

Prüfbericht-Nr.: <i>Test report No.:</i>	CN21HSCE 001	Auftrags-Nr.: <i>Order No.:</i>	170257888	Seite 1 von 22 <i>Page 1 of 22</i>
Kunden-Referenz-Nr.: <i>Client reference No.:</i>	N/A	Auftragsdatum: <i>Order date.:</i>	11.01.2021	
Auftraggeber: <i>Client:</i>	GD JG Electronic Ltd Building 6, No.58 Gaozeng Street, Renhe Town, Baiyun District, Guangzhou, Guangdong, P.R. China.			
Prüfgegenstand: <i>Test item:</i>	Refrigerator			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	FC15, FC30, FC40, FC50, FCR15, FCR30, FCR40, FCR50			
Auftrags-Inhalt: <i>Order content:</i>	FCC approval			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 RSS-247 Issue 2 February 2017 CFR47 FCC Part 15: Subpart C Section 15.207 RSS-Gen Issue 5 November 2018 CFR47 FCC Part 15: Subpart C Section 15.209 RSS-102 Issue 5 March 2015 FCC KDB Publication 447498 D01 v06			
Wareneingangsdatum: <i>Date of receipt:</i>	24.02.2021			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A002991034			
Prüfzeitraum: <i>Testing period:</i>	Refer to test report			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Guangdong) Co.,Ltd. EMC Laboratory			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Guangdong) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:				
 08.04.2021 Storm Shu / Project Manager		 08.04.2021 Amy Wang / Technical Certifier		
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>
Sonstiges / Other:				
FCC ID: 2AZCIFCR15T50				
IC: 27084-FCR15T50 HVIN: FCR15T50				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 6dB BANDWIDTH

RESULT: Pass

5.1.5 99% BANDWIDTH

RESULT: Pass

5.1.6 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH

RESULT: Pass

5.1.7 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.8 RADIATED EMISSION

RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test setup and test equipment

Appendix B: Test Results

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

No.102, 1F of Southwest and No.205, 2F of West Warehouse Building, No.767 Tianyuan Road, Tianhe District, Guangzhou, Guangdong, P.R. China

FCC Designation No.: CN1207

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

For the measurement Equipment list, refer to the appendix 1.

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

Item		Extended Uncertainty
Conducted Emission		± 2.68 dB
Radiated Emission (9kHz-30MHz)	Field strength (dB μ V/m)	U=3.08dB, k=2, σ =95%
Radiated Emission (30-1000MHz)	Field strength (dB μ V/m)	U=5.16dB, k=2, σ =95%
Radiated Emission (above 1000MHz)	Field strength (dB μ V/m)	U=3.08dB, k=2, σ =95%
Radio Spectrum		± 0.60 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Guangdong) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory
No.102, 1F of Southwest and No.205, 2F of West Warehouse Building, No.767 Tianyuan Road, Tianhe District, Guangzhou, Guangdong, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The appliance is compressor-type Refrigerator.

This appliance is intended to be used in car and similar applications and it supports Bluetooth 4.2 (Single mode) wireless technology.

Model List:

Model	Rated voltage	Rated input current	Refrigerant/ charge	Capacity volume	Battery	Compressor
FC15	12/24V==	6,5A/ 3,0A	R1234yf / 0,022kg	15L	--	ZH25G
FC30	12/24V==	7,0A/ 3,2A	R1234yf / 0,029kg	30L	--	ZH25G
FC40	12/24V==	7,5A/ 3,4A	R1234yf / 0,034kg	40L	--	ZH25G
FC50	12/24V==	7,8A / 3,6A	R1234yf / 0,042kg	50L	--	ZH25G
FCR15	12/24V==	6,5A / 3,0A	R1234yf / 0,022kg	15L	JG01-3S6P	AMV20JZ
FCR30	12/24V==	7,0A/ 3,2A	R1234yf / 0,029kg	30L	JG01-3S6P	AMV20JZ
FCR40	12/24V==	7,5A/ 3,4A	R1234yf / 0,034kg	40L	JG01-3S6P	AMV20JZ
FCR50	12/24V==	7,8A / 3,6A	R1234yf / 0,042kg	50L	JG01-3S6P	AMV20JZ

Model difference:

1. All models used the same Bluetooth module
2. FC15, FC30 and FC40 are identical with FC50 except the overall dimensions and capacity volume.
2. FCR15, FCR30 and FCR40 are identical with FCR50 except the overall dimensions and capacity volume.
3. FC series are similar as FCR series except that the FCR series with battery and different refrigerating system.

According to above information, full test were performed on FCR50

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

Technical Specification	Value
Kind of Equipment	Refrigerator
Type Designation	FC15, FC30, FC40, FC50, FCR15, FCR30, FCR40, FCR50
Trade Mark	FROZEN
FCC ID	2AZCIFCR15T50
Operating Frequency	2402 - 2480 MHz
Operating Temperature Range	0°C to +43°C
Operating Voltage	DC 12V or DC 24V
Testing Voltage	DC 24V
Type of Modulation	GFSK
Channel Number	40 channels
Channel Separation	2MHz
Wireless Technology	Bluetooth 4.2 (Single mode)
Antenna Type	PCB Antenna
Antenna Gain	1.5 dBi

Table 3: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	19	2440.00	29	2460.00	39	2480.00

3.3 Independent Operation Modes

The basic operation modes are:

- A. On
 - 1. Bluetooth transmitting mode (Low Energy mode)
 - a) Low Channel
 - b) Middle Channel
 - c) High Channel
- B. On, Bluetooth connecting mode
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|----------------------------------|-------------------------|
| - Application Form | - Operation Description |
| - Block Diagram | - Photo Document |
| - FCC/IC Label and Location Info | - Schematics |
| - Model Difference Letter | - User Manual |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014

According to clause 3.1, all tests were performed on model K6-EN in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	IBM	2366(T30)	99-BLMAW 03/03	/

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

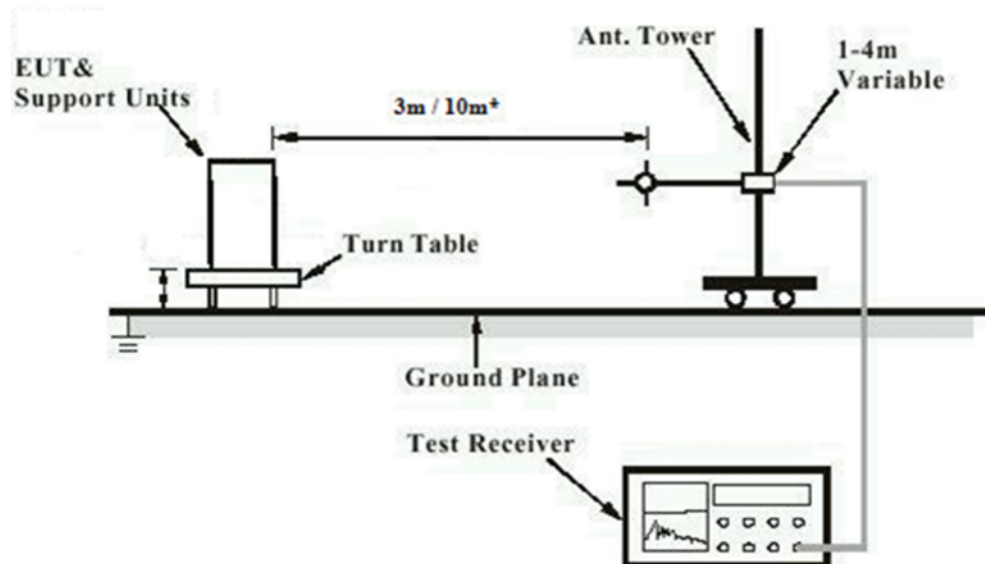


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

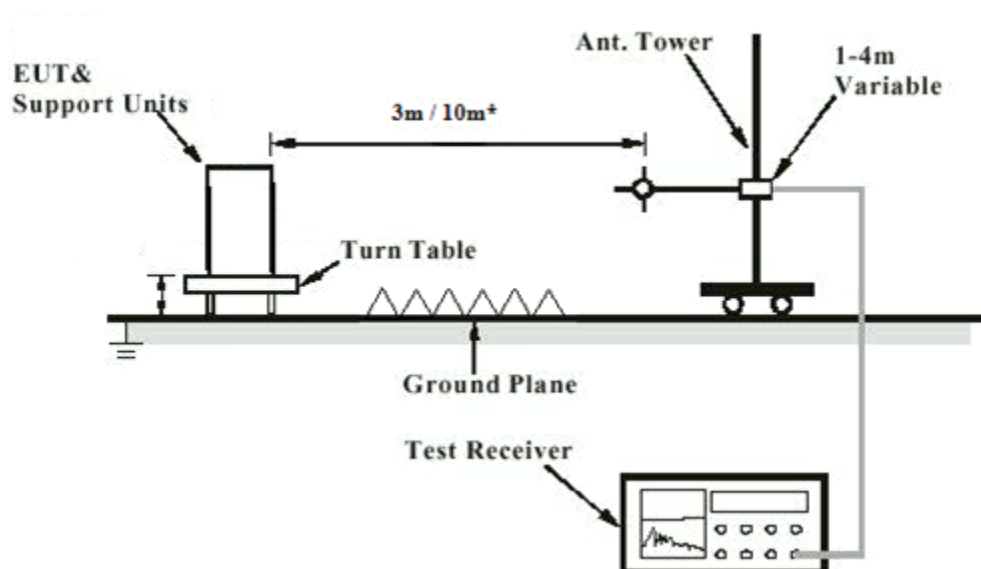


Diagram of Measurement Configuration for Mains Conduction Measurement

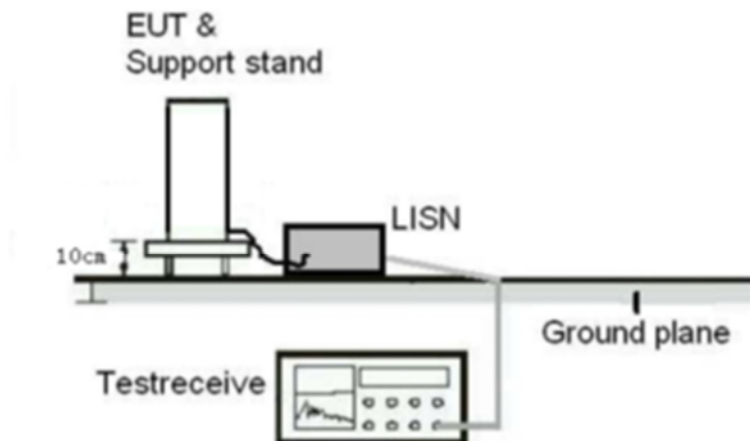
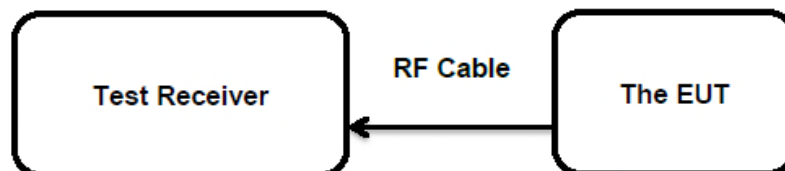


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 2.0 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power

RESULT:
Pass
Test Specification

Test standard	: FCC Part 15.247(b)(1)&(3) RSS-247 Clause 5.4(b)&(d)
Basic standard	: ANSI C63.10: 2013
Limits	: FHSS < 0.125 Watts, DSSS < 1.0 Watts
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 06.04.2021
Input voltage	: DC 24V
Operation mode	: A.1
Test channel	: Low / Middle / High
Ambient temperature	: 24 °C
Relative humidity	: 50 %
Atmospheric pressure	: 101 kPa

Table 5: Test Result of Maximum Peak Conducted Output Power

Test Mode	Channel Frequency (MHz)	Measured Peak Output Power		Limit (W)
		(dBm)	(W)	
Low Energy	2402	-19.05	0.00012	< 1.0
	2440	-19.69	0.00011	
	2480	-19.88	0.00010	
Maximum Measured Value		-19.05	0.00012	/

Note: The cable loss 2.0 dB is taken into account in results.

This testing was carried out on all operation modes, but only the worst case was presented in this report.

5.1.3 Conducted Power Spectral Density

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(e)
Basic standard : ANSI C63.10: 2013
Limits : 8 dBm/3kHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 06.04.2021
Input voltage : DC 24V
Operation mode : A.1
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 6: Test Result of Power Spectral Density, Low Energy

Test Mode	Test Channel (MHz)	Power Spectrum Density(dBm/3kHz)	Limit (dBm/3kHz)
Low Energy	2402	-35.92	< 8.0
	2440	-36.49	
	2480	-36.69	
Maximum Measured Value		-35.92	

Note: The cable loss 2.0 dB is taken into account in results.

5.1.4 6dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(2)
Basic standard : ANSI C63.10: 2013
Limits : More than 500 KHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 06.04.2021
Input voltage : DC 24V
Operation mode : A.1
Test channel : Low / Middle / High
Ambient temperature : 24 °C
Relative humidity : 50 %
Atmospheric pressure : 101 kPa

Table 7: Test Result of 6dB Bandwidth, Low Energy

Test Mode	Test Channel (MHz)	-6dB Bandwidth (kHz)	Limit (kHz)
Low Energy	2402	720.0	> 500
	2440	720.0	
	2480	720.0	
Minimum Measured Value		720.0	

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5.1.5 99% Bandwidth**RESULT:****Pass****Test Specification**

Test standard : RSS-Gen Clause 6.6
Basic standard : ANSI C63.10: 2013
Limits : More than 500 KHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 06.04.2021
Input voltage : DC 24V
Operation mode : A.1
Test channel : Low / Middle / High
Ambient temperature : 24 °C
Relative humidity : 50 %
Atmospheric pressure : 101 kPa

Table 8: Test Result of 99% Bandwidth, Low Energy

Test Mode	Test Channel (MHz)	99% Bandwidth (kHz)	Limit (kHz)
Low Energy	2402	1038.0	/
	2440	1038.0	
	2480	1038.0	
Minimum Measured Value		1038.0	

5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	: ANSI C63.10: 2013
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 06.04.2021
Input voltage	: DC 24V
Operation mode	: A.1
Test channel	: Low / Middle / High
Ambient temperature	: 24 °C
Relative humidity	: 50 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test plot, and compliance is achieved as well.

5.1.7 Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 07.04.2021
Input voltage	: DC 24V
Operation mode	: A.1
Test channel	: Low / Middle / High
Ambient temperature	: 23 °C
Relative humidity	: 48 %
Atmospheric pressure	: 101 kPa

Remark:

The Radiated Spurious Emission was carried out within frequency range 9kHz – 30MHz and 18GHz - 26.5GHz, and the measurements with active antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

For the measurement records, refer to the appendix 1.

