Spot Check Evaluation

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2527-2
FCC ID	:	IHDT56AV4
STANDARD	:	47 CFR Part 22(H), 24(E), 27(M), 27(Q), 90(S) 47 CFR Part 15 Subpart C §15.225 47 CFR Part 15 Subpart C §15.247 47 CFR Part 15 Subpart E §15.407
TEST DATE(S)	:	Apr. 05, 2025 ~ Apr. 27, 2025

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Sporton International Inc. (ShenZhen)

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR530724-01D	Rev. 01	Initial issue of report	Apr. 30, 2025

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2527-2
FCC ID	IHDT56AV4
IMEI Code	Conducted/DFS: 258674600017032/258674600017040 Radiation: 358674600016810/358674600016828 Conduction: 358674600016612/358674600016620
HW Version	DVT2
SW Version	V2VN35.50
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Modification of EUT

No modifications are made to the EUT during all test items.

1.5 Testing Site

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-KS DFS01-KS	CN1257	314309

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO02-SZ 03CH02-SZ 03CH03-SZ 03CH05-SZ	CN1256	421272

1.6 Test Software

Item	Site	Manufacturer	Name	Version
1.	TH01-KS	SPORTON	FCC 15C-15E Test Tools Ver10.0_210607	10.0
2.	DFS01-KS	Sporton	Test Tools	1.0
3.	03CH02-SZ	AUDIX	E3	6.2009-8-24a
4.	03CH03-SZ	AUDIX	E3	6.2009-8-24
5.	03CH05-SZ	AUDIX	E3	6.2009-8-24al
6.	CO02-SZ	AUDIX	E3	6.120613b

1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC KDB 484596 D01 Referencing Test Data v02r03
- 47 CFR Part 22(H), 24(E), 27(M), 27(Q), 90(S)
- 47 CFR Part 15 Subpart C §15.225
- 47 CFR Part 15 Subpart C §15.247
- 47 CFR Part 15 Subpart E §15.407
- ANSI C63.10-2013
- ANSI C63.26-2015

1.8 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-331L
AC Adapter 1(EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-332L
AC Adapter 1(UK)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-333L
AC Adapter 1(AU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-335L
AC Adapter 1(AR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-336L
AC Adapter 1(BR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-337L
AC Adapter 2(US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-331L
AC Adapter 2(EU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-332L
AC Adapter 2(UK)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-333L
AC Adapter 2(AR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-336L
AC Adapter 2(BR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-337L
Battery 1	**Brand Name**	Motorola(NVT)	**Model Name**	RA52
Battery 2	**Brand Name**	Motorola(SUNWODA)	**Model Name**	RA52
USB Cable 1	**Brand Name**	Motorola(Washin)	**Model Name**	HX-ZN-34
USB Cable 2	**Brand Name**	Motorola(Juwei)	**Model Name**	JWUB1928-ZN01H
Earphone	**Brand Name**	Motorola (Juwei)	**Model Name**	ZN80400118H001

2 Re-use of Measured Data

2.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2527-2, FCC ID: IHDT56AV4) is electrically identical to the reference device (Model: XT2527-1, FCC ID: IHDT56AV5) for the portions of the circuitry corresponding to the data being re-used, following the FCC KDB 484596 D01 Referencing Test Data v02r03.

ECR Data Referencing Inquiry has been approved by FCC, and the data referencing and spot check test plan includes RF/EMC, the details are presented in section 2.3 of this report, and for SAR Reference detail, please refer to FCC SAR report FA530724-01.

The criteria set in section 3 of KDB 484596 D01 v02r03 is followed to determine whether the data referencing is justified. For SAR, the higher between the referenced value and the spot check value is used to determine compliance in both standalone and simultaneous transimission conditions

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: IHDT56AV4 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56AV5 and FCC ID: IHDT56AV4 is as below:

- Remove WCDMA B4, LTE B4/12/13/17/25/66 and 5G NR n2/n66.
- Add LTE B20/32/71/38C/41C and 5G NR n8/n20/n71.
- B41/B41C/n77/n78 Enable PC2 by software.
- Add NSA mode for 5G NR n5/n77.

Other differences and all the details of similarity and difference can be found in the confidential documents (IHDT56AV4 Operational Description of Product Equality Declaration).

2.3 Reference detail Section:

Rule Part	Equipment Class	Frequency Band (MHz)	Reference FCC ID (Parent)	Reference on test	Reference Title	FCC ID Filling (Variant)	Test on the variant	Data Referencing (Y/N)
15C	DSS (BR/EDR)	2400~2483.5	IHDT56AV5	Full test	FR530724A	IHDT56AV4	Spot check	Y, All test items
	DTS (BLE)	2400~2483.5	IHDT56AV5	Full test	FR530724B	IHDT56AV4	Spot check	Y, All test items
	DTS (WLAN)	2400~2483.5	IHDT56AV5	Full test	FR530724C	IHDT56AV4	Spot check	Y, All test items
	DXX (NFC)	13.56	IHDT56AV5	Full test	FR530724D	IHDT56AV4	Spot check	Y, All test items
15E	U-NII	5180~5240	IHDT56AV5	Full test	FR530724E	IHDT56AV4	Spot check	Y, All test items
		5260~5320	IHDT56AV5	Full test	FR530724E	IHDT56AV4	Spot check	Y, All test items
		5500~5720	IHDT56AV5	Full test	FR530724E	IHDT56AV4	Spot check	Y, All test items
		5745~5825	IHDT56AV5	Full test	FR530724E	IHDT56AV4	Spot check	Y, All test items
		5260~5320 5500~5720	IHDT56AV5	Full test	FZ530724	IHDT56AV4	Spot check	Y, All test items
22, 24, 27, 90,	PCE (GSM)	GSM 850/1900	IHDT56AV5	Full test	FG530724A	IHDT56AV4	Spot check	Y, All test items
	PCE (WCDMA)	Band II, V	IHDT56AV5	Full test	FG530724A	IHDT56AV4	Spot check	Y, All test items
	PCE (LTE)	B5/26/7/7C/42	IHDT56AV5	Full test	FG530724B FG530724C FG530724E FG530724F	IHDT56AV4	Spot check	Y, All test items
	PCE (LTE)	B26 (90S)	IHDT56AV5	Full test	FG530724D	IHDT56AV4	Spot check	Y, All test items
	PCE (LTE)	B2/38/38C/41/41C/71	-	-	-	-	-	N

Y: Pointer to spot-check exhibit; N: Pointer to full test exhibit

Remark: All 5G NR spot check or full test bands are not included in this report and will be issued separately.

2.4 Spot Check Verification Data Section

All test items test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.
All test procedures follow the related section of parent report.

Spot-check measurements, while being always compliant with the applicable rule part(s) for the test under consideration, show a deviation d_{dB} from the reference data no larger than 3 dB:

$$d_{dB} = | V_{dB} – R_{dB} | \leq 3 \text{ dB} \quad (1)$$

V_{dB}, the variant spot-check level
R_{dB}, the corresponding measurement level for the reference model

An alternative to the limit of eq. (1) is available, and is based on considering how far the reference data R_{dB} is from the compliance threshold C_{dB} (also expressed in dB), for the particular test under consideration. In this case, if $M_{dB} =|C_{dB} – R_{dB}|$ is the margin in dB from the compliance limit, a spot check may be considered acceptable when the deviation ddB from the reference data satisfies the following condition:

$$d_{dB} = | V_{dB} – R_{dB} | \leq (3 + M_{dB} /20) \text{ dB} \text{ , for } 0 \leq M_{dB} \leq 60 \text{ dB}$$

$$d_{dB} = | V_{dB} – R_{dB} | = 6 \text{ dB} \text{ , for } M_{dB} > 60 \text{ dB} \quad (2)$$

where "| |" is the absolute value of the measured quantity.
When using the option in eq. (2), d_{dB} increases linearly from 3 dB to 6 dB.

Summary for spot check for each rule entry and technology is listed as below:

Mode	Test Item	IHDT56AV5 Parent Worst mode Test Result	IHDT56AV4 Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
BT 1Mbps (CH78)	Number of Channels	79	79	0	3
	Hopping Channel Separation	0.991	0.998	0.007	3
	Dwell Time of Each Channel	0.31	0.31	0	3
	20dB Bandwidth	0.86	0.86	0	3
	99% Bandwidth	0.758	0.758	0	3
	Conducted Band Edges	-46.95	-46.67	0.28	3
	Conducted Spurious Emission	-36.21	-36.45	0.24	3
BT 1Mbps (CH78)	Radiated Band Edges and Radiated Spurious Emission	46.35	46.95	0.6	3
BT	AC Conducted Emission	7.98	8.08	0.1	3
BLE 2Mbps (CH38)	6dB Bandwidth	1.18	1.17	0.01	3
	99% Bandwidth	2.054	2.054	0	3
	Power Spectral Density	-5	-5.08	0.08	3
	Conducted Band Edges	-46.83	-47.02	0.19	3
	Conducted Spurious Emission	-35.82	-35.51	0.31	3
BLE 2Mbps (CH39)	Radiated Band Edges and Spurious Emission	41.54	41.29	0.25	3
BLE	AC Conducted Emission	7.98	8.08	0.1	3
WIFI 2.4G	6dB Bandwidth	17.24	17.96	0.72	3

(802.11ax20 CH01)	99% Bandwidth	19.341	19.5	0.159	3
	Power Spectral Density	-7.83	-8.05	0.22	3
	Conducted Band Edges	-18.38	-18.82	0.44	3
	Conducted Spurious Emission	-36.09	-35.22	0.87	3
WIFI 2.4G (802.11g CH11)	Radiated Band Edges and Spurious Emission	50.75	49.21	1.54	3
WIFI 2.4G	AC Conducted Emission	7.98	8.08	0.1	3
FCC-WIFI 5G (802.11ax20 CH149)	26dB Bandwidth	29	28.06	0.94	3
FCC-WIFI 5G (802.11ax20 CH149)	99% Bandwidth	19.341	19.295	0.046	3
FCC-WIFI 5G (802.11ax20 CH149)	Power Spectral Density	3.98	3.93	0.05	3
FCC-WIFI 5G (802.11ax20 CH149)	Unwanted Emissions	17.52	18.14	0.62	3
WIFI 5G (802.11ax HE80 CH106)	DFS	0.91522	0.830828	0.084392	3
5G WIFI 11ax HE20_CH64	Radiated Band Edges and Spurious Emission	50.65	50.01	0.64	3
WIFI 5G	AC Conducted Emission	8.68	9.38	0.7	3
NFC	20dB Emission Bandwidth (MHz)	2.48	2.48	0	3
	99% Occupied Bandwidth (MHz)	2.10	2.11	0.01	3
	Frequency Stability	-0.5531	-0.5045	0.0486	3
	Field Strength of Fundamental (dBuV/m)	55.24	55.48	0.24	3
	Radiated Spurious Emissions (dBuV/m)	36.16	33.85	2.31	3
	AC Power Line Conducted Emissions(dBuV)	9.75	8.40	1.35	3
Part 22/24/27/90 (LTE Band 7C)	Equivalent Isotropic Radiated Power	20.47	20.15	0.32	3
	Peak-to-Average Ratio	6.41	6.22	0.19	3
	Occupied Bandwidth	28.77	28.89	0.12	3
	Conducted Band Edge	-26.22	-27.35	1.13	3
	Conducted Spurious Emission	-51.75	-53.16	1.41	3
	Frequency Stability	0.0012	0.0027	0.0015	3
Part 22/24/27/90 (GSM 850)	Radiated Spurious Emission	-34.48	-32.78	1.7	3

