Prüfbericht-Nr.: *Test report no.*:	**CN25X9P1 001**	**Auftrags-Nr.:** *Order no.*:	168531160	
Kunden-Referenz-Nr.: *Client reference no.*:	N/A	**Auftragsdatum:** *Order date:*	2025-01-16	
Auftraggeber: *Client*:	FUJIAN LANDI COMMERCIAL EQUIPMENT CO., LTD. Building 17, Section A, Software Park, No 89 Software Road, Gulou District, Fuzhou, Fujian 350003, P.R. China			
Prüfgegenstand: *Test item*:	POS Terminal			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	C20DS (Trademark: N/A)			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification*:	CFR Title 47 FCC Part 15, Subpart C, Section 15.247 CFR Title 47 FCC Part 15, Subpart C, Section 15.207 CFR Title 47 FCC Part 15, Subpart C, Section 15.209 RSS-247 Issue 3 August 2023 RSS-Gen Issue 5 February 2021			
Wareneingangsdatum: *Date of sample receipt*:	2025-01-23	Please refer to Photo Document		
Prüfmuster-Nr.: *Test sample no:*	A003911736-001~005 A003913858-001~016			
Prüfzeitraum: *Testing period*:	2025-02-13 - 2025-02-21			
Ort der Prüfung: *Place of testing*:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: *Test result**:	Pass			

geprüft von: tested by: **Datum:** *Date:* 2025-04-03	X Bell Hu Bell Hu	**genehmigt von:** *authorized by*: **Ausstellungsdatum:** *Issue date:* 2025-04-03	X Hardy Suo Hardy Suo
Stellung / Position: Sachverständige(r)/Expert		**Stellung** / Position: Sachverständige(r)/Expert	

Sonstiges / *Other*:
This report is for Bluetooth Classic.
FCC ID: 2AG6N-C20DS
IC: 23725-C20DS
HVIN: C20DS

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*: Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* *Legend:*	*P(ass) = passed a.m. test specification(s)*	*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.*
2	Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: go.tuv.com/digital-signature *As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: go.tuv.com/digital-signature*
3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. *The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.*

Test Summary

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER
RESULT: Pass

5.1.3 99% BANDWIDTH
RESULT: Pass

5.1.4 20DB BANDWIDTH
RESULT: Pass

5.1.5 CARRIER FREQUENCY SEPARATION
RESULT: Pass

5.1.6 NUMBER OF HOPPING FREQUENCY
RESULT: Pass

5.1.7 TIME OF OCCUPANCY
RESULT: Pass

5.1.8 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH
RESULT: Pass

5.1.9 RADIATED SPURIOUS EMISSION
RESULT: Pass

5.1.10 CONDUCTED EMISSION ON AC MAINS
RESULT: Pass

Contents

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 Results of Bluetooth BR & EDR

Appendix B: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.
2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China

A2LA Certificate Number: 5162.01

FCC Registration No.: 694916

ISED Wireless Device Testing Laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (SRD-Tonscend)					
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. Date**	**Cal. until**
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2024-09-26	2025-09-25
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2024-09-26	2025-09-25
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2024-09-26	2025-09-25
DC power supply	Keysight	E3642A	MY61276100	2024-09-26	2025-09-25
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2024-09-26	2025-09-25
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2024-09-26	2025-09-25
Test Software	Tonscend	JS1120-3	N/A	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A	N/A
Shielding Room	Albatross	SR1	APC17151-SR1	2024-09-14	2027-09-13

Unwanted Emission Testing (TS9975)					
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. Date**	**Cal. until**
EMI Test Receiver	R&S	ESR 7	102021	2024-09-29	2025-09-28
Signal Analyzer	R&S	FSV 40	101439	2024-09-29	2025-09-28
System Controller Interface	R&S	SCI-100	S10010038	N/A	N/A
Filterbank	R&S	Wlan	100759	2024-09-29	2025-09-28
OSP	R&S	OSP 120	102040	N/A	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2024-09-29	2025-09-28
Amplifier	R&S	SCU-18F	180070	2024-09-29	2025-09-28
Amplifier	R&S	SCU40A	100475	2024-09-29	2025-09-28
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2024-09-28	2025-09-27
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2024-09-28	2025-09-27
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-09-28	2025-09-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2024-09-28	2025-09-27
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-09-14	2027-09-13

Conducted Emission				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESR3	102680	2026-02-09
Artificial Mains Network	R&S	ENV216	102333	2025-07-22
Artificial Mains Network	R&S	ENV216	101445	2026-02-09
LISN ENV216-Receiver cable in SR3	Calibration frequency range: 9 kHz~30 MHz			2025-12-20
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

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 basics 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.

Table 2: Measurement Uncertainty

Parameter	Uncertainty (k=2)
RF output power, conducted	± 0.99 dB
Occupied Channel Bandwidth	± 2.08 %
Unwanted Emissions, conducted	± 0.89 dB
All emissions, radiated	± 4.17 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB

2.6 Location of Original Data

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

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of 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 Product is a POS Terminal which supports Bluetooth dual mode, 2.4 GHz Wi-Fi, 5GHz Wi-Fi and NFC functions.

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

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	POS Terminal
Type Designation:	C20DS
Trademark:	N/A
Operating Voltage:	AC/DC adapter (120V AC/60Hz) or Powered by POE
Operating Temperature Range:	0 °C ~ +40 °C
AC/DC Adapter 1#:	Model: PA-1400-76 Input: 100-240V, 50/60Hz Output: DC 19V, 2.1A
AC/DC Adapter 2#:	Model: PA-1450-26 Input: 100-240V, 50/60Hz Output: DC 19V, 2.37A
Technical Specification of Bluetooth BR & EDR	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, π/4-DQPSK, 8DPSK
Channel Number:	79 channels
Channel Separation:	1MHz
Antenna Type:	Integral Antenna
Antenna Gain:	5.89 dBi (Provided by the Client)

Note: The correctness of all data provided by customer in the test report is ensured and responsible of the customer. Any misjudgment of the test results caused by the use of incorrect data provided by customer shall be borne by the customer.

Table 4: RF Channel and Frequency of Bluetooth BR & EDR

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	**2402.00**	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00

7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	**2480.00**
19	2421.00	39	**2441.00**	59	2461.00		

Test frequencies are lowest channel: 2402 MHz, middle channel: 2441 MHz and highest channel: 2480 MHz for Bluetooth BR & EDR

3.3 Independent Operation Modes

The basic operation modes are:

A. On, Bluetooth transmitting mode
    1) Low Channel
    2) Middle Channel
    3) High Channel

B. On, Transmitting on Hopping channel

C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- ID Label and Location Info
- User Manual
- Operation Description

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 tests were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all tests were performed on model *C20DS* in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 5: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8
Portable Laptop	Lenovo	ThinkPad T480	10Q67059
POE Gigabit Unmanaged Switch	NETGEAR INTERNATIONAL LTD	GS108PP	5WT119D3511DC
POE Adapter	Ruijie Networks Co., Ltd.	RG-POE-50-60W-MG	N/A

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)

