:

Frequency (MHz)	Pol.	Measure Result(PK, dBuV/m)	Measure Result(AV, dBuV/m)	Limit PK (dBuV/m)	Limit AV (dBuV/m)	Margin PK dB	Margin AV dB	Result
2402	Н	85.57	78.55	114	94	-28.43	-15.45	Pass
2402	V	85.51	78.52	114	94	-28.49	-15.48	Pass
2440	Н	85.76	78.69	114	94	-28.24	-15.31	Pass
2440	V	85.92	77.78	114	94	-28.08	-16.22	Pass
2480	Н	87.79	78.92	114	94	-26.21	-15.08	Pass
2480	V	87.80	78.36	114	94	-26.20	-15.64	Pass

For 1GHz to 25GHz

Channel 1 / 2402 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4804.00	49.61	32.44	30.25	7.95	59.75	74.00	-14.25	Peak	Horizontal
4804.00	34.86	32.44	30.25	7.95	45.00	54.00	-9.00	Average	Horizontal
4804.00	53.46	32.44	30.25	7.95	63.60	74.00	-10.40	Peak	Vertical
4804.00	35.05	32.44	30.25	7.95	45.19	54.00	-8.81	Average	Vertical

Channel 2 / 2440 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4880.00	50.23	32.52	30.31	8.12	60.56	74.00	-13.44	Peak	Horizontal
4880.00	36.35	32.52	30.31	8.12	46.68	54.00	-7.32	Average	Horizontal
4880.00	52.01	32.52	30.31	8.12	62.34	74.00	-11.66	Peak	Vertical
4880.00	36.40	32.52	30.31	8.12	46.73	54.00	-7.27	Average	Vertical

Channel 3 / 2480 MHz

Freq. MHz	Reading dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
4960.00	51.20	32.68	30.27	7.88	61.49	74.00	-12.51	Peak	Horizontal
4960.00	35.94	32.68	30.27	7.88	46.23	54.00	-7.77	Average	Horizontal
4960.00	48.90	32.68	30.27	7.88	59.19	74.00	-14.81	Peak	Vertical
4960.00	32.04	32.68	30.27	7.88	42.33	54.00	-11.67	Average	Vertical

Notes:

- 1). Measuring frequencies from 9 KHz~10th harmonic or 26.5GHz (which is less), No emission found between lowest internal used/generated frequency to 30MHz.
- 2). Radiated emissions measured in frequency range from 9 KHz~10th harmonic or 26.5GHz (which is less) were made with an instrument using Peak detector mode.
- 3). Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4). Measured= Reading- Pre. Fac.+ Ant. Fac.+ Cab. Loss
- 5). Margin = Measured- Limit

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4.3. 20dB Bandwidth

TEST CONFIGURATION



TEST PROCEDURE

Use the following spectrum analyzer settings:

Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a hopping channel

RBW = 1% to 5% of the 20 dB bandwidth

VBW =3 RBW

Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

LIMIT

Non-Specified

TEST RESULTS

Temperature	24.2℃	Humidity	54.9%
Test Engineer	Oliver Ou	Configurations	BT

Modulation	Channel	20dB Bandwidth (MHz)	Limit (KHz)	Result
	1	0.2496	Non-Specified	Pass
GFSK	2	0.2499	Non-Specified	Pass
	3	0.2507	Non-Specified	Pass



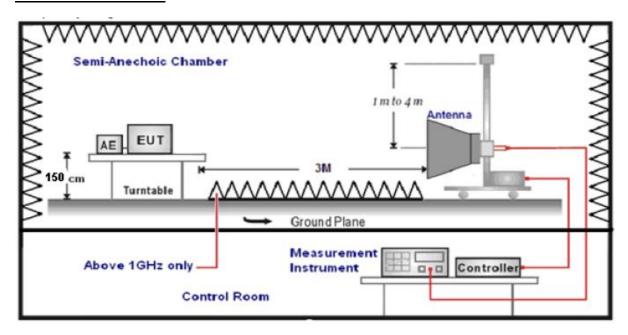
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4.4. Band Edge Compliance of RF Emission

TEST REQUIREMENT

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

TEST CONFIGURATION



TEST PROCEDURE

The EUT is placed on a turntable, which is 0.8m above the ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission. Set the spectrum analyzer in the following setting in order to capture the lower and upper bandedges of the emission:

Peak: RBW=120MHz, RBW=300MHz / Sweep=AUTO

Repeat the procedures until the peak versus polarization are measured.

