



Spot Check Evaluation

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2503-4, XT2505-1
FCC ID : IHDT56AU8
STANDARD : 47 CFR Part 2, 22, 24, 27, 90S
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) : Jan. 03, 2025 ~ Jan. 23, 2025

We, Sporton International Inc. (ShenZhen), 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. (KunShan)

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

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG4D1311-01L	Rev. 01	Initial issue of report	Feb. 10, 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/manufacture 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	XT2503-4, XT2505-1
FCC ID	IHDT56AU8
IMEI Code	Conducted/DFS: 357706750005150/357706750005168 Radiation: 357706750006133/357706750006141 Conduction: 357706750006158/357706750006166
HW Version	DVT2
SW Version	V2VC35.13
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. (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	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ DFS01-SZ	CN1256	421272

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.
	03CH01-SZ	CN1256	421272

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.
	CO01-KS 03CH02-KS 03CH08-KS	CN1257	314309

1.6 Test Software

Item	Site	Manufacturer	Name	Version
1.	CO01-KS	AUDIX	E3	6.2009-8-24
2.	03CH02-KS	AUDIX	E3	6.2009-8-24a1
3.	03CH08-KS	AUDIX	E3	210616
4.	03CH01-SZ	AUDIX	E3	6.2009-8-24
5.	DFS01-SZ	Sporton	Test Tools	1.0

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 2, 22, 24, 27, 90S
- 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

Accessories Information				
AC Adapter 1(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-681N
AC Adapter 1(EU)	Brand Name	Motorola(Chenyang)	Model Name	MC-682N
AC Adapter 1(UK)	Brand Name	Motorola(Chenyang)	Model Name	MC-683N
AC Adapter 1(AU)	Brand Name	Motorola(Chenyang)	Model Name	MC-685N
AC Adapter 1(AR)	Brand Name	Motorola(Chenyang)	Model Name	MC-686N
AC Adapter 1(BR)	Brand Name	Motorola(Chenyang)	Model Name	MC-687N
AC Adapter 1(CHILE)	Brand Name	Motorola(Chenyang)	Model Name	MC-689N
AC Adapter 2(US)	Brand Name	Motorola(Acbel)	Model Name	MC-681N
AC Adapter 2(EU)	Brand Name	Motorola(Acbel)	Model Name	MC-682N
AC Adapter 2(UK)	Brand Name	Motorola(Acbel)	Model Name	MC-683N
AC Adapter 2(AU)	Brand Name	Motorola(Acbel)	Model Name	MC-685N
AC Adapter 2(AR)	Brand Name	Motorola(Acbel)	Model Name	MC-686N
AC Adapter 2(BR)	Brand Name	Motorola(Acbel)	Model Name	MC-687N
AC Adapter 2(CHILE)	Brand Name	Motorola(Acbel)	Model Name	MC-689N
Battery 1	Brand Name	Motorola(ATL)	Model Name	RM52
Battery 2	Brand Name	Motorola(Cosmx)	Model Name	RM52
Earphone	Brand Name	Motorola(Lyand)	Model Name	MI181C
USB Cable 1	Brand Name	Motorola(saibao)	Model Name	SC18D71644
USB Cable 2	Brand Name	Motorola(Luxshare)	Model Name	SC18E08104
USB Cable 3	Brand Name	Motorola(saibao)	Model Name	SC18D86731
USB Cable 4	Brand Name	Motorola(Luxshare)	Model Name	SC18E08103



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: XT2503-4, XT2505-1, FCC ID: IHDT56AU8) is electrically identical to the reference device (Model: XT2503-1, XT2505-3, FCC ID: IHDT56AU7) 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 FA4D1311-01.

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 transmission conditions

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: IHDT56AU8 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56AU7 and FCC ID: IHDT56AU8 is as below:

- Remove WCDMA B4, LTE B4/12/13/17/66 and 5G NR n2/n66.
- Add LTE B18/19/20/32/43/71, 5G NR n20/n71/n75.
- Add n5 NSA mode and n41 SA mode.
- LTE B41, 5G NR n77/N78 upgraded to PC2 via software.

Other differences and all the details of similarity and difference can be found in the confidential documents (IHDT56AU8 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	IHDT56AU7	Full test	FR4D1311A	IHDT56AU8	Spot check	Y, All test items
	DTS (BLE)	2400~2483.5	IHDT56AU7	Full test	FR4D1311B	IHDT56AU8	Spot check	Y, All test items
	DTS (WLAN)	2400~2483.5	IHDT56AU7	Full test	FR4D1311C	IHDT56AU8	Spot check	Y, All test items
	DXX (NFC)	13.56	IHDT56AU7	Full test	FR4D1311D	IHDT56AU8	Spot check	Y, All test items
15E	U-NII	5180~5240	IHDT56AU7	Full test	FR4D1311E	IHDT56AU8	Spot check	Y, All test items
		5260~5320	IHDT56AU7	Full test	FR4D1311E	IHDT56AU8	Spot check	Y, All test items
		5500~5720	IHDT56AU7	Full test	FR4D1311E	IHDT56AU8	Spot check	Y, All test items
		5745~5825	IHDT56AU7	Full test	FR4D1311E	IHDT56AU8	Spot check	Y, All test items
		5260~5320 5500~5720	IHDT56AU7	Full test	FZ4D1311	IHDT56AU8	Spot check	Y, All test items
22, 24, 27, 90,	PCE (GSM)	GSM 850/1900	IHDT56AU7	Full test	FG4D1311A	IHDT56AU8	Spot check	Y, All test items
	PCE (WCDMA)	Band II, V	IHDT56AU7	Full test	FG4D1311A	IHDT56AU8	Spot check	Y, All test items
	PCE (LTE)	B2/5/7/26/38/42/ 7C/38C/42C	IHDT56AU7	Full test	FG4D1311B FG4D1311C FG4D1311E FG4D1311F	IHDT56AU8	Spot check	Y, All test items
	PCE (LTE)	B26 (90S)	IHDT56AU7	Full test	FG4D1311D	IHDT56AU8	Spot check	Y, All test items
	PCE (NR)	n5/n7/n26/n38/n41	IHDT56AU7	Full test	FG4D1311G FG4D1311H	IHDT56AU8	Spot check	Y, All test items except for n5 NSA RSE, n41 RSE
	PCE (NR)	n26 (90S)	IHDT56AU7	Full test	FG4D1311I	IHDT56AU8	Spot check	Y, All test items

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

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 d_{dB} from the reference data satisfies the following condition:

$$d_{dB} = |V_{dB} - R_{dB}| \leq (3 + M_{dB} / 20) \text{ dB} , \text{ for } 0 \leq M_{dB} \leq 60 \text{ dB} \quad (2)$$

$$d_{dB} = |V_{dB} - R_{dB}| = 6 \text{ dB} , \text{ for } M_{dB} > 60 \text{ dB}$$

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	IHDT56AU7 Parent Worst mode Test Result	IHDT56AU8 Variant Check Test Result	Deviation	Deviation Limit
BT 1Mbps (CH39)	Number of Channels	79	79	0	3
	Hopping Channel Separation	1	1.003	0.003 MHz	3
	Dwell Time of Each Channel	0.306	0.307	0.001 s	3
	20dB Bandwidth	0.87	0.865	0.005 MHz	3
	99% Bandwidth	0.758	0.757	0.01 MHz	3
	Conducted Band Edges	-43.67	-45.85	2.18 dBm	3
	Conducted Spurious Emission	-36.12	-38.30	2.18 dBm	3
BT 1Mbps (CH78)	Radiated Band Edges and Radiated Spurious Emission	-18.78	-18	0.78 dB	3
BT	AC Conducted Emission	-13.67	-11.94	1.73 dB	3
BLE 2Mbps (CH01)	6dB Bandwidth	1.16	1.17	0.01 MHz	3
	99% Bandwidth	2.056	2.050	0.006 MHz	3
	Power Spectral Density	-4.23	-4.94	0.71 dBm/3kHz	3
	Conducted Band Edges	-52.99	-53.56	0.57 dBm/100kHz	3
	Conducted Spurious Emission	-35.36	-37.17	1.81 dBm/100kHz	3
BLE 1Mbps (CH19)	Radiated Band Edges and Spurious Emission	-3.41	-3.13	0.28 dB	3
BLE	AC Conducted Emission	-13.67	-11.94	1.73 dB	3
WIFI 2.4G (802.11ax HE20 CH06)	6dB Bandwidth	18.48	18.70	0.22 MHz	3
	99% Bandwidth	19.874	20.280	0.406 MHz	3
	Power Spectral Density	-6.15	-7.19	1.04 dBm/3kHz	3
	Conducted Band Edges	-14.78	-15.00	0.22 dBm/100kHz	3
	Conducted Spurious Emission	-35.5	-38.06	-2.56 dBm/100kHz	3
WIFI 2.4G (802.11ax HE40 CH06)	Radiated Band Edges and Spurious Emission	-3.11	-3.38	0.27 dB	3
WIFI 2.4G	AC Conducted Emission	-13.67	-11.94	1.73 dB	3
WIFI 5G (802.11ax HE40 CH142)	26dB & 99% Bandwidth	75.60	75.24	0.36 MHz	3
	Power Spectral Density	3.62	3.14	0.48 dBm/MHz	3
WIFI 5G (802.11ax HE80 CH58)	DFS	0.951632	0.88803	0.63602 s	3
WIFI 5G (802.11ax HE20 CH36)	Radiated Band Edges and Spurious Emission	-3.07	-3.23	0.16 dB	3
WIFI 5G	AC Conducted Emission	-17.62	-15.89	1.73 dB	3
NFC	20dB Spectrum Bandwidth	2.58	2.57	0.01 kHz	3
	99% Occupied Bandwidth	2.19	2.19	0 kHz	3
	Field Strength of Fundamental Emissions@3m	52.46	52.54	0.08 dBuV/m	3
	Radiated Spurious Emissions	47.17	49.99	0.82 dBuV/m	3
	AC Power Line Conducted Emissions	-14.93	-13.10	1.83 dB	3
Part 22H (GSM 850)	Peak-to-Average Ratio	0.17	0.14	0.03 dB	3
	Occupied Bandwidth	0.242	0.243	0.001 MHz	3
	Conducted Band Edge	-14.83	-14.60	0.23 dBm	3
	Conducted Spurious Emission	-31.6	-30.52	1.08 dBm	3
	Frequency Stability	0.0023	0.0024	0.0001 ppm	3
Part 27M (LTE Band 7)	26dB Bandwidth	0.32	0.31	0.01 MHz	3
	Radiated Spurious Emission	-49.04	-51.39	2.35 dB	3



Test Item	Mode	IHDT56AU7 Parent Worst mode Test Result	IHDT56AU8 Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
Conducted Power (dBm)	BT BR/EDR	17.40	17.30	0.10	3
	BLE 1Mbps/2Mbps	12.66	11.40	1.26	3
	11b, 2.4GHz	21.28	20.82	0.46	3
	11g, 2.4GHz	23.72	23.55	0.17	3
	11n HT20, 2.4GHz	23.68	23.53	0.15	3
	11n HT40, 2.4GHz	22.95	22.48	0.47	3
	11ax HE20, 2.4GHz	23.77	23.49	0.28	3
	11ax HE40, 2.4GHz	23.03	22.5	0.53	3
	11a, 5GHz	18.78	18.67	0.11	3
	11n HT20, 5GHz	18.69	18.67	0.02	3
	11n HT40, 5GHz	18.79	18.70	0.09	3
	11ac VHT20, 5GHz	18.75	18.74	0.01	3
	11ac VHT40, 5GHz	18.83	18.70	0.13	3
	11ac VHT80, 5GHz	17.98	17.95	0.03	3
	11ax HE20, 5GHz	18.83	18.78	0.05	3
	11ax HE40, 5GHz	18.95	18.82	0.13	3
	11ax HE80, 5GHz	18.07	18.06	0.01	3
	GSM 850	31.75	31.34	0.41	3
	GSM 1900	28.86	26.57	2.29	3
	WCDMA II	22.68	20.42	2.26	3
	WCDMA V	22.81	22.39	0.42	3
	LTE B2	22.51	22.27	0.24	3
	LTE B5	22.49	22.39	0.10	3
	LTE B7	23.67	22.36	1.31	3
	LTE B7C	22.52	22.39	0.13	3
	LTE B26L	22.47	22.13	0.34	3
	LTE B26H	22.52	22.28	0.24	3
	LTE B38	23.58	23.28	0.30	3
	LTE B38C	22.39	22.53	0.14	3
	LTE B42	22.49	22.23	0.26	3
	LTE B42C	22.38	22.18	0.20	3
	5GNR n5	23.17	22.95	0.22	3
	5GNR n7	23.57	22.84	0.73	3
	5GNR n38	23.10	23.01	0.29	3
	5GNR n41	23.62	23.26	0.36	3
	5GNR n26L	23.66	22.87	0.79	3
	5GNR n26H	23.45	23.19	0.26	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.

The same detection mechanism/software/antenna gain is used in the variant of DFS. Hence, all test cases refer to parent report.