Test Item	Mode	IHDT56AV5 Parent Worst mode Test Result	IHDT56AV4 Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
Conducted Power (dBm)	BT BR/EDR	16.74	15.87	0.87	3
	BLE 1Mbps	11.92	11.67	0.25	3
	BLE 2Mbps	11.96	11.64	0.32	3
	11b, 2.4GHz	18.51	18.18	0.33	3
	11g, 2.4GHz	18.57	18.47	0.10	3
	11n HT20, 2.4GHz	18.59	18.25	0.34	3
	11n HT40, 2.4GHz	16.86	16.59	0.33	3
	11ax HE20, 2.4GHz	18.69	18.50	0.19	3
	11ax HE40, 2.4GHz	17.05	17.59	0.54	3
	11a, 5.2GHz	18.24	18.21	0.03	3
	11a, 5.3GHz	18.30	18.26	0.04	3
	11a, 5.5GHz	18.01	17.96	0.05	3
	11a, 5.8GHz	17.92	17.86	0.06	3
	11n HT20, 5.2GHz	18.07	17.92	0.15	3
	11n HT20, 5.3GHz	18.27	18.11	0.16	3
	11n HT20, 5.5GHz	18.08	17.97	0.11	3
	11n HT20, 5.8GHz	17.81	17.61	0.20	3
	11ac VHT20, 5.2GHz	18.12	18.04	0.08	3
	11ac VHT20, 5.3GHz	18.34	18.21	0.13	3
	11ac VHT20, 5.5GHz	18.12	18.03	0.09	3
	11ac VHT20, 5.8GHz	17.88	17.81	0.07	3
	11ax HE20, 5.2GHz	18.23	18.18	0.05	3
	11ax HE20, 5.3GHz	18.41	18.36	0.05	3
	11ax HE20, 5.5GHz	18.21	18.18	0.03	3
	11ax HE20, 5.8GHz	17.97	17.93	0.04	3
	11n HT40, 5.2GHz	17.29	17.21	0.08	3
	11n HT40, 5.3GHz	17.70	17.62	0.08	3
	11n HT40, 5.5GHz	17.19	17.07	0.12	3
	11n HT40, 5.8GHz	17.18	17.12	0.06	3
	11ac VHT40, 5.2GHz	17.36	17.35	0.01	3
	11ac VHT40, 5.3GHz	17.73	17.71	0.02	3
	11ac VHT40, 5.5GHz	17.25	17.21	0.04	3
	11ac VHT40, 5.8GHz	17.24	17.22	0.02	3
	11ax HE40, 5.2GHz	17.47	17.41	0.06	3
	11ax HE40, 5.3GHz	17.82	17.77	0.05	3
	11ax HE40, 5.5GHz	17.37	17.34	0.03	3
	11ax HE40, 5.8GHz	17.34	17.30	0.04	3
	11ac VHT80, 5.2GHz	16.33	16.26	0.07	3
	11ac VHT80, 5.3GHz	16.46	16.30	0.16	3
	11ac VHT80, 5.5GHz	16.27	16.23	0.04	3
	11ac VHT80, 5.8GHz	16.20	16.19	0.01	3
	11ax HE80, 5.2GHz	16.43	16.38	0.05	3
	11ax HE80, 5.3GHz	16.58	16.55	0.03	3
	11ax HE80, 5.5GHz	16.38	16.34	0.04	3
	11ax HE80, 5.8GHz	16.33	16.30	0.03	3
	GSM 850	31.76	31.65	0.11	3
	GSM 1900	28.52	28.24	0.28	3
	WCDMA 850	22.58	22.53	0.05	3
	WCDMA 1900	22.70	22.65	0.05	3
	LTE B5	22.59	22.49	0.1	3
	LTE B26	22.65	22.54	0.11	3

	LTE B26-90S	22.81	22.48	0.33	3
	LTE B7	22.84	22.72	0.12	3
	LTE B42	23.04	22.92	0.12	3
	LTE B7C	22.77	22.45	0.32	3

Conclusion:
All test items test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Based on the spot check test result, the test data from the original model is representative for the variant model. All spot check test data are shown within expected level compliant to limit line.

We are using power and ERP/EIRP measurements from the original parent model reports to list on the grant.

We confirm that the test data referencing policy of FCC KDB 484596 D01 Referencing Test Data v02r03 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.

3 List of Measuring Equipment

For BT/WIFI:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Apr. 23, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2025	Apr. 23, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2025	Apr. 23, 2025	Jan. 01, 2026	Conducted (TH01-KS)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 08, 2025	Apr. 16, 2025	Apr. 07, 2026	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 08, 2025	Apr. 16, 2025	Apr. 07, 2026	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Apr. 16, 2025	Dec. 27, 2025	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 20, 2023	Apr. 16, 2025	Aug. 19, 2025	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 08, 2025	Apr. 16, 2025	Apr. 07, 2026	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Apr. 16, 2025	Jul. 02, 2025	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 08, 2025	Apr. 16, 2025	Apr. 07, 2026	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2024	Apr. 16, 2025	Oct. 17, 2025	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Apr. 16, 2025	Oct. 13, 2025	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 27, 2023	Apr. 16, 2025	Dec. 26, 2024	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010002729	N/A	Oct. 18, 2024	Apr. 16, 2025	Oct. 17, 2025	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Apr. 16, 2025	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Apr. 16, 2025	NCR	Radiation (03CH03-SZ)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Dec. 25, 2024	Apr. 17, 2025	Dec. 24, 2025	Conduction (CO02-SZ)
Spectrum Analyzer	R&S	FSV7	101632	10Hz~7GHz	Jan. 03, 2025	Apr. 16, 2025	Jan. 02, 2026	Conducted (DFS01-KS)
Signal Generator	KEYSIGHT	N5182B	MY53050604	9KHz~6GHz	Apr. 17, 2024	Apr. 16, 2025	Apr. 16, 2025	Conducted (DFS01-KS)
Combiner	MTJ Cooperation	MTJ7112	N/A	0.4-6GHz	NCR	Apr. 16, 2025	NCR	Conducted (DFS01-KS)

NCR: No Calibration Required.

For NFC:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	R&S	ESR7	102261	9kHz~7GHz	Apr. 08, 2025	Apr. 23, 2025	Apr. 07, 2026	Radiation (03CH05-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY59071191	10Hz~44GHz	Apr. 08, 2025	Apr. 23, 2025	Apr. 07, 2026	Radiation (03CH05-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Apr. 23, 2025	Dec. 27, 2025	Radiation (03CH05-SZ)
Log-periodic Antenna	SCHWARZBECK	VULB 9168	01001	20MHz~1.5GHz	Jul. 08, 2024	Apr. 23, 2025	Jul. 07, 2025	Radiation (03CH05-SZ)
Amplifier	EM Electronics	EM330	060756	0.01Hz ~3000MHz	Apr. 08, 2025	Apr. 23, 2025	Apr. 07, 2026	Radiation (03CH05-SZ)
AC Power Source	APC	AFV-S-600	F119050013	N/A	Oct. 14, 2024	Apr. 23, 2025	Oct. 13, 2025	Radiation (03CH05-SZ)
Turn Table	EMEC	T-200-S-1	060925-T	0~360 degree	NCR	Apr. 23, 2025	NCR	Radiation (03CH05-SZ)
Antenna Mast	EMEC	MBS-400-1	060927	1 m~4 m	NCR	Apr. 23, 2025	NCR	Radiation (03CH05-SZ)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Apr. 23, 2025	Oct. 09, 2025	Conducted (TH01-KS)
DC Power Supply	GW INSTEK	PLR36-10	GET220683	Max 20A, 36V	Jan. 02, 2025	Apr. 23, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Apr. 23, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Dec.25, 2024	Apr. 17, 2025	Dec. 24, 2025	Conduction (CO02-SZ)

NCR: No Calibration Required.

For WWAN Bands:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Apr. 22, 2025~ Apr. 23, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Apr. 22, 2025~ Apr. 23, 2025	NCR	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Apr. 22, 2025~ Apr. 23, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	Apr. 16, 2025~ Apr. 27, 2025	Jul. 02, 2025	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Apr. 16, 2025~ Apr. 27, 2025	Dec. 27, 2025	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Apr. 16, 2025~ Apr. 27, 2025	Oct. 23, 2025	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Apr. 16, 2025~ Apr. 27, 2025	Jul. 04, 2025	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Apr. 16, 2025~ Apr. 27, 2025	Jul. 03, 2025	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 08, 2025	Apr. 16, 2025~ Apr. 27, 2025	Apr. 07, 2026	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2024	Apr. 16, 2025~ Apr. 27, 2025	Oct. 17, 2025	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 14, 2024	Apr. 16, 2025~ Apr. 27, 2025	Oct. 13, 2025	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010003043	N/A	Oct. 18, 2024	Apr. 16, 2025~ Apr. 27, 2025	Oct. 17, 2025	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Apr. 16, 2025~ Apr. 27, 2025	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Apr. 16, 2025~ Apr. 27, 2025	NCR	Radiation (03CH02-SZ)

NCR: No Calibration Required.

4 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement (BT/WIFI2.4G/5G)

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Conducted Power Spectral Density	±0.90 dB
Frequency	±0.04 Hz

Uncertainty of Conducted Measurement (DFS)

Conducted Generated signal Levels	±0.56 dB
Conducted Time	0.38%

Uncertainty of Conducted Measurement (NFC)

Test Item	Uncertainty
Occupied Channel Bandwidth	±0.1%
Frequency	±0.04 Hz

Uncertainty of Conducted Measurement (WWAN)

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.90 dB
Frequency Stability	±0.04 ppm

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.5 dB

03CH03-SZ(BT/WIF):

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.00 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.90 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.00 dB

03CH05-SZ(NFC):

Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.50 dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.20 dB

03CH02-SZ(WWAN):

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.47 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.31 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.72 dB

-THE END-

Appendix A. Radiated Spurious Emission

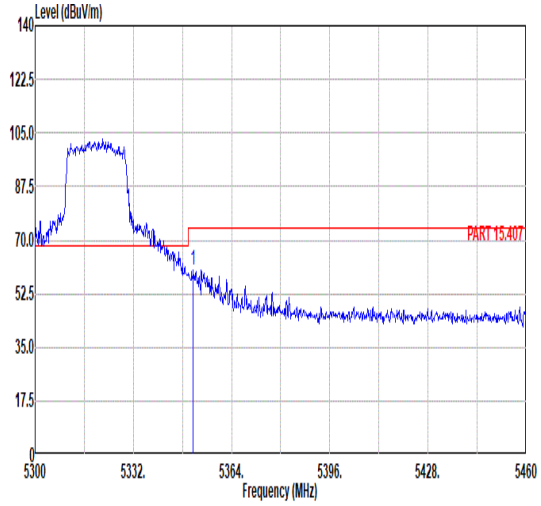
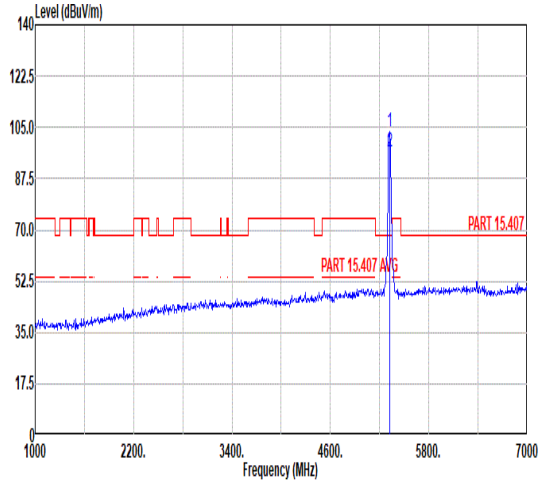
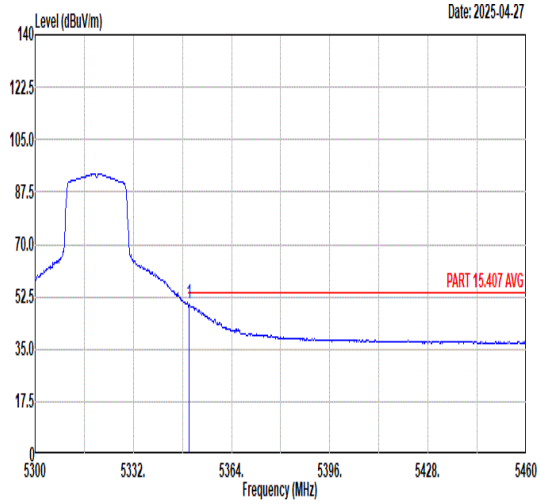
Test Engineer :	Shunping You	Relative Humidity :	50%
		Temperature :	20-24℃