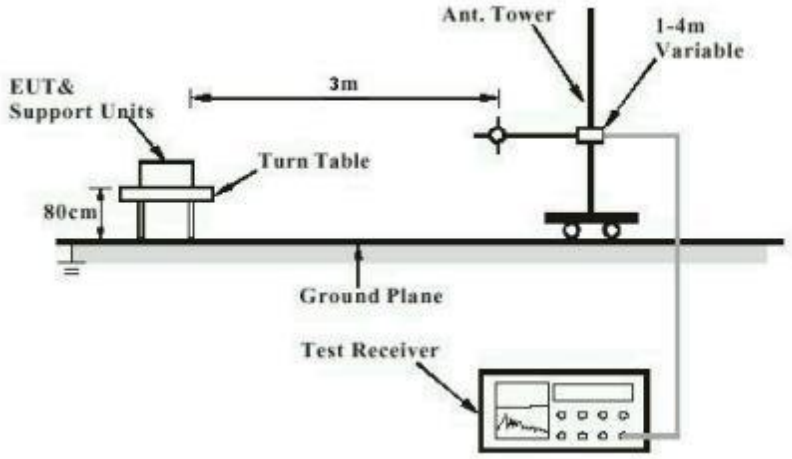


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

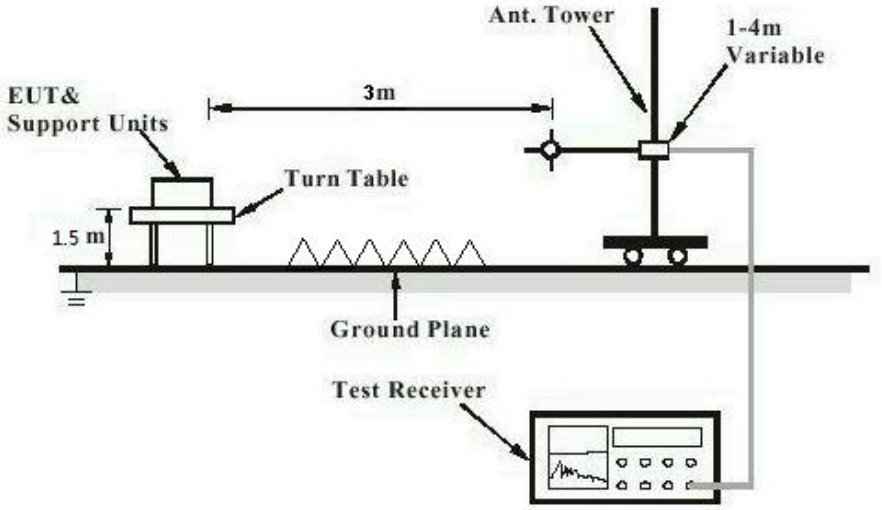


Diagram of Measurement Configuration for Mains Conduction Measurement

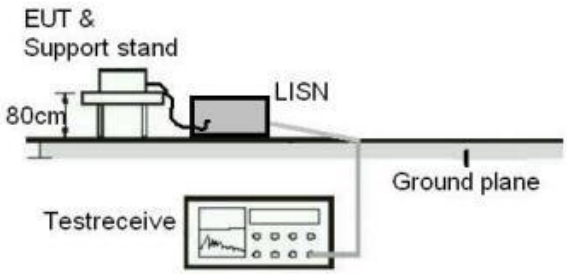
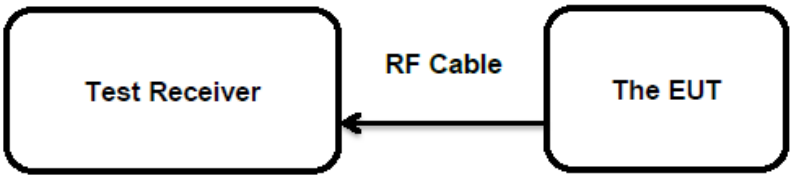


Diagram of Measurement Configuration for Conducted Transmitter Measurement



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
RSS-Gen Clause 6.8

According to the manufacturer declared, the EUT has an Integral antenna, permanent attachment and no consideration of replacement, refer to section 3.2 for details.

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) RSS-247 Clause 5.4(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	FHSS < 0.125 Watts (Maximum Conducted Power) e.i.r.p. <4 Watts
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 6: Test Result of Maximum Peak Conducted Output Power, Bluetooth BR & EDR

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
GFSK (BR)	2402.0	4.00	0.0025	< 0.125
	2441.0	2.31	0.0017	
	2480.0	0.88	0.0012	
Maximum Measured Value		**4.00**	**0.0025**	

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
8DPSK (EDR)	2402.0	3.39	0.0022	< 0.125
	2441.0	1.93	0.0016	
	2480.0	0.42	0.0011	
Maximum Measured Value		**3.39**	**0.0022**	

Max. e.i.r.p.=4.00dBm+5.89dBi=9.89dBm, which is less than 36dBm=4W.

Note:
1) The cable loss is taken into account in results.
2) Antenna gain(G): 5.89 dBi
e.i.r.p.=$P_{(Peak\ power)}$+ G, which is far below the 4 W

5.1.3 99% Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a) RSS-Gen Clause 6.7
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.4 20dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(a)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.5 Carrier Frequency Separation

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.6 Number of Hopping Frequency

RESULT: **Pass**

Test Specification

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	B
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.7 Time of Occupancy

RESULT: **Pass**

Test Specification

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 0.4s
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	B
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.8 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	:	2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

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

For the measurement records, refer to the appendix A.

5.1.9 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) RSS-Gen Section 8.9 & 8.10
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	2025-02-19 to 2025-02-21
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	Refer to test result
Relative humidity	:	Refer to test result
Atmospheric pressure	:	101 kPa

Remark:
Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix A.

5.1.10 Conducted Emission on AC Mains

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.207(a) RSS-Gen Section 8.8
Basic standard	:	ANSI C63.10: 2013
Frequency range	:	0.15 – 30MHz
Classification	:	Class B
Limits	:	FCC Part 15.207(a) RSS-Gen Table 4
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2025-02-13
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Ambient temperature	:	24.0 ℃
Relative humidity	:	50.4 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

6 Photographs of the Test Set-Up

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

7 List of Tables

Appendix A: Test Results of Bluetooth BR & EDR

Appendix A.1: Test Results of 20dB Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.930	2401.535	2402.465	---	PASS
		2441	0.828	2440.640	2441.468	---	PASS
		2480	0.825	2479.526	2480.351	---	PASS
3DH5	Ant1	2402	1.278	2401.358	2402.636	---	PASS
		2441	1.281	2440.355	2441.636	---	PASS
		2480	1.281	2479.355	2480.636	---	PASS

Test Graphs

DH5_Ant1_2402

DH5_Ant1_2441

DH5_Ant1_2480

3DH5_Ant1_2402

3DH5_Ant1_2441

3DH5_Ant1_2480

Appendix A.2: Test Results of 99% Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.83848	2401.5845	2402.4230	---	PASS
		2441	0.84060	2440.5680	2441.4086	---	PASS
		2480	0.88944	2479.5574	2480.4469	---	PASS
3DH5	Ant1	2402	1.1400	2401.4441	2402.5841	---	PASS
		2441	1.1647	2440.4365	2441.6012	---	PASS
		2480	1.2106	2479.4016	2480.6122	---	PASS