LIMIT

Below -20dB of the highest emission level in operating band.

Radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)

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TEST RESULTS

4.4.1 For Radiated Bandedge Measurement

Temperature	23.8℃	Humidity	53.7%
Test Engineer	Oliver Ou	Configurations	BT

Frequency	y(MHz):			2402			Polarity:		ŀ	HORIZO	NTAL
Frequency (MHz)	Emissi Leve (dBuV/	el	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifi er	Correction Factor (dB/m)
2390.00	46.11	PK	74.00	-27.89	1	62	51.42	27.49	3.32	36.12	-5.31
2390.00	34.04	ΑV	54.00	-19.96	1	62	39.35	27.49	3.32	36.12	-5.31
Frequency	y(MHz):			2402			Polarity:			VERTI	CAL
Frequency (MHz)	Emissi Leve (dBuV/	el	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifi er	Correction Factor (dB/m)
2390.00	49.92	PK	74.00	-24.08	1	259	55.23	27.49	3.32	36.12	-5.31
2390.00	30.98	AV	54.00	-23.02	1	259	36.29	27.49	3.32	36.12	-5.31
Frequency(MHz):			2480			Polarity:			HORIZONTAL		
							_				
Frequency (MHz)	Emissi Leve (dBuV/	el	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifi er	Correction Factor (dB/m)
	Leve	el		_	Height	Angle	Value	Factor	Factor	amplifi	Factor
(MHz)	Leve (dBuV/	el m)	(dBuV/m)	(dB)	Height (m)	Angle (Degree)	Value (dBuV)	Factor (dB/m)	Factor (dB)	amplifi er	Factor (dB/m)
(MHz) 2483.50	Leve (dBuV/ 46.65 34.52	l m) PK	(dBuV/m) 74.00	(dB) -27.35	Height (m)	Angle (Degree) 169	Value (dBuV) 52.37	Factor (dB/m) 27.45	Factor (dB) 3.38	amplifi er 36.55	Factor (dB/m) -5.72 -5.72
(MHz) 2483.50 2483.50	Leve (dBuV/ 46.65 34.52	PK AV	(dBuV/m) 74.00	(dB) -27.35 -19.48	Height (m)	Angle (Degree) 169	Value (dBuV) 52.37 40.24	Factor (dB/m) 27.45	Factor (dB) 3.38 3.38 Cable	amplifi er 36.55 36.55	Factor (dB/m) -5.72 -5.72
(MHz) 2483.50 2483.50 Frequency	Leve (dBuV/ 46.65 34.52 y(MHz): Emissi Leve	PK AV	(dBuV/m) 74.00 54.00 Limit	(dB) -27.35 -19.48 2480 Margin	Height (m) 1 1 Antenna Height	Angle (Degree) 169 169 Table Angle	Value (dBuV) 52.37 40.24 Polarity: Raw Value	Factor (dB/m) 27.45 27.45 Antenna Factor	Factor (dB) 3.38 3.38 Cable Factor	amplifi er 36.55 36.55 VERTI Pre- amplifi	Factor (dB/m) -5.72 -5.72 CAL Correction Factor