5.1.8 Radiated Emission

RESULT:**Pass****Test Specification**

Test standard	: FCC part 15.209 RSS-247 Clause 3.3
Basic standard	: ANSI C63.4: 2014
Frequency range	: 30 MHz – 26GHz
Limits	: FCC part 15.209
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 07.04.2021
Input voltage	: DC12V, DC24V
Operation mode	: C
Earthing	: N/A
Ambient temperature	: 21 °C
Relative humidity	: 51 %
Atmospheric pressure	: 100 kPa

This testing was carried out on DC 12V and DC 24V input voltage, but only the worst case was presented in this report.
For the measurement records, refer to the appendix B.

6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:**Pass****Test Specification**

Test standard : CFR47 FCC Part 2: Section 2.1091
CFR47 FCC Part 1: Section 1.1310
FCC KDB Publication 447498 D01 v06
RSS-102 Issue 5 March 2015

The minimum distance for the EUT is less than 5mm.
Since maximum peak output power of the transmitter is 0.12mW <10 mW.

Hence the EUT is excluded from SAR evaluation according to FCC KDB Publication 447498 D01 General RF Exposure Guidance v06.

The maximum peak output power of the transmitter is -19.05dBm (0.12mW), which is far below the SAR exclusion threshold level 4 mW $\approx$ 6.02 dBm.
Hence the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 5.

7 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix 2.

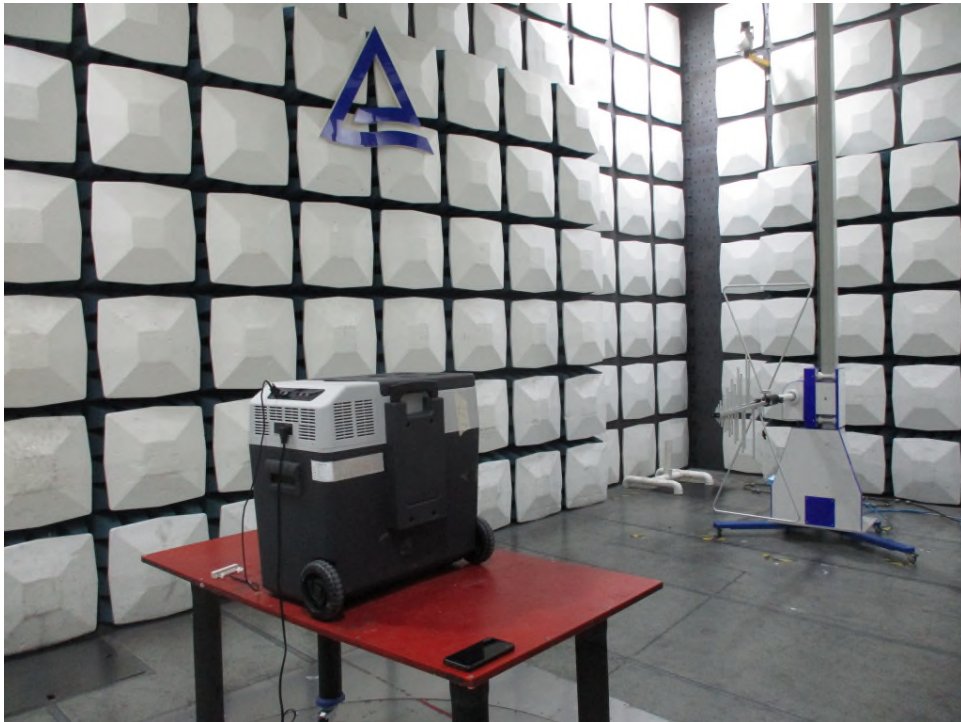
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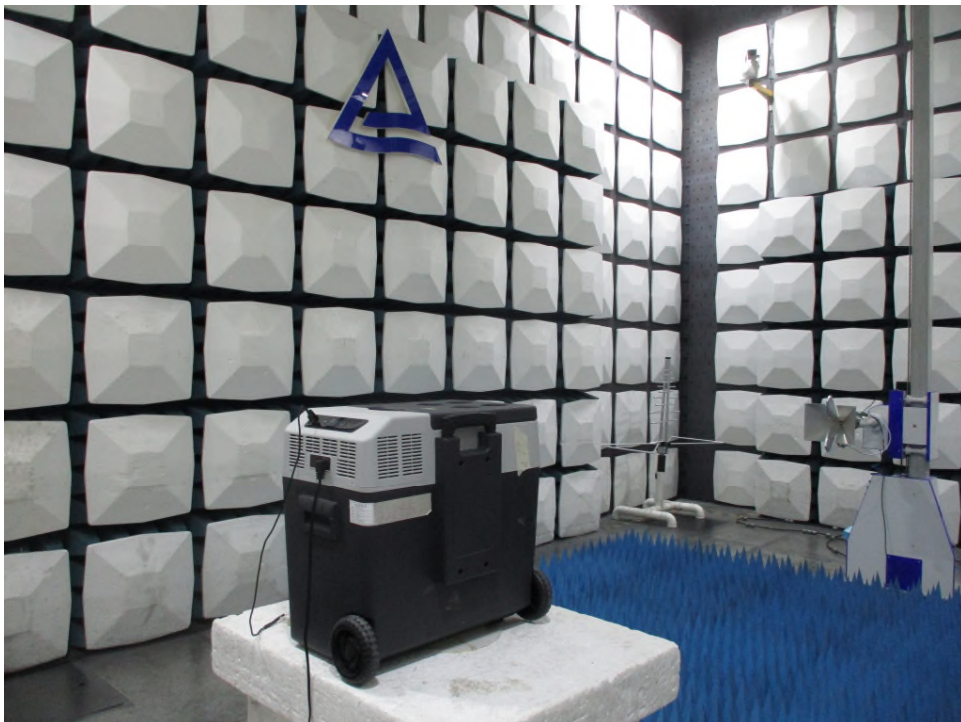
Appendix A.1: Photographs of the Test Set-Up

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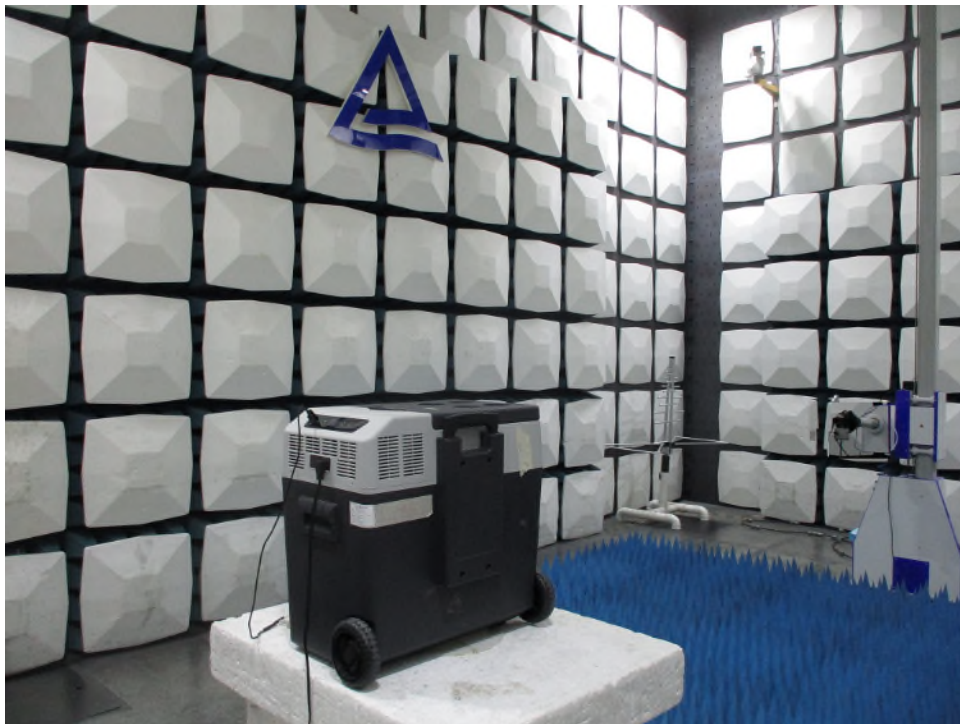
Photograph 1: Set-up for Radiated Spurious Emission, 30MHz - 1GHz



Photograph 2: Set-up for Radiated Spurious Emission, 1GHz - 18GHz



Photograph 3: Set-up for Radiated Spurious Emission, 18GHz - 26.5GHz



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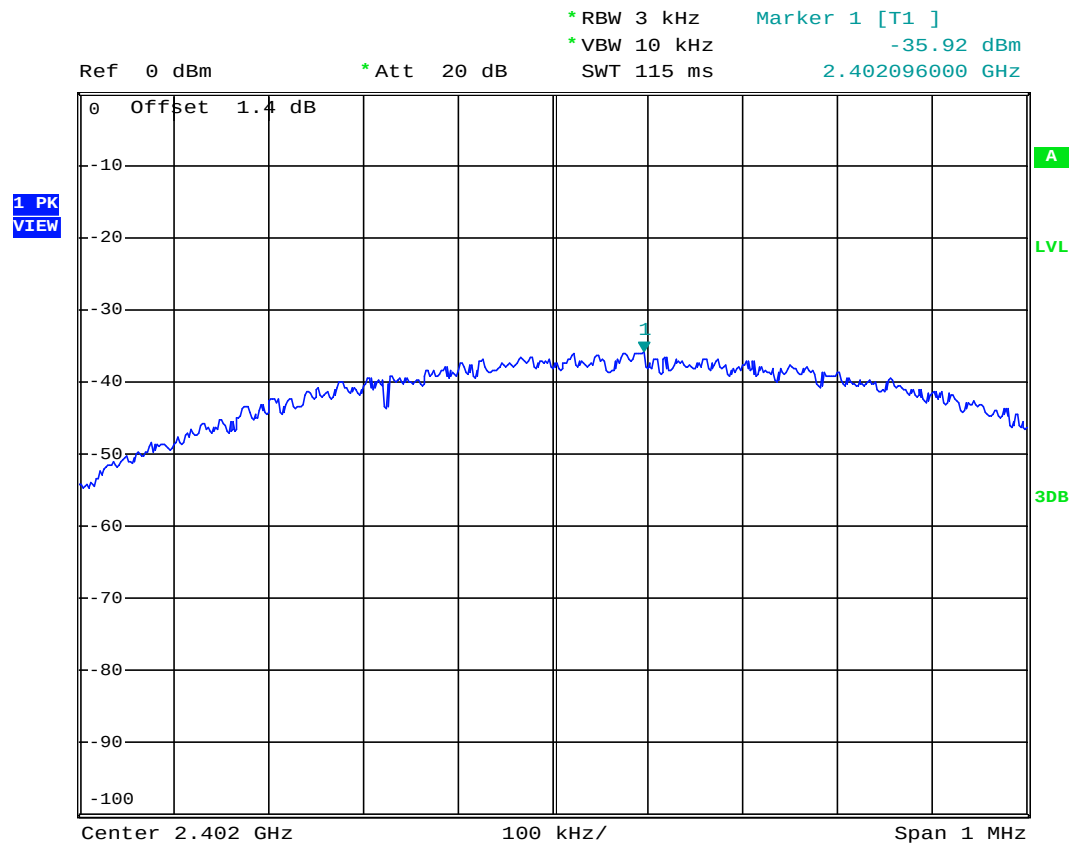
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Conducted Power Spectral Density-BLE-L Channel



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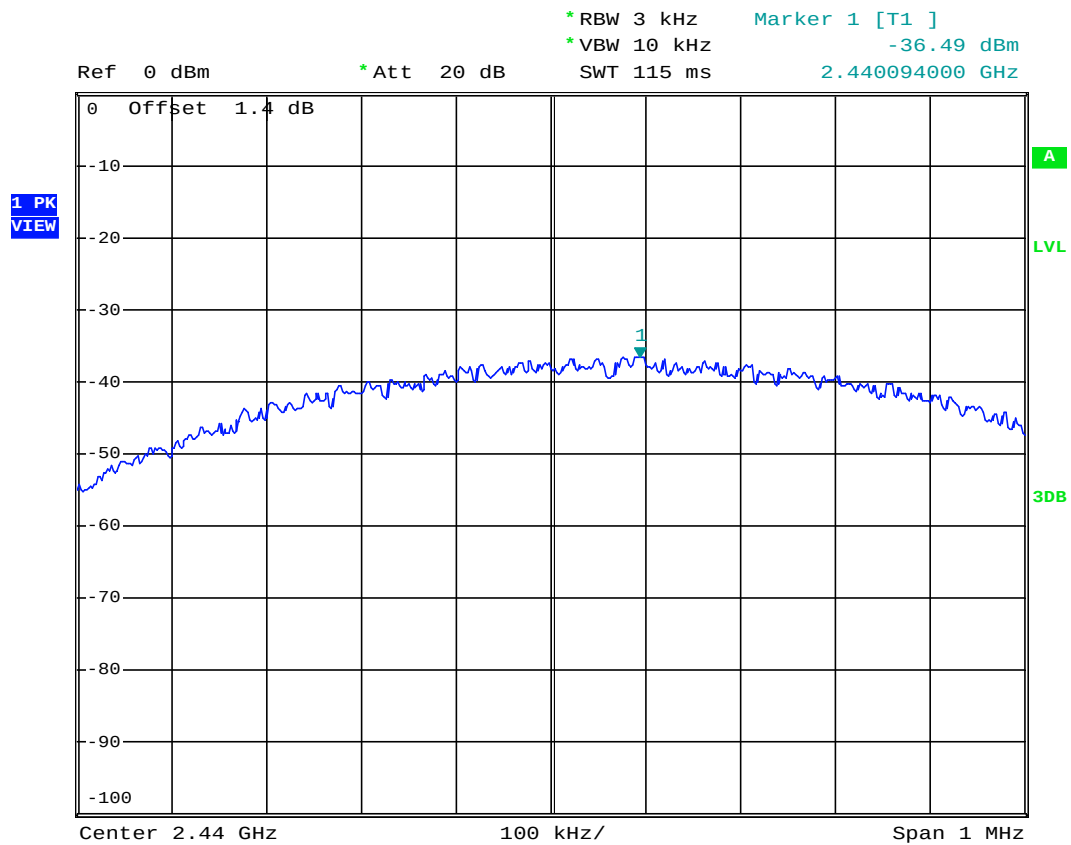
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Conducted Power Spectral Density-BLE-M Channel