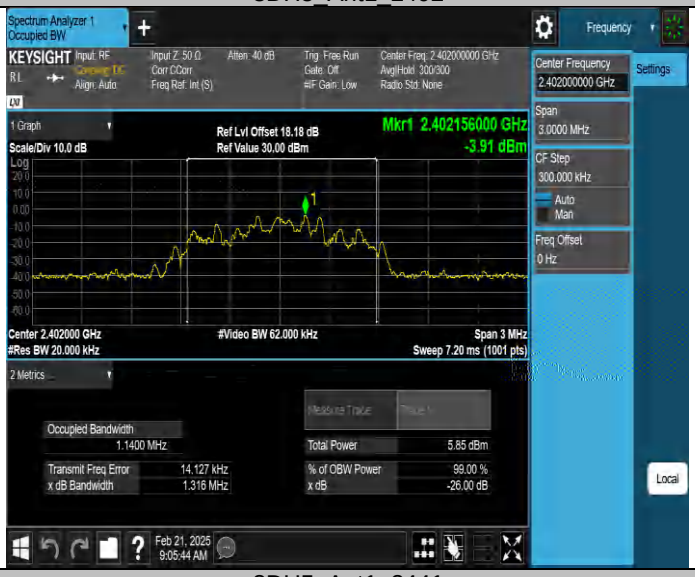
Test Graphs

DH5_Ant1_2402

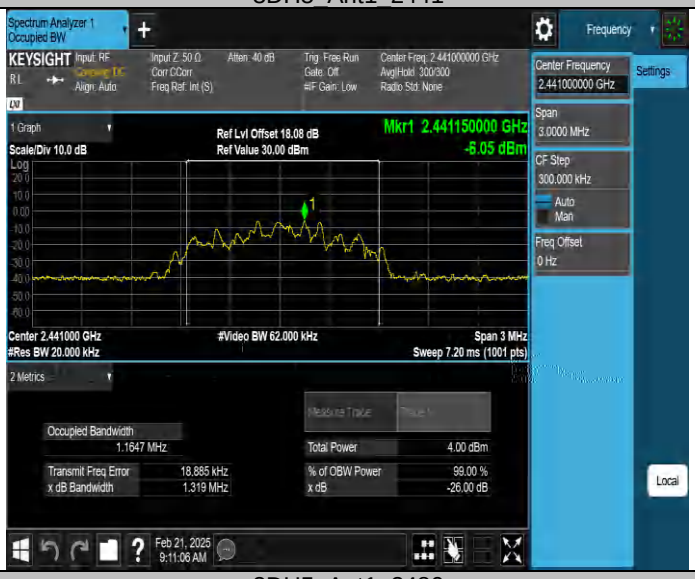
DH5_Ant1_2441

DH5_Ant1_2480

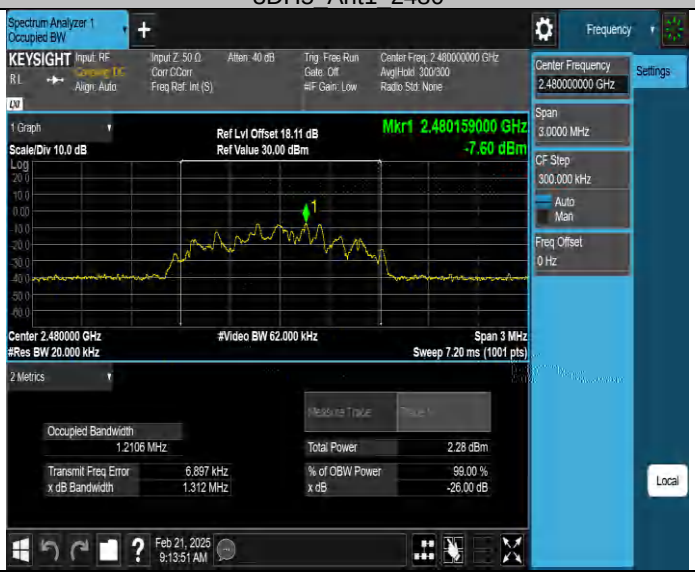
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix A.3: Test Results of Carrier Frequency Separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.158	≥0.930	PASS
3DH5	Ant1	Hop	1.022	≥0.854	PASS

Test Graphs

DH5_Ant1_Hop

3DH5_Ant1_Hop

Appendix A.4: Test Results of Time of Occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.367	315	0.116	≤0.4	PASS
DH3	Ant1	Hop	1.263	163	0.206	≤0.4	PASS
DH5	Ant1	Hop	2.872	105	0.302	≤0.4	PASS
3DH1	Ant1	Hop	0.376	319	0.12	≤0.4	PASS
3DH3	Ant1	Hop	1.628	167	0.272	≤0.4	PASS
3DH5	Ant1	Hop	2.878	109	0.314	≤0.4	PASS

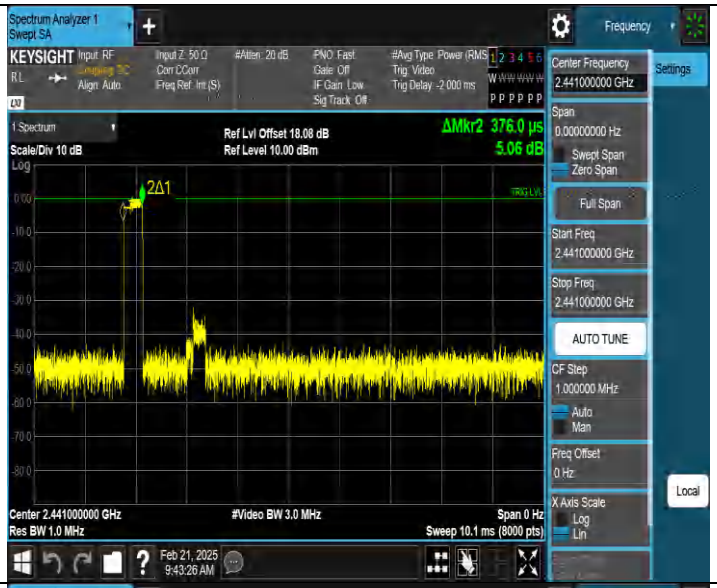
Test Graphs

DH1_Ant1_Hop

DH3_Ant1_Hop

DH5_Ant1_Hop

3DH1_Ant1_Hop



3DH3_Ant1_Hop

3DH5_Ant1_Hop

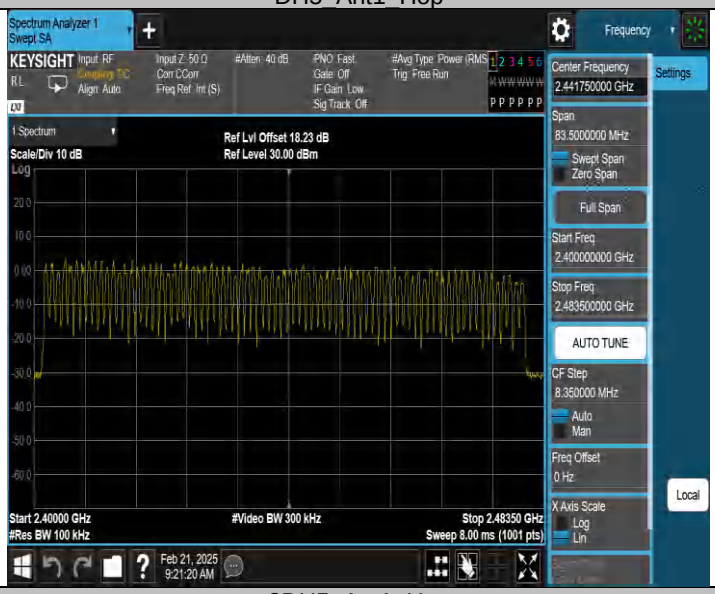
Appendix A.5: Test Results of Number of Hopping Frequency