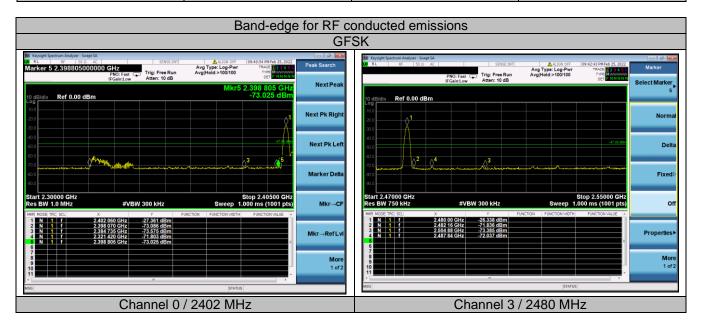
REMARKS:

- Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
 Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
- 3. Margin value = Limit value- Emission level.
- 4. -- Mean the PK detector measured value is below average limit.
- 5. The other emission levels were very low against the limit.

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4.4.2 For Conducted Bandedge Measurement

Temperature	22.9℃	Humidity	53.2%
Test Engineer	Oliver Ou	Configurations	BT



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4.5. Antenna Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, 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.

And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Test Result

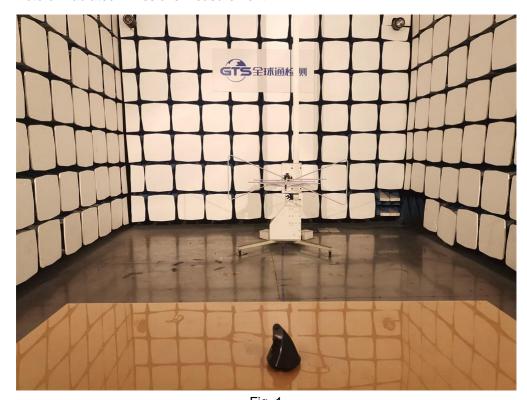
The antenna used for this product is PCB Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0.5dBi.

Reference to the **Internal photos**.

5. TEST SETUP PHOTOS OF THE EUT

Photo of Radiated Emissions Measurement

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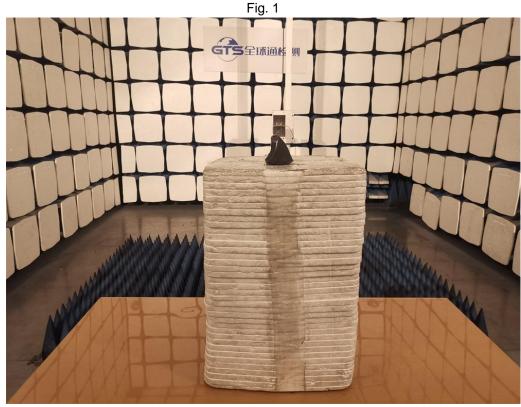


Fig. 2

6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

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Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8