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	101078	10Hz~40GHz	Apr. 09, 2024	Jan. 22, 2025	Apr. 08, 2025	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 25, 2024	Jan. 22, 2025	Dec. 24, 2025	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Oct.14, 2024	Jan. 22, 2025	Oct. 13, 2025	Conducted (TH01-SZ)
EMI Test Receiver	Keysight	N9038A	MY57290151	3Hz~8.5GHz;Max 30dBm	Jul. 04, 2024	Jan. 20, 2025	Jul. 03, 2025	Radiation (03CH08-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57441079	10Hz~44GHz	Oct. 09, 2024	Jan. 20, 2025	Oct. 08, 2025	Radiation (03CH08-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Jan. 20, 2025	Sep. 07, 2025	Radiation (03CH08-KS)
Bilog Antenna	TESEQ	CBL 6111D	59915	30MHz~1GHz	Aug. 18, 2024	Jan. 20, 2025	Aug.17, 2025	Radiation (03CH08-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00240138	1GHz~18GHz	Jul. 06, 2024	Jan. 20, 2025	Jul. 05, 2025	Radiation (03CH08-KS)
high gain Amplifier	EM	EM01G18GA	060890	1Ghz~18Ghz	Jul. 23, 2024	Jan. 20, 2025	Jul. 22, 2025	Radiation (03CH08-KS)
SHF-EHF Horn	Com-power	AH-840	101116	18GHz~40GHz	Oct. 22, 2024	Jan. 20, 2025	Oct. 21, 2025	Radiation (03CH08-KS)
Amplifier	SONOMA	310N	380826	9KHz~1GHz	Jul. 03, 2024	Jan. 20, 2025	Jul. 02, 2025	Radiation (03CH08-KS)
Amplifier	Keysight	83017A	MY53270417	500MHz~26.5GHz	Oct. 09, 2024	Jan. 20, 2025	Oct. 08, 2025	Radiation (03CH08-KS)
Amplifier	EM	EM18G40GGA	060737	18~40GHz	Jan. 03, 2025	Jan. 20, 2025	Jan. 02, 2026	Radiation (03CH08-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Jan. 20, 2025	NCR	Radiation (03CH08-KS)
Turn Table	EM	EM 1000-T	N/A	0~360 degree	NCR	Jan. 20, 2025	NCR	Radiation (03CH08-KS)
Antenna Mast	EM	EM 1000-A	N/A	1 m~4 m	NCR	Jan. 20, 2025	NCR	Radiation (03CH08-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 18, 2024	Jan. 20, 2025	Apr. 17, 2025	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Aug. 20, 2024	Jan. 20, 2025	Aug. 19, 2025	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Apr. 18, 2024	Jan. 20, 2025	Apr. 17, 2025	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 09, 2024	Jan. 20, 2025	Oct. 08, 2025	Conduction (CO01-KS)
Signal Analyzer	R&S	FSV7	101473	10Hz~7GHz	Dec. 25, 2024	Jan. 08, 2025	Dec. 24, 2025	DFS (DFS01-SZ)
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200424	9kHz~6GHz	Apr. 09, 2024	Jan. 08, 2025	Apr. 08, 2025	DFS (DFS01-SZ)
Combiner	TOJOIN	PS-2AM-0460	SZE14011007	0.4~6GHz	Sep. 05, 2024	Jan. 08, 2025	Sep. 04, 2025	DFS (DFS01-SZ)

NCR: No Calibration Required.



For NFC:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Jan. 23, 2025	Apr. 08, 2025	Conducted (TH01-SZ)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Jan. 23, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Oct. 11, 2024	Jan. 03, 2025	Oct. 10, 2025	Radiation (03CH02-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Jan. 03, 2025	Sep. 07, 2025	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	59915	30MHz-1GHz	Aug. 18, 2024	Jan. 03, 2025	Aug. 17, 2025	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Jan. 03, 2025	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Jan. 03, 2025	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Jan. 03, 2025	NCR	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	413740	9KHz-1GHz	Jan. 02, 2025	Jan. 03, 2025	Jan. 01, 2026	Radiation (03CH02-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 18, 2024	Jan. 20, 2025	Apr. 17, 2025	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Aug. 20, 2024	Jan. 20, 2025	Aug. 19, 2025	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Apr. 18, 2024	Jan. 20, 2025	Apr. 17, 2025	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000811	AC 0V~300V, 45Hz~1000Hz	Oct. 09, 2024	Jan. 20, 2025	Oct. 08, 2025	Conduction (CO01-KS)

For WWAN Bands:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Jan. 08, 2025	Apr. 08, 2025	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V , 3A	Oct.14, 2024	Jan. 08, 2025	Oct. 13, 2025	Conducted (TH01-SZ)
Power Divider	Titan	P02N005180	923402	0.4GHz~26.5GHz	Nov. 08, 2024	Jan. 08, 2025	Nov. 07, 2025	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 03, 2024	Jan. 08, 2025	Jul. 02, 2025	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 25, 2024	Jan. 18, 2025	Dec. 24, 2025	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Jan. 18, 2025	Dec. 27, 2025	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Jan. 18, 2025	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Jan. 18, 2025	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz-40GHz	Apr. 09, 2024	Jan. 18, 2025	Apr. 08, 2025	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 09, 2024	Jan. 18, 2025	Apr. 08, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Jan. 18, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Jan. 18, 2025	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 14, 2024	Jan. 18, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 18, 2025	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 18, 2025	NCR	Radiation (03CH01-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	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Conducted Power Spectral Density	±1.32 dB
Frequency	±1.3 Hz

Uncertainty of Conducted Measurement (NFC)

Test Item	Uncertainty
Occupied Channel Bandwidth	±0.012 MHz
Frequency	±1.3 Hz

Uncertainty of Conducted Measurement (DFS)

Test Item	Uncertainty
Conducted Generated signal Levels	±1.23 dB
Conducted Time	0.38%

Uncertainty of Conducted Measurement (WWAN)

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Peak to Average Ratio	±1.34 dB
Frequency Stability	±1.3 Hz

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.84 dB
---	---------

03CH08-KS(BT/WIF):**Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)**

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.30 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.04 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.26 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.40 dB
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03CH02-KS(NFC):**Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)**

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.30 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.04 dB
---	---------



03CH01-SZ(WWAN):

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.48 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.53 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.02 dB
---	---------

-THE END-



Appendix A. Radiated Spurious Emission

For Simultaneous transmission:

Test Engineer :	Zhaohui Liang	Relative Humidity :	50%
		Temperature :	20-22℃

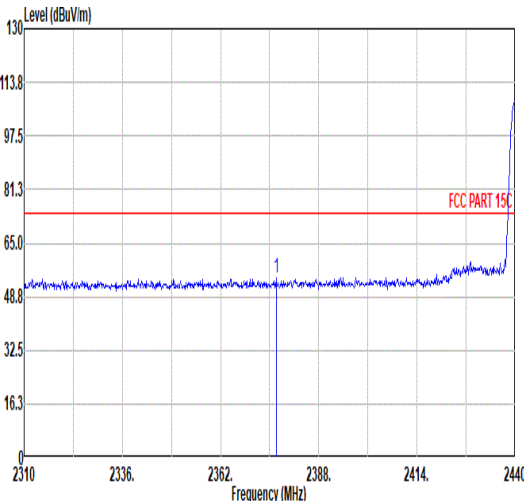
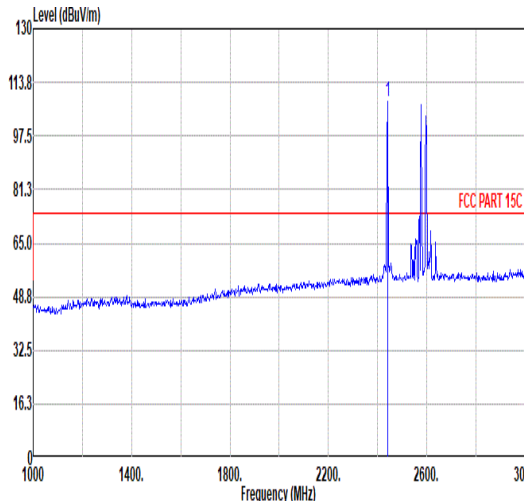
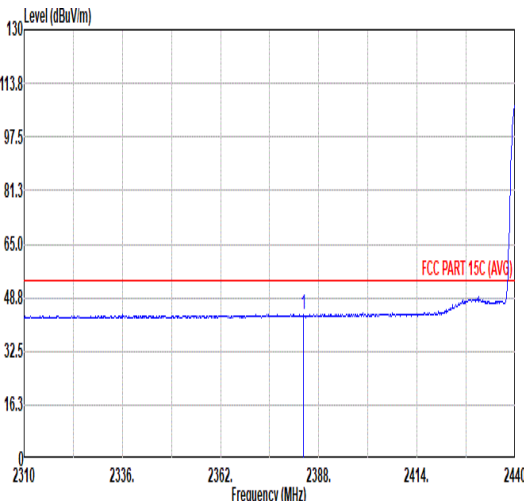
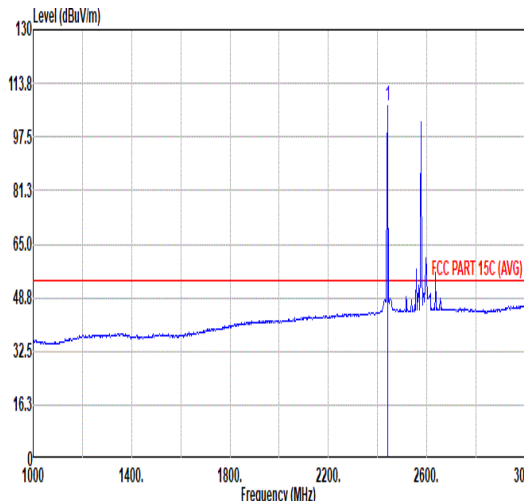
Radiated Spurious Emission Test Modes

Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	2400-2483.5	3	Bluetooth-LE_GSFK	19	2440	1Mbps	-	-
	U-NII-1	5.15-5.25	4	802.11ax HE20	36	5180	MCS0	Full RU	-
	LTE Band 41C								

Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
1	Bluetooth-LE_GSFK	19	2490.46	44.29	54.00	-9.71	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE_GSFK	19	4880.00	50.74	54.00	-3.26	H	AVERAGE	Pass	Harmonic
1	802.11ax HE20	36	5149.65	50.39	54.00	-3.61	H	AVERAGE	Pass	Band Edge
	802.11ax HE20	36	10360.00	44.85	68.20	-23.35	H	PEAK	Pass	Harmonic

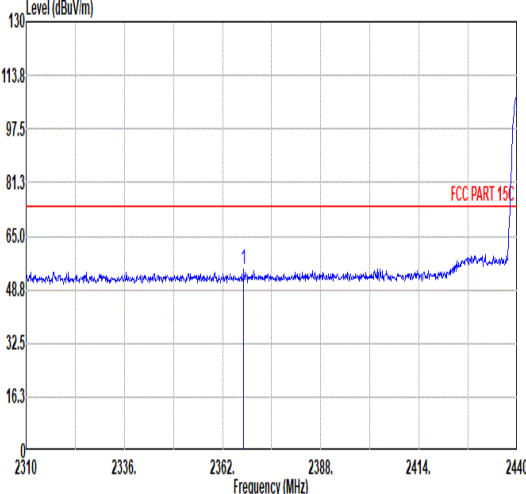
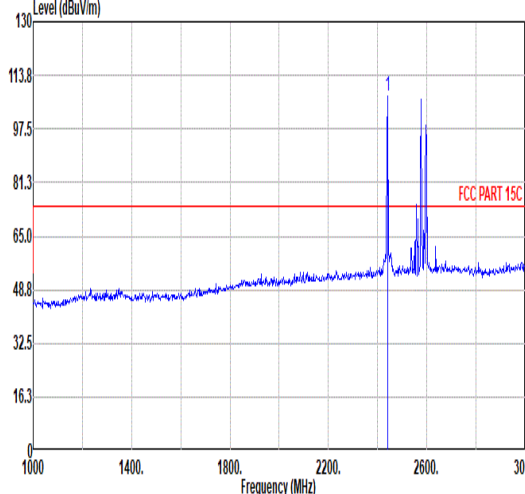
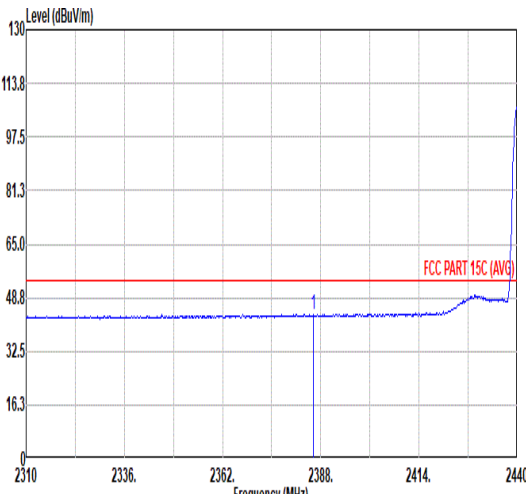
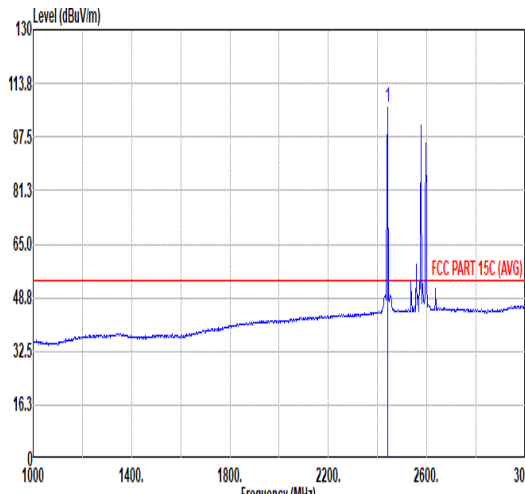