Test Result

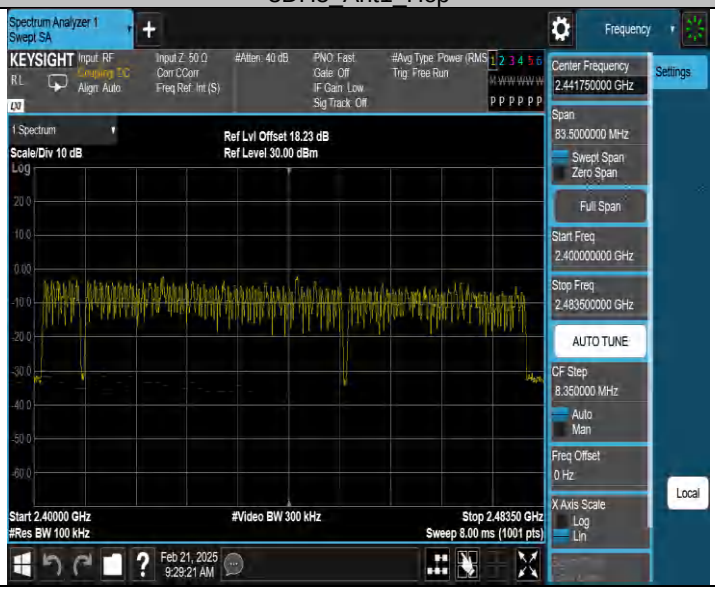
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

DH5_Ant1_Hop



3DH5_Ant1_Hop



Appendix A.6: Test Results of Band Edge Measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	2.16	-43.00	≤-17.84	PASS
		High	2480	-0.31	-43.54	≤-20.31	PASS
3DH5	Ant1	Low	2402	-0.47	-44.35	≤-20.47	PASS
		High	2480	-4.34	-44.83	≤-24.34	PASS
DH5	Ant1	Hopping	2402	0.25	-43.90	≤-19.75	PASS
		Hopping	2480	-1.29	-43.83	≤-21.29	PASS
3DH5	Ant1	Hopping	2402	-2.87	-42.61	≤-22.87	PASS
		Hopping	2480	-7.33	-43.99	≤-27.33	PASS

Test Graphs

DH5_Ant1_Low_2402

DH5_Ant1_High_2480

3DH5_Ant1_Low_2402

3DH5_Ant1_High_2480

DH5_Ant1_Hopping_2402

DH5_Ant1_Hopping_2480

3DH5_Ant1_Hopping_2402

3DH5_Ant1_Hopping_2480

Appendix A.7: Test Results of Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	2.06	2.06	---	PASS
			30~1000	2.06	-40.81	≤-17.94	PASS
			1000~26500	2.06	-32.27	≤-17.94	PASS
		2441	Reference	0.28	0.28	---	PASS
			30~1000	0.28	-41.66	≤-19.72	PASS
			1000~26500	0.28	-32.68	≤-19.72	PASS
		2480	Reference	-2.64	-2.64	---	PASS
			30~1000	-2.64	-40.93	≤-22.64	PASS
			1000~26500	-2.64	-32.02	≤-22.64	PASS
3DH5	Ant1	2402	Reference	-0.84	-0.84	---	PASS
			30~1000	-0.84	-40.98	≤-20.84	PASS
			1000~26500	-0.84	-32.17	≤-20.84	PASS
		2441	Reference	-2.48	-2.48	---	PASS
			30~1000	-2.48	-41.45	≤-22.48	PASS
			1000~26500	-2.48	-31.89	≤-22.48	PASS
		2480	Reference	-3.84	-3.84	---	PASS
			30~1000	-3.84	-41.27	≤-23.84	PASS
			1000~26500	-3.84	-32.28	≤-23.84	PASS