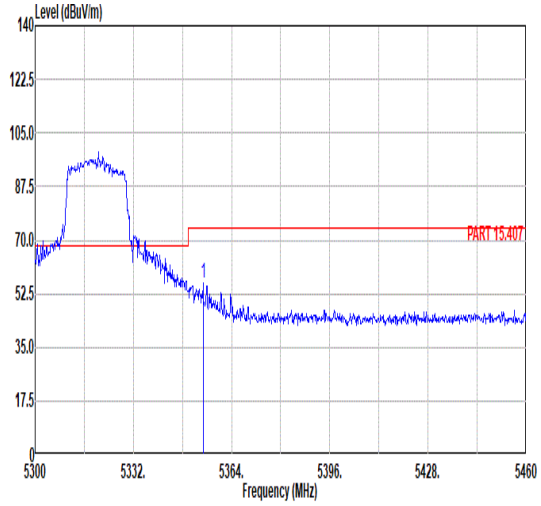
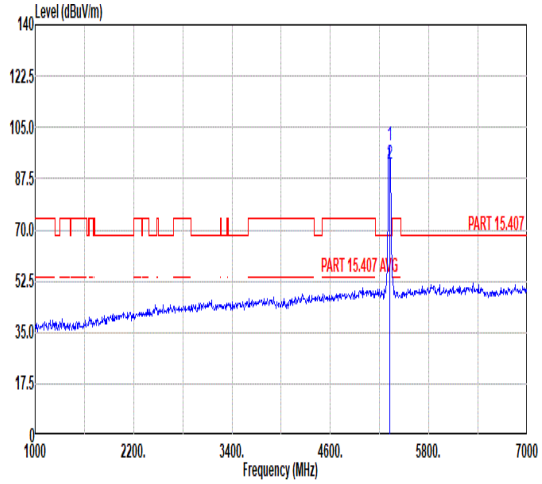
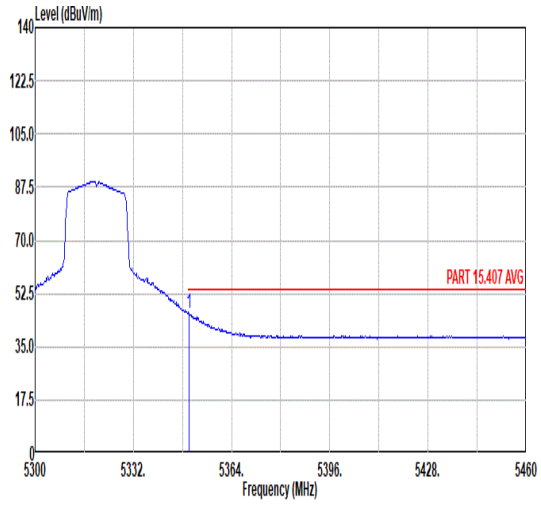
Radiated Spurious Emission Test Modes

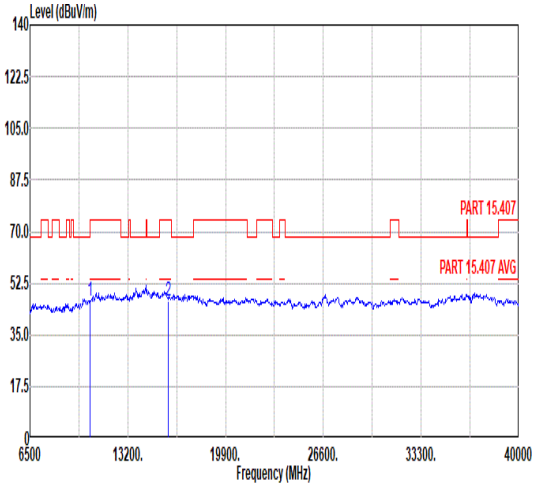
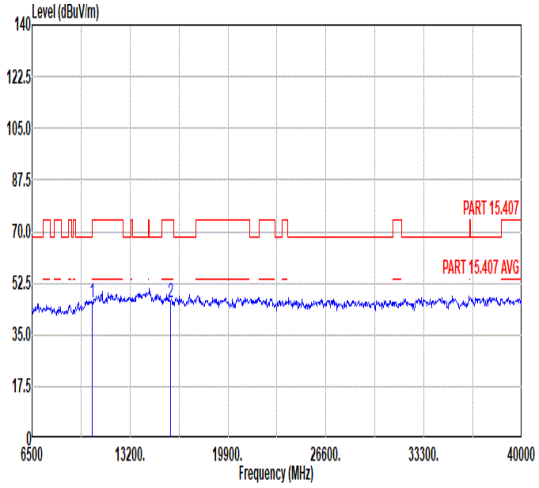
Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	CO-TX	5.25-5.35	5	802.11ax HE20	64	5320	MCS0	Full	-
		-	-	BT on	-	-	-	-	-
		-	-	NFC on	-	-	-	-	-
		-	-	LTE Band 71	LINK	-	-	-	-
Mode 2	CO-TX	5.25-5.35	5	802.11ax HE20	64	5320	MCS0	Full	-
		-	-	BT on	-	-	-	-	-
		-	-	NFC on	-	-	-	-	-
		-	-	LTE Band 41	LINK	-	-	-	-
Mode 3	CO-TX			LF					

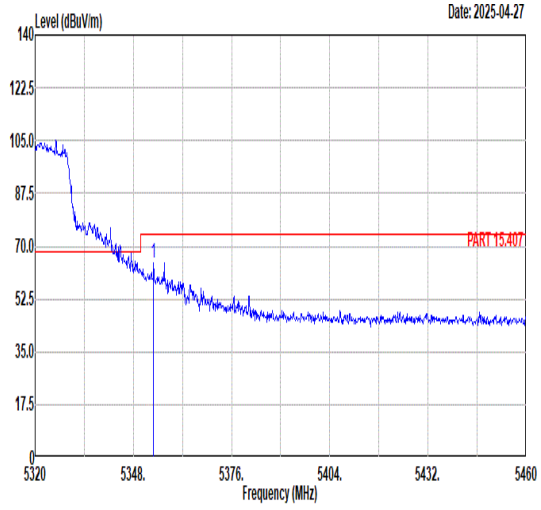
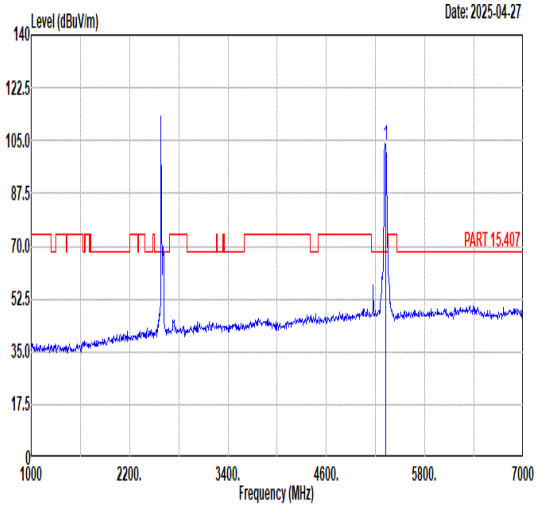
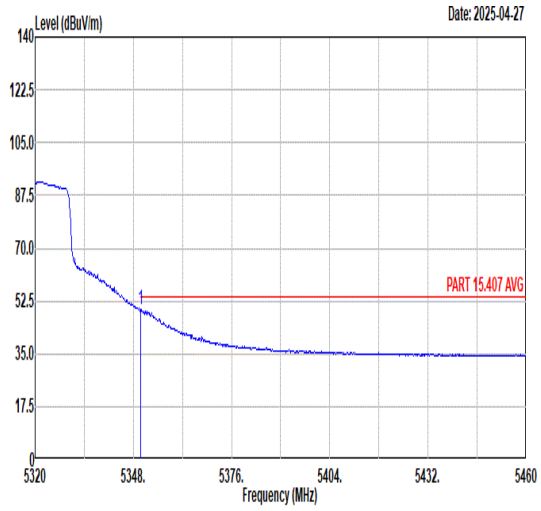
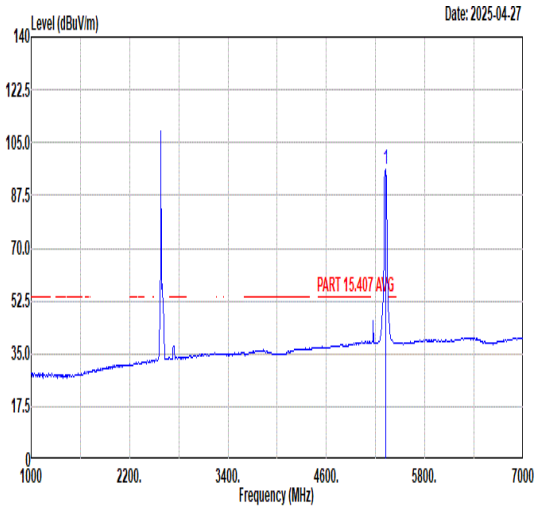
Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
1	802.11ax HE20	64	5350.24	49.99	54.00	-4.01	H	Average	Pass	Band Edge
	802.11ax HE20	64	15960.00	46.33	74.00	-27.67	H	Peak	Pass	Harmonic
2	802.11ax HE20	64	5350.10	49.71	54.00	-4.29	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	64	10640.00	47.57	74.00	-26.43	H	Peak	Pass	Harmonic
3	802.11ax HE20_LF	64	34.85	26.73	40.00	-13.27	V	Peak	Pass	LF