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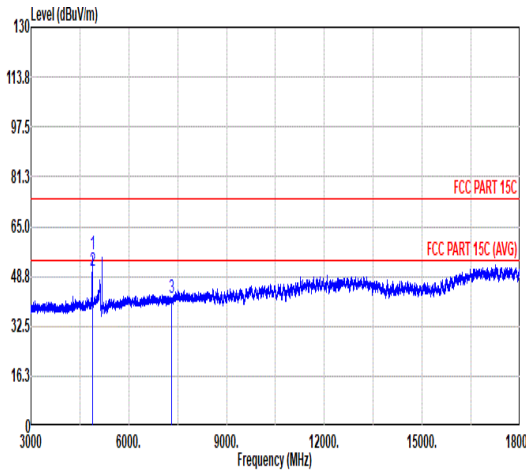
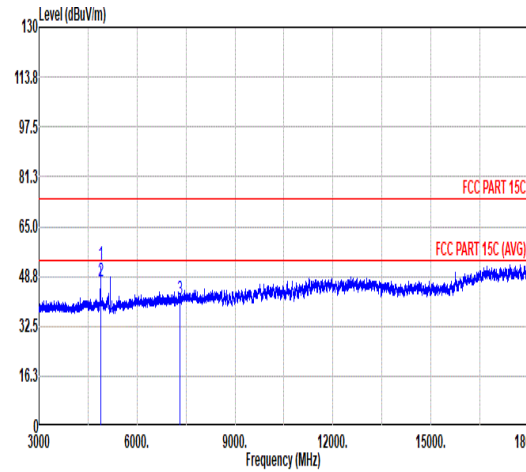


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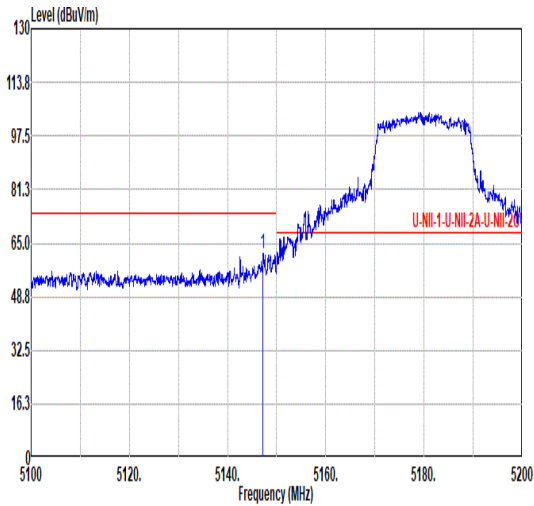
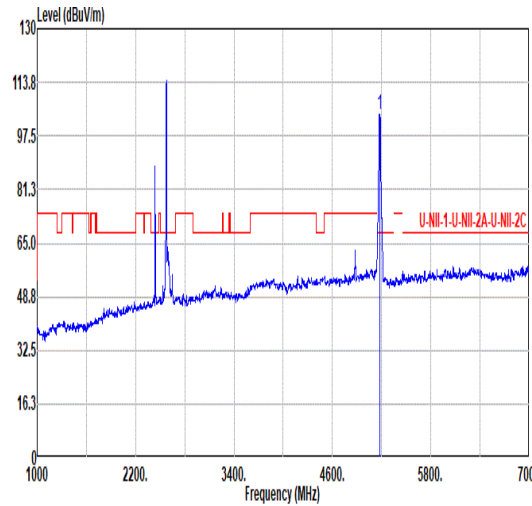
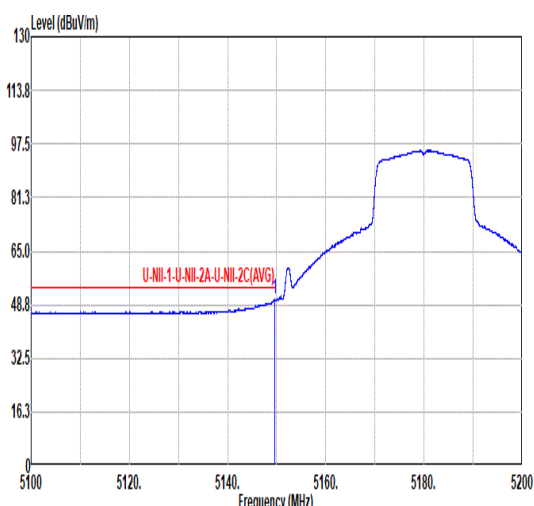
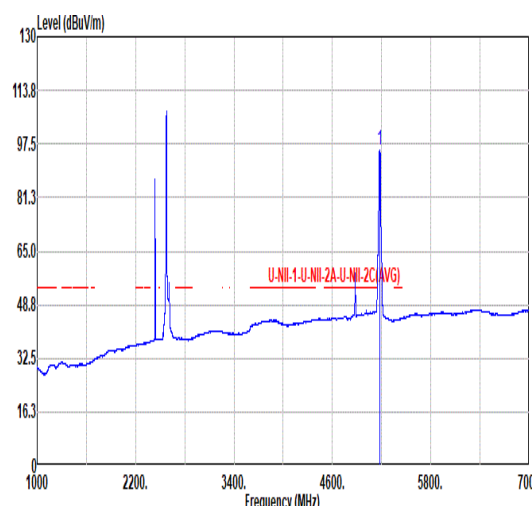


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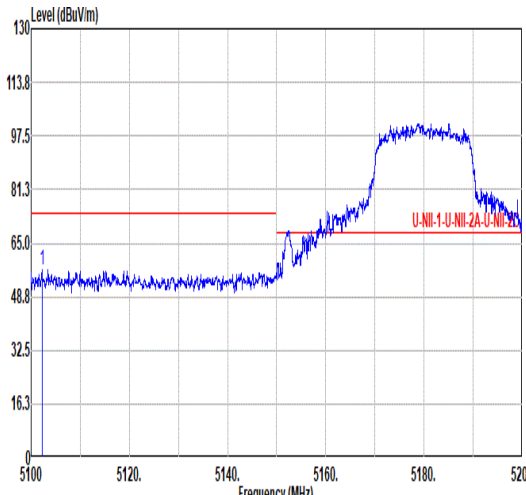
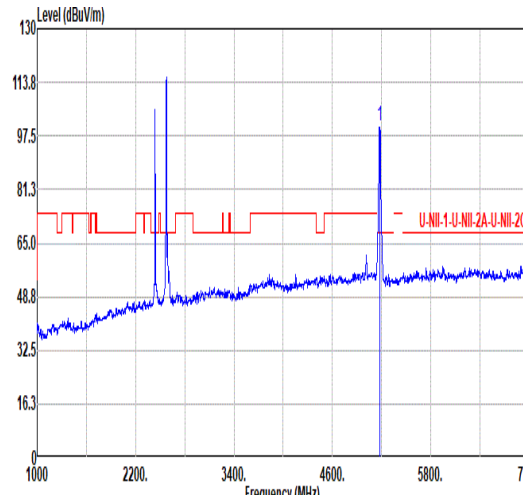
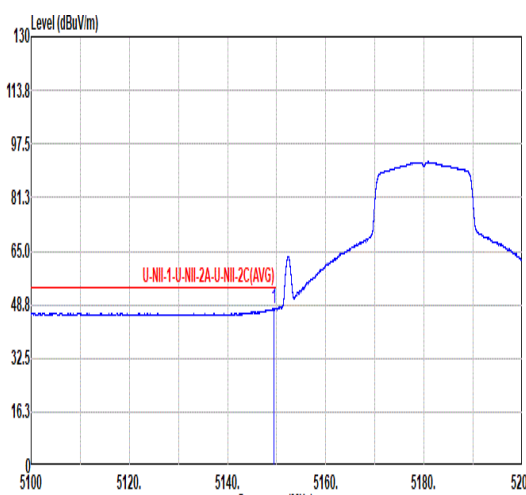
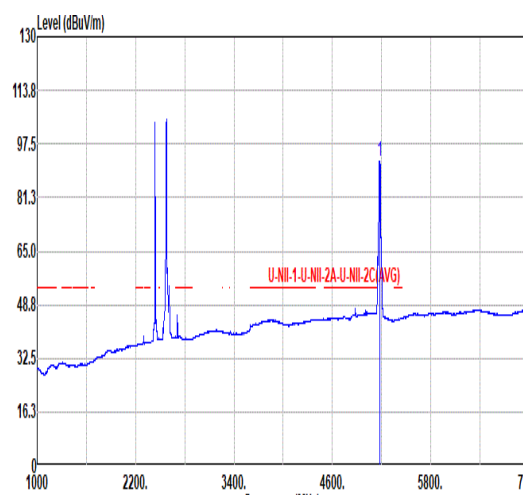


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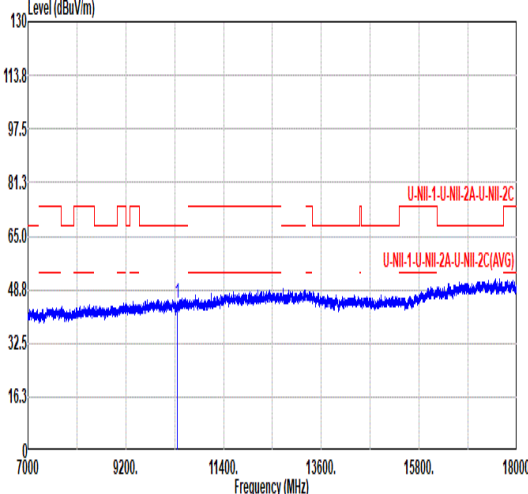
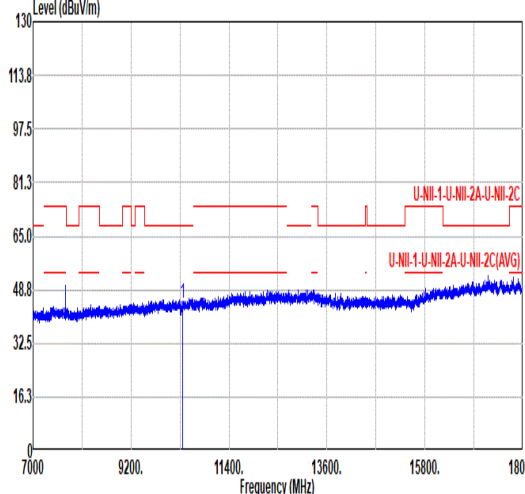


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Note: For all plots above, the over limit line signals are Fundamental signal which can be ignored

**For 5G NR n5 NSA:**

Test Engineer :	HuaCong Liang	Relative Humidity :	48~52%
		Temperature :	22-25°C

EN-DC_7A_n5A / LTE 10MHz + NR 20MHz / QPSK (ANT2+0)									
Channel	Frequency (MHz)	ERP/EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
NR n5 Middle	1654.5	-65.70	-13	-52.70	-77.23	-68.95	4.00	9.40	H
	2481.75	-59.92	-13	-46.92	-78.65	-63.49	4.88	10.60	H
	3309	-59.16	-13	-46.16	-79.95	-64.09	5.52	12.60	H
	1654.5	-64.93	-13	-51.93	-77.10	-68.18	4.00	9.40	V
	2481.75	-59.78	-13	-46.78	-78.83	-63.35	4.88	10.60	V
	3309	-58.45	-13	-45.45	-79.94	-63.38	5.52	12.60	V
LTE Band7 Middle	5061.18	-58.04	-25	-33.04	-81.16	-63.60	7.14	12.70	H
	7591.77	-55.00	-25	-30.00	-81.25	-58.30	8.30	11.60	H
	10122.36	-52.53	-25	-27.53	-82.91	-54.05	10.48	12.00	H
	5061.18	-57.38	-25	-32.38	-81.71	-62.94	7.14	12.70	V
	7591.77	-55.73	-25	-30.73	-81.98	-59.03	8.30	11.60	V
	10122.36	-51.58	-25	-26.58	-83.01	-53.10	10.48	12.00	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Appendix C. Reference Report



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2503-1, XT2505-3
FCC ID : IHDT56AU7
STANDARD : 47 CFR Part 90(S)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Dec. 25, 2024 ~ Dec. 27, 2024

We, Sporton International Inc. (ShenZhen), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

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

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG4D1311I	Rev. 01	Initial issue of report	Jan. 24, 2025

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	—	Report only	-
3.2	§2.1049 §90.209	Occupied Bandwidth and 26dB Bandwidth	—	Report only	-
3.3	§2.1051 §90.691	Emission masks – In-band emissions	$< 50+10\log_{10}(P[\text{Watts}])$	PASS	-
3.4	§2.1051 §90.691	Emission masks – Out of band emissions	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	-
3.5	§2.1053 §90.691	Field Strength of Spurious Radiation	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	Under limit 44.87 dB at 3260.00 MHz
3.6	§2.1055 §90.213	Frequency Stability for Temperature & Voltage	$< 2.5 \text{ ppm}$	PASS	-

Conformity Assessment Condition:

- 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/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
- 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 Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2503-1, XT2505-3
FCC ID	IHDT56AU7
IMEI Code	Conducted : 354424860019490 Radiation : 354424860020035/354424860020043
HW Version	DVT2
SW Version	V2VC35.13
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

Product Specification subjective to this standard	
Tx Frequency	814 ~ 824 MHz
Rx Frequency	859 ~ 869 MHz
SCS / Bandwidth	15kHz : 5MHz / 10MHz / 15MHz / 20MHz
Antenna Gain	<Ant.0>: -5.1 dBi <Ant.1>: -4.5 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Note:

1. Only maximum conducted Power of Ant.1 is shown in the report.
2. 5G NR n26 supports SA mode only.



1.5 Modification of EUT

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

1.6 Maximum Conducted Power and Emission Designator

5G NR n26		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	816.5 ~ 821.5	0.2355	4M46G7D	0.1919	4M47W7D
10	819	0.2388	9M25G7D	0.1919	9M28W7D
15	821.5	0.2355	14M1G7D	0.1892	14M1W7D
20	824	0.2415	18M9G7D	0.1995	18M9W7D

Note: All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.