Test Graphs

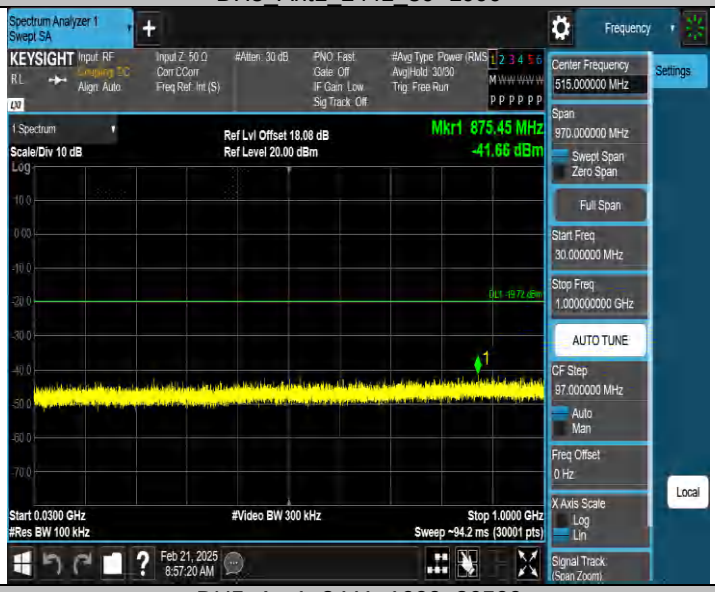
DH5_Ant1_2402_0~Reference

DH5_Ant1_2402_30~1000

DH5_Ant1_2402_1000~26500

DH5_Ant1_2441_0~Reference

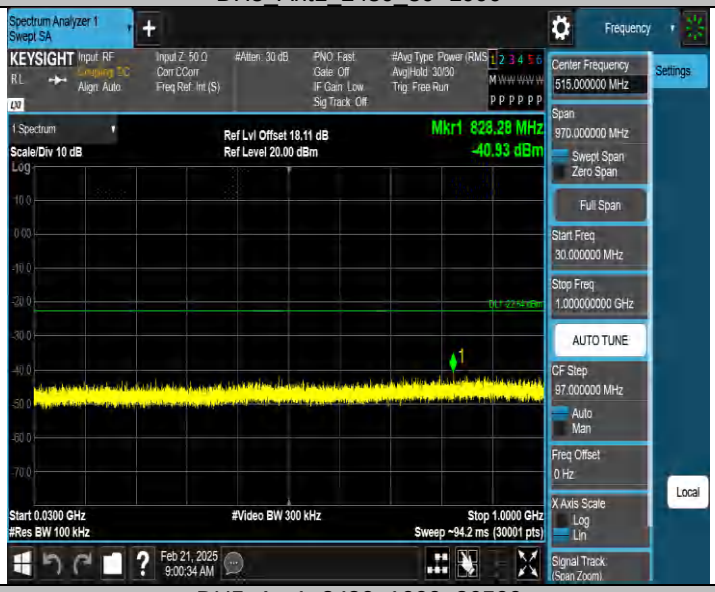
DH5_Ant1_2441_30~1000



DH5_Ant1_2441_1000~26500

DH5_Ant1_2480_0~Reference

DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

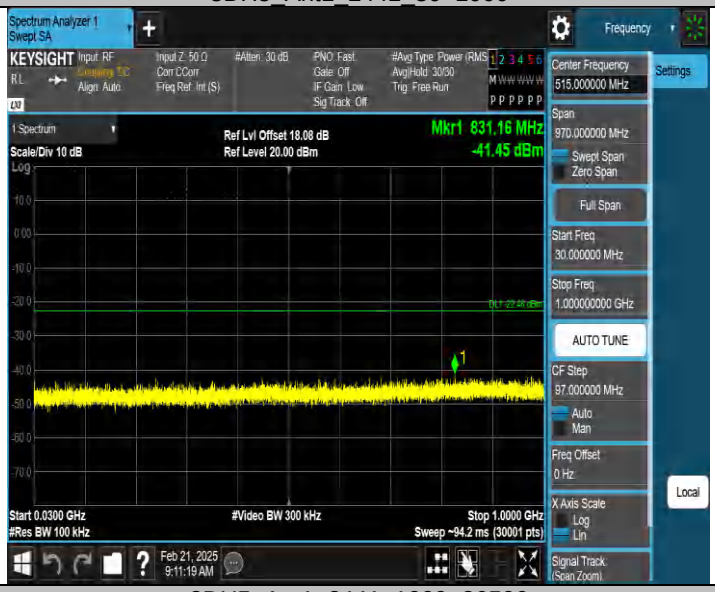
3DH5_Ant1_2402_0~Reference

3DH5_Ant1_2402_30~1000

3DH5_Ant1_2402_1000~26500

3DH5_Ant1_2441_0~Reference

3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~26500

3DH5_Ant1_2480_0~Reference

3DH5_Ant1_2480_30~1000

3DH5_Ant1_2480_1000~26500

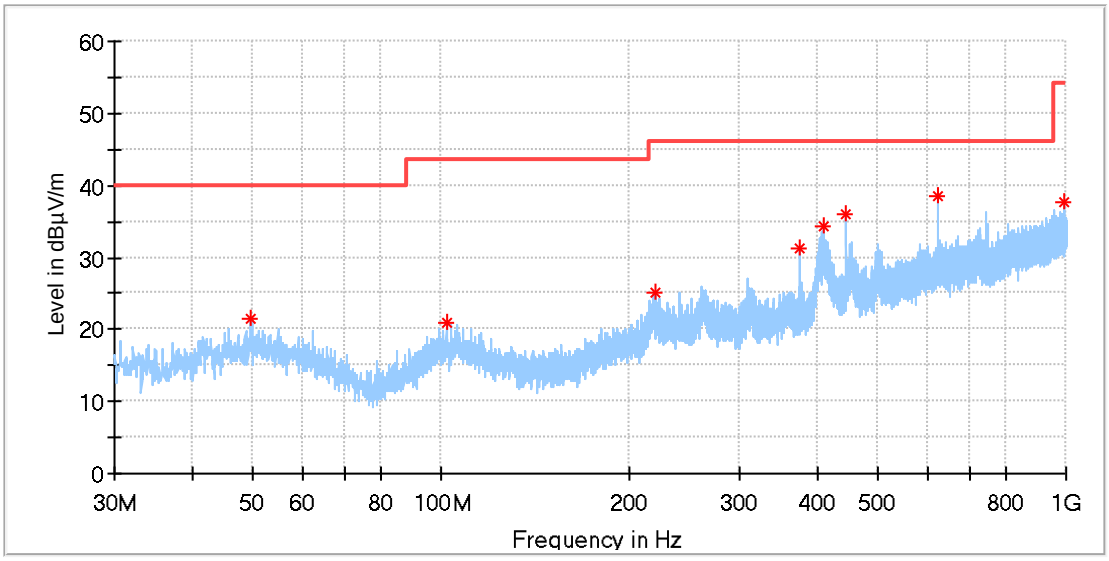
Appendix A.8: Test Results of Radiated Spurious Emissions

Note:
1) This testing was carried out on different modulations, but only the worst case was presented in this report.
2) Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30 MHz - 1GHz

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

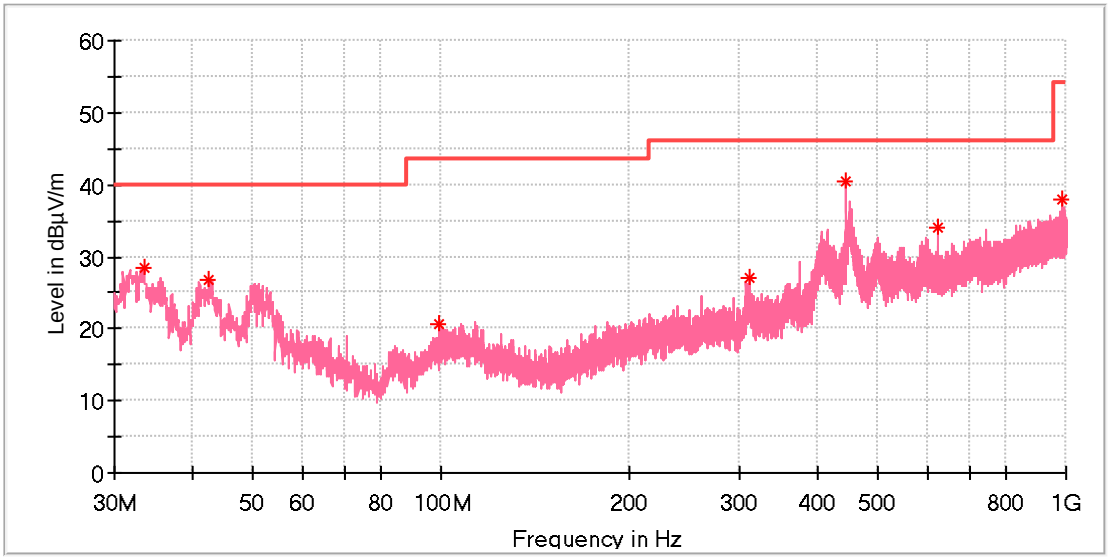
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.735769	21.42	40.00	18.58	100.0	H	183.0	-18.4
101.854615	20.93	43.50	22.57	100.0	H	278.0	-19.0
219.523077	25.16	46.00	20.84	100.0	H	134.0	-18.7
374.984231	31.19	46.00	14.81	100.0	H	134.0	-14.3
408.523846	34.39	46.00	11.61	100.0	H	126.0	-13.5
445.495769	36.04	46.00	9.96	100.0	H	30.0	-12.9
625.020385	38.46	46.00	7.54	100.0	H	295.0	-9.2
995.746923	37.77	54.00	16.23	100.0	H	63.0	-3.5

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.432308	28.53	40.00	11.47	100.0	V	240.0	-22.4
42.498077	26.86	40.00	13.14	100.0	V	263.0	-19.5
99.466923	20.67	43.50	22.83	100.0	V	351.0	-19.2
311.859615	27.05	46.00	18.95	100.0	V	169.0	-16.0
445.495769	40.38	46.00	5.62	100.0	V	335.0	-12.9
625.020385	34.18	46.00	11.82	100.0	V	297.0	-9.2
982.577308	37.89	54.00	16.11	100.0	V	176.0	-3.8

Final_Result

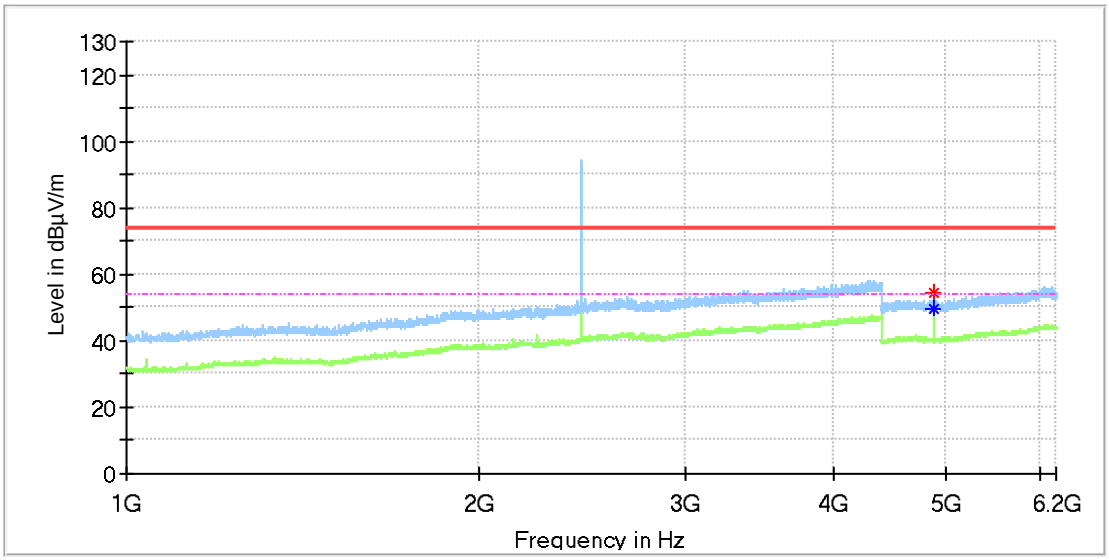
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