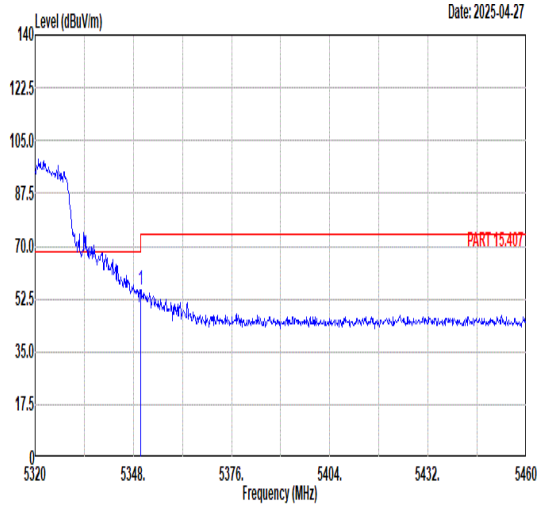
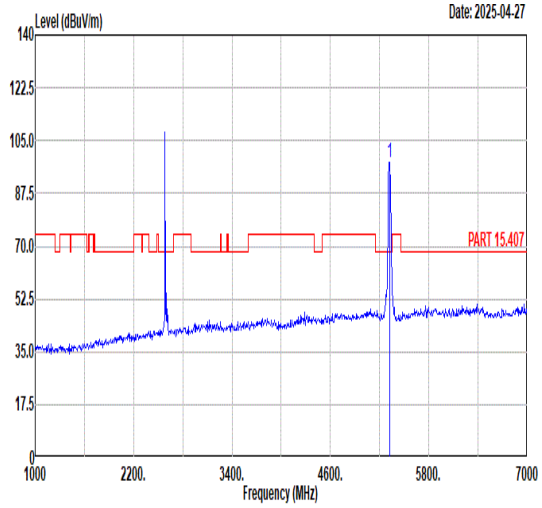
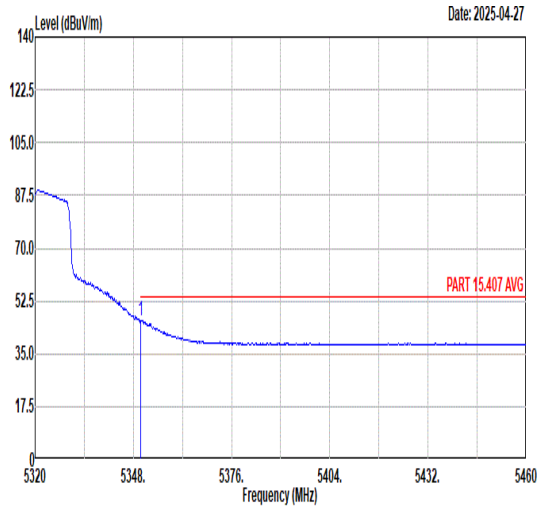
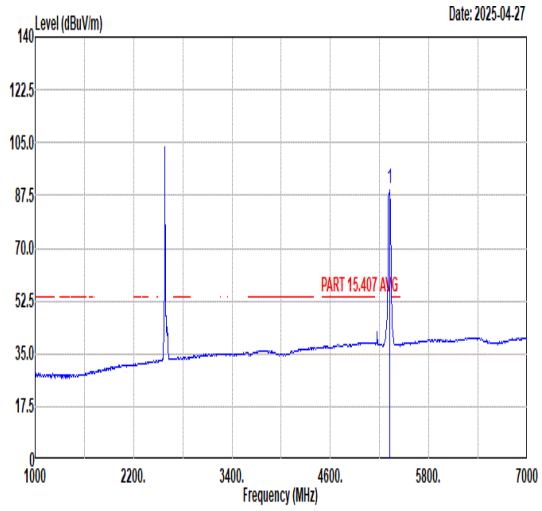
Mode	1	
	Band Edge	
	LTE Band 71 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5351.52 60.07 74.00 -13.93 50.29 34.11 8.33 32.66 161 40 Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 103.66 ------ ------ 93.99 34.09 8.25 32.67 161 40 Peak 2 5320.00 96.65 ------ ------ 86.98 34.09 8.25 32.67 161 40 Average
Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5350.24 49.99 54.00 -4.01 40.21 34.11 8.33 32.66 161 40 Average	Blank

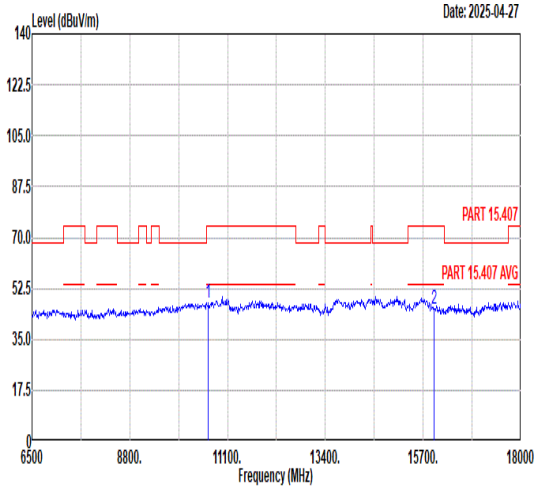
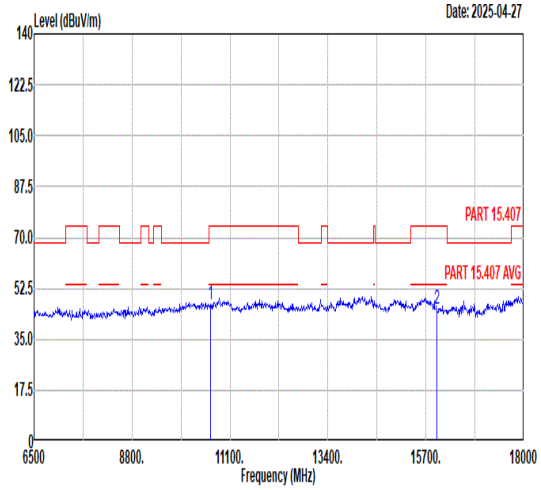
Mode	1	
	Band Edge	
	LTE Band 71 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5354.72 56.23 74.00 -17.77 46.44 34.11 8.34 32.66 115 266 Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 98.84 ------ ------ 89.17 34.09 8.25 32.67 115 266 Peak 2 5320.00 92.32 ------ ------ 82.65 34.09 8.25 32.67 115 266 Average
Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5350.08 45.73 54.00 -8.27 35.95 34.11 8.33 32.66 115 266 Average	Blank

Mode	1	
	Harmonic	
	LTE Band 71 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 10640.00 46.26 74.00 -27.74 56.23 37.78 10.94 58.69 -- -- Peak 2 15960.00 46.33 74.00 -27.67 53.41 39.59 12.70 59.37 -- -- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 10640.00 46.15 74.00 -27.85 56.12 37.78 10.94 58.69 -- -- Peak 2 15960.00 46.03 74.00 -27.97 53.11 39.59 12.70 59.37 -- -- Peak

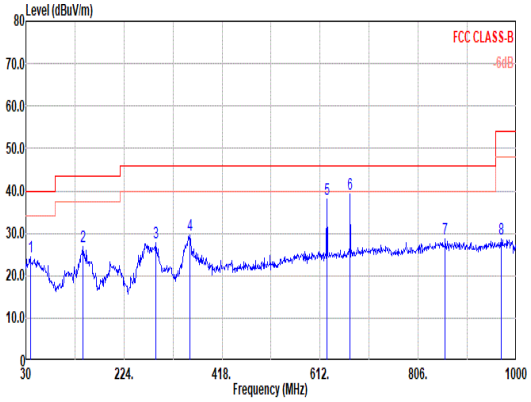
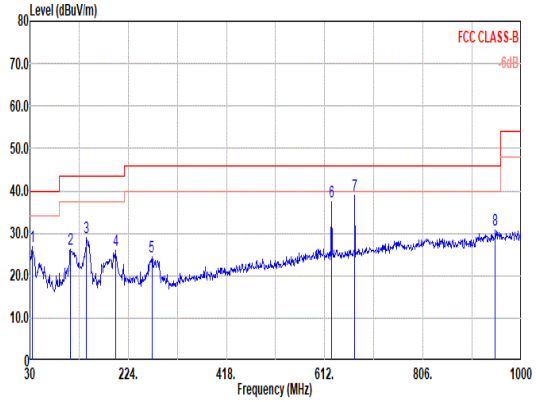
Mode	2	
	Band Edge	
	LTE Band 41 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5353.74 64.56 74.00 -9.44 54.77 34.11 8.34 32.66 106 58 PEAK	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 103.80 ------ ------ 101.53 30.64 5.06 33.43 106 58 PEAK
Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5350.10 49.71 54.00 -4.29 39.93 34.11 8.33 32.66 106 58 AVERAGE	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 95.90 ------ ------ 93.63 30.64 5.06 33.43 106 58 AVERAGE

Remark: All signals exceeding the limit are fundamental frequency signals and can be ignored.

Mode	2	
	Band Edge	
	LTE Band 41 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5350.10 55.49 74.00 -18.51 45.71 34.11 8.33 32.66 103 257 PEAK	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 97.58 ------ ------ 95.31 30.64 5.06 33.43 103 257 PEAK
Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5350.10 46.21 54.00 -7.79 36.43 34.11 8.33 32.66 103 257 AVERAGE	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 89.80 ------ ------ 87.53 30.64 5.06 33.43 103 257 AVERAGE

Mode	2	
	Harmonic	
	LTE Band 41 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 10640.00 47.57 74.00 -26.43 57.54 37.78 10.94 58.69 -- -- Peak 2 15960.00 45.19 74.00 -28.81 52.27 39.59 12.70 59.37 -- -- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 10640.00 46.77 74.00 -27.23 56.74 37.78 10.94 58.69 -- -- Peak 2 15960.00 45.21 74.00 -28.79 52.29 39.59 12.70 59.37 -- -- Peak

Mode	3
	LF
	LTE Band 71 + 802.11ax HE20 + BT on + NFC on.
ANT	5

Pol.	Horizontal	Vertical
Peak Avg	 	

Horizontal:

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	38.73	24.31	40.00	-15.69	39.43	19.16	0.62	34.90	--	--	Peak
2	142.52	26.81	43.50	-16.69	41.93	18.35	1.25	34.72	--	--	Peak
3	287.05	27.91	46.00	-18.09	42.06	18.72	1.76	34.63	--	--	Peak
4	353.98	29.69	46.00	-16.31	42.02	20.31	1.95	34.59	--	--	Peak
5	625.50	38.03			43.75	26.17	2.66	34.55	--	--	Peak
6	671.50	39.23			44.32	26.62	2.75	34.46	--	--	Peak
7	859.35	28.78	46.00	-17.22	31.20	28.77	3.11	34.30	--	--	Peak
8	970.90	28.79	54.00	-25.21	29.87	29.88	3.30	34.26	--	--	Peak

Vertical:

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	34.85	26.73	40.00	-13.27	42.37	18.68	0.58	34.90	--	--	Peak
2	109.54	26.35	43.50	-17.15	44.34	15.68	1.11	34.78	--	--	Peak
3	141.55	29.03	43.50	-14.47	44.23	18.27	1.25	34.72	--	--	Peak
4	198.78	25.84	43.50	-17.66	43.01	16.05	1.48	34.70	--	--	Peak
5	270.56	24.31	46.00	-21.69	39.05	18.21	1.71	34.66	--	--	Peak
6	625.50	37.44			43.16	26.17	2.66	34.55	--	--	Peak
7	671.50	38.82			43.91	26.62	2.75	34.46	--	--	Peak
8	948.59	30.69	46.00	-15.31	31.99	29.74	3.26	34.30	--	--	Peak

Remark: 625.5MHz & 671.5MHz are WWAN fundamental frequency signals and can be ignored

Appendix C. Reference Report

FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2527-1
FCC ID	:	IHDT56AV5
STANDARD	:	FCC Part 15 Subpart C §15.225
CLASSIFICATION	:	(DXX) Low Power Communication Device Transmitter
TEST DATE(S)	:	Mar. 18, 2025 ~ Apr. 17, 2025