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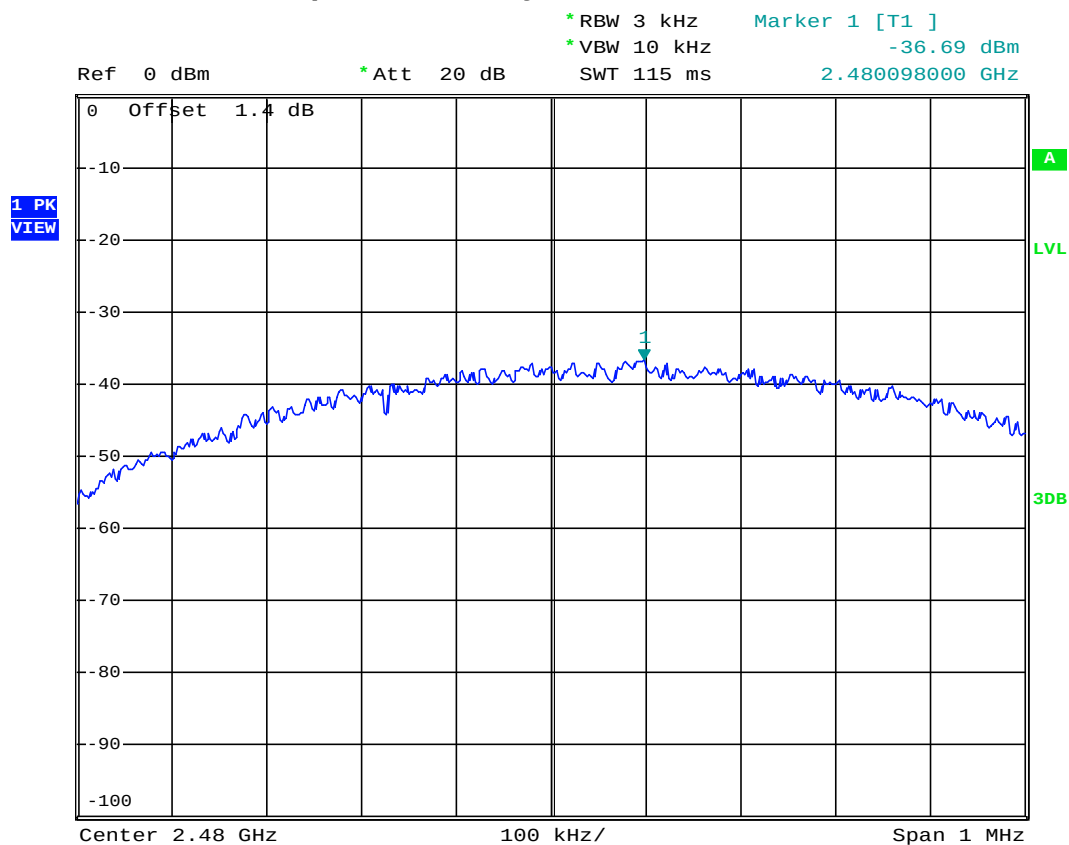
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Conducted Power Spectral Density-BLE-H Channel



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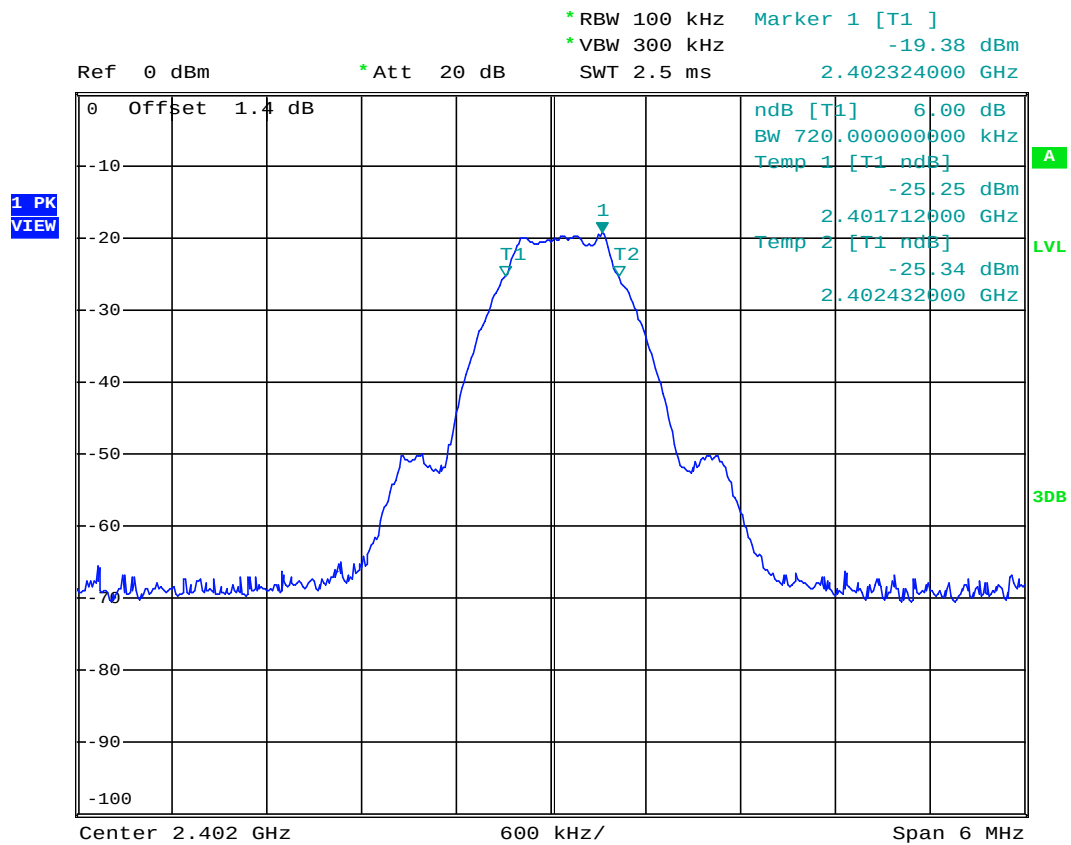
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6dB Bandwidth-BLE-L Channel



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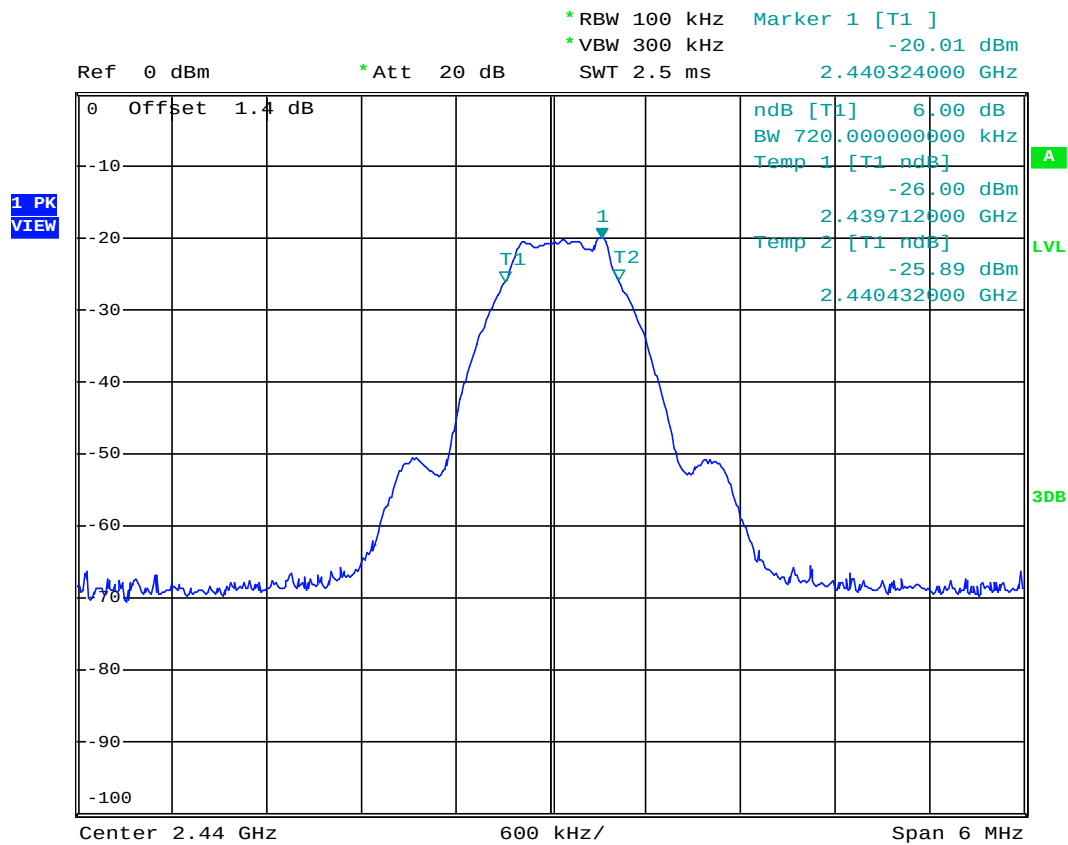
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6dB Bandwidth-BLE-M Channel



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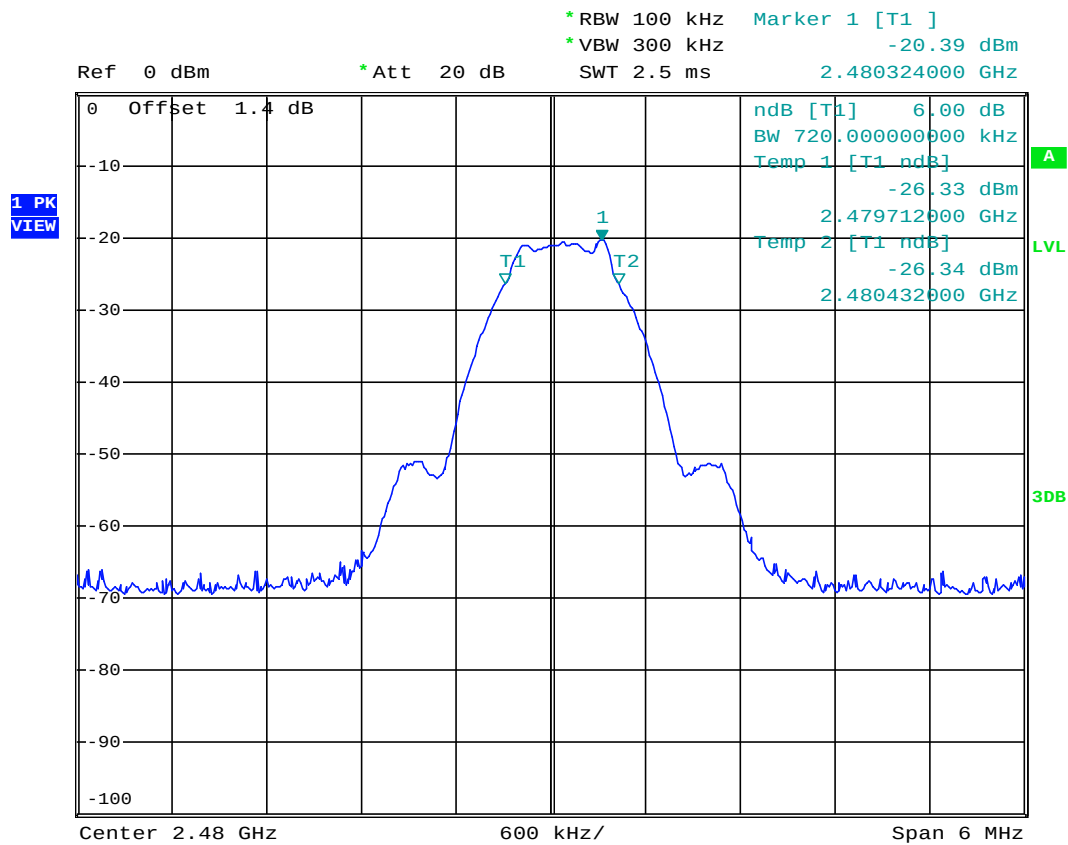
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6dB Bandwidth-BLE-H Channel



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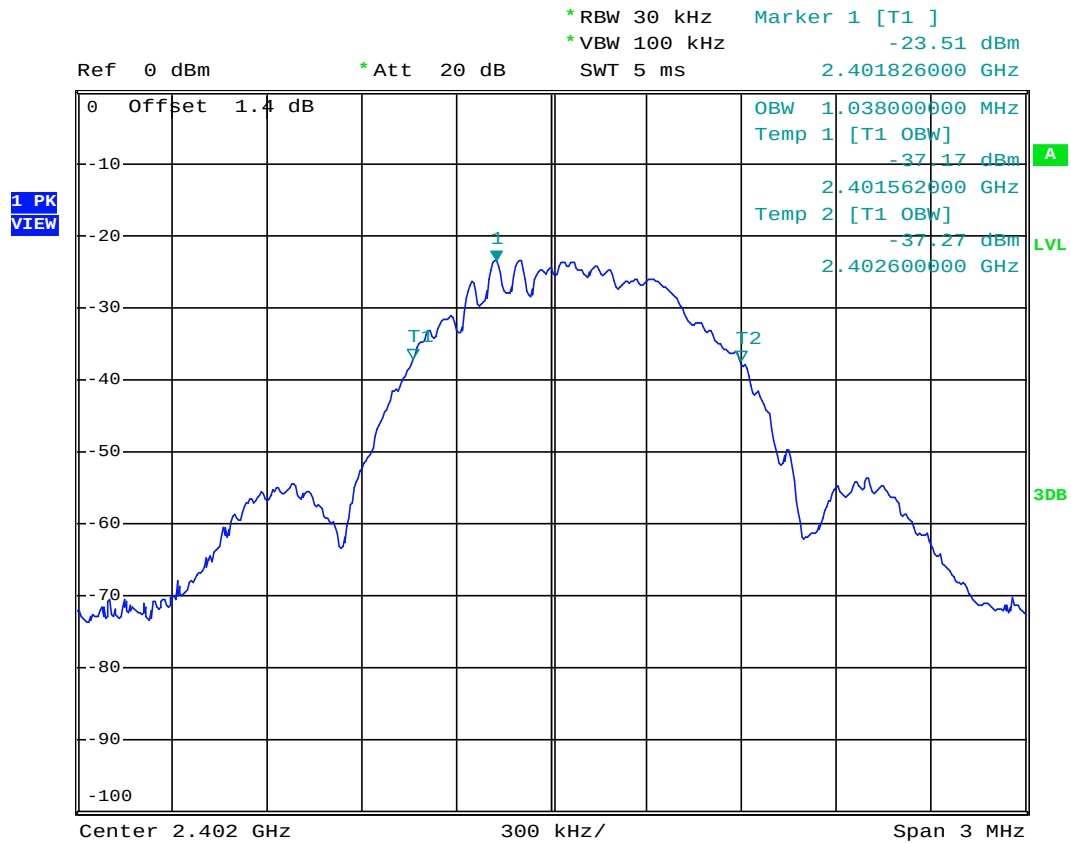
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99% Bandwidth-BLE-L Channel



Prüfbericht - Nr.:

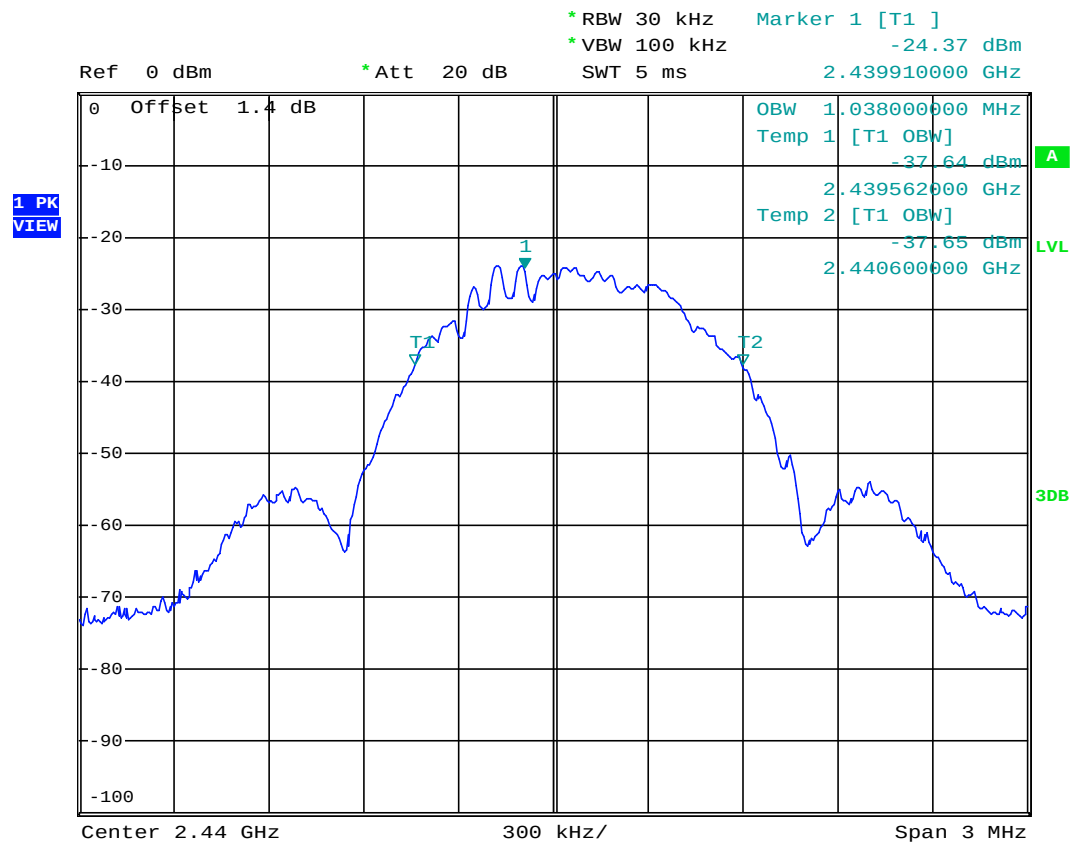
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99% Bandwidth-BLE-M Channel



Prüfbericht - Nr.:

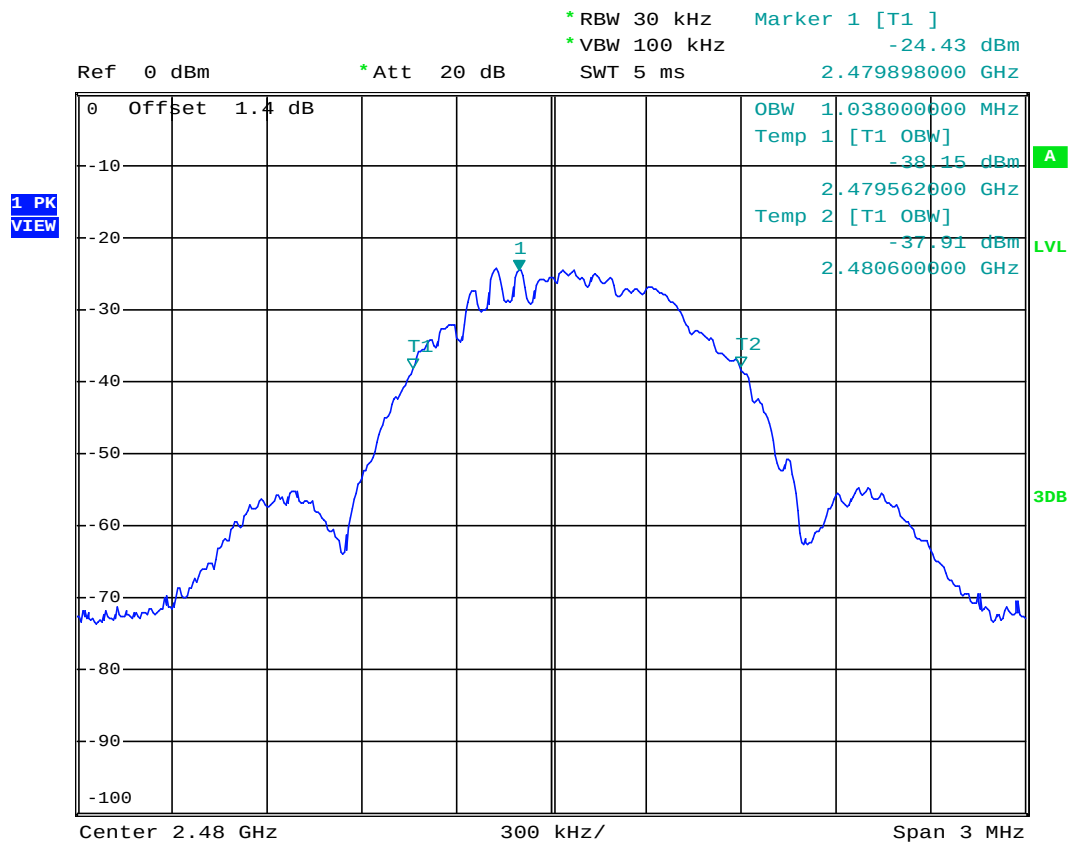
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99% Bandwidth-BLE-H Channel



Prüfbericht - Nr.:

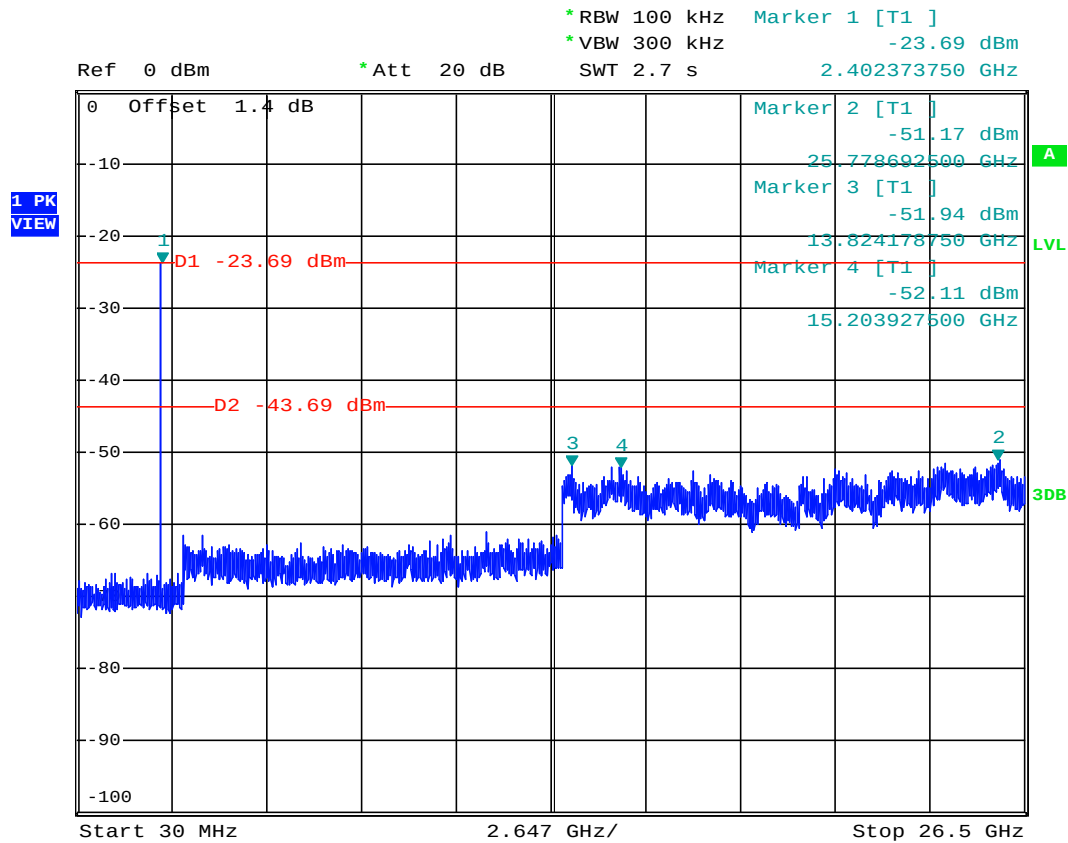
CN21HSCE 001

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Conducted Spurious Emissions –BLE-L Channel



Prüfbericht - Nr.:

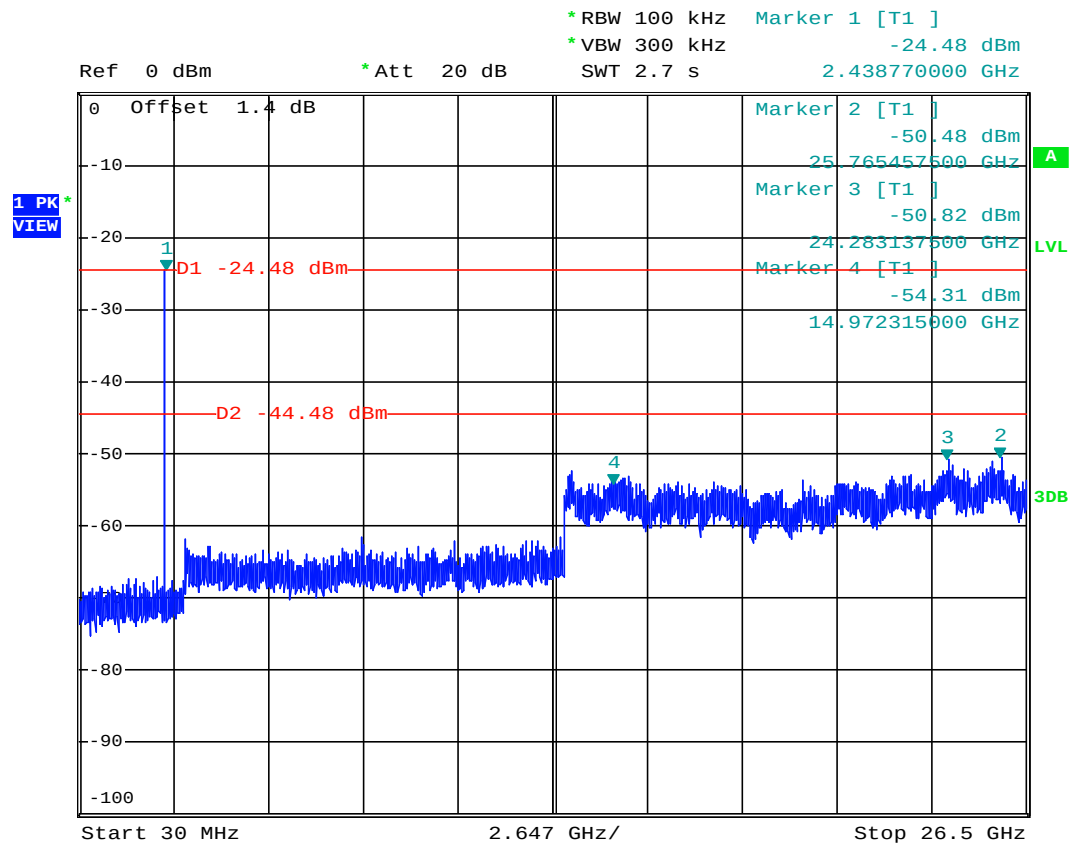
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Conducted Spurious Emissions –BLE-M Channel



Prüfbericht - Nr.:

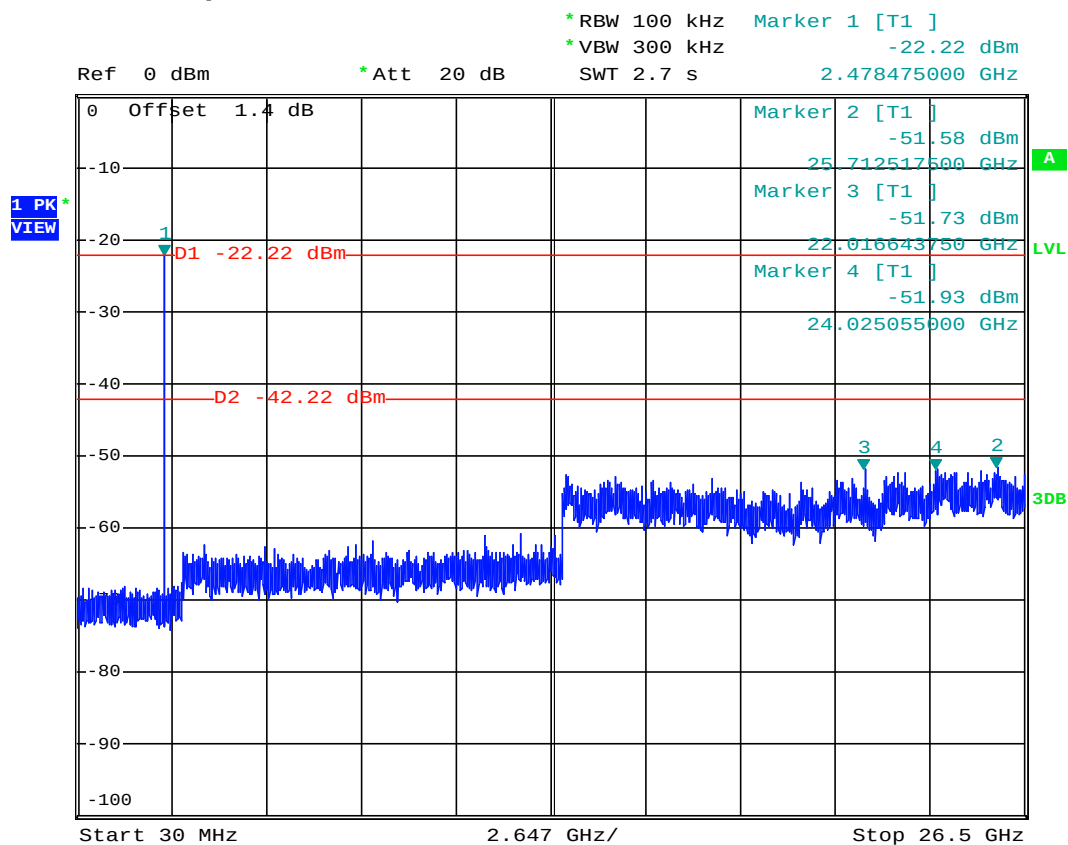
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Conducted Spurious Emissions –BLE-H Channel



Prüfbericht - Nr.:

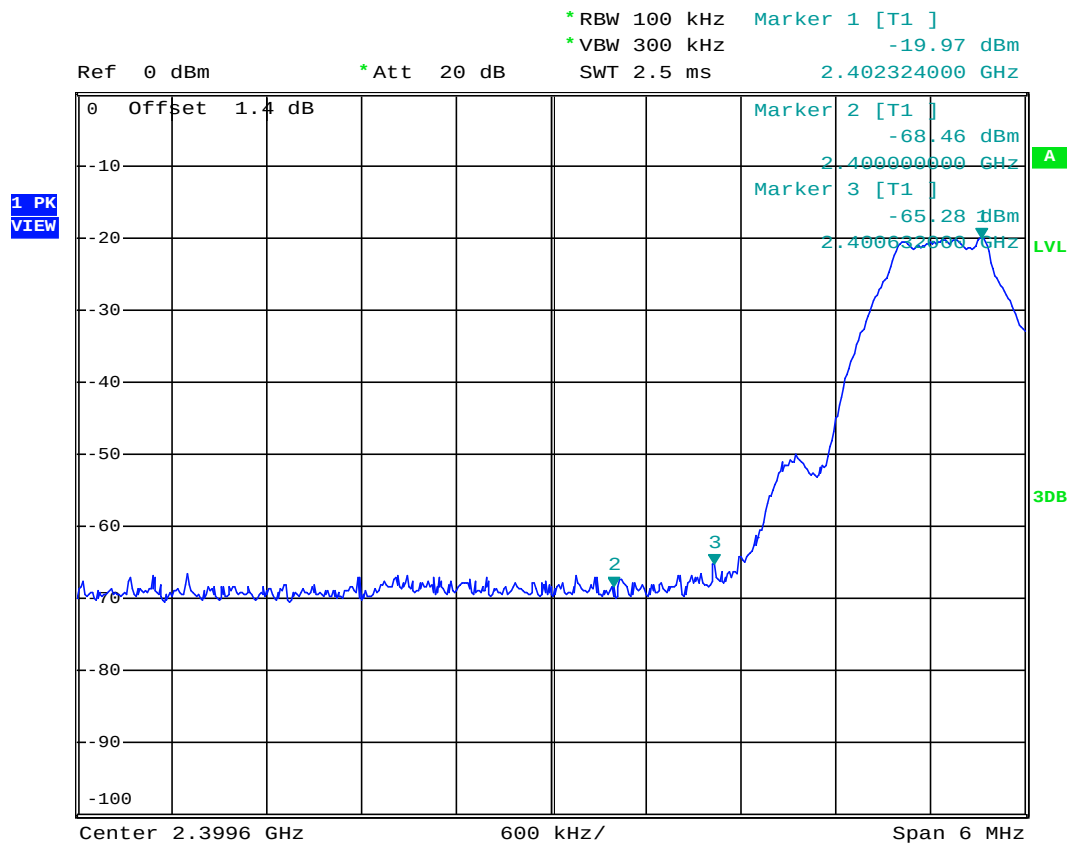
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Band Edge-BLE-L CH



Prüfbericht - Nr.:

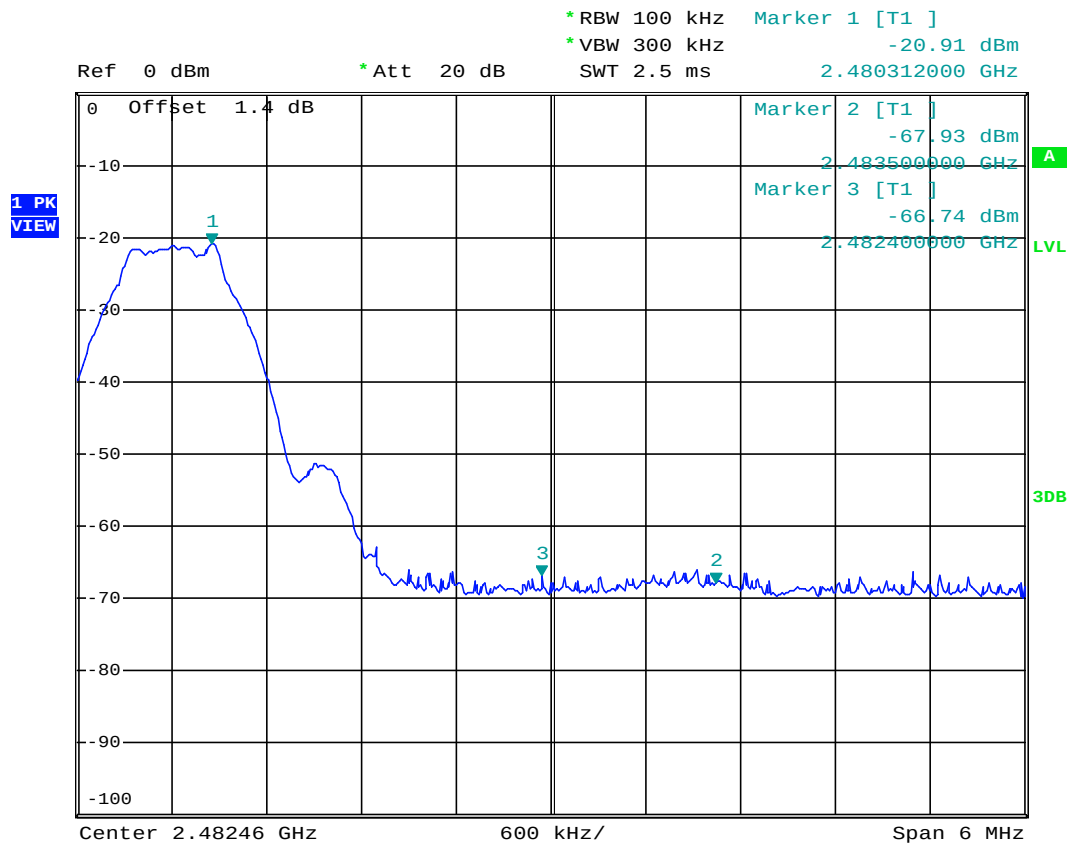
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Band Edge-BLE-H CH



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Radiated Spurious Emissions

TUV Rheinland (Guangdong) Ltd.

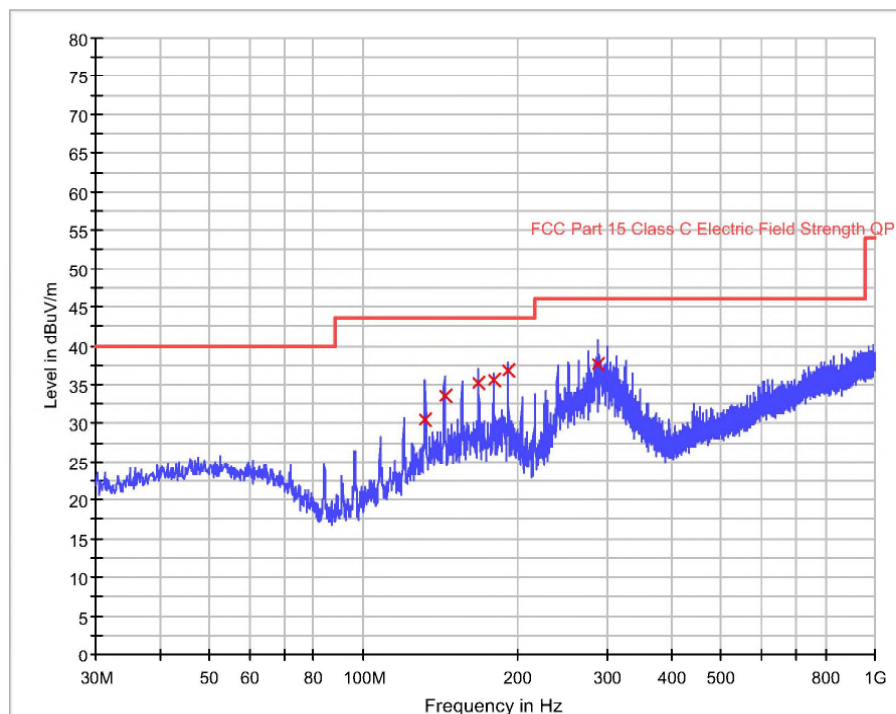
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Middle)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency range:	30M-1000MHz
Receiver:	ESCI 3
Transducer:	VULB9168



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
132.200000	30.6	1000.0	120.000	H	19.6	13.0	43.5	
144.080000	33.5	1000.0	120.000	H	20.9	10.0	43.5	
168.000000	35.3	1000.0	120.000	H	20.7	8.3	43.5	
180.000000	35.5	1000.0	120.000	H	19.6	8.0	43.5	
192.000000	36.8	1000.0	120.000	H	18.2	6.7	43.5	
287.880000	37.6	1000.0	120.000	H	21.7	8.4	46.0	

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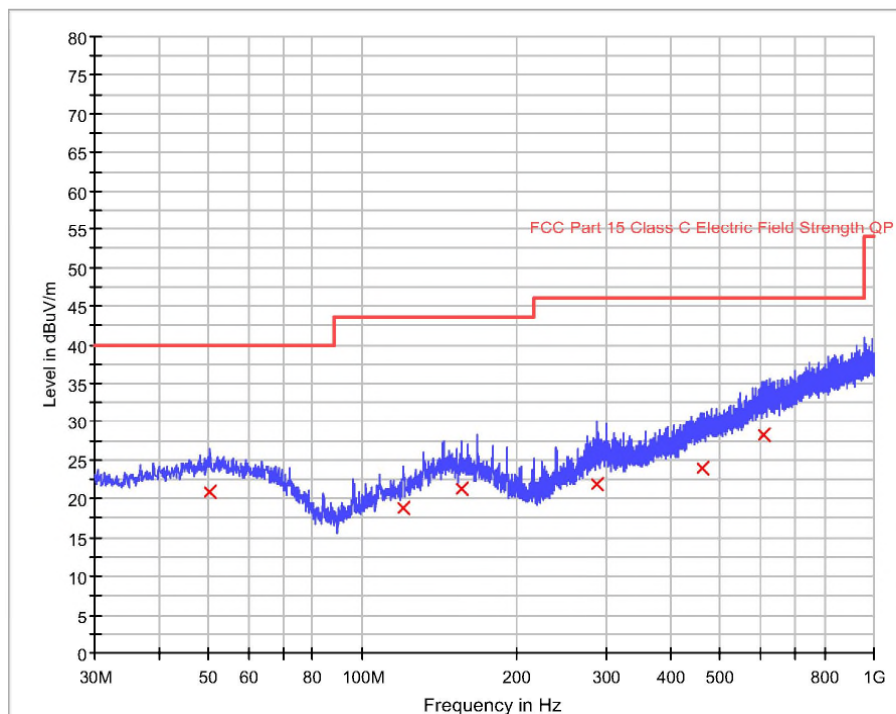
TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Middle)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical
Subrange 1	
Frequency range:	30M-1000MHz
Receiver:	ESCI 3
Transducer:	VULB9168



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Test Report No.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)	Comment
50.480000	20.8	1000.0	120.000	V	20.8	19.2	40.0	
120.560000	18.8	1000.0	120.000	V	18.4	24.7	43.5	
156.360000	21.3	1000.0	120.000	V	21.1	22.2	43.5	
287.400000	21.8	1000.0	120.000	V	21.7	24.2	46.0	
463.240000	23.9	1000.0	120.000	V	26.6	22.1	46.0	
608.960000	28.3	1000.0	120.000	V	29.9	17.7	46.0	

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

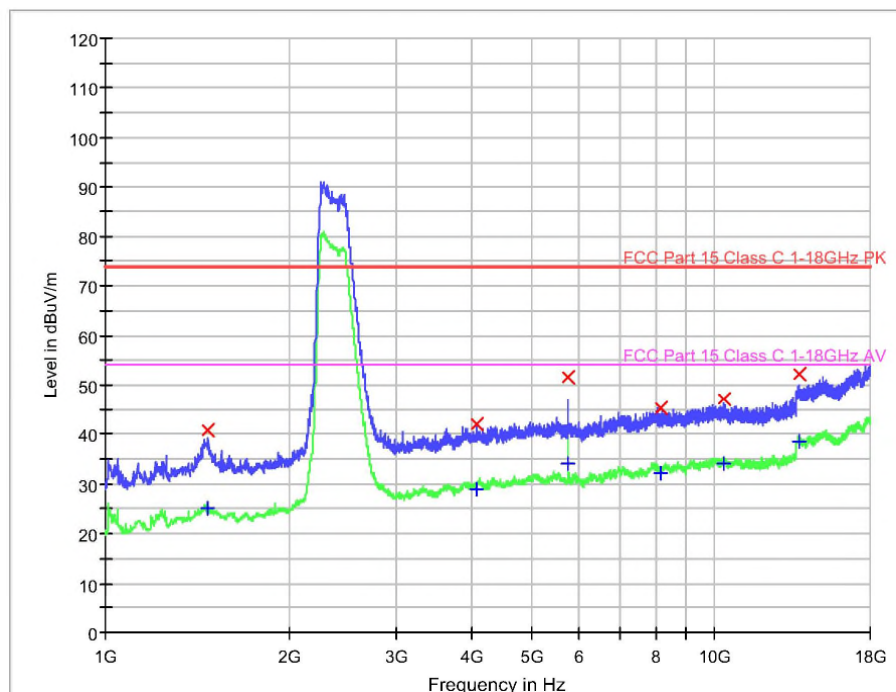
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Low)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Notch filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1476.000000	40.7	25.2	1000.0	1000.000	H	-16.6	33.3	74.0
4071.000000	42.0	28.9	1000.0	1000.000	H	-8.3	32.1	74.0
5752.000000	51.6	34.1	1000.0	1000.000	H	-5.9	22.4	74.0
8155.000000	45.2	32.3	1000.0	1000.000	H	-0.9	28.8	74.0
10348.000000	47.0	34.1	1000.0	1000.000	H	2.2	27.0	74.0
13771.000000	52.2	38.6	1000.0	1000.000	H	2.8	21.8	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1476.000000	40.7	25.2	1000.0	1000.000	H	-16.6	28.8	54.0
4071.000000	42.0	28.9	1000.0	1000.000	H	-8.3	25.1	54.0
5752.000000	51.6	34.1	1000.0	1000.000	H	-5.9	19.9	54.0
8155.000000	45.2	32.3	1000.0	1000.000	H	-0.9	21.7	54.0
10348.000000	47.0	34.1	1000.0	1000.000	H	2.2	19.9	54.0
13771.000000	52.2	38.6	1000.0	1000.000	H	2.8	15.4	54.0

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Test Report No.