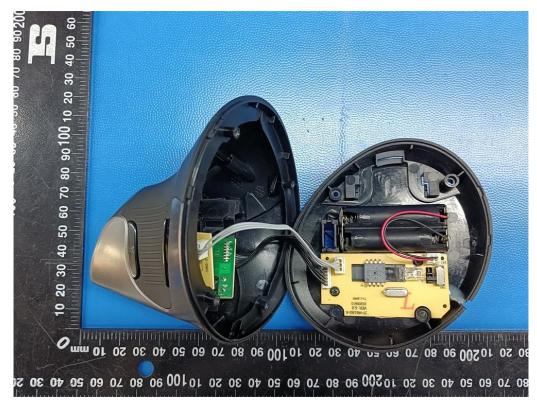


Fig. 9



Fig. 10

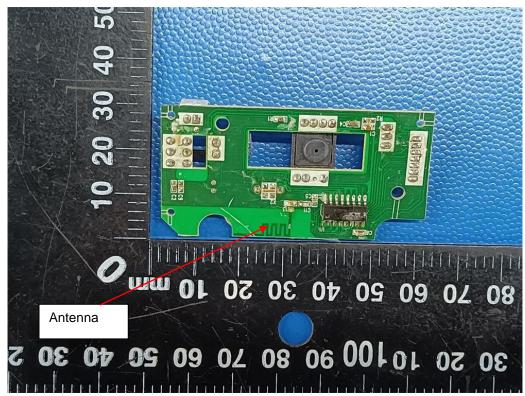


Fig. 11

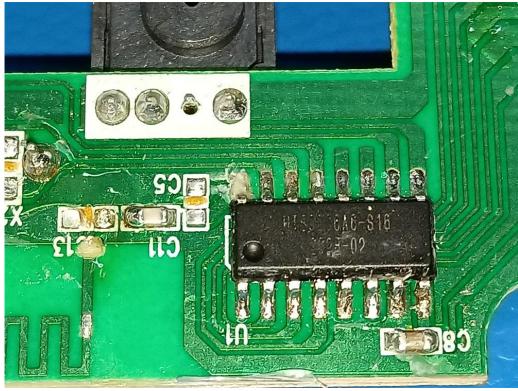


Fig. 12



Fig. 13

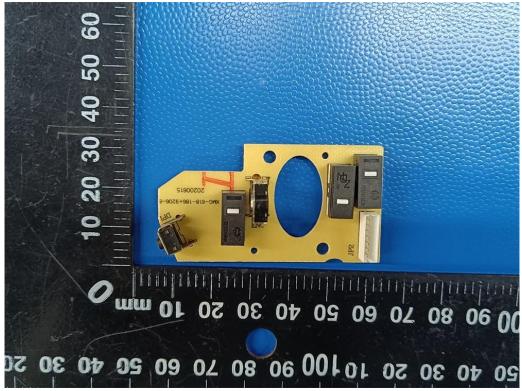


Fig. 14

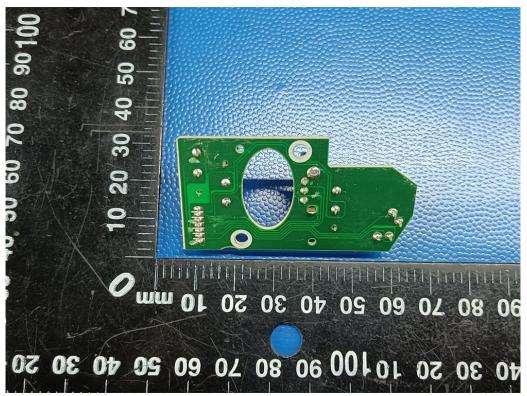


Fig. 15

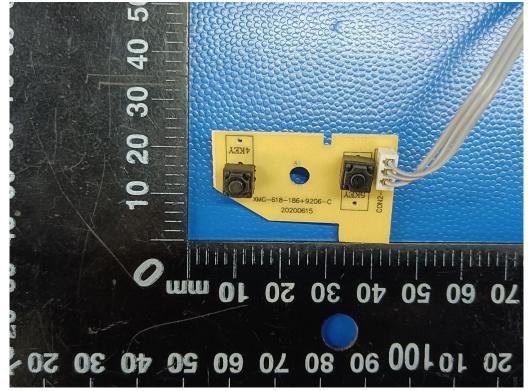


Fig. 16

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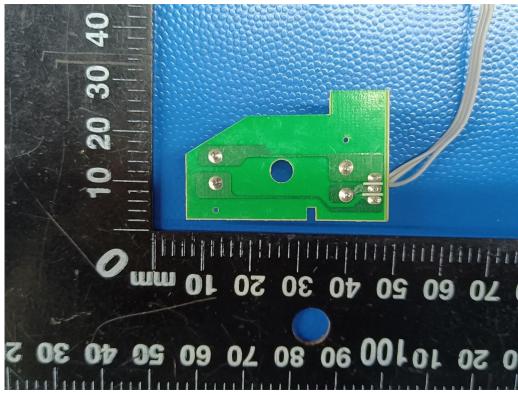


Fig. 17

.....End of Report.....