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Sporton International Inc. (Shenzhen)

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR530724D	Rev. 01	Initial issue of report	Apr. 21, 2025

SUMMARY OF THE TEST RESULT

Report Section	FCC Rule	Description of Test	Result	Remark
3.1	15.207	AC Power Line Conducted Emissions	Complies	Under limit 9.75 dB at 0.51MHz
3.2	15.215(c)	20dB Spectrum Bandwidth	Complies	-
	-	99% OBW Spectrum Bandwidth	Complies	-
3.3	15.225(e)	Frequency Stability	Complies	-
3.4	15.225(a)(b)(c)	Field Strength of Fundamental Emissions	Complies	Max level 15.24 dBμV/m at 13.56 MHz @30m
3.5	15.225(d) & 15.209	Radiated Spurious Emissions	Complies	Under limit 3.84 dB at 40.67MHz
3.6	15.203	Antenna Requirements	Complies	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1. General Description

1.1 Applicant

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2527-1
FCC ID	IHDT56AV5
IMEI/SN Code	Conducted: NNOR210311 Conduction: 358887330039734/358887330039742 Radiation: 358887330039734/358887330039742
HW Version	DVT2
SW Version	V2VN35.50
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	13.553 ~ 13.567MHz
Channel Number	1
20dBW	2.475 KHz
99%OBW	2.98 KHz
Antenna Type	Coil Antenna
Type of Modulation	ASK

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-KS	CN1257	314309
Test Engineer	Smile Wang		
Temperature	22~24℃		
Relative Humidity	53~55%		

Sporton International Inc. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)			
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985			
Test Site No.	**Sporton Site No.**		**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO02-SZ	03CH05-SZ	CN1256	421272
Test Engineer	XuRuibin	ZhanSheng Liu		
Temperature	22~24℃	23~25℃		
Relative Humidity	44~50%	48~52%		

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH05-SZ	AUDIX	E3	6.2009-8-24
2.	CO02-SZ	AUDIX	E3	6.120613b

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 15 Subpart C §15.225
- ANSI C63.10-2013

1.9 Specification of Accessory

Accessories Information				
AC Adapter 1(US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-331L
AC Adapter 1(EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-332L
AC Adapter 1(UK)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-333L
AC Adapter 1(AU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-335L
AC Adapter 1(AR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-336L
AC Adapter 1(BR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-337L
AC Adapter 2(US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-331L
AC Adapter 2(EU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-332L
AC Adapter 2(UK)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-333L
AC Adapter 2(AR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-336L
AC Adapter 2(BR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-337L
Battery 1	**Brand Name**	Motorola(NVT)	**Model Name**	RA52
Battery 2	**Brand Name**	Motorola(SUNWODA)	**Model Name**	RA52
USB Cable 1	**Brand Name**	Motorola(Washin)	**Model Name**	HX-ZN-34
USB Cable 2	**Brand Name**	Motorola(Juwei)	**Model Name**	JWUB1928-ZN01H
Wireless Earphones	**Brand Name**	Motorola	**Model Name**	XT2443-1

2. Test Configuration of Equipment Under Test

2.1 Descriptions of Test Mode

Investigation has been done on all the possible configurations.

The following table is a list of the test modes shown in this test report.

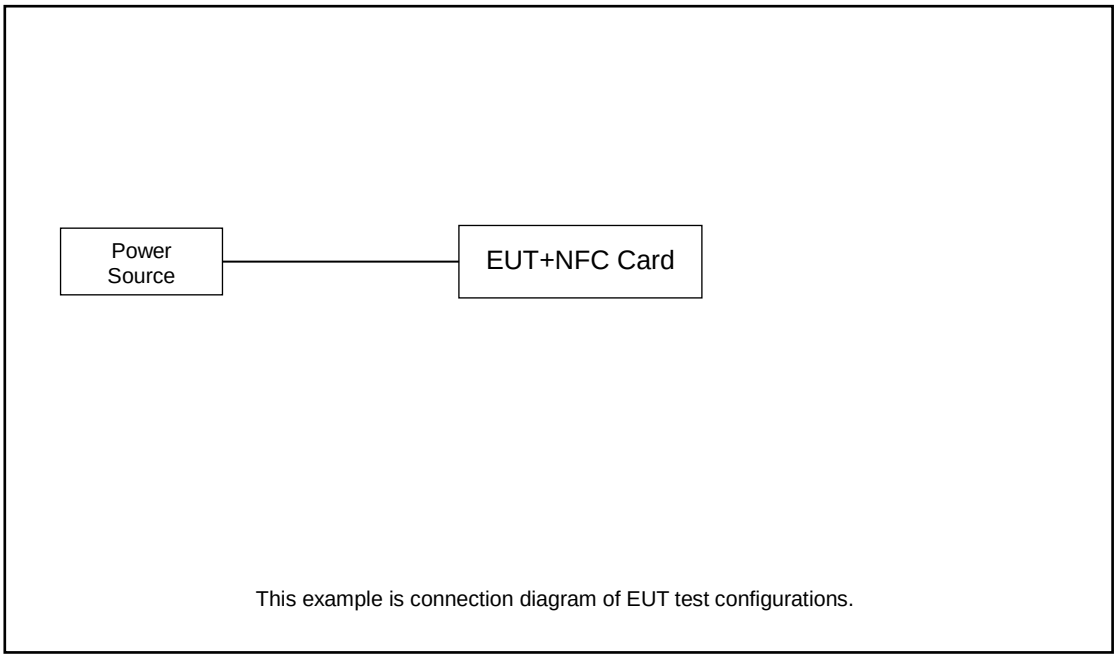
Test Items	
AC Power Line Conducted Emissions	Field Strength of Fundamental Emissions
20dB Spectrum Bandwidth	Frequency Stability
Radiated Emissions 9kHz~30MHz	Radiated Emissions 30MHz~1GHz

The EUT pre-scanned in four NFC type, A, B, F, V. The worst type (type F) was recorded in this report. Pre-scanned tests, X, Y, Z in three orthogonal panels to determine the final configuration (Z plane as worst plane) from all possible combinations.

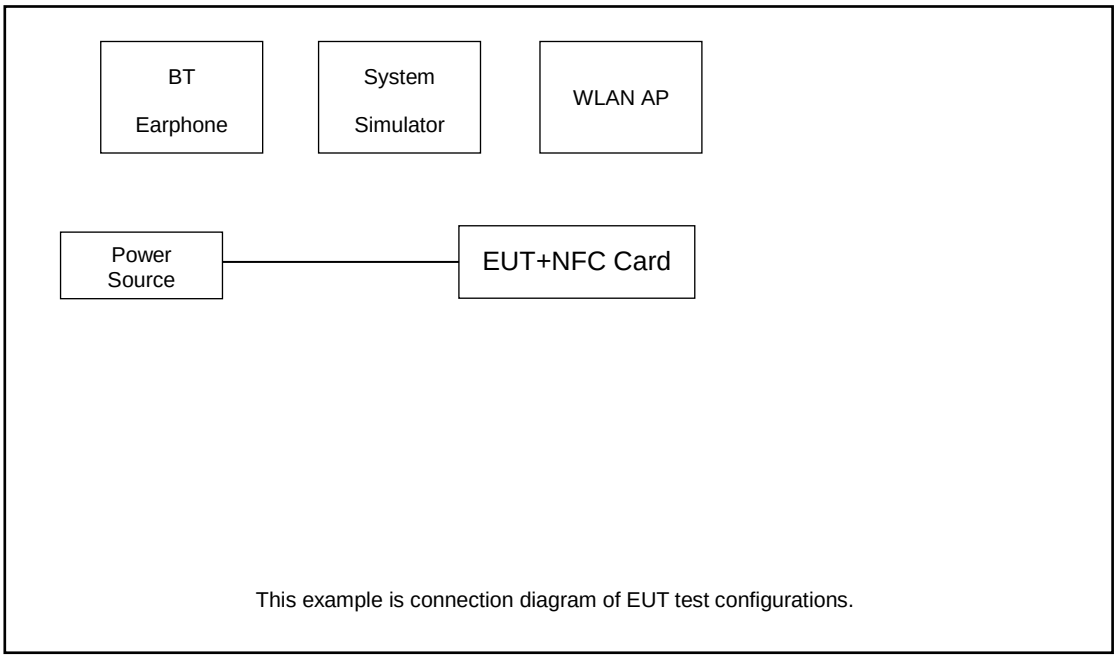
Test Cases	
AC Conducted Emission	Mode 1: GSM 850 Idle + Bluetooth Link with Wireless Earphones + WLAN Link (2.4G) + NFC Tx + USB Cable2 (Charging from Adapter2)
Remark: 1. For Radiated Test Cases, The tests were performance with Adapter 2 and USB Cable 2. 2. Accessories from 15B worse mode.	

2.2 Connection Diagram of Test System

<Radiated Emission >



< AC Conducted Emission >



2.3 Table for Supporting Units

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	WLAN AP	Dlink	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
3.	NFC Card	N/A	N/A	N/A	N/A	N/A

2.4 EUT Operation Test Setup

The EUT was programmed to be in continuously transmitting mode.

The ancillary equipment, NFC card, is used to make the EUT (NFC) continuously transmit at 13.56MHz and is placed around 0 cm gap to the EUT.

3. Test Results

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

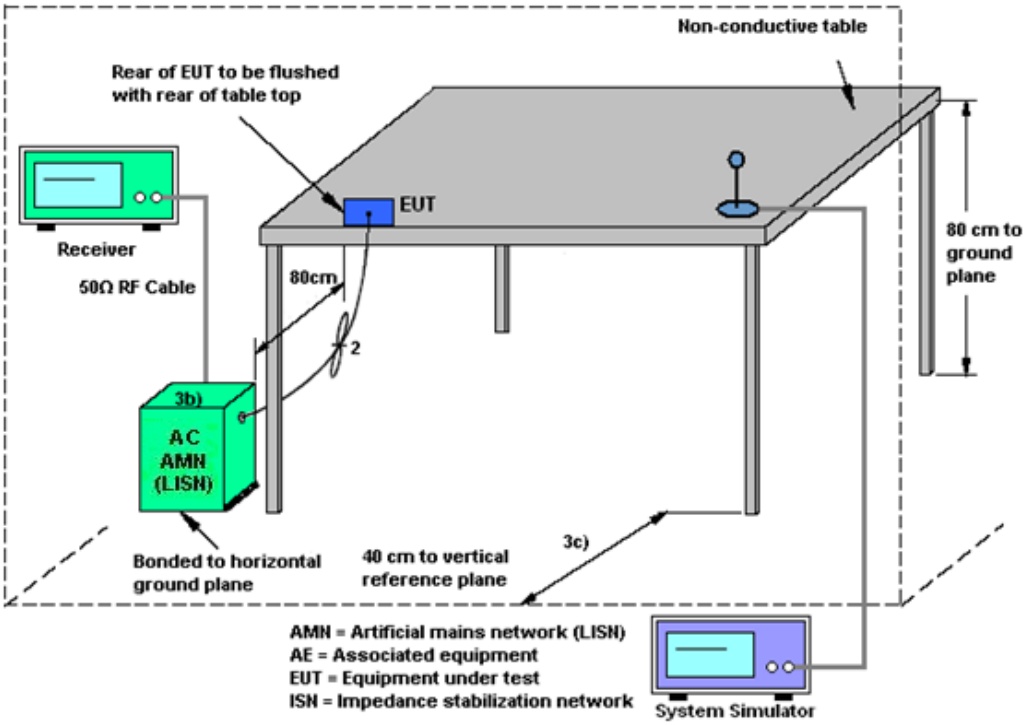
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.1.4 Test setup



3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

3.2 20dB and 99% OBW Spectrum Bandwidth Measurement

3.2.1 Limit

Intentional radiators must be designed to ensure that the 20dB and 99% emission bandwidth in the specific band 13.553~13.567MHz.