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

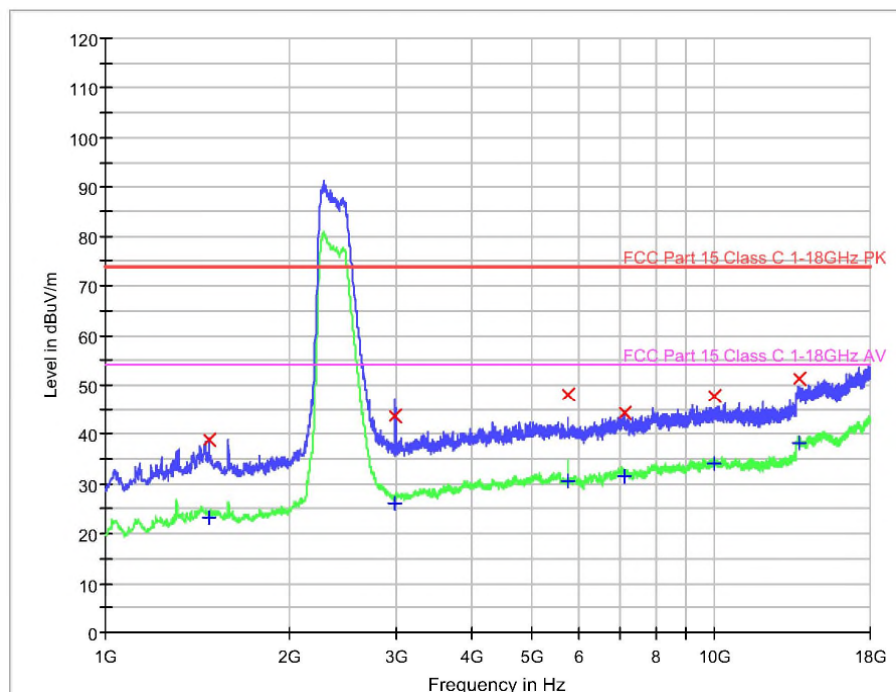
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Low)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Notch filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1482.000000	38.7	23.2	1000.0	1000.000	V	-16.6	35.3	74.0
2991.000000	43.7	26.2	1000.0	1000.000	V	-11.0	30.3	74.0
5747.000000	48.2	30.6	1000.0	1000.000	V	-5.9	25.9	74.0
7120.000000	44.4	31.4	1000.0	1000.000	V	-3.3	29.6	74.0
9982.000000	47.9	34.0	1000.0	1000.000	V	2.4	26.1	74.0
13737.000000	51.3	38.3	1000.0	1000.000	V	2.8	22.7	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1482.000000	38.7	23.2	1000.0	1000.000	V	-16.6	30.8	54.0
2991.000000	43.7	26.2	1000.0	1000.000	V	-11.0	27.8	54.0
5747.000000	48.2	30.6	1000.0	1000.000	V	-5.9	23.4	54.0
7120.000000	44.4	31.4	1000.0	1000.000	V	-3.3	22.6	54.0
9982.000000	47.9	34.0	1000.0	1000.000	V	2.4	20.0	54.0
13737.000000	51.3	38.3	1000.0	1000.000	V	2.8	15.7	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

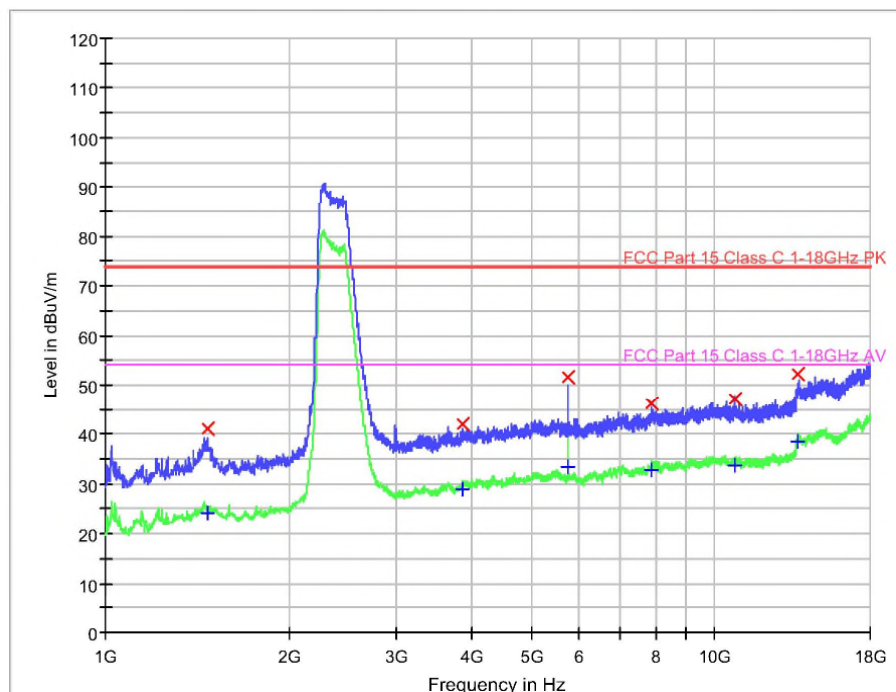
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Middle)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Notch filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1470.000000	41.1	24.2	1000.0	1000.000	H	-16.7	32.9	74.0
3858.000000	42.1	29.0	1000.0	1000.000	H	-8.6	31.9	74.0
5743.000000	51.5	33.4	1000.0	1000.000	H	-5.9	22.5	74.0
7866.000000	46.2	32.7	1000.0	1000.000	H	-1.6	27.8	74.0
10813.000000	47.0	33.9	1000.0	1000.000	H	2.7	27.0	74.0
13731.000000	52.1	38.6	1000.0	1000.000	H	2.8	21.9	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1470.000000	41.1	24.2	1000.0	1000.000	H	-16.7	29.8	54.0
3858.000000	42.1	29.0	1000.0	1000.000	H	-8.6	25.0	54.0
5743.000000	51.5	33.4	1000.0	1000.000	H	-5.9	20.6	54.0
7866.000000	46.2	32.7	1000.0	1000.000	H	-1.6	21.3	54.0
10813.000000	47.0	33.9	1000.0	1000.000	H	2.7	20.2	54.0
13731.000000	52.1	38.6	1000.0	1000.000	H	2.8	15.4	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

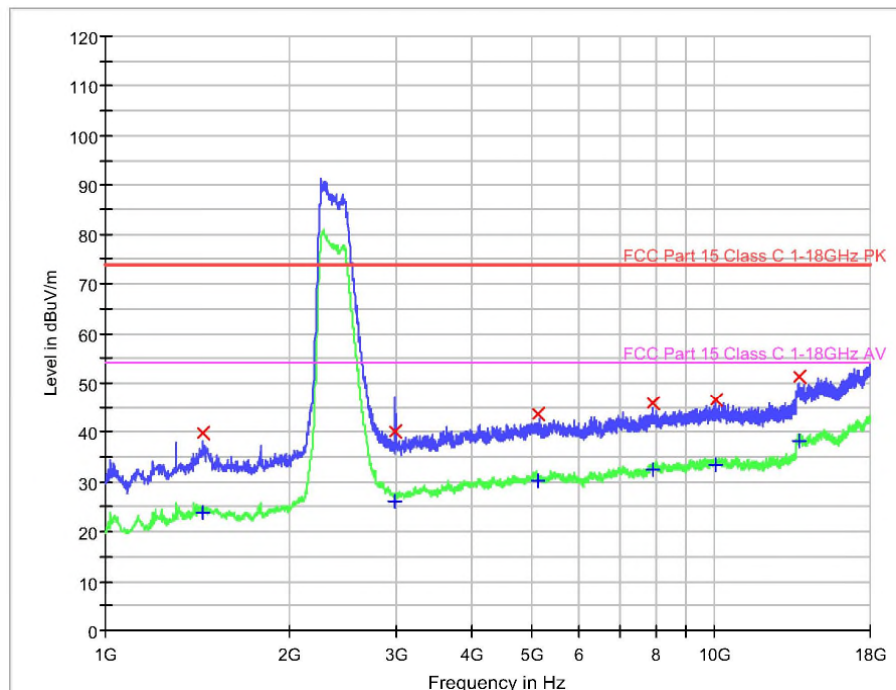
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Middle)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Notch filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1444.000000	39.7	23.9	1000.0	1000.000	V	-16.8	34.3	74.0
2993.000000	40.2	26.1	1000.0	1000.000	V	-11.0	33.8	74.0
5142.000000	43.7	30.4	1000.0	1000.000	V	-6.2	30.3	74.0
7927.000000	45.8	32.6	1000.0	1000.000	V	-1.4	28.2	74.0
10046.000000	46.4	33.6	1000.0	1000.000	V	2.3	27.6	74.0
13733.000000	51.1	38.2	1000.0	1000.000	V	2.8	22.9	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1444.000000	39.7	23.9	1000.0	1000.000	V	-16.8	30.1	54.0
2993.000000	40.2	26.1	1000.0	1000.000	V	-11.0	27.9	54.0
5142.000000	43.7	30.4	1000.0	1000.000	V	-6.2	23.6	54.0
7927.000000	45.8	32.6	1000.0	1000.000	V	-1.4	21.5	54.0
10046.000000	46.4	33.6	1000.0	1000.000	V	2.3	20.5	54.0
13733.000000	51.1	38.2	1000.0	1000.000	V	2.8	15.9	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

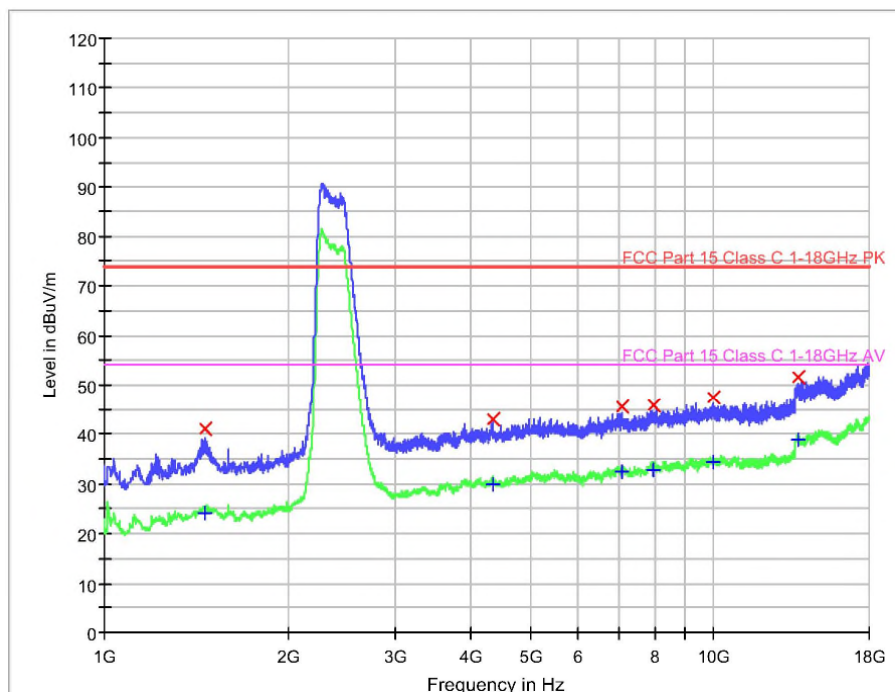
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Notch filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1467.000000	41.1	24.2	1000.0	1000.000	H	-16.7	32.9	74.0
4334.000000	43.1	30.0	1000.0	1000.000	H	-7.5	30.9	74.0
7063.000000	45.4	32.5	1000.0	1000.000	H	-3.3	28.6	74.0
7976.000000	46.0	32.7	1000.0	1000.000	H	-1.3	28.0	74.0
9982.000000	47.3	34.4	1000.0	1000.000	H	2.4	26.7	74.0
13746.000000	51.6	38.7	1000.0	1000.000	H	2.8	22.4	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1467.000000	41.1	24.2	1000.0	1000.000	H	-16.7	29.8	54.0
4334.000000	43.1	30.0	1000.0	1000.000	H	-7.5	24.0	54.0
7063.000000	45.4	32.5	1000.0	1000.000	H	-3.3	21.6	54.0
7976.000000	46.0	32.7	1000.0	1000.000	H	-1.3	21.3	54.0
9982.000000	47.3	34.4	1000.0	1000.000	H	2.4	19.6	54.0
13746.000000	51.6	38.7	1000.0	1000.000	H	2.8	15.3	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

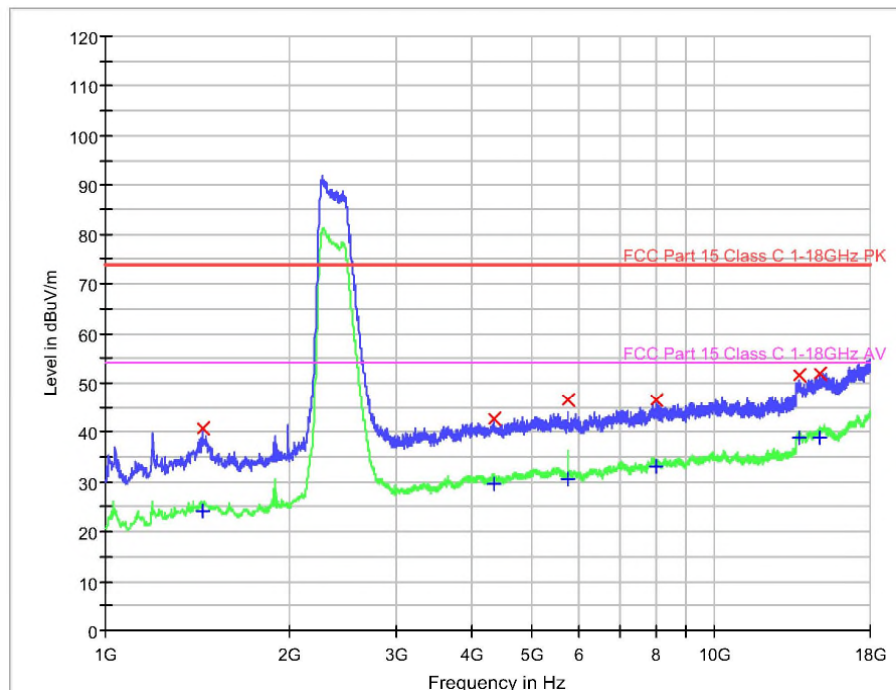
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-07_1GHz-18GHz_With PreAMP EXT& Notch filter



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1446.000000	40.7	24.3	1000.0	1000.000	V	-16.8	33.3	74.0
4353.000000	42.6	29.7	1000.0	1000.000	V	-7.5	31.4	74.0
5745.000000	46.4	30.7	1000.0	1000.000	V	-5.9	27.6	74.0
8006.000000	46.4	33.0	1000.0	1000.000	V	-1.2	27.6	74.0
13754.000000	51.6	38.8	1000.0	1000.000	V	2.8	22.4	74.0
14840.000000	51.8	38.9	1000.0	1000.000	V	3.5	22.2	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1446.000000	40.7	24.3	1000.0	1000.000	V	-16.8	29.7	54.0
4353.000000	42.6	29.7	1000.0	1000.000	V	-7.5	24.3	54.0
5745.000000	46.4	30.7	1000.0	1000.000	V	-5.9	23.3	54.0
8006.000000	46.4	33.0	1000.0	1000.000	V	-1.2	21.1	54.0
13754.000000	51.6	38.8	1000.0	1000.000	V	2.8	15.2	54.0
14840.000000	51.8	38.9	1000.0	1000.000	V	3.5	15.1	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