1GHz - 18GHz

Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

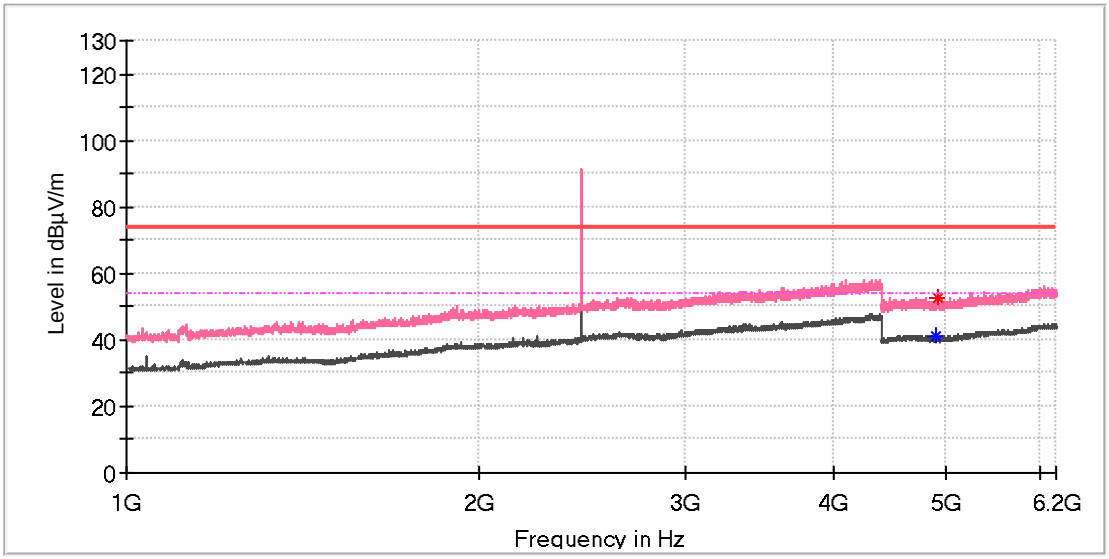
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4881.500000	54.67	---	74.00	19.33	150.0	H	345.0	13.3
4882.000000	---	49.67	54.00	4.33	150.0	H	356.0	13.3

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

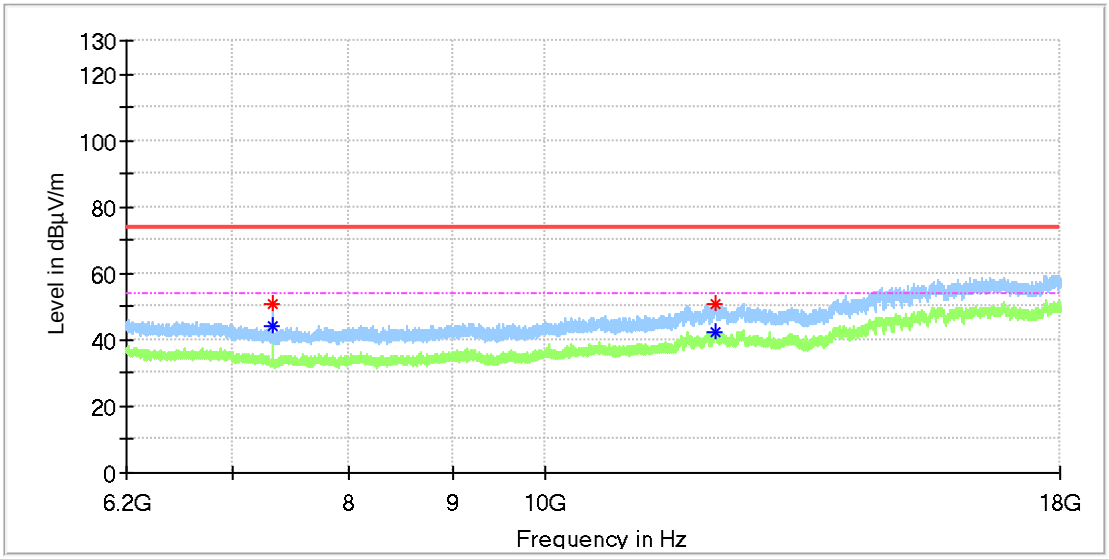
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4900.000000	---	40.99	54.00	13.01	150.0	V	217.0	13.3
4916.000000	52.67	---	74.00	21.33	150.0	V	236.0	13.3

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

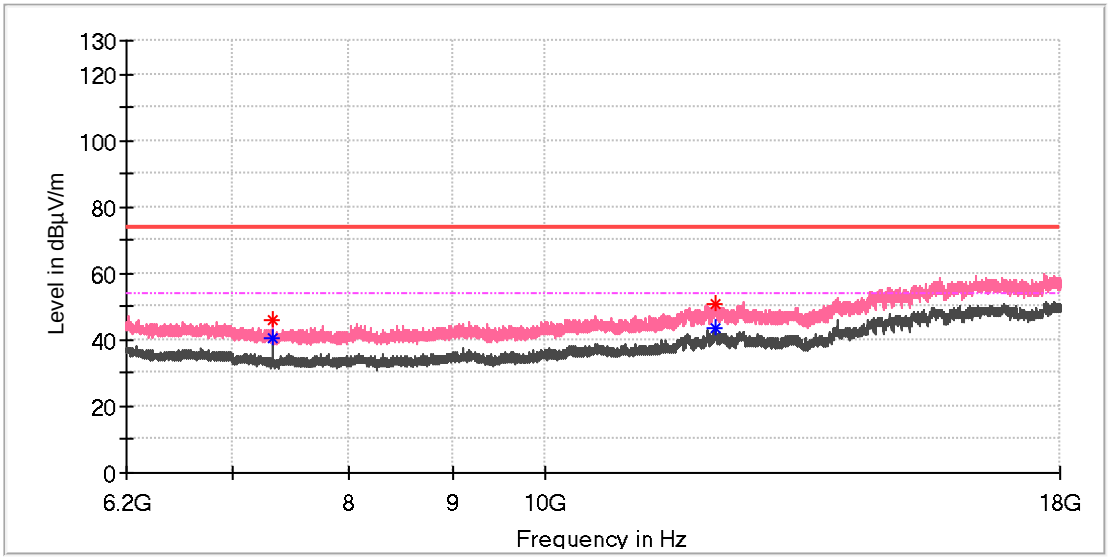
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7321.983333	50.91	---	74.00	23.09	150.0	H	316.0	8.2
7321.983333	---	43.91	54.00	10.09	150.0	H	316.0	8.2
12132.450000	---	42.36	54.00	11.64	150.0	H	212.0	16.3
12155.066667	50.99	---	74.00	23.01	150.0	H	304.0	16.5

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7322.475000	45.82	---	74.00	28.18	150.0	V	0.0	8.2
7322.475000	---	40.33	54.00	13.67	150.0	V	0.0	8.2
12146.216667	---	43.25	54.00	10.75	150.0	V	327.0	16.6
12153.100000	50.59	---	74.00	23.41	150.0	V	186.0	16.6