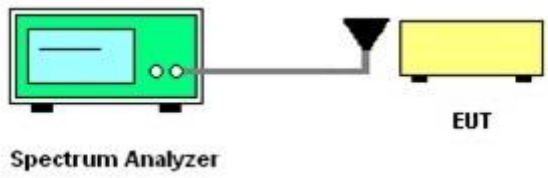
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used.
3. Measured the spectrum width with power higher than 20dB below carrier.
4. Measured the 99% OBW.

3.2.4 Test Setup



3.2.5 Test Result of Conducted Test Items

Please refer to Appendix B.

3.3 Frequency Stability Measurement

3.3.1 Limit

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

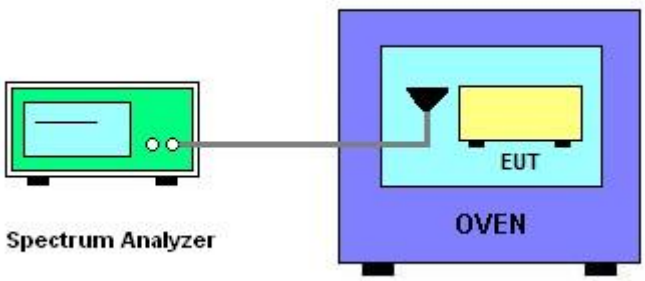
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The spectrum analyzer connected via a receive antenna placed near the EUT.
2. EUT have transmitted signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire emissions bandwidth.
4. Set RBW = 1 kHz, VBW = 3 kHz with peak detector and maxhold settings.
5. The fc is declaring of channel frequency. Then the frequency error formula is $(fc-f)/fc \times 10^6$ ppm and the limit is less than ±100ppm.
6. Extreme temperature rule is -20°C~50°C.

3.3.4 Test Setup



3.3.5 Test Result of Conducted Test Items

Please refer to Appendix B.

3.4 Field Strength of Fundamental Emissions and Mask Measurement

3.4.1 Limit

Rules and specifications	FCC CFR 47 Part 15 section 15.225	
Description	Compliance with the spectrum mask is tested with RBW set to 9kHz.	
Freq. of Emission (MHz)	Field Strength (μV/m) at 30m	Field Strength (dBμV/m) at 30m
1.705~13.110	30	29.5
13.110~13.410	106	40.5
13.410~13.553	334	50.5
13.553~13.567	15848	84.0
13.567~13.710	334	50.5
13.710~14.010	106	40.5
14.010~30.000	30	29.5

3.4.2 Measuring Instruments

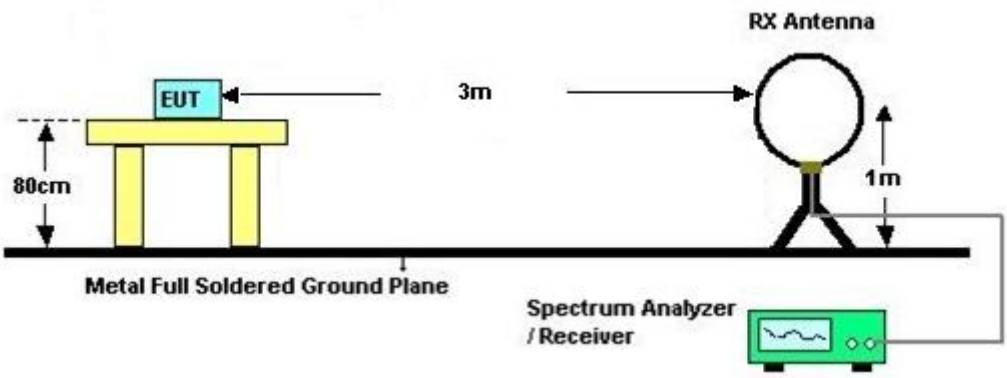
See list of measuring instruments of this test report.

3.4.3 Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the receiving antenna was fixed at one meter above ground to find the maximum emissions field strength.
4. For Fundamental emissions, use the receiver to measure QP reading.
5. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
6. Compliance with the spectrum mask is tested with RBW set to 9kHz.
   Note: Emission level (dBμV/m) = 20 log Emission level (μV/m).
7. The field strength is tested at 3m distance then convert to 30m by adding distance factor 40*log(d1/d2).

3.4.4 Test Setup

For radiated emissions below 30MHz



3.4.5 Test Result of Field Strength of Fundamental Emissions and Mask

Please refer to Appendix C.

3.5 Radiated Emissions Measurement

3.5.1 Limit

The field strength of any emissions which appear outside of 13.110 ~14.010MHz band shall not exceed the general radiated emissions limits.

<FCC Limit>

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

3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Measuring Instrument Setting

The following table is the setting of receiver.

Receiver Parameter	Setting
Attenuation	Auto
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

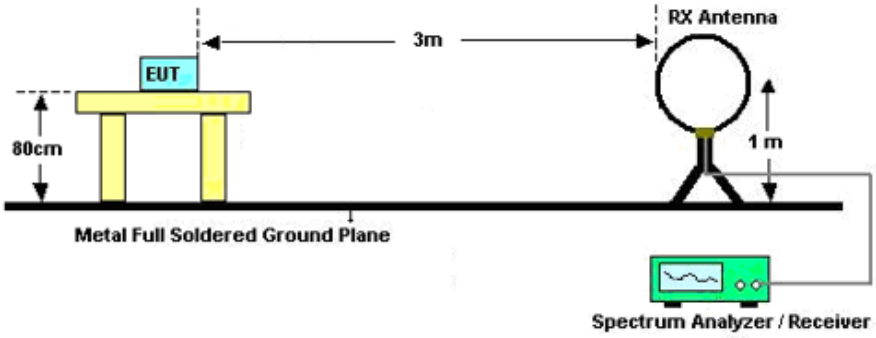
Note: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

3.5.4 Test Procedures

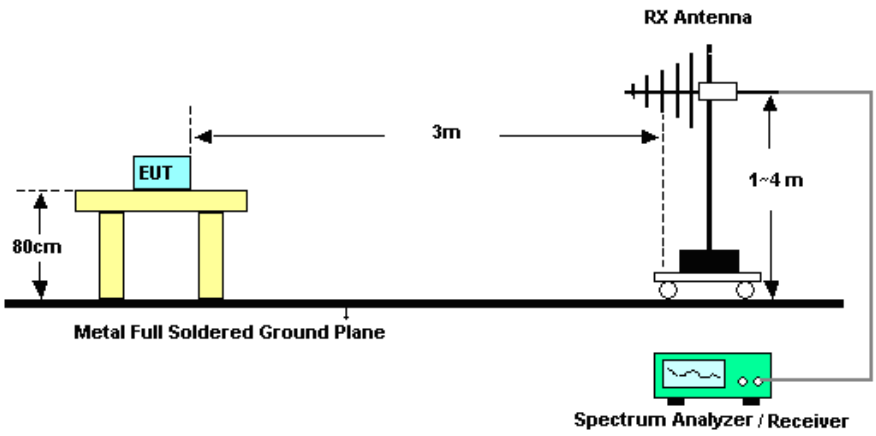
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. Antenna Requirements

3.5.5 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



3.5.6 Test Result of Radiated Emissions Measurement

Please refer to Appendix C.

Note:

1. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.
2. Tested for radiated below 30 MHz using a loop antenna in accordance with C63.10, the antenna was positioned in three antenna orientations: parallel, perpendicular, and ground-parallel. Pre-scanned the three antenna orientations, the worst case is parallel & perpendicular polarization, and test data of two mode was reported. (Parallel: The loop antenna is placed vertical axis and aligned along the site axis; Perpendicular: The loop antenna is placed vertical axis and orthogonal to the axis; ground-parallel: The loop antenna is placed horizontal axis and parallel with the ground).

3.6 Antenna Requirements

3.6.1 Standard Applicable

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	R&S	ESR7	102261	9kHz~7GHz	Apr. 09, 2024	Mar. 18, 2025	Apr. 08, 2025	Radiation (03CH05-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY59071191	10Hz~44GHz	Apr. 09, 2024	Mar. 18, 2025	Apr. 08, 2025	Radiation (03CH05-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Mar. 18, 2025	Dec. 27, 2025	Radiation (03CH05-SZ)
Log-periodic Antenna	SCHWARZBECK	VULB 9168	01001	20MHz~1.5GHz	Jul. 08, 2024	Mar. 18, 2025	Jul. 07, 2025	Radiation (03CH05-SZ)
Amplifier	EM Electronics	EM330	060756	0.01Hz ~3000MHz	Apr. 09, 2024	Mar. 18, 2025	Apr. 08, 2025	Radiation (03CH05-SZ)
AC Power Source	APC	AFV-S-600	F119050013	N/A	Oct. 14, 2024	Mar. 18, 2025	Oct. 13, 2025	Radiation (03CH05-SZ)
Turn Table	EMEC	T-200-S-1	060925-T	0~360 degree	NCR	Mar. 18, 2025	NCR	Radiation (03CH05-SZ)
Antenna Mast	EMEC	MBS-400-1	060927	1 m~4 m	NCR	Mar. 18, 2025	NCR	Radiation (03CH05-SZ)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Apr. 01, 2025	Oct. 09, 2025	Conducted (TH01-KS)
DC Power Supply	GW INSTEK	PLR36-10	GET220683	Max 20A, 36V	Jan. 02, 2025	Apr. 01, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Apr. 01, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Dec.25, 2024	Apr. 17, 2025	Dec. 24, 2025	Conduction (CO02-SZ)

NCR: No Calibration Required

5. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Occupied Channel Bandwidth	±0.1%
Frequency	±0.04 Hz

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.50 dB

Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.50 dB

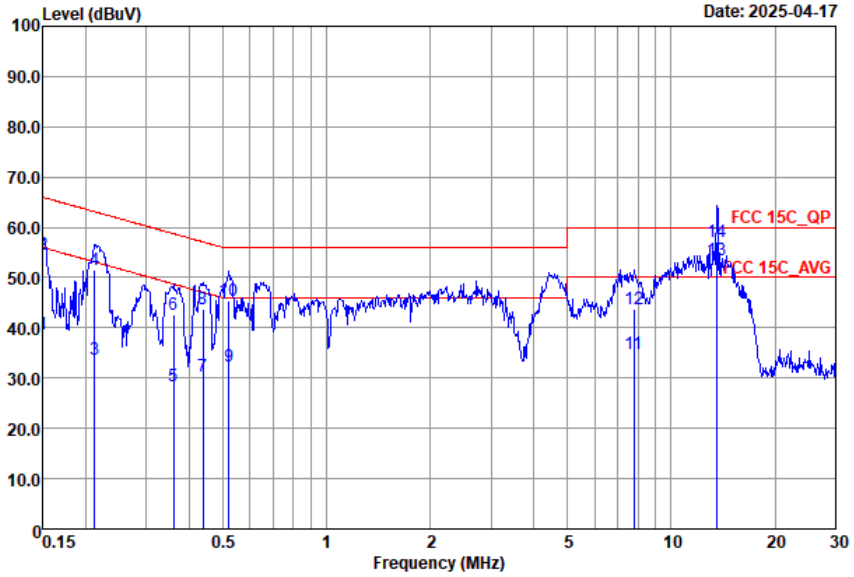
Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.20 dB