1.7 Testing Site

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	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

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.
	03CH01-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24

1.9 Applied Standards

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

- ♦ 47 CFR 90(S)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 971168 D02 Misc Rev Approv License Devices v02r02

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

1.10 Specification of Accessory

Accessories Information				
AC Adapter 1(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-681N
AC Adapter 1(EU)	Brand Name	Motorola(Chenyang)	Model Name	MC-682N
AC Adapter 1(UK)	Brand Name	Motorola(Chenyang)	Model Name	MC-683N
AC Adapter 1(AU)	Brand Name	Motorola(Chenyang)	Model Name	MC-685N
AC Adapter 1(AR)	Brand Name	Motorola(Chenyang)	Model Name	MC-686N
AC Adapter 1(BR)	Brand Name	Motorola(Chenyang)	Model Name	MC-687N
AC Adapter 1(CHILE)	Brand Name	Motorola(Chenyang)	Model Name	MC-689N
AC Adapter 2(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-681N
AC Adapter 2(EU)	Brand Name	Motorola(Acbel)	Model Name	MC-682N
AC Adapter 2(UK)	Brand Name	Motorola(Acbel)	Model Name	MC-683N
AC Adapter 2(AU)	Brand Name	Motorola(Acbel)	Model Name	MC-685N
AC Adapter 2(AR)	Brand Name	Motorola(Acbel)	Model Name	MC-686N
AC Adapter 2(BR)	Brand Name	Motorola(Acbel)	Model Name	MC-687N
AC Adapter 2(CHILE)	Brand Name	Motorola(Acbel)	Model Name	MC-689N
Battery 1	Brand Name	Motorola(ATL)	Model Name	RM52
Battery 2	Brand Name	Motorola(Cosmx)	Model Name	RM52
USB Cable 1	Brand Name	Motorola(saibao)	Model Name	SC18D71644
USB Cable 2	Brand Name	Motorola(Luxshare)	Model Name	SC18E08104
USB Cable 3	Brand Name	Motorola(saibao)	Model Name	SC18D86731
USB Cable 4	Brand Name	Motorola(Luxshare)	Model Name	SC18E08103
Wireless Earphones	Brand Name	Motorola	Model Name	XT2443-1

2 Test Configuration of Equipment Under Test

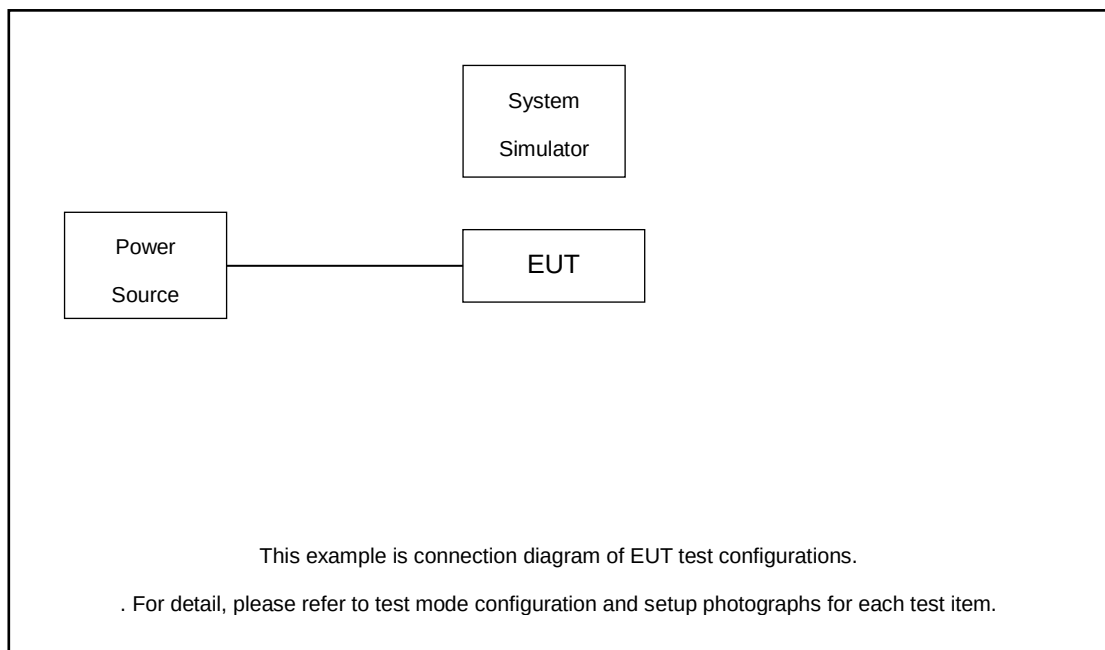
2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission is 30 MHz to 9000 MHz. (Z Plane)

Test Items	Band	Bandwidth (MHz)				Modulation					RB #			Test Channel		
		5	10	15	20	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	n26	v	v	v	v	v	v	v	v	v	v		v	v	v	v
26dB and 99% Bandwidth	n26	v	v	v	v		v	v	v	v			v		v	
Emission masks In-band emissions	n26	v				v	v				v		v	v		v
			v		v	v	v				v		v		v	
Emission masks – Out of band emissions	n26	v				v	v				v			v	v	v
			v		v	v	v				v				v	
Frequency Stability	n26				v		v						v		v	
Radiated Spurious Emission	n26	Worst Case													v	
Note	1. The mark “v” means that this configuration is chosen for testing 2. The mark “-” means that this bandwidth is not supported. 3. 5G NR n26 transmit frequency for part22 rule is 824MHz-849MHz, for part90 rule is 814MHz-824MHz. ERP over 15MHz bandwidth complies the ERP limit line of part22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies. 4. Frequency Stability : Normal Voltage = 3.91V ; Low Voltage =3.60V ; High Voltage =4.50V;															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss .

Offset = RF cable loss.

The following shows an offset computation example with RF cable loss 7.5 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 7.5 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

5G NR n26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	-	163800	-
	Frequency	-	819	-
5	Channel	163300	163800	164300
	Frequency	816.5	819	821.5

5G NR n26 Cross-rule Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	-	Middle	-
20	Channel	-	164800	-
	Frequency	-	824	-
15	Channel	-	164300	-
	Frequency	-	821.5	-

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

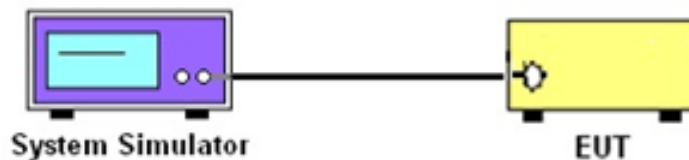
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Please refer to Appendix A.

3.2 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.2.1 Description of (Occupied) Bandwidth Limitations Measurement

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

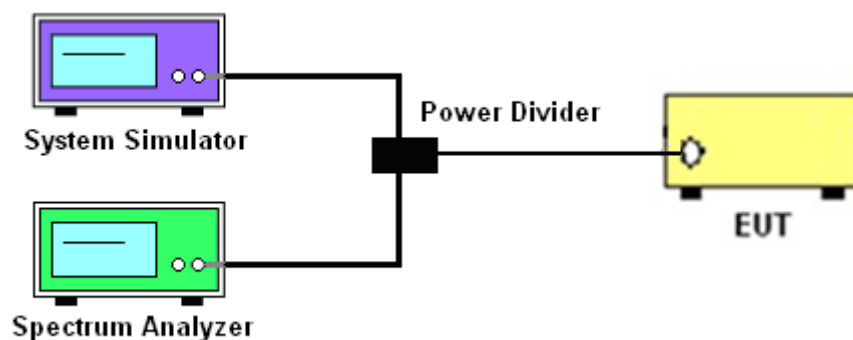
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

3.2.4 Test Setup



3.2.5 Test Result of 99% Occupied Bandwidth and 26dB Bandwidth

Please refer to Appendix A.

3.3 Emissions Mask Measurement

3.3.1 Description of Emissions Mask Measurement

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90.691.(a):

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

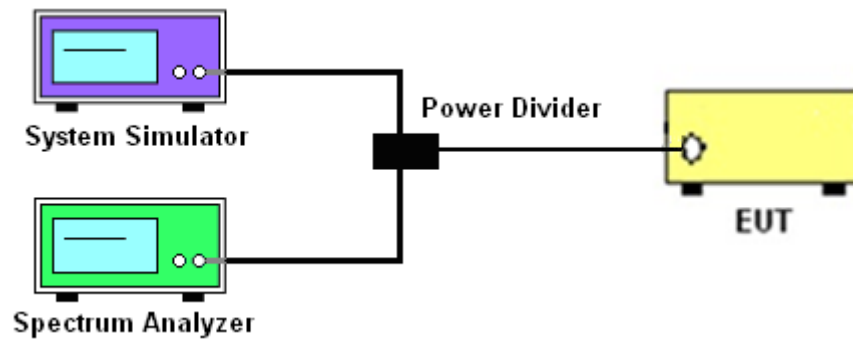
3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The emissions mask of low and high channels for the highest RF powers were measured.
3. The measured RBW and the VBW set 3 times of RBW are then set in spectrum analyzer, and the RBW correction factor $10 \log (1\% \text{ of OBW/measured RBW})(\text{dB})$ was compensated, if required.
4. The test results were shown below plots with a correction offset factor including cable loss, insertion loss of power divider.

3.3.4 Test Setup



3.3.5 Test Result (Plots) of Conducted Emissions Mask

Please refer to Appendix A.

3.4 Emissions Mask – Out Of Band Emissions Measurement

3.4.1 Description of Conducted Emissions Out of band emissions measurement

The power of any emission FCC Part 90.691 (a)(2) on any frequency removed from the assigned frequency by out of the authorized bandwidth at least $43 + 10 \log (P)$ dB. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

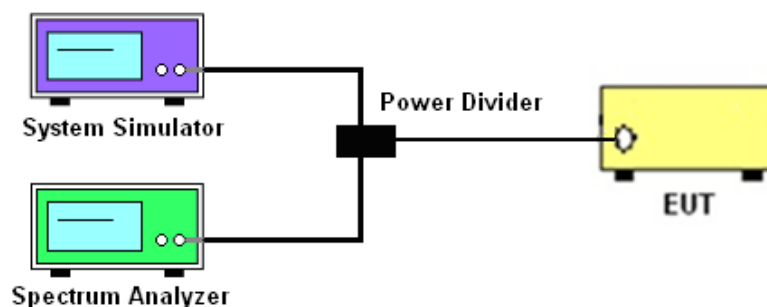
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

3.4.4 Test Setup



3.4.5 Test Result (Plots) of Conducted Emission

Please refer to Appendix A.