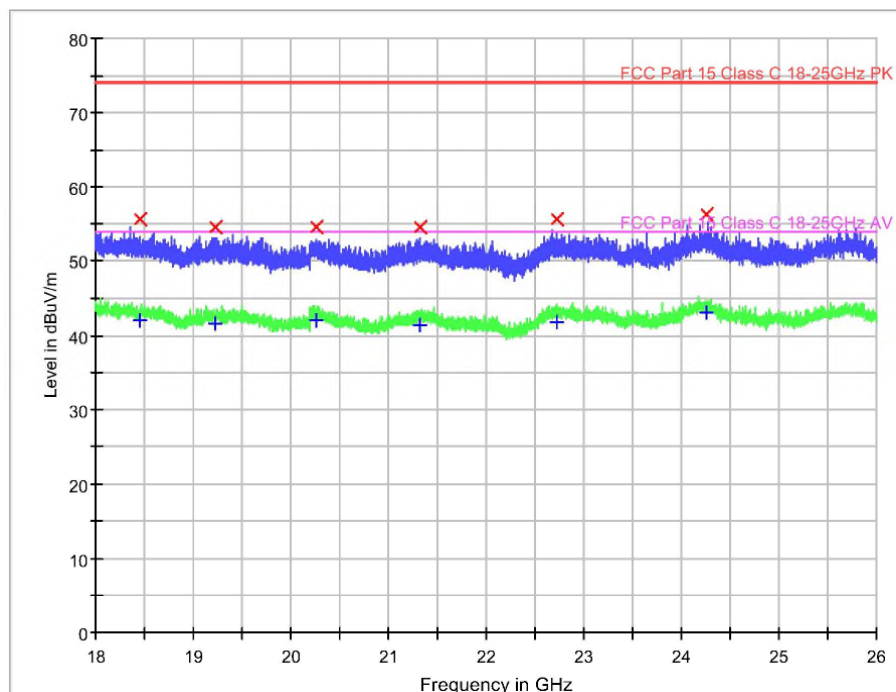
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Low)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	18GHz-26GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC Horn 3160-09

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
18444.000000	55.5	42.0	1000.0	1000.000	H	8.1	18.5	74.0
19226.000000	54.6	41.6	1000.0	1000.000	H	7.9	19.4	74.0
20262.000000	54.6	42.0	1000.0	1000.000	H	7.6	19.4	74.0
21321.000000	54.4	41.3	1000.0	1000.000	H	7.2	19.6	74.0
22726.000000	55.6	41.8	1000.0	1000.000	H	7.4	18.5	74.0
24251.000000	56.3	43.1	1000.0	1000.000	H	7.7	17.7	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
18444.000000	55.5	42.0	1000.0	1000.000	H	8.1	12.0	54.0
19226.000000	54.6	41.6	1000.0	1000.000	H	7.9	12.4	54.0
20262.000000	54.6	42.0	1000.0	1000.000	H	7.6	12.0	54.0
21321.000000	54.4	41.3	1000.0	1000.000	H	7.2	12.7	54.0
22726.000000	55.6	41.8	1000.0	1000.000	H	7.4	12.2	54.0
24251.000000	56.3	43.1	1000.0	1000.000	H	7.7	10.9	54.0

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EMC Test Service Hotline: +86-20-28391188

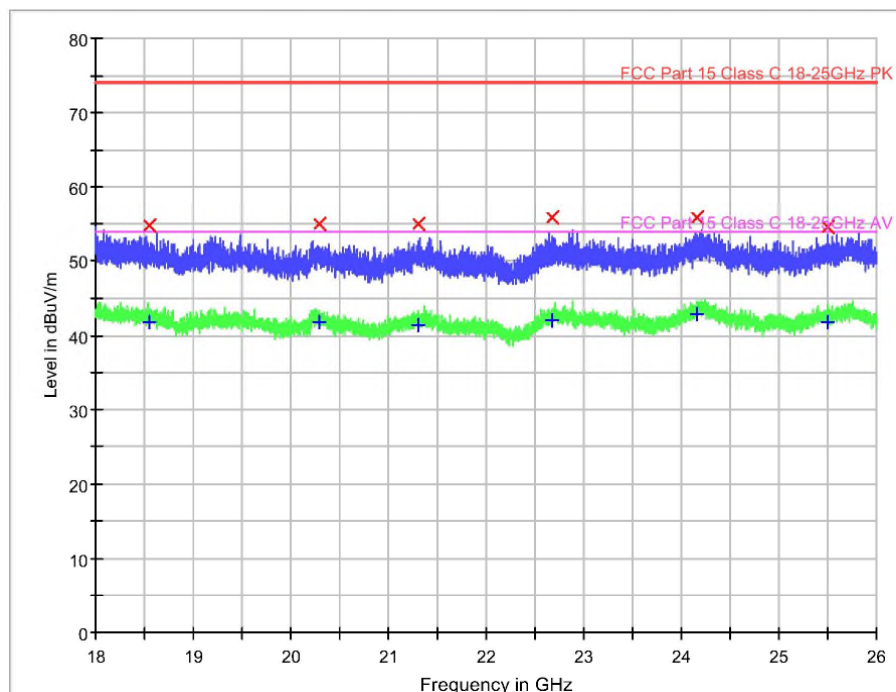
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Low)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	18GHz-26GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC Horn 3160-09

EMCTT_ERE011-A02-08_18GHz-25GHz_With PreAMP EXT



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
18546.000000	54.8	41.8	1000.0	1000.000	V	8.1	19.2	74.0
20287.000000	54.9	41.9	1000.0	1000.000	V	7.6	19.1	74.0
21305.000000	55.0	41.4	1000.0	1000.000	V	7.2	19.0	74.0
22681.000000	55.8	42.0	1000.0	1000.000	V	7.4	18.3	74.0
24157.000000	55.7	42.9	1000.0	1000.000	V	7.8	18.3	74.0
25498.000000	54.6	41.8	1000.0	1000.000	V	7.0	19.4	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
18546.000000	54.8	41.8	1000.0	1000.000	V	8.1	12.2	54.0
20287.000000	54.9	41.9	1000.0	1000.000	V	7.6	12.1	54.0
21305.000000	55.0	41.4	1000.0	1000.000	V	7.2	12.6	54.0
22681.000000	55.8	42.0	1000.0	1000.000	V	7.4	12.0	54.0
24157.000000	55.7	42.9	1000.0	1000.000	V	7.8	11.1	54.0
25498.000000	54.6	41.8	1000.0	1000.000	V	7.0	12.3	54.0

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EMC Test Service Hotline: +86-20-28391188

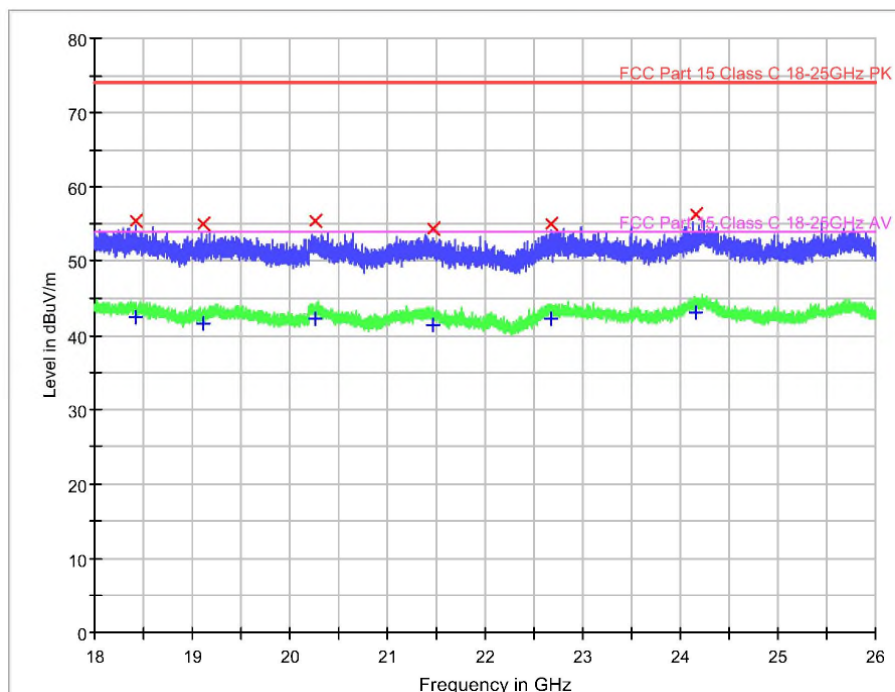
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Middle)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	18GHz-26GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC Horn 3160-09

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
18416.000000	55.4	42.4	1000.0	1000.000	H	8.1	18.6	74.0
19119.000000	55.0	41.6	1000.0	1000.000	H	7.9	19.0	74.0
20261.000000	55.3	42.2	1000.0	1000.000	H	7.6	18.7	74.0
21469.000000	54.3	41.4	1000.0	1000.000	H	7.1	19.7	74.0
22674.000000	55.1	42.1	1000.0	1000.000	H	7.4	18.9	74.0
24169.000000	56.1	43.0	1000.0	1000.000	H	7.7	17.9	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
18416.000000	55.4	42.4	1000.0	1000.000	H	8.1	11.7	54.0
19119.000000	55.0	41.6	1000.0	1000.000	H	7.9	12.5	54.0
20261.000000	55.3	42.2	1000.0	1000.000	H	7.6	11.8	54.0
21469.000000	54.3	41.4	1000.0	1000.000	H	7.1	12.6	54.0
22674.000000	55.1	42.1	1000.0	1000.000	H	7.4	11.9	54.0
24169.000000	56.1	43.0	1000.0	1000.000	H	7.7	11.0	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

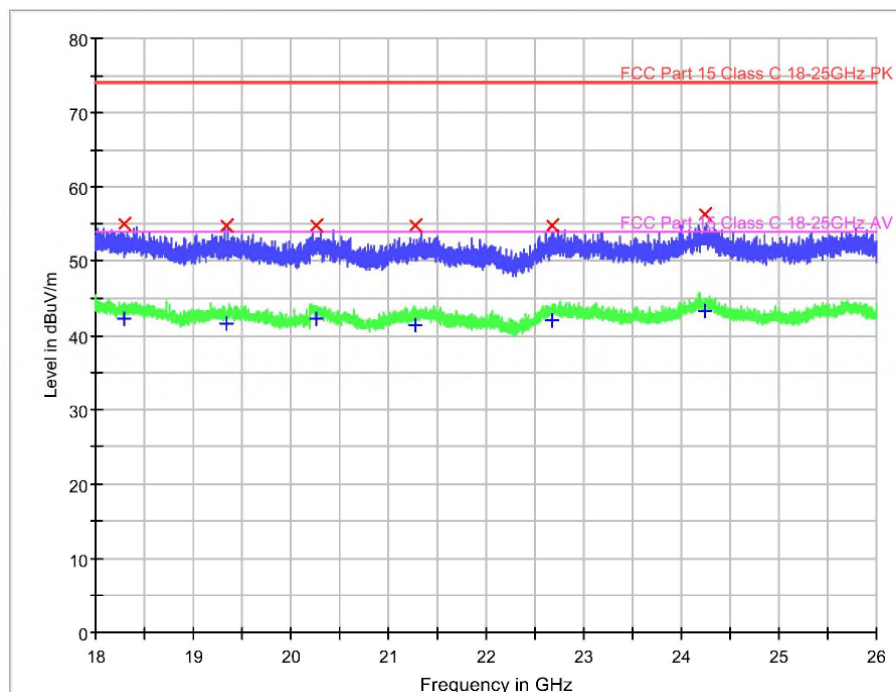
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(Middle)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	18GHz-26GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC Horn 3160-09

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
18291.000000	54.9	42.2	1000.0	1000.000	V	8.0	19.1	74.0
19346.000000	54.8	41.6	1000.0	1000.000	V	7.9	19.3	74.0
20260.000000	54.8	42.2	1000.0	1000.000	V	7.6	19.2	74.0
21269.000000	54.7	41.4	1000.0	1000.000	V	7.2	19.4	74.0
22679.000000	54.8	42.1	1000.0	1000.000	V	7.4	19.2	74.0
24249.000000	56.2	43.3	1000.0	1000.000	V	7.7	17.8	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
18291.000000	54.9	42.2	1000.0	1000.000	V	8.0	11.9	54.0
19346.000000	54.8	41.6	1000.0	1000.000	V	7.9	12.4	54.0
20260.000000	54.8	42.2	1000.0	1000.000	V	7.6	11.9	54.0
21269.000000	54.7	41.4	1000.0	1000.000	V	7.2	12.6	54.0
22679.000000	54.8	42.1	1000.0	1000.000	V	7.4	11.9	54.0
24249.000000	56.2	43.3	1000.0	1000.000	V	7.7	10.7	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

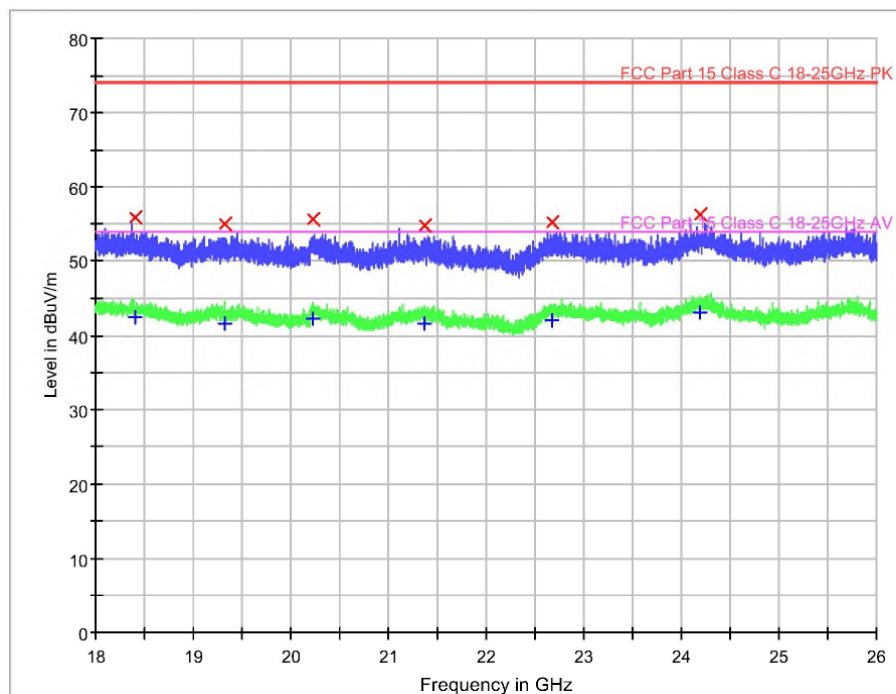
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	18GHz-26GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC Horn 3160-09

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
18400.000000	55.8	42.4	1000.0	1000.000	H	8.1	18.2	74.0
19323.000000	55.0	41.6	1000.0	1000.000	H	7.9	19.0	74.0
20228.000000	55.7	42.3	1000.0	1000.000	H	7.7	18.3	74.0
21370.000000	54.7	41.6	1000.0	1000.000	H	7.2	19.4	74.0
22670.000000	55.1	42.1	1000.0	1000.000	H	7.3	18.9	74.0
24194.000000	56.3	43.1	1000.0	1000.000	H	7.7	17.7	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
18400.000000	55.8	42.4	1000.0	1000.000	H	8.1	11.6	54.0
19323.000000	55.0	41.6	1000.0	1000.000	H	7.9	12.4	54.0
20228.000000	55.7	42.3	1000.0	1000.000	H	7.7	11.7	54.0
21370.000000	54.7	41.6	1000.0	1000.000	H	7.2	12.4	54.0
22670.000000	55.1	42.1	1000.0	1000.000	H	7.3	11.9	54.0
24194.000000	56.3	43.1	1000.0	1000.000	H	7.7	10.9	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