---------- THE END ----------

Appendix A. Test Results of Conducted Emission Test

Test Engineer :	XuRuibin	**Temperature :**	22~24℃
		Relative Humidity :	44~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



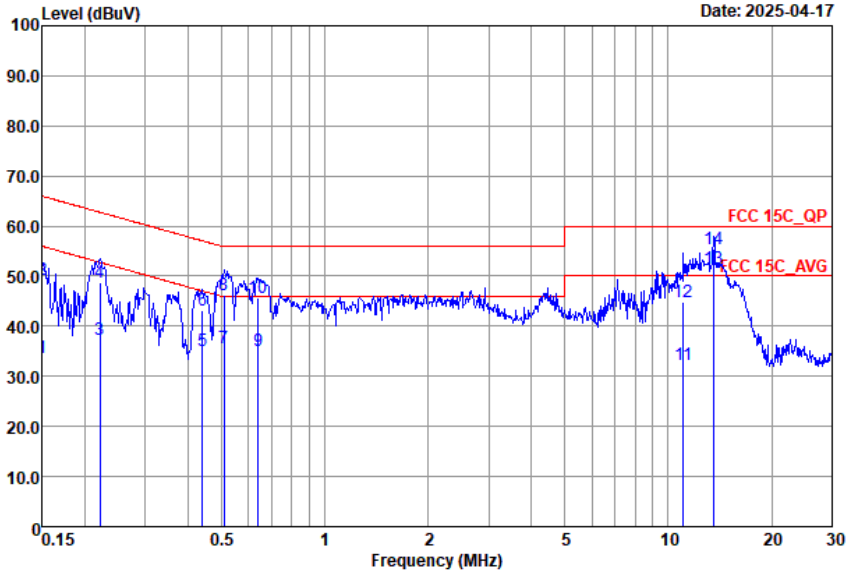
Site : CO02-SZ
Condition : FCC 15C_QP LISN_2025-L LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	38.85	-17.15	56.00	19.00	9.66	10.19	Average
2	0.15	54.65	-11.35	66.00	34.80	9.66	10.19	QP
3	0.21	33.70	-19.40	53.10	13.81	9.71	10.18	Average
4	0.21	51.50	-11.60	63.10	31.61	9.71	10.18	QP
5	0.36	28.44	-20.30	48.74	8.49	9.73	10.22	Average
6	0.36	42.74	-16.00	58.74	22.79	9.73	10.22	QP
7	0.44	30.23	-16.88	47.11	10.30	9.70	10.23	Average
8	0.44	43.63	-13.48	57.11	23.70	9.70	10.23	QP
9	0.52	32.32	-13.68	46.00	12.40	9.68	10.24	Average
10	0.52	45.32	-10.68	56.00	25.40	9.68	10.24	QP
11	7.81	34.85	-15.15	50.00	15.01	9.63	10.21	Average
12	7.81	43.65	-16.35	60.00	23.81	9.63	10.21	QP
13 *	13.56	53.60			33.70	9.65	10.25	Average
14 *	13.56	57.20			37.30	9.65	10.25	QP

(1) with antenna

Remark: 13.560MHz is the NFC RF fundamental signal.

Test Engineer :	XuRuibin	**Temperature :**	22~24℃
		Relative Humidity :	44~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



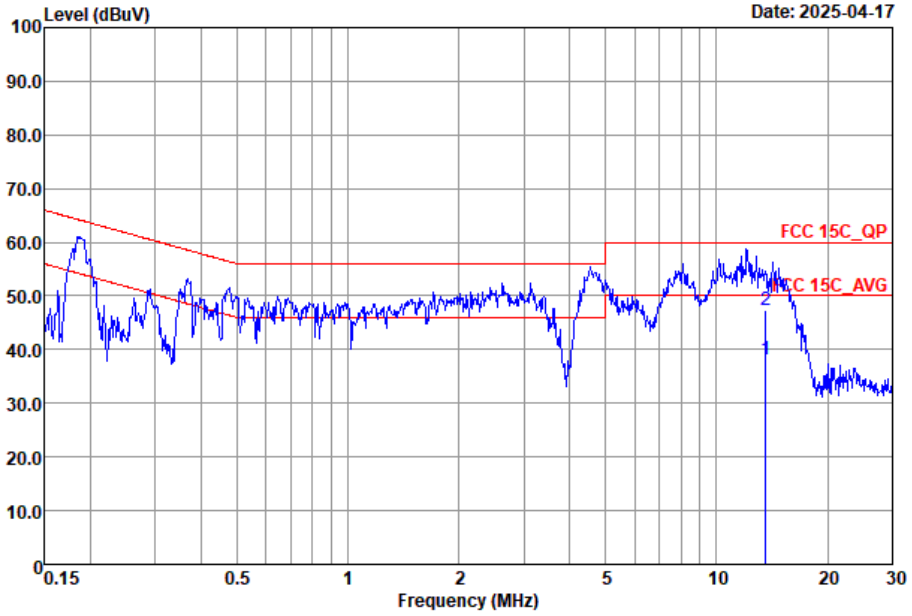
Site : CO02-SZ
Condition : FCC 15C_QP LISN_2025-N NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	33.84	-22.16	56.00	14.10	9.55	10.19	Average
2	0.15	49.24	-16.76	66.00	29.50	9.55	10.19	QP
3	0.22	37.19	-15.55	52.74	17.30	9.70	10.19	Average
4	0.22	48.79	-13.95	62.74	28.90	9.70	10.19	QP
5	0.44	35.07	-12.00	47.07	14.90	9.94	10.23	Average
6	0.44	43.17	-13.90	57.07	23.00	9.94	10.23	QP
7	0.51	35.65	-10.35	46.00	15.80	9.61	10.24	Average
8	0.51	46.25	-9.75	56.00	26.40	9.61	10.24	QP
9	0.64	35.21	-10.79	46.00	15.30	9.67	10.24	Average
10	0.64	45.81	-10.19	56.00	25.90	9.67	10.24	QP
11	11.08	32.24	-17.76	50.00	12.40	9.64	10.20	Average
12	11.08	44.94	-15.06	60.00	25.10	9.64	10.20	QP
13 *	13.56	51.64			31.70	9.69	10.25	Average
14 *	13.56	55.34			35.40	9.69	10.25	QP

(1) with antenna

Remark: 13.560MHz is the NFC RF fundamental signal.

Test Engineer :		**Temperature :**	℃
		Relative Humidity :	%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



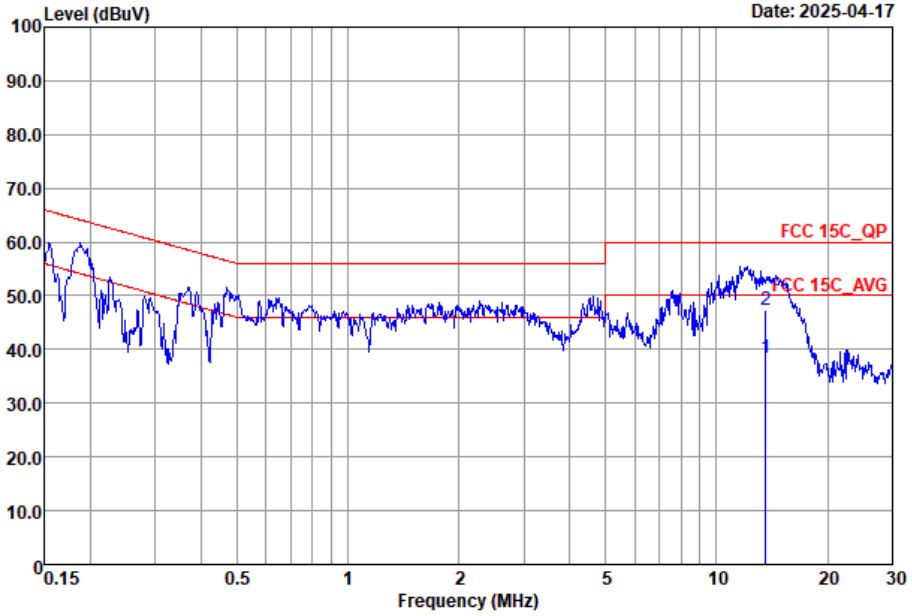
Site : CO02-SZ
Condition : FCC 15C_QP LISN_2025-L LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	13.56	38.30	-11.70	50.00	18.40	9.65	10.25	Average
2 *	13.56	47.30	-12.70	60.00	27.40	9.65	10.25	QP

(2) With dummy load

Remark: Only the fundamental NFC signal needs to be retested per KDB 174176.

Test Engineer :	XuRuibin	**Temperature :**	22~24℃
		Relative Humidity :	44~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO02-SZ
Condition : FCC 15C_QP LISN_2025-N NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	13.56	38.34	-11.66	50.00	18.40	9.69	10.25	Average
2 *	13.56	47.34	-12.66	60.00	27.40	9.69	10.25	QP

(2) With dummy load

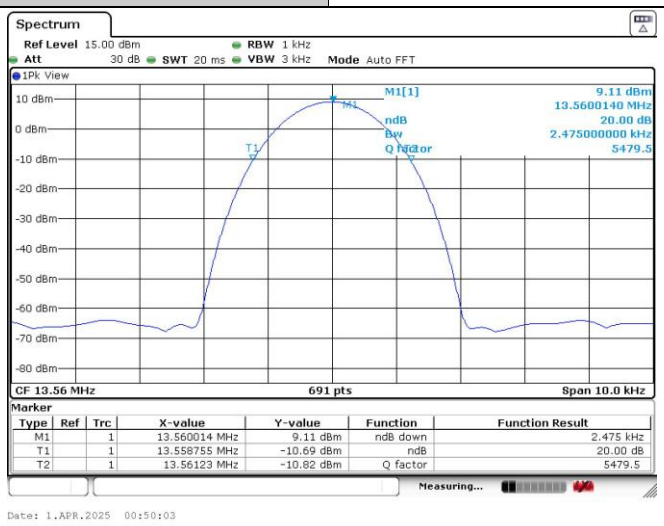
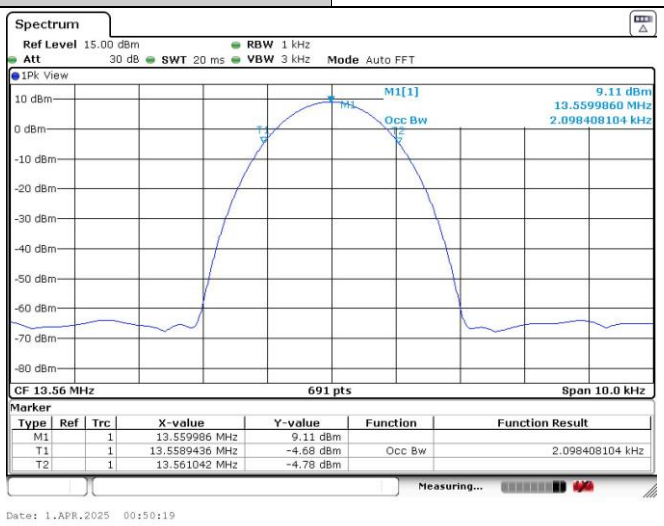
Remark: Only the fundamental NFC signal needs to be retested per KDB 174176.