3.5 Field Strength of Spurious Radiation Measurement

3.5.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least $43 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log_{10}(P[\text{Watts}])$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.5.2 Measuring Instruments

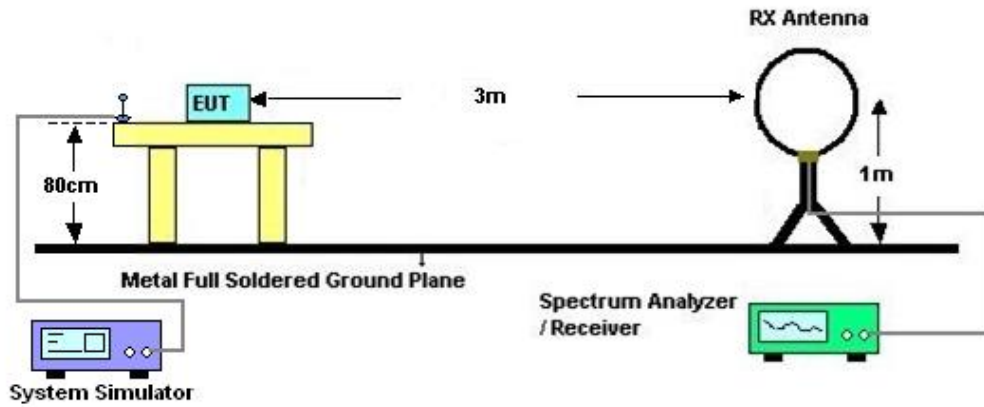
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

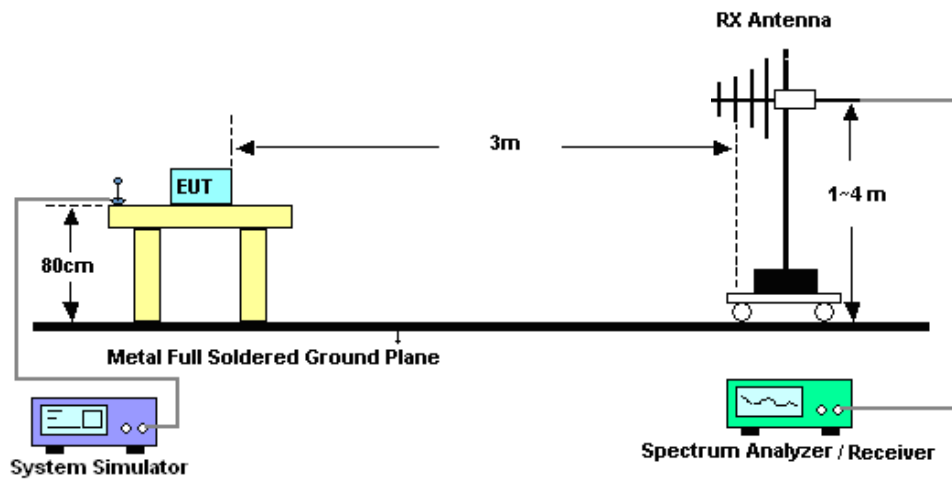
1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
11. $\text{ERP (dBm)} = \text{EIRP} - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from $43 + 10 \log(P)$ dB below the transmitter power P(Watts)

3.5.4 Test Setup

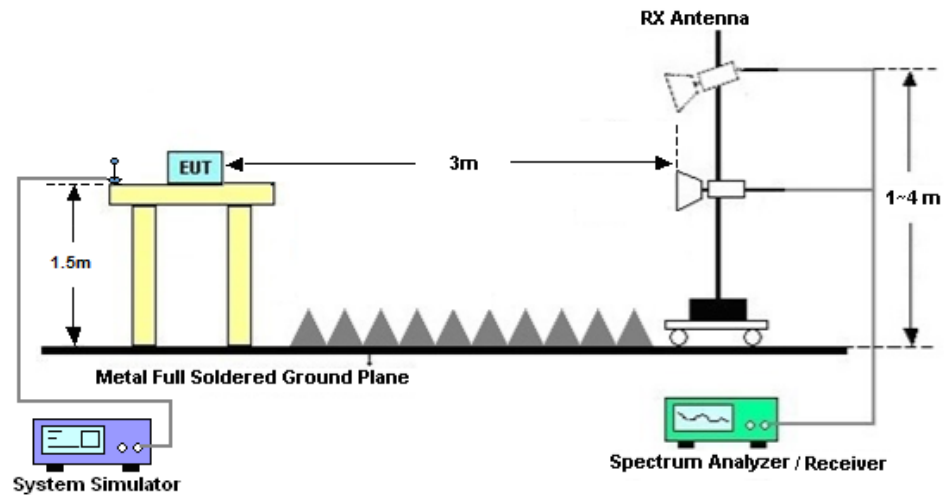
For radiated test from 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.5.5 Test Result of Field Strength of Spurious Radiated

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

3.6 Frequency Stability Measurement

3.6.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency according to FCC Part 90.213.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

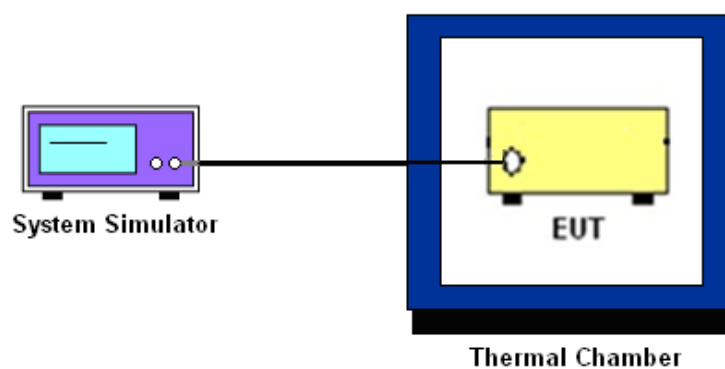
3.6.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.6.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
3. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the
4. battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

3.6.5 Test Setup



3.6.6 Test Result of Temperature Variation

Please refer to Appendix A.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Dec. 25, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V, 3A	Oct. 15, 2024	Dec. 25, 2024	Oct. 14, 2025	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.0 077	0.4GHz~26.5G Hz	Dec. 24, 2024	Dec. 25, 2024	Dec. 23, 2025	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhonggroup	LP-150U	H201408180 3	-40~+150°C	Jul. 03, 2024	Dec. 25, 2024	Jul. 02, 2025	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY5226018 5	20Hz~26.5GHz	Dec. 26, 2024	Dec. 27, 2024	Dec. 25, 2025	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 29, 2023	Dec. 27, 2024	Dec. 28, 2024	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY5327010 5	0.5GHz~26.5Gh z	Oct. 14, 2024	Dec. 27, 2024	Oct. 13, 2025	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Oct. 24, 2023	Dec. 27, 2024	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Dec. 27, 2024	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz~40GHz	Apr. 09, 2024	Dec. 27, 2024	Apr. 08, 2025	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 09, 2024	Dec. 27, 2024	Apr. 08, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30- 10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Dec. 27, 2024	Oct. 13, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 03, 2024	Dec. 27, 2024	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	6160100019 85	N/A	Oct. 14, 2024	Dec. 27, 2024	Oct. 13, 2025	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Dec. 27, 2024	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Dec. 27, 2024	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

5 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

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	± 1.34 dB
Occupied Channel Bandwidth	± 0.012 MHz
Conducted Power	± 1.34 dB
Peak to Average Ratio	± 1.34 dB
Frequency Stability	± 1.3 Hz

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.48 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.53 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.02 dB
---	---------

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



Appendix A. Test Results of Conducted Test

Test Engineer :	Khan Zhen	Temperature :	22~23℃
		Relative Humidity :	40~42%



FR1 N26

Transmitter Conducted Output Power

NR Band	SCS	BandWidth	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)
26	15	5	163300	816.5	DFT-s-OFDM QPSK	12@6	23.45
26	15	5	163300	816.5	DFT-s-OFDM QPSK	1@1	23.69
26	15	5	163300	816.5	DFT-s-OFDM QPSK	1@23	23.4
26	15	5	163300	816.5	DFT-s-OFDM 16 QAM	12@6	22.71
26	15	5	163300	816.5	DFT-s-OFDM 16 QAM	1@1	22.79
26	15	5	163300	816.5	DFT-s-OFDM 16 QAM	1@23	22.77
26	15	5	163800	819	DFT-s-OFDM QPSK	12@6	23.46
26	15	5	163800	819	DFT-s-OFDM QPSK	1@1	23.72
26	15	5	163800	819	DFT-s-OFDM QPSK	1@23	23.33
26	15	5	163800	819	DFT-s-OFDM 16 QAM	12@6	22.61
26	15	5	163800	819	DFT-s-OFDM 16 QAM	1@1	22.83
26	15	5	163800	819	DFT-s-OFDM 16 QAM	1@23	22.65
26	15	5	164300	821.5	DFT-s-OFDM QPSK	12@6	23.31
26	15	5	164300	821.5	DFT-s-OFDM QPSK	1@1	23.5
26	15	5	164300	821.5	DFT-s-OFDM QPSK	1@23	23.07
26	15	5	164300	821.5	DFT-s-OFDM 16 QAM	12@6	22.41
26	15	5	164300	821.5	DFT-s-OFDM 16 QAM	1@1	22.64
26	15	5	164300	821.5	DFT-s-OFDM 16 QAM	1@23	22.39
26	15	10	163800	819	DFT-s-OFDM QPSK	25@12	23.46
26	15	10	163800	819	DFT-s-OFDM QPSK	1@1	23.78
26	15	10	163800	819	DFT-s-OFDM QPSK	1@50	23.17
26	15	10	163800	819	DFT-s-OFDM 16 QAM	25@12	22.6
26	15	10	163800	819	DFT-s-OFDM 16 QAM	1@1	22.83
26	15	10	163800	819	DFT-s-OFDM 16 QAM	1@50	22.48
26	15	15	164300	821.5	DFT-s-OFDM QPSK	36@18	23.32
26	15	15	164300	821.5	DFT-s-OFDM QPSK	1@1	23.72
26	15	15	164300	821.5	DFT-s-OFDM QPSK	1@77	22.79
26	15	15	164300	821.5	DFT-s-OFDM 16 QAM	36@18	22.38
26	15	15	164300	821.5	DFT-s-OFDM 16 QAM	1@1	22.77
26	15	15	164300	821.5	DFT-s-OFDM 16 QAM	1@77	22.13
26	15	20	164800	824	DFT-s-OFDM PI/2 BPSK	50@25	23.59
26	15	20	164800	824	DFT-s-OFDM PI/2 BPSK	1@1	23.83
26	15	20	164800	824	DFT-s-OFDM PI/2 BPSK	1@104	23.01



NR Band	SCS	BandWidth	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)
26	15	20	164800	824	DFT-s-OFDM QPSK	50@25	23.61
26	15	20	164800	824	DFT-s-OFDM QPSK	1@1	23.72
26	15	20	164800	824	DFT-s-OFDM QPSK	1@104	22.85
26	15	20	164800	824	DFT-s-OFDM 16 QAM	50@25	22.68
26	15	20	164800	824	DFT-s-OFDM 16 QAM	1@1	23
26	15	20	164800	824	DFT-s-OFDM 16 QAM	1@104	22.25
26	15	20	164800	824	DFT-s-OFDM 64 QAM	50@25	21.17
26	15	20	164800	824	DFT-s-OFDM 64 QAM	1@1	21.19
26	15	20	164800	824	DFT-s-OFDM 64 QAM	1@104	20.42
26	15	20	164800	824	DFT-s-OFDM 256 QAM	50@25	19.15
26	15	20	164800	824	DFT-s-OFDM 256 QAM	1@1	19.32
26	15	20	164800	824	DFT-s-OFDM 256 QAM	1@104	18.56
26	15	20	164800	824	CP-OFDM QPSK	53@26	22.17
26	15	20	164800	824	CP-OFDM QPSK	1@1	22.5
26	15	20	164800	824	CP-OFDM QPSK	1@104	21.59



Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0000	PASS	NV
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0029	PASS	LV
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0010	PASS	HV
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0010	PASS	-30°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0032	PASS	-20°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0063	PASS	-10°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0032	PASS	0°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0045	PASS	10°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0000	PASS	20°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0016	PASS	30°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0035	PASS	40°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	0.0058	PASS	50°C

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	11.2	PASS	NV
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	16.9	PASS	LV
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	14.5	PASS	HV
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	16.4	PASS	-30°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	11.9	PASS	-20°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	10.7	PASS	-10°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	15.6	PASS	0°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	15.1	PASS	10°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	11.2	PASS	20°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	18.3	PASS	30°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	19	PASS	40°C
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	11.1	PASS	50°C

$|\text{MAX}(\Delta f)| = 19 \text{ Hz}$

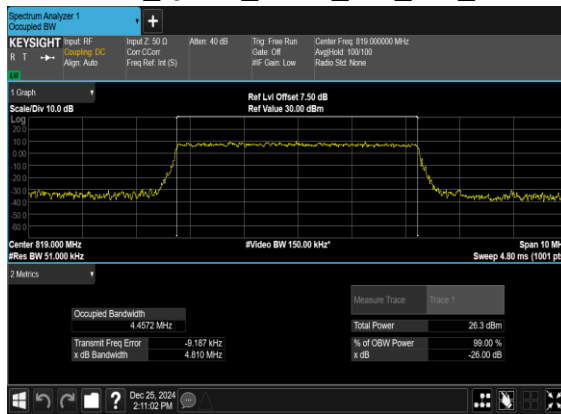
Frequency Stability	Frequency (MHz)	Limit Line	Result
$f_L - \text{MAX}(\Delta f) $	814.344681	$\geq 814 \text{ MHz}$	PASS
$f_H + \text{MAX}(\Delta f) $	823.255719	$\leq 824 \text{ MHz}$	