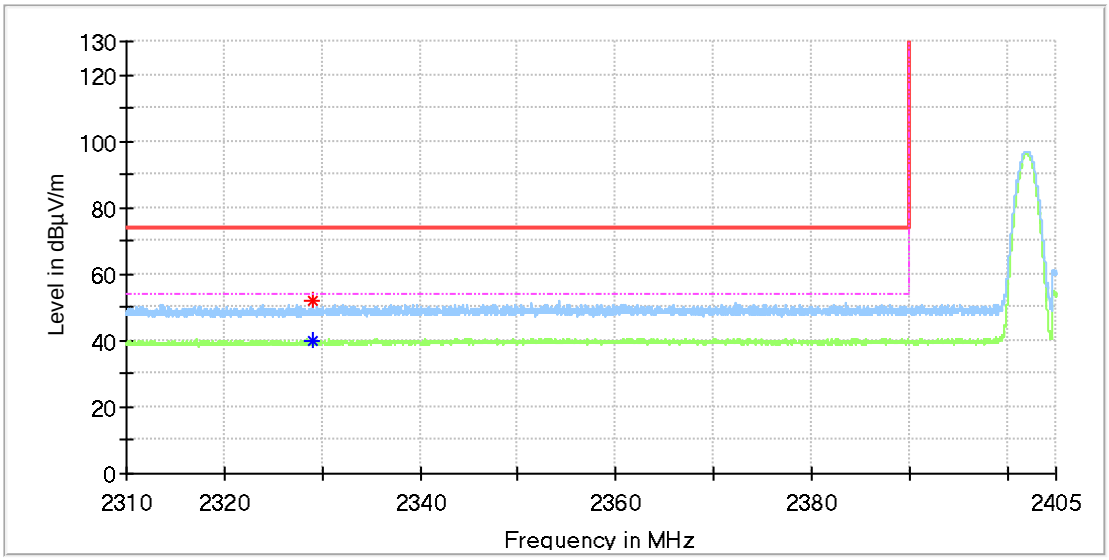
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Appendix A.9: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

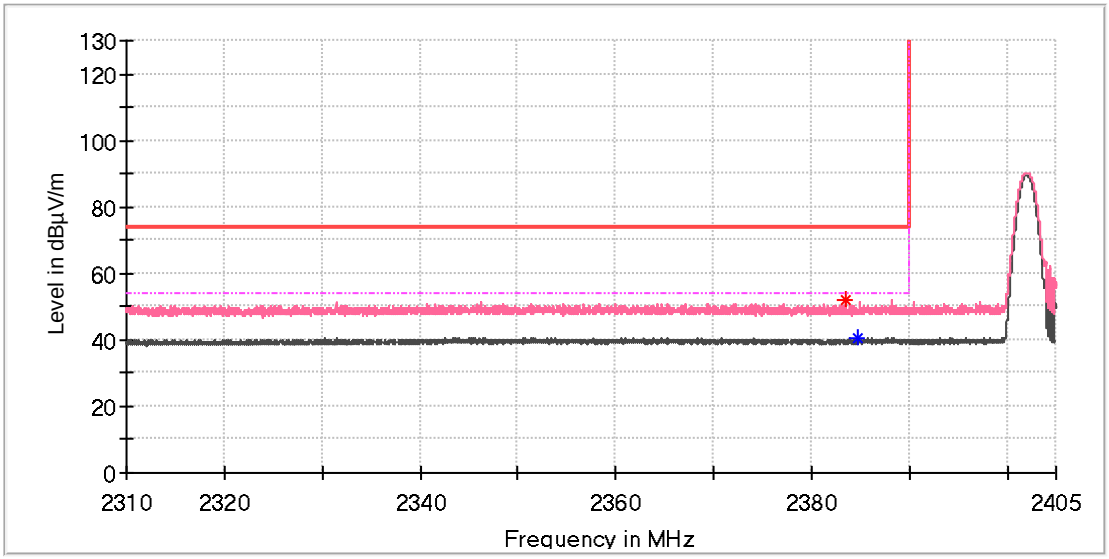
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2329.058824	52.08	---	74.00	21.92	150.0	H	275.0	8.3
2329.073530	---	40.10	54.00	13.90	150.0	H	245.0	8.3

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

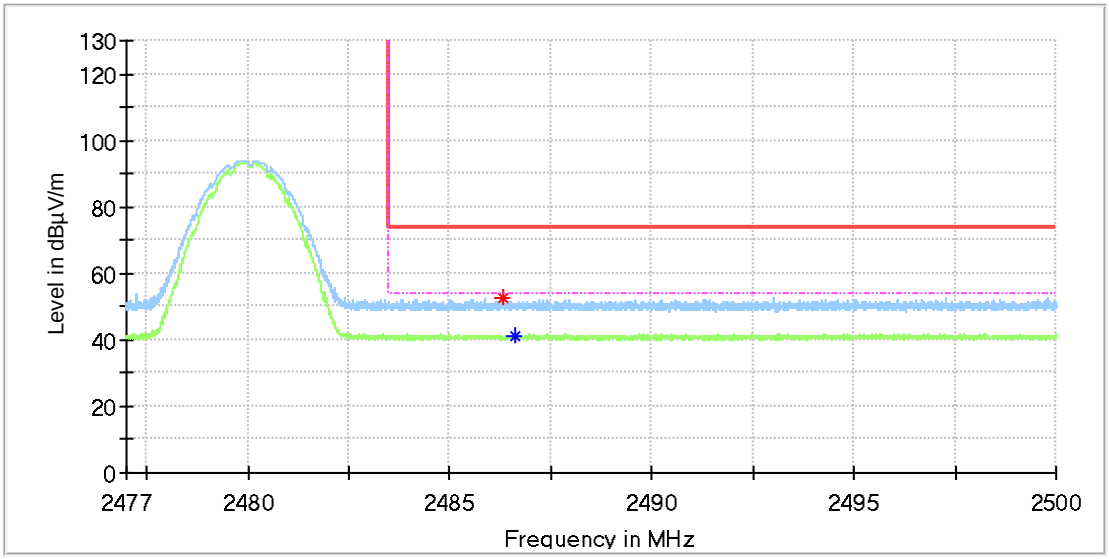
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2383.485294	52.09	---	74.00	21.91	150.0	V	195.0	8.5
2384.661765	---	40.29	54.00	13.71	150.0	V	271.0	8.5

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

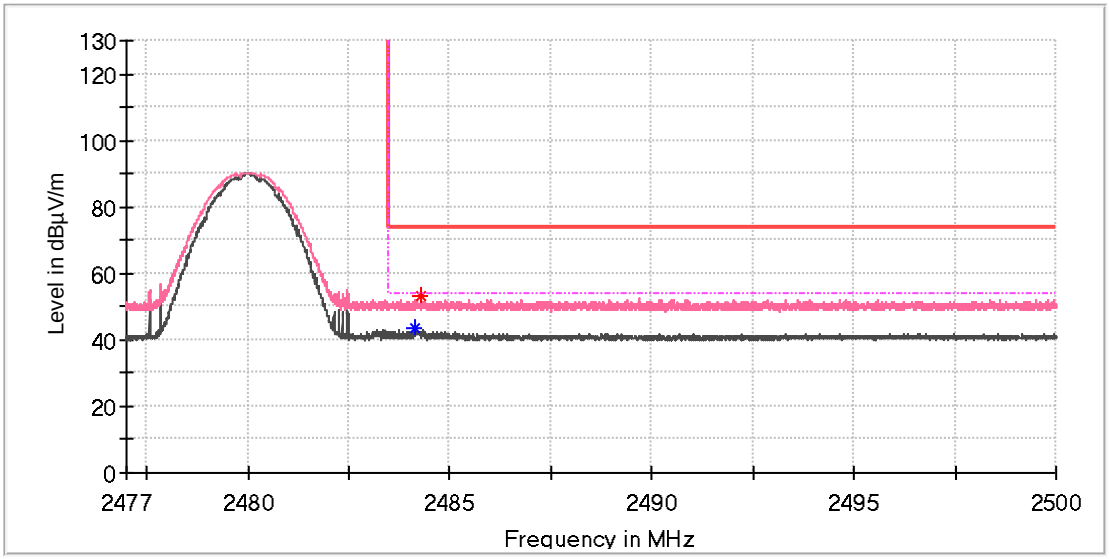
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2486.316177	52.48	---	74.00	21.52	150.0	H	55.0	9.0
2486.632353	---	41.39	54.00	12.61	150.0	H	219.0	9.0