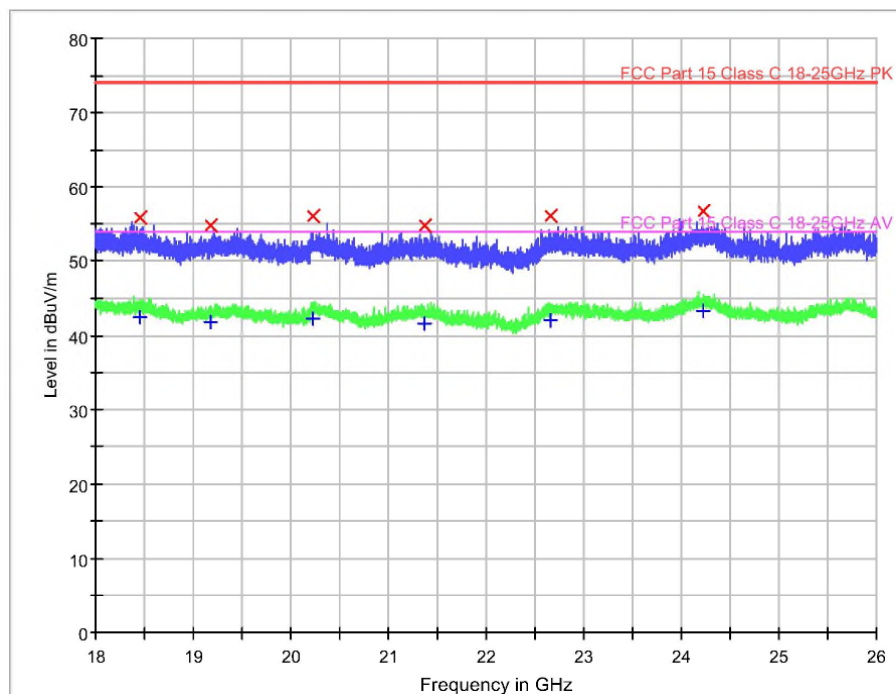
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Radiated Emission
Operation Mode:	Transmitting(High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	18GHz-26GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC Horn 3160-09

EMCTT_EREFO11-A02-08_18GHz-25GHz_With PreAMP EXT



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
18447.000000	55.9	42.4	1000.0	1000.000	V	8.1	18.1	74.0
19185.000000	54.8	41.8	1000.0	1000.000	V	7.9	19.2	74.0
20230.000000	56.0	42.3	1000.0	1000.000	V	7.7	18.0	74.0
21365.000000	54.7	41.7	1000.0	1000.000	V	7.2	19.3	74.0
22669.000000	55.9	42.1	1000.0	1000.000	V	7.3	18.1	74.0
24225.000000	56.7	43.3	1000.0	1000.000	V	7.7	17.4	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
18447.000000	55.9	42.4	1000.0	1000.000	V	8.1	11.6	54.0
19185.000000	54.8	41.8	1000.0	1000.000	V	7.9	12.2	54.0
20230.000000	56.0	42.3	1000.0	1000.000	V	7.7	11.7	54.0
21365.000000	54.7	41.7	1000.0	1000.000	V	7.2	12.3	54.0
22669.000000	55.9	42.1	1000.0	1000.000	V	7.3	11.9	54.0
24225.000000	56.7	43.3	1000.0	1000.000	V	7.7	10.7	54.0

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Band Edge-BLE

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

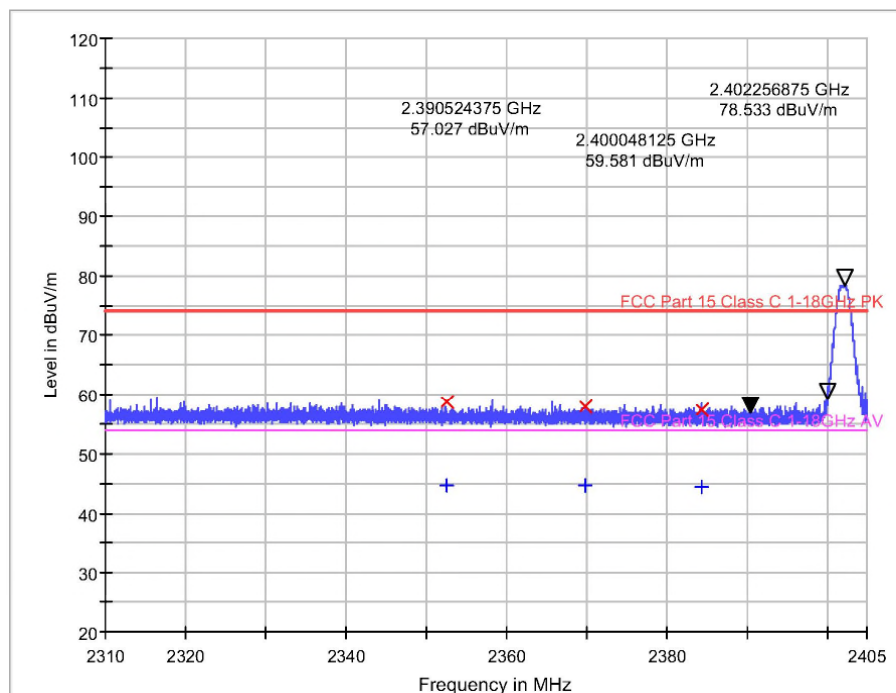
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Band edge
Operation Mode:	Transmitting(Low)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2352.520000	58.7	44.8	1000.0	1000.000	H	32.2	15.3	74.0
2369.920000	57.9	44.7	1000.0	1000.000	H	32.3	16.1	74.0
2384.320000	57.5	44.5	1000.0	1000.000	H	32.3	16.5	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2352.520000	58.7	44.8	1000.0	1000.000	H	32.2	9.2	54.0
2369.920000	57.9	44.7	1000.0	1000.000	H	32.3	9.3	54.0
2384.320000	57.5	44.5	1000.0	1000.000	H	32.3	9.5	54.0

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

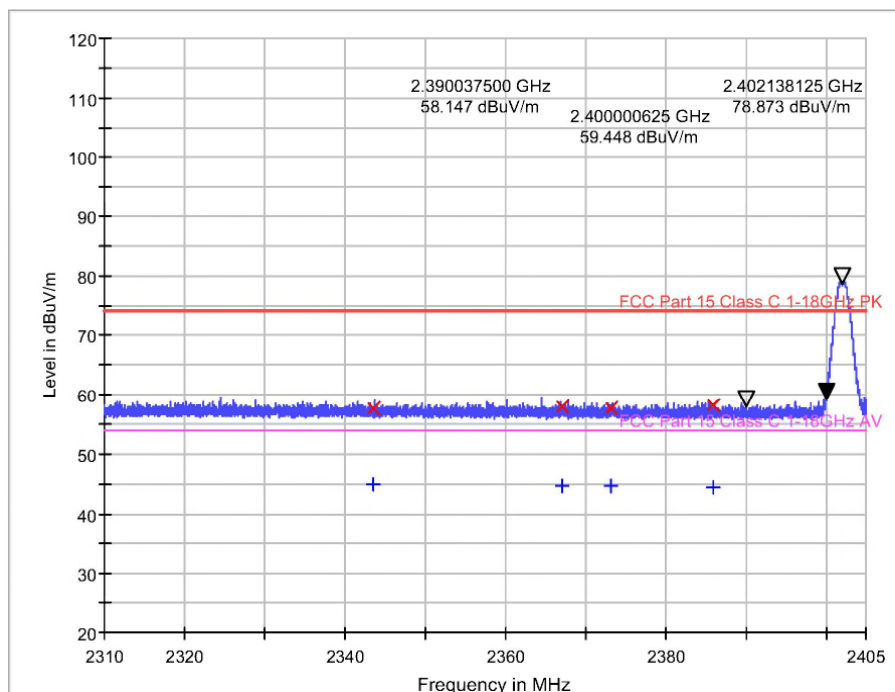
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Band edge
Operation Mode:	Transmitting(Low)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2343.640000	57.8	44.8	1000.0	1000.000	V	32.2	16.2	74.0
2367.040000	57.9	44.7	1000.0	1000.000	V	32.3	16.1	74.0
2373.280000	57.8	44.6	1000.0	1000.000	V	32.3	16.2	74.0
2386.000000	58.2	44.5	1000.0	1000.000	V	32.3	15.8	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2343.640000	57.8	44.8	1000.0	1000.000	V	32.2	9.2	54.0
2367.040000	57.9	44.7	1000.0	1000.000	V	32.3	9.3	54.0
2373.280000	57.8	44.6	1000.0	1000.000	V	32.3	9.4	54.0
2386.000000	58.2	44.5	1000.0	1000.000	V	32.3	9.5	54.0

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EMC Test Service Hotline: +86-20-28391188

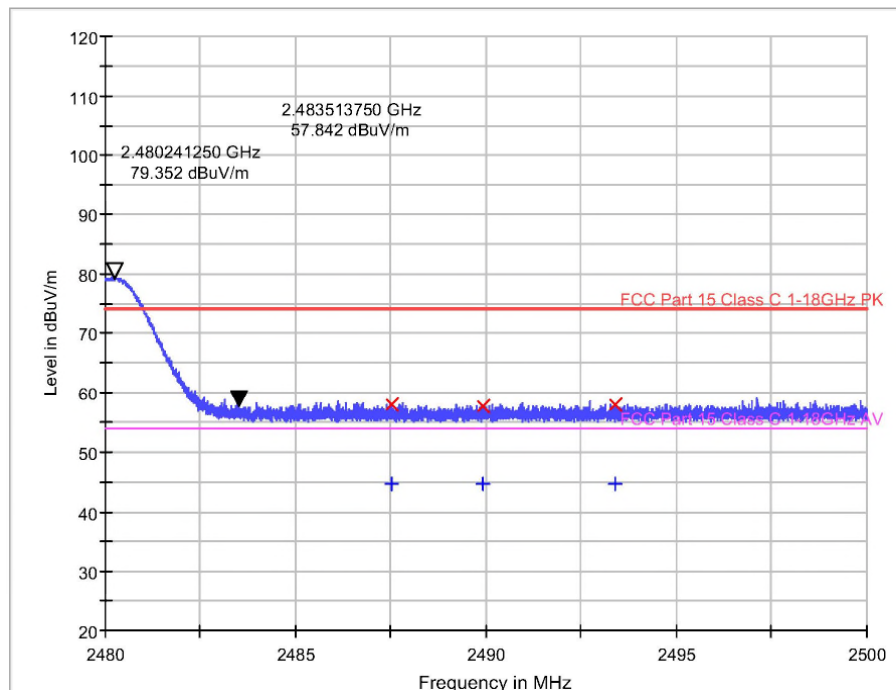
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Band edge
Operation Mode:	Transmitting(High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Horizontal

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



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Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2487.520000	57.9	44.6	1000.0	1000.000	H	32.6	16.1	74.0
2489.920000	57.6	44.6	1000.0	1000.000	H	32.6	16.4	74.0
2493.400000	57.9	44.6	1000.0	1000.000	H	32.6	16.1	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2487.520000	57.9	44.6	1000.0	1000.000	H	32.6	9.4	54.0
2489.920000	57.6	44.6	1000.0	1000.000	H	32.6	9.4	54.0
2493.400000	57.9	44.6	1000.0	1000.000	H	32.6	9.4	54.0

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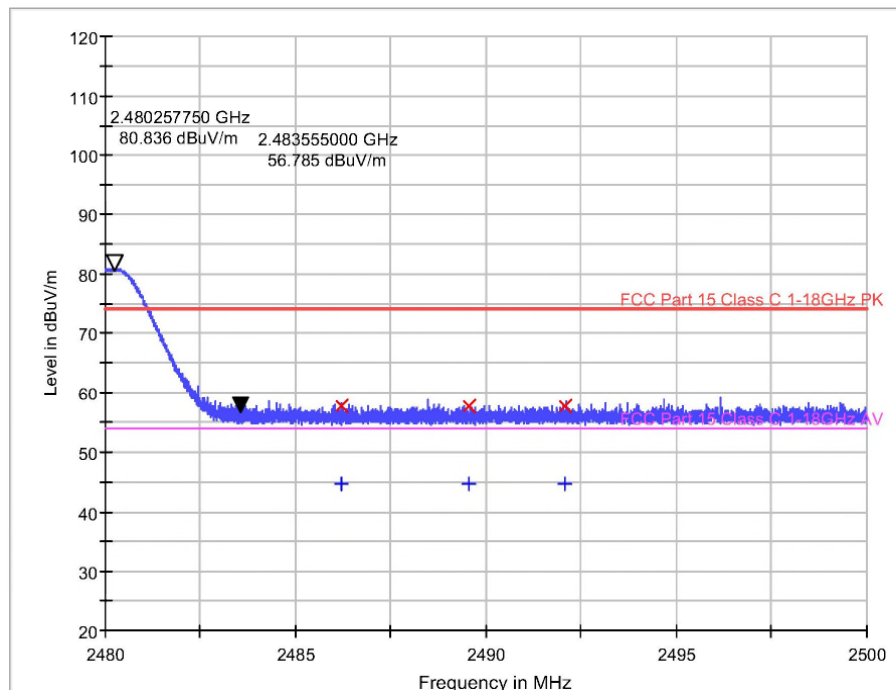
EMC Test Record (Emission)

Common Information

Manufacturer:	JG
Test Item:	Cooler
Identification:	FCR-50
Test Standard:	FCC Part 15C
Test Detail:	Band edge
Operation Mode:	Transmitting(High)
Climate Condition:	20 °C, 50 %, 100 k Pa
Test Voltage/ Freq:	DC 5V
Receipt No:	170259936
Report No:	/
Result:	Pass
Comment:	Test distance is 3m; Vertical

Subrange 1	
Frequency Range:	1GHz-18GHz
Receiver:	TUV FSP30
Transducer:	TUV SAC HF907

EMCTT_EREFO11-A02-04_1GHz-18GHz



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Limit and Margin PK

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2486.200000	57.8	44.6	1000.0	1000.000	V	32.6	16.2	74.0
2489.560000	57.7	44.6	1000.0	1000.000	V	32.6	16.3	74.0
2492.080000	57.7	44.6	1000.0	1000.000	V	32.6	16.3	74.0

Limit and Margin AV

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2486.200000	57.8	44.6	1000.0	1000.000	V	32.6	9.5	54.0
2489.560000	57.7	44.6	1000.0	1000.000	V	32.6	9.4	54.0
2492.080000	57.7	44.6	1000.0	1000.000	V	32.6	9.4	54.0