**Occupied Bandwidth**

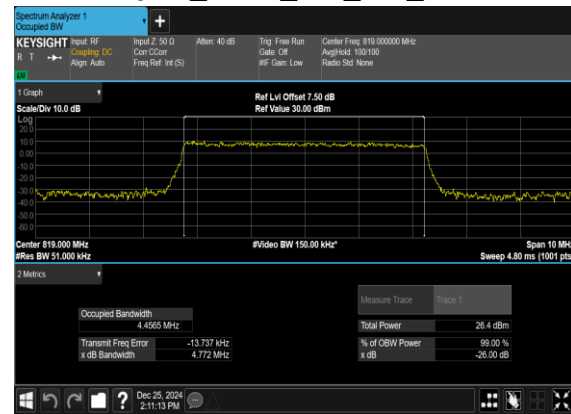
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
26	15	5	163800	819.0	CP-OFDM QPSK	25@0	4.4572	4.81
26	15	5	163800	819.0	CP-OFDM 16 QAM	25@0	4.4565	4.772
26	15	5	163800	819.0	CP-OFDM 64 QAM	25@0	4.4728	4.794
26	15	5	163800	819.0	CP-OFDM 256 QAM	25@0	4.4682	4.762
26	15	10	163800	819.0	CP-OFDM QPSK	52@0	9.2496	9.713
26	15	10	163800	819.0	CP-OFDM 16 QAM	52@0	9.2657	9.68
26	15	10	163800	819.0	CP-OFDM 64 QAM	52@0	9.2759	9.678
26	15	10	163800	819.0	CP-OFDM 256 QAM	52@0	9.2521	9.685
26	15	15	164300	821.5	CP-OFDM QPSK	79@0	14.09	14.68
26	15	15	164300	821.5	CP-OFDM 16 QAM	79@0	14.089	14.66
26	15	15	164300	821.5	CP-OFDM 64 QAM	79@0	14.103	14.66
26	15	15	164300	821.5	CP-OFDM 256 QAM	79@0	14.058	14.66
26	15	20	164800	824.0	CP-OFDM QPSK	106@0	18.91	19.69
26	15	20	164800	824.0	CP-OFDM 16 QAM	106@0	18.898	19.68
26	15	20	164800	824.0	CP-OFDM 64 QAM	106@0	18.943	19.68
26	15	20	164800	824.0	CP-OFDM 256 QAM	106@0	18.919	19.6



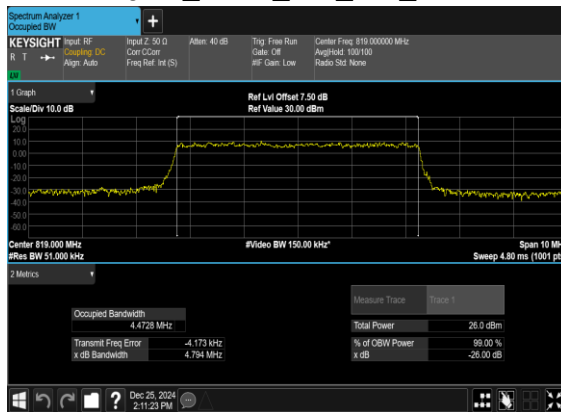
N26(5M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



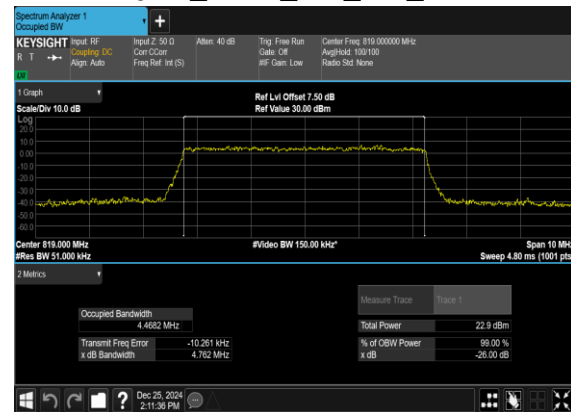
N26(5M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N26(5M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

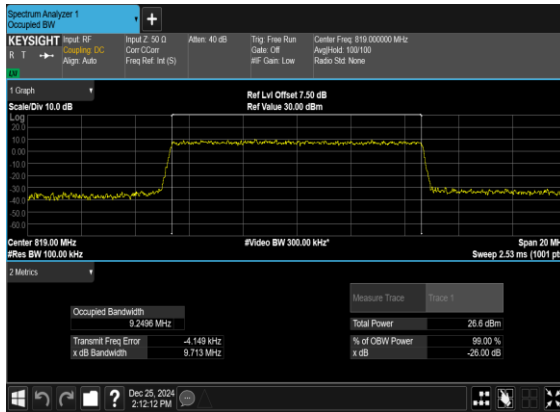


N26(5M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

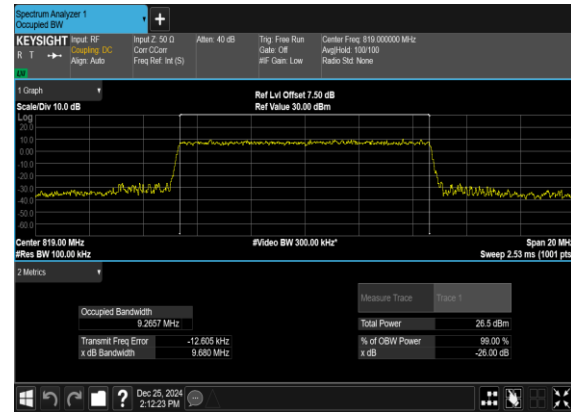




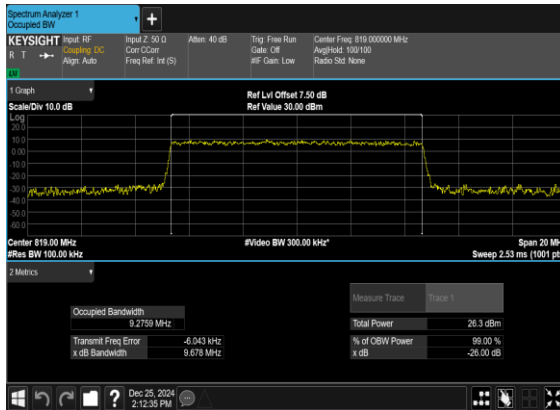
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OFDM_QPSK_Outer_Full_Mid_CH



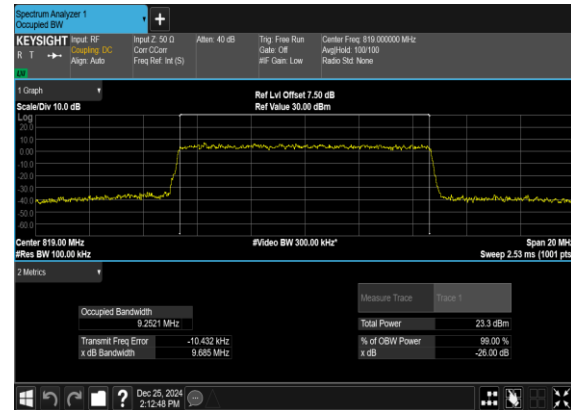
N26(10M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N26(10M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

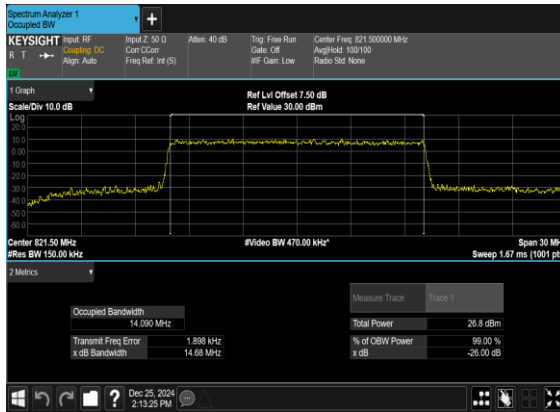


N26(10M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

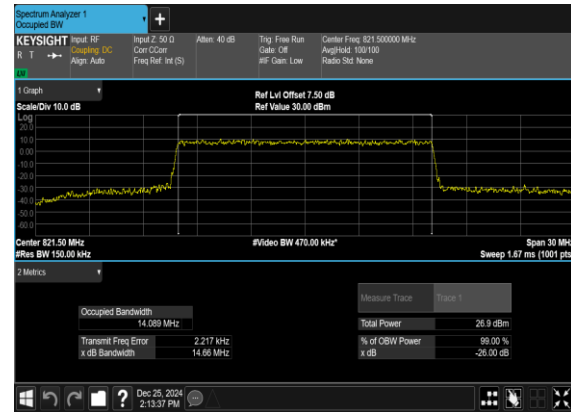




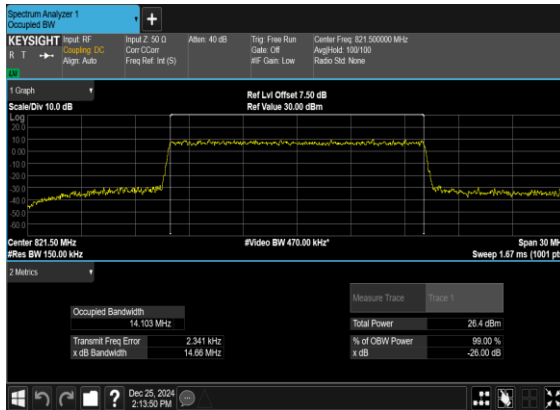
N26(15M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



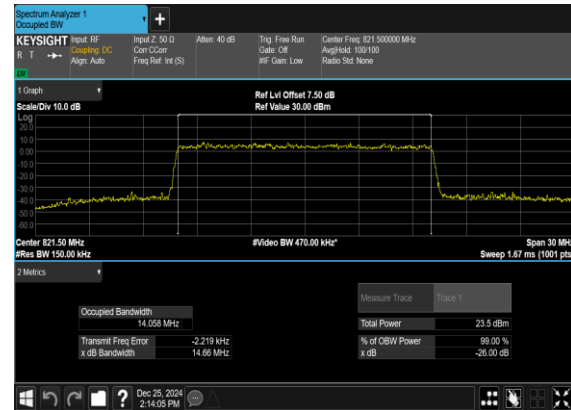
N26(15M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N26(15M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

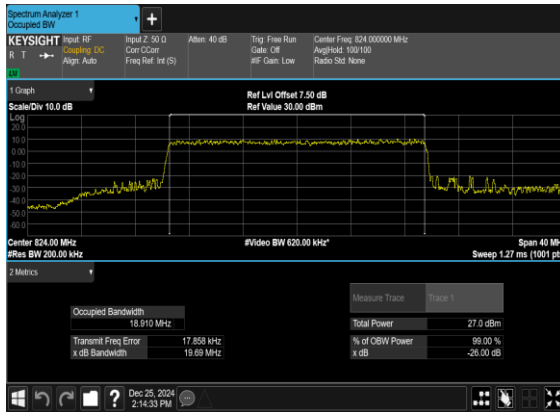


N26(15M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

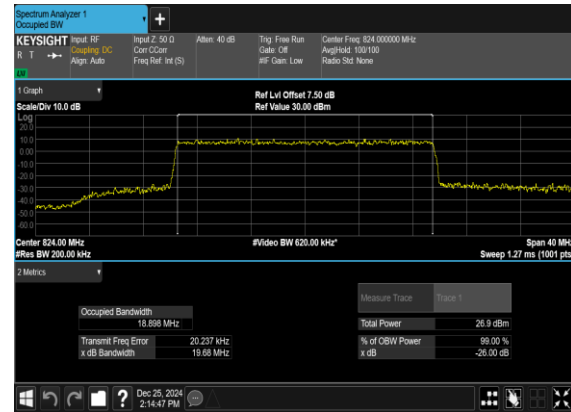




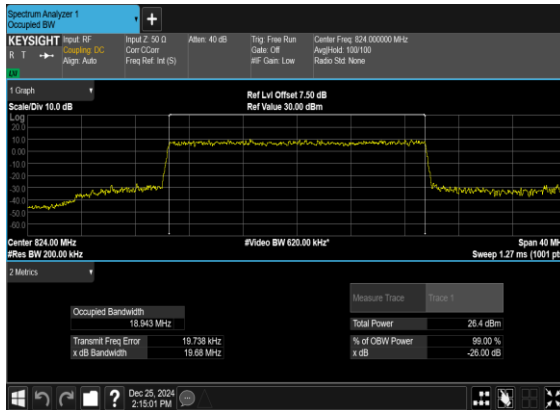
N26(20M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



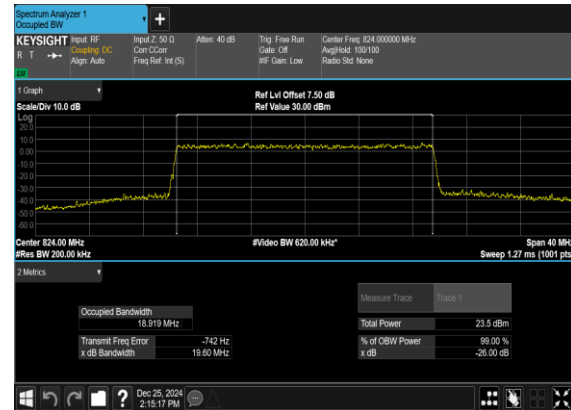
N26(20M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N26(20M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