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	POS Terminal
Model:	C20DS
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168531160/A003911736-002
Test Voltage:	Adaptor
Remark:	Temp 22 Humi:52%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.136030	---	43.31	54.00	10.69	150.0	V	5.0	9.0
2484.283088	53.25	---	74.00	20.75	150.0	V	126.0	9.0

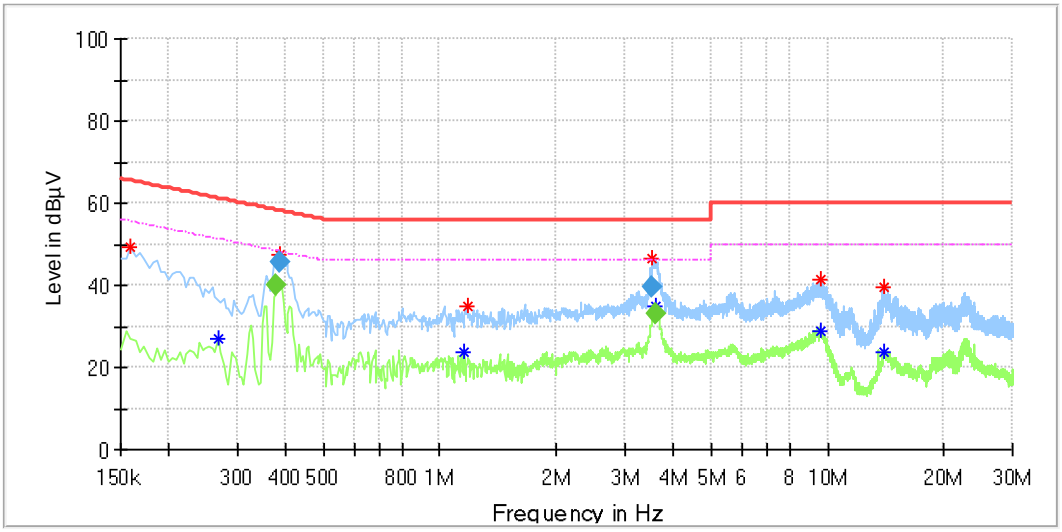
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Appendix A.10: Test Results of Conducted Emission on AC Mains

EUT Information

EUT Name:	POS Terminal
Order Number:	168531160 60
Model:	C20DS
Test Mode:	BT Link
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15C
Test By:/Review By:	Dawn Shen/ Shower Dai
Tem./Hum./Pressure:	24.0°C/50.4%/101kPa
Remark:	SR3



Critical_Freqs

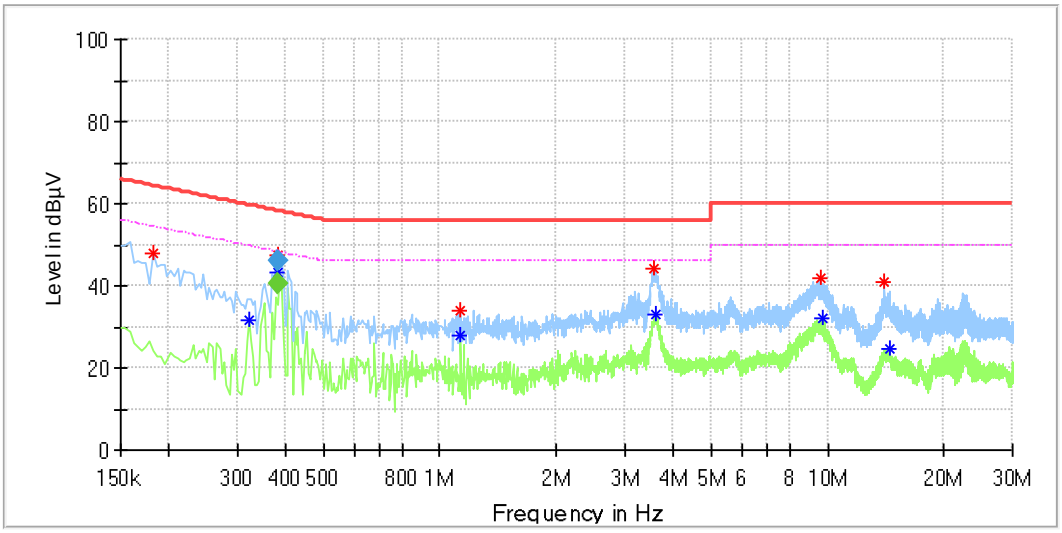
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.159000	49.43	---	65.52	16.08	L1	9.8
0.267000	---	27.16	51.21	24.05	L1	9.8
0.379500	---	40.44	48.19	7.75	L1	9.9
0.388000	47.36	---	58.10	10.73	L1	9.9
1.158000	---	23.63	46.00	22.37	L1	10.0
1.180500	34.83	---	56.00	21.17	L1	10.0
3.525000	46.56	---	56.00	9.44	L1	10.1
3.614500	---	35.03	46.00	10.97	L1	10.1
9.582000	41.57	---	60.00	18.43	L1	10.2
9.586500	---	28.95	50.00	21.05	L1	10.2
14.014500	---	23.85	50.00	26.15	L1	10.2
14.014500	39.70	---	60.00	20.30	L1	10.2

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.379500	---	39.97	48.29	8.32	1000.0	9.000	L1	9.9
0.388000	45.79	---	58.11	12.32	1000.0	9.000	L1	9.9
3.525000	39.54	---	56.00	16.46	1000.0	9.000	L1	10.1
3.614500	---	32.84	46.00	13.16	1000.0	9.000	L1	10.1

EUT Information

EUT Name:	POS Terminal
Order Number:	168531160 60
Model:	C20DS
Test Mode:	BT Link
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15C
Test By:/Review By:	Dawn Shen/ Shower Dai
Tem./Hum./Pressure:	24.0°C/50.4%/101kPa
Remark:	SR3



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.182000	47.71	---	64.39	16.69	N	9.7
0.322000	---	31.50	49.66	18.16	N	9.7
0.381500	47.54	---	58.15	10.61	N	9.7
0.381500	---	43.27	48.15	4.88	N	9.7
1.130000	---	27.98	46.00	18.02	N	9.8
1.130000	34.14	---	56.00	21.86	N	9.8
3.578000	44.14	---	56.00	11.86	N	9.8
3.598000	---	33.09	46.00	12.91	N	9.8
9.614000	41.81	---	60.00	18.19	N	9.9
9.658000	---	32.28	50.00	17.72	N	9.9
13.914000	41.09	---	60.00	18.91	N	9.9
14.394000	---	24.86	50.00	25.14	N	9.9

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.381500	---	40.67	48.25	7.58	1000.0	9.000	N	9.7
0.381500	46.12	---	58.25	12.13	1000.0	9.000	N	9.7