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix B. Test Results of Conducted Test Items

B1. Test Result of 20dB Spectrum Bandwidth

Test mode	NFC Tx	Test Frequency (MHz)	13.56
			
20dB Bandwidth (kHz)	2.475	**99% OccupiedBW(kHz)**	2.098
Frequency range (MHz)	**f_L > 13.553**	13.558755	**Test Result**
	f_H < 13.567	13.56123	**Complies**

Remark: Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

B2. Test Result of Frequency Stability

Startup:

Voltage vs. Frequency Stability		Temperature vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**	**Temperature (℃)**	**Measurement Frequency (MHz)**
NV	13.55999250	-20	13.55999250
LV	13.55999250	-10	13.55999250
HV	13.55999250	0	13.55999250
		10	13.55999250
		20	13.55999250
		30	13.55999250
		40	13.55999250
		50	13.55999250
Max.Deviation (MHz)	-0.00000750	**Max.Deviation (MHz)**	-0.00000750
Max.Deviation (ppm)	-0.5531	**Max.Deviation (ppm)**	-0.5531
Limit	**FS < ±100 ppm**	**Limit**	**FS < ±100 ppm**
Test Result	**PASS**	**Test Result**	**PASS**

2MIN:

Voltage vs. Frequency Stability		Temperature vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**	**Temperature (℃)**	**Measurement Frequency (MHz)**
NV	13.56000750	-20	13.56000000
LV	13.56000000	-10	13.56000000
HV	13.56000750	0	13.56000000
		10	13.56000750
		20	13.56000750
		30	13.56000750
		40	13.56000750
		50	13.56000750
Max.Deviation (MHz)	0.00000750	**Max.Deviation (MHz)**	0.00000750
Max.Deviation (ppm)	0.5531	**Max.Deviation (ppm)**	0.5531
Limit	**FS < ±100 ppm**	**Limit**	**FS < ±100 ppm**
Test Result	**PASS**	**Test Result**	**PASS**

5MIN:

Voltage vs. Frequency Stability		Temperature vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**	**Temperature (℃)**	**Measurement Frequency (MHz)**
NV	13.56000000	-20	13.56000000
LV	13.56000000	-10	13.56000000
HV	13.56000000	0	13.56000000
		10	13.56000000
		20	13.56000000
		30	13.56000000
		40	13.56000000
		50	13.56000000
Max.Deviation (MHz)	0.00000000	**Max.Deviation (MHz)**	0.00000000
Max.Deviation (ppm)	0.0000	**Max.Deviation (ppm)**	0.0000
Limit	**FS < ±100 ppm**	**Limit**	**FS < ±100 ppm**
Test Result	**PASS**	**Test Result**	**PASS**

10MIN:

Voltage vs. Frequency Stability		Temperature vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**	**Temperature (℃)**	**Measurement Frequency (MHz)**
NV	13.55999250	-20	13.55999250
LV	13.55999250	-10	13.55999250
HV	13.55999250	0	13.55999250
		10	13.55999250
		20	13.55999250
		30	13.55999250
		40	13.55999250
		50	13.55999250
Max.Deviation (MHz)	-0.00000750	**Max.Deviation (MHz)**	-0.00000750
Max.Deviation (ppm)	-0.5531	**Max.Deviation (ppm)**	-0.5531
Limit	**FS < ±100 ppm**	**Limit**	**FS < ±100 ppm**
Test Result	**PASS**	**Test Result**	**PASS**

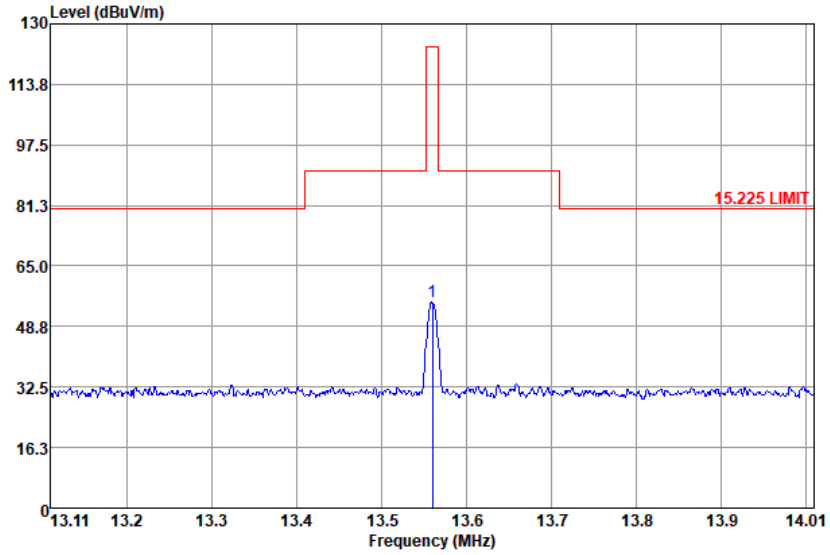
Appendix C. Test Results of Radiated Test Items

C1. Results of Field Strength of Fundamental Emissions

Frequency (MHz)	Level @3m (dBuV/m)	Distance Factor (dB)	Corrected Level @30m (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Remark	Pol/Phase
13.56	55.24	40	15.24	84.0	-68.76	34.06	20.27	0.91	QP	Perpendicular
13.56	48.7	40	8.7	84.0	-75.3	27.52	20.27	0.91	QP	Parallel

Note: The field strength is tested at 3m distance then convert to 30m by adding distance factor 40*log(d1/d2).

Test Mode :	NFC Tx	Polarization :	Perpendicular
Test Distance	3m		

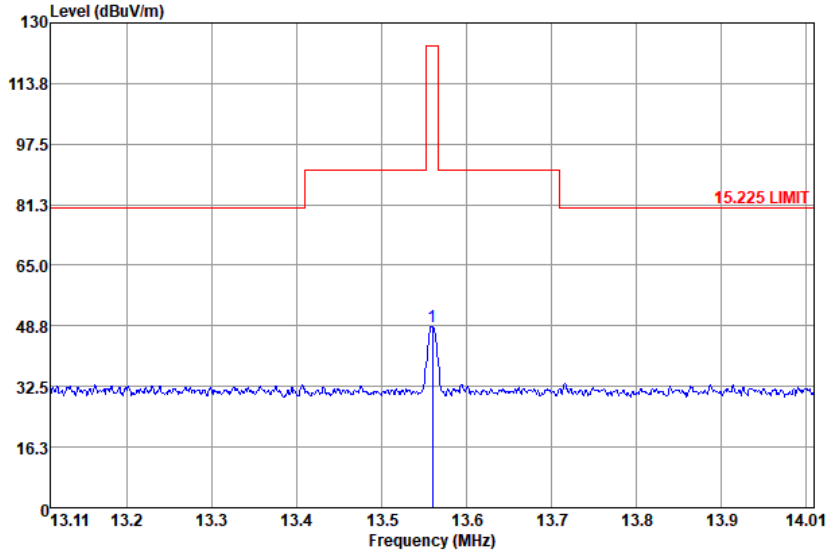


Site : 03CH05-SZ
Condition : 15.225 LIMIT 3m LOOP ANTENNA-316424 HORIZONTAL

: F Card
: Perpendicular

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	13.56	55.24	-68.76	124.00	34.06	20.27	0.91	---	---	QP

Test Mode :	NFC Tx	Polarization :	Parallel
Test Distance	3m		



Site : 03CH05-SZ
Condition : 15.225 LIMIT 3m LOOP ANTENNA-316424 VERTICAL

: F Card
: Parallel

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	13.56	48.70	-75.30	124.00	27.52	20.27	0.91	---	---	QP

Note:

1. Level(dBμV/m) = Read Level(dBμV) + Antenna Factor(dB/m) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
4. Corrected Level = Level @3m (dBμV/m) - distance extrapolation factor.

C2. Results of Radiated Spurious Emissions (9 kHz~30MHz)

Test Mode :	NFC Tx					Polarization :	Perpendicular				
Frequency (MHz)	Level @3m (dBμV/m)	Distance Factor (dB)	Corrected Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.03833	44.38	80	-35.62	-71.55	35.93	24.64	19.7	0.04	-	-	Average
0.06558	45.9	80	-34.1	-65.37	31.27	26.16	19.7	0.04	-	-	Average
0.09723	37.36	80	-42.64	-70.49	27.85	17.49	19.84	0.03	-	-	QP
0.12555	36.62	80	-43.38	-69.01	25.63	16.68	19.9	0.04	-	-	Average
0.77345	46.35	40	6.35	-23.49	29.84	25.98	20.2	0.17	-	-	QP
2.036	36.78	40	-3.22	-32.76	29.54	16.44	20.15	0.19	-	-	QP
10.816	35.07	40	-4.93	-34.47	29.54	13.83	20.38	0.86	-	-	QP
24.856	34.1	40	-5.9	-35.44	29.54	12.47	20.49	1.14	-	-	QP
29.035	35.92	40	-4.08	-33.62	29.54	14.22	20.5	1.2	-	-	QP

Test Mode :	NFC Tx					Polarization :	Parallel				
Frequency (MHz)	Level @3m (dBμV/m)	Distance Factor (dB)	Corrected Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.03848	44.91	80	-35.09	-70.99	35.9	25.17	19.7	0.04	-	-	Average
0.06549	39.93	80	-40.07	-71.35	31.28	20.19	19.7	0.04	-	-	Average
0.09669	36.97	80	-43.03	-70.93	27.9	17.11	19.83	0.03	-	-	QP
0.12786	31.98	80	-48.02	-73.49	25.47	12.04	19.9	0.04	-	-	Average
0.7827	45.98	40	5.98	-23.75	29.73	25.61	20.2	0.17	-	-	QP
2.066	36.51	40	-3.49	-33.03	29.54	16.17	20.15	0.19	-	-	QP
10.888	34.63	40	-5.37	-34.91	29.54	13.38	20.39	0.86	-	-	QP
20.689	34.42	40	-5.58	-35.12	29.54	13	20.37	1.05	-	-	QP
29.545	35.67	40	-4.33	-33.87	29.54	13.92	20.55	1.2	-	-	QP

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
3. Corrected Level = Level @3m (dBμV/m) - distance extrapolation factor.

C3. Results of Radiated Spurious Emissions (30MHz~1GHz)

Test Mode :	NFC Tx				Polarization :		Horizontal			
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
40.67	25.43	-14.57	40	39.17	19.3	1.37	34.41	-	-	Peak
90.14	24.31	-19.19	43.5	43.69	13.73	1.99	35.1	-	-	Peak
147.37	24.92	-18.58	43.5	38.84	18.86	2.31	35.09	-	-	Peak
203.63	25.85	-17.65	43.5	41.7	16.26	2.77	34.88	-	-	Peak
313.24	29.33	-16.67	46	41.41	19.75	3.27	35.1	-	-	Peak
460.68	27.25	-18.75	46	35.15	23.11	3.45	34.46	-	-	Peak

Test Mode :	NFC Tx				Polarization :		Vertical			
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
40.67	36.16	-3.84	40	49.9	19.3	1.37	34.41	100	64	QP
163.86	23.57	-19.93	43.5	37.51	18.7	2.4	35.04	-	-	Peak
199.75	23.66	-19.84	43.5	39.69	16.12	2.75	34.9	-	-	Peak
308.39	25.06	-20.94	46	37.28	19.63	3.25	35.1	-	-	Peak
442.25	25.73	-20.27	46	33.96	22.77	3.45	34.45	-	-	Peak
577.08	26.48	-19.52	46	31.58	25.8	3.55	34.45	-	-	Peak

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.