N26(20M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



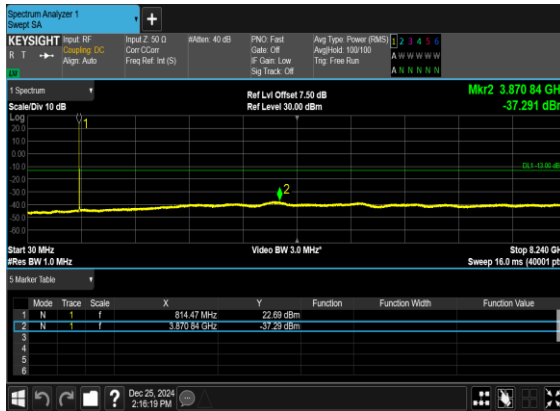


Conducted Spurious Emissions

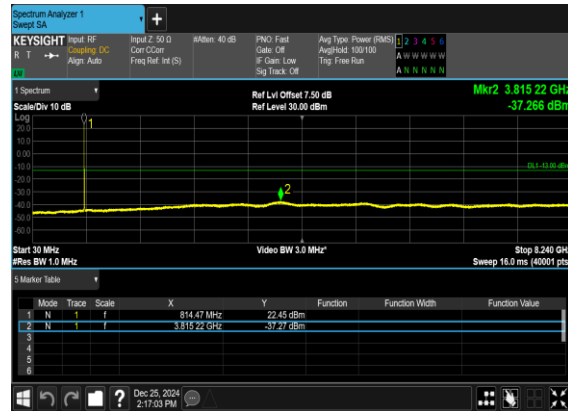
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
26	15	5	163300	816.5	DFT-s-OFDM BPSK	1@0	see graph	---
26	15	5	163300	816.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	5	163300	816.5	DFT-s-OFDM QPSK	1@0	see graph	---
26	15	5	163300	816.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
26	15	5	163800	819.0	DFT-s-OFDM BPSK	1@0	see graph	---
26	15	5	163800	819.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	5	163800	819.0	DFT-s-OFDM QPSK	1@0	see graph	---
26	15	5	163800	819.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
26	15	5	164300	821.5	DFT-s-OFDM BPSK	1@0	see graph	---
26	15	5	164300	821.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	5	164300	821.5	DFT-s-OFDM QPSK	1@0	see graph	---
26	15	5	164300	821.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM BPSK	1@0	see graph	---
26	15	10	163800	819.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM QPSK	1@0	see graph	---
26	15	10	163800	819.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM BPSK	1@0	see graph	---
26	15	20	164800	824.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM QPSK	1@0	see graph	---
26	15	20	164800	824.0	DFT-s-OFDM QPSK	1@0	see graph	PASS



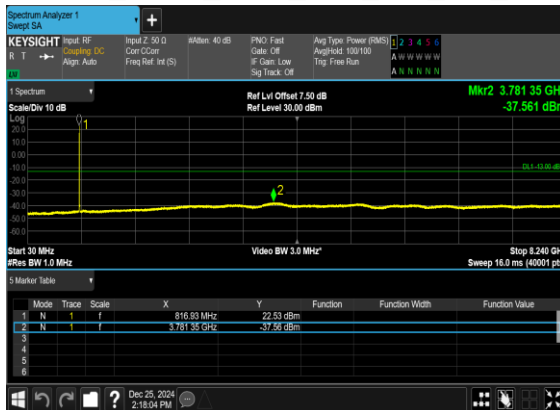
N26(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



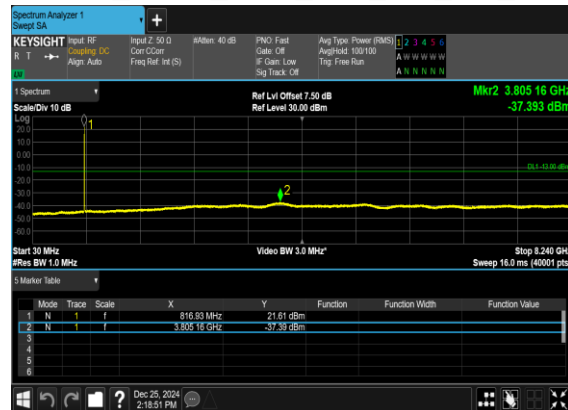
N26(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



N26(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



N26(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH

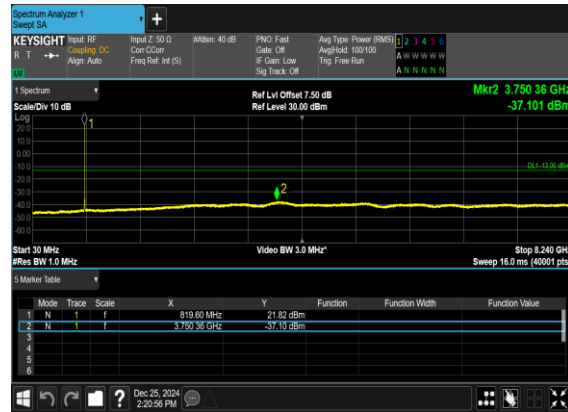




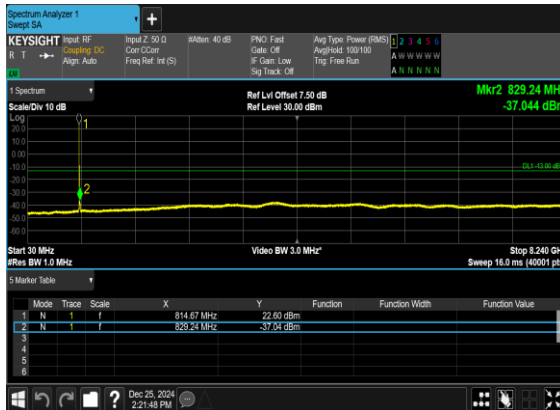
N26(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



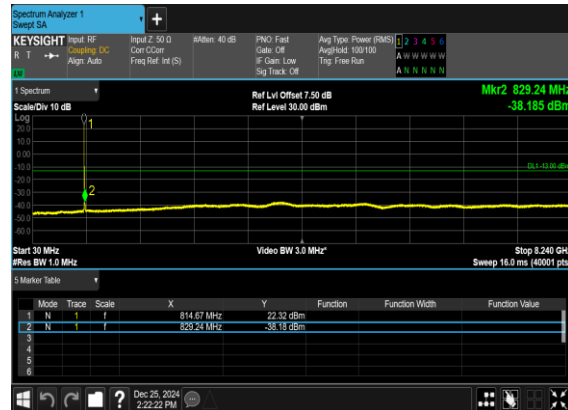
N26(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH



N26(10M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH

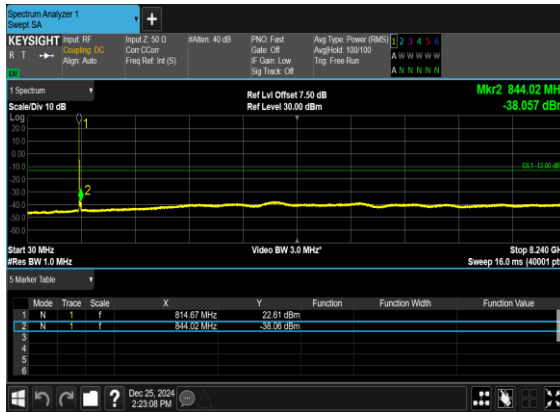


N26(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH

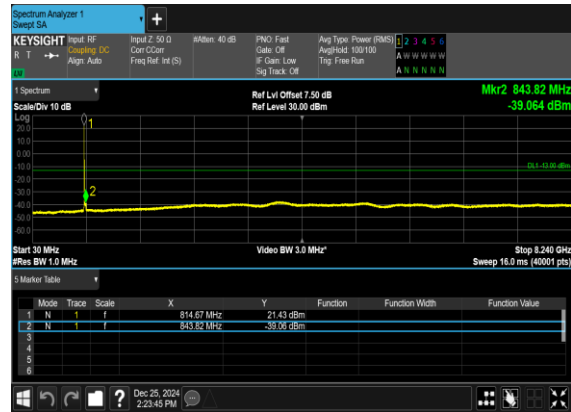




N26(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



N26(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH

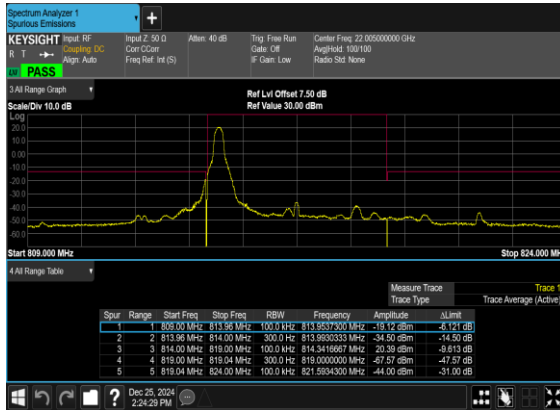


**Conducted Band Edge**

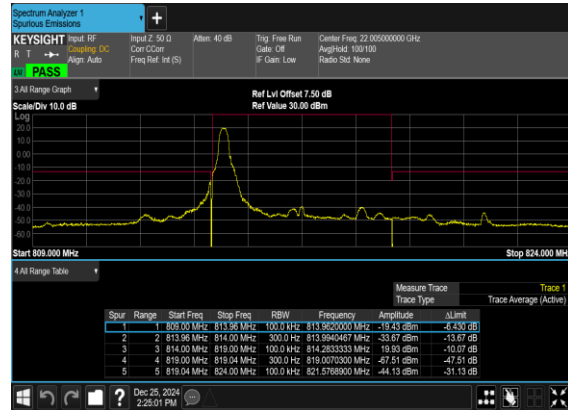
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
26	15	5	163300	816.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	5	163300	816.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
26	15	5	163300	816.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
26	15	5	163300	816.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
26	15	5	164300	821.5	DFT-s-OFDM BPSK	1@24	see graph	PASS
26	15	5	164300	821.5	DFT-s-OFDM QPSK	1@24	see graph	PASS
26	15	5	164300	821.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
26	15	5	164300	821.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM BPSK	1@51	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM QPSK	1@51	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM BPSK	50@0	see graph	PASS
26	15	10	163800	819.0	DFT-s-OFDM QPSK	50@0	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM BPSK	1@105	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM QPSK	1@105	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM BPSK	100@0	see graph	PASS
26	15	20	164800	824.0	DFT-s-OFDM QPSK	100@0	see graph	PASS



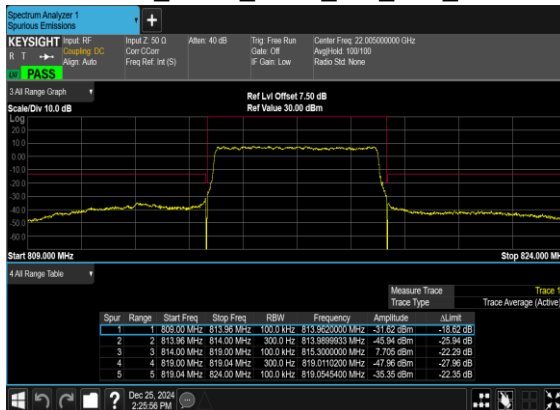
N26(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



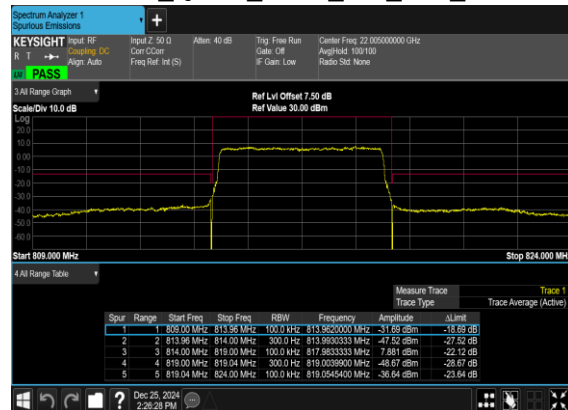
N26(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



N26(5M)_DFT-s-
OFDM_BPSK_Outer_Full_Low_CH

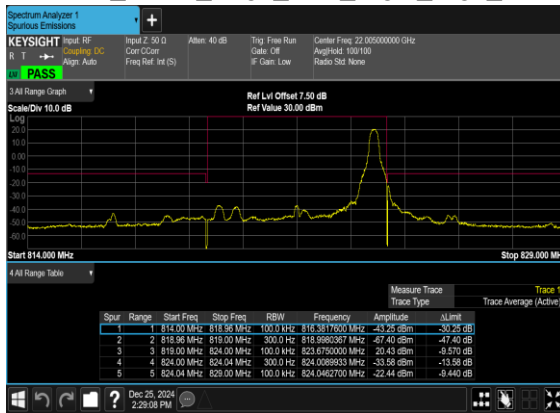


N26(5M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH

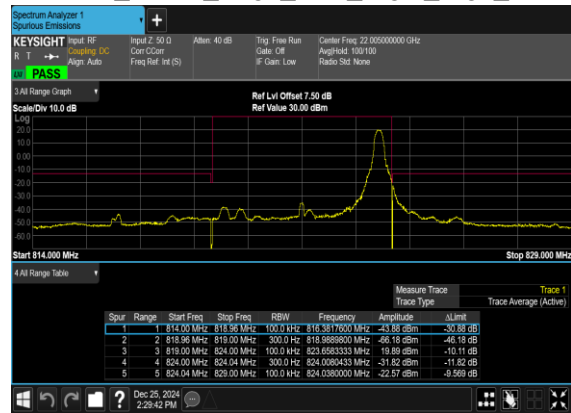




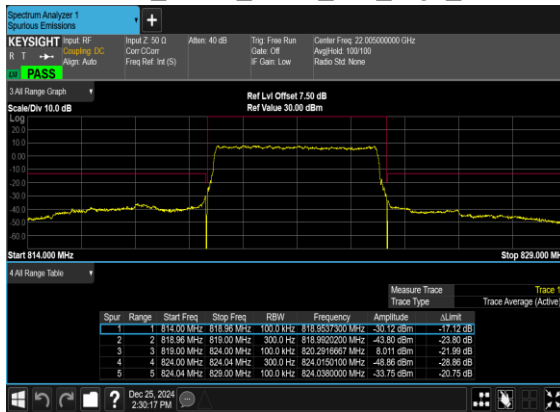
N26(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



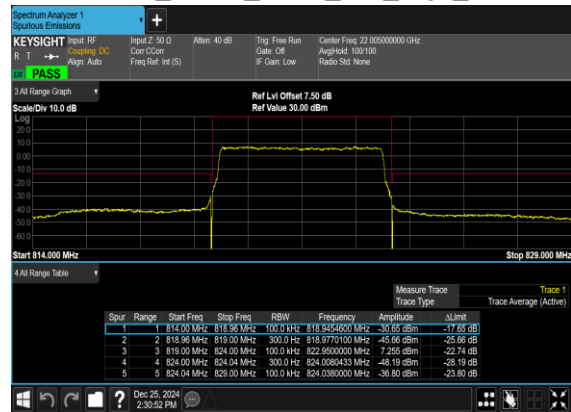
N26(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



N26(5M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH

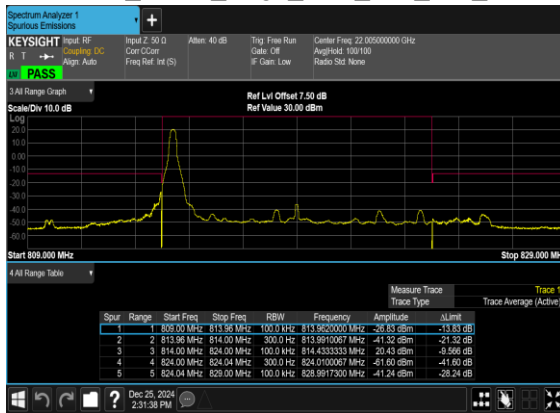


N26(5M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH

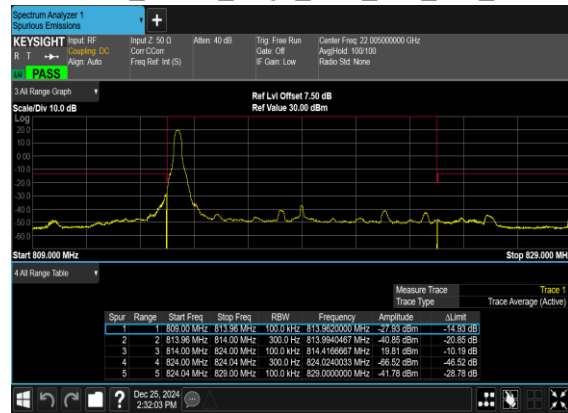




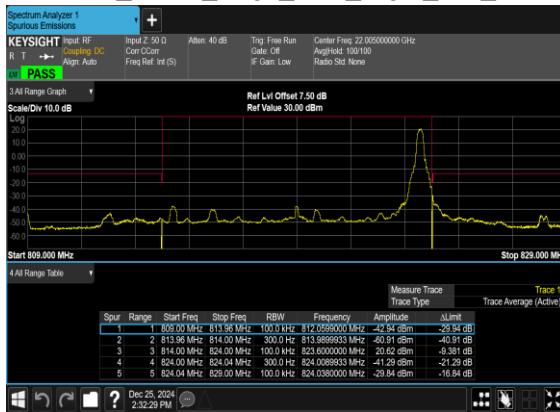
N26(10M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



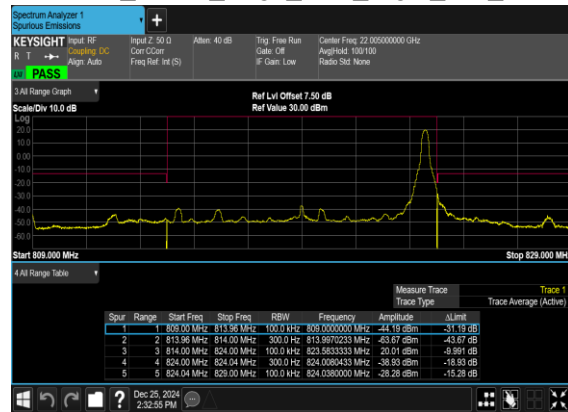
N26(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH



N26(10M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_Mid_CH

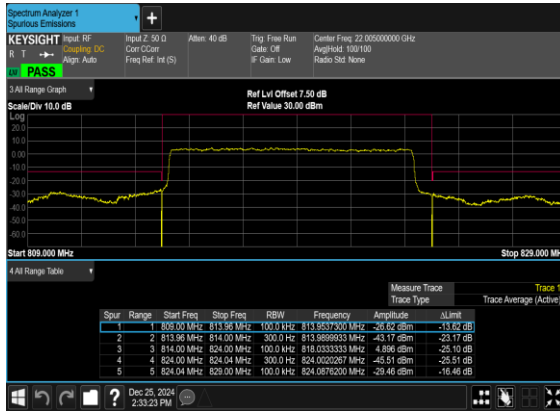


N26(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_Mid_CH

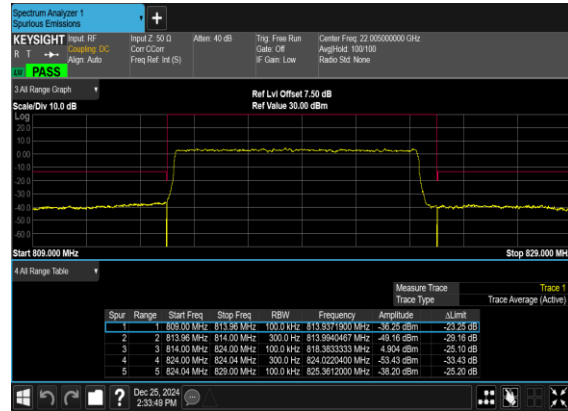




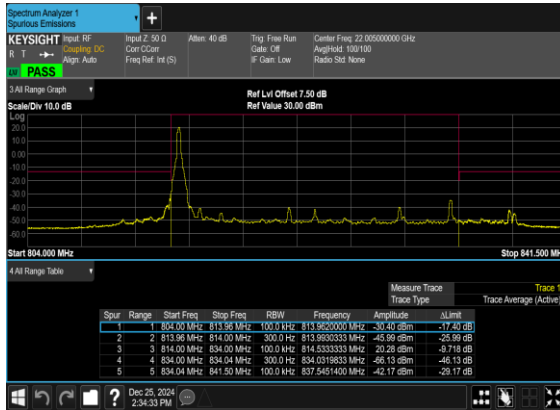
N26(10M)_DFT-s-
OFDM_BPSK_Outer_Full_Mid_CH



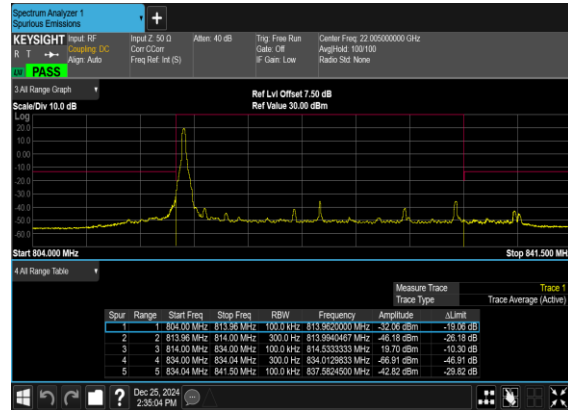
N26(10M)_DFT-s-
OFDM_QPSK_Outer_Full_Mid_CH



N26(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH

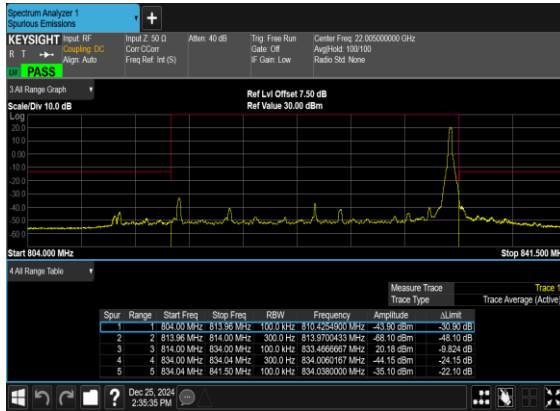


N26(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH

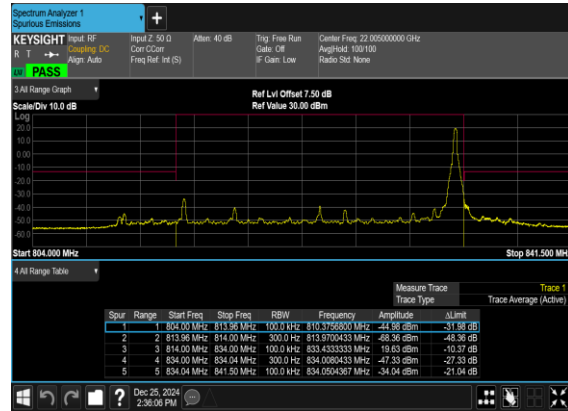




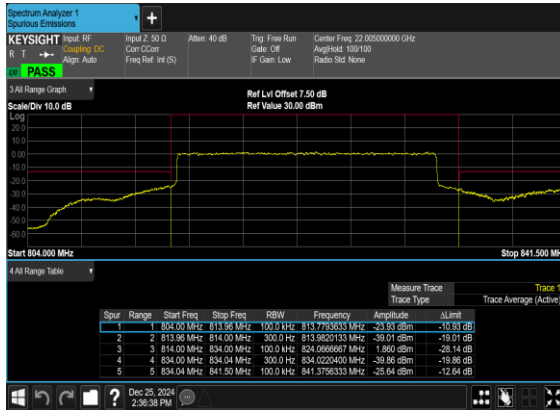
N26(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_Mid_CH



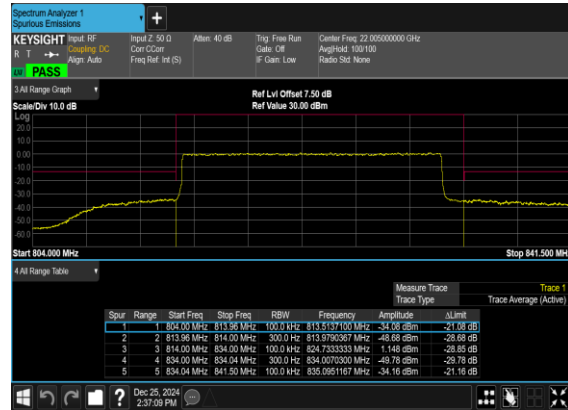
N26(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_Mid_CH



N26(20M)_DFT-s-
OFDM_BPSK_Outer_Full_Mid_CH



N26(20M)_DFT-s-
OFDM_QPSK_Outer_Full_Mid_CH





Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	HuaCong Liang	Temperature :	22~25°C
		Relative Humidity :	48~52%

Note: Pre-scanned harmonic for the different antennas, we choose the worst antenna mode to perform final test and record in the report.

n26 SA / NR 10MHz / QPSK(Ant.1)									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1628.8	-65.75	-13	-52.75	-77.20	-69.00	4.00	9.40	H
	2443.2	-60.47	-13	-47.47	-78.92	-64.04	4.88	10.60	H
	3257.6	-59.58	-13	-46.58	-80.10	-64.51	5.52	12.60	H
	1628.8	-64.94	-13	-51.94	-76.99	-68.19	4.00	9.40	V
	2443.2	-59.93	-13	-46.93	-78.82	-63.50	4.88	10.60	V
	3257.6	-58.28	-13	-45.28	-80.07	-63.21	5.52	12.60	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

n26 SA / NR 10MHz / QPSK(Ant.1)									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	1630	-65.88	-13	-52.88	-77.33	-69.05	4.10	9.42	H
	2445	-60.25	-13	-47.25	-78.70	-63.83	4.90	10.63	H
	3260	-59.13	-13	-46.13	-79.65	-64.05	5.55	12.62	H
	1630	-65.19	-13	-52.19	-77.24	-68.36	4.10	9.42	V
	2445	-59.52	-13	-46.52	-78.41	-63.10	4.90	10.63	V
	3260	-57.87	-13	-44.87	-79.66	-62.79	5.55	12.62	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.