Spot Check Evaluation

APPLICANT	:	**Xiaomi Communications Co., Ltd.**
EQUIPMENT	:	**Mobile Phone**
BRAND NAME	:	**Redmi**
MODEL NAME	:	**25062PC34G**
FCC ID	:	**2AFZZPC34G**
STANDARD	:	**47 CFR Part 22(H), 24(E), 27(L), 27(M), 90(S)** **47 CFR Part 15 Subpart C §15.247** **47 CFR Part 15 Subpart E §15.407**
TEST DATE(S)	:	**May 12, 2025 ~ May 25, 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

TABLE OF CONTENTS

REVISION HISTORY **3**

1 GENERAL DESCRIPTION **4**

1.1 Applicant 4
1.2 Manufacturer 4
1.3 Product Feature of Equipment Under Test 4
1.4 Modification of EUT 4
1.5 Testing Site 5
1.6 Test Software 5
1.7 Applicable Standards 6

2 RE-USE OF MEASURED DATA **7**

2.1 Introduction Section 7
2.2 Model Difference Information 7
2.3 Reference detail Section: 8
2.4 Spot Check Verification Data Section 9

3 LIST OF MEASURING EQUIPMENT **12**

4 MEASUREMENT UNCERTAINTY **14**

APPENDIX A. RADIATED SPURIOUS EMISSION

APPENDIX B. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
542103-03	Rev. 01	Initial issue of report	Jun. 04, 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

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Manufacturer

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Redmi
Model Name	25062PC34G
FCC ID	2AFZZPC34G
IMEI Code	Conducted: 866694070007342/866694070007359 Radiation: 866694070007227/866694070007235 Conduction: 866694070007722/866694070007730 DFS: 866694070007789/866694070007797
HW Version	13510O19A
SW Version	Xiaomi HyperOS 2.0
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	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.**
	DFS01-SZ CO02-SZ 03CH04-SZ 03CH02-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.	03CH02-SZ	AUDIX	E3	6.2009-8-24a
3.	03CH04-SZ	AUDIX	E3	6.2009-8-24
4.	CO02-SZ	AUDIX	E3	6.120613b
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 22(H), 24(E), 27(L), 27(M), 90(S)
- 47 CFR Part 15 Subpart C §15.247
- 47 CFR Part 15 Subpart E §15.407
- ANSI C63.10-2013
- ANSI C63.26-2015

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: 25062PC34G, FCC ID: 2AFZZPC34G) is electrically identical to the reference device (Model: 25062RN2DL, FCC ID: 2AFZZRN2DL) 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 FA542811.

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: 2AFZZPC34G .

2.2 Model Difference Information

The **main** difference between FCC ID: 2AFZZRN2DL and FCC ID: 2AFZZPC34G is as below:

- Remove LTE B13.
- Add NFC function, LTE B20.

Other differences and all the details of similarity and difference can be found in the confidential documents (2AFZZPC34G 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	2AFZZRN2DL	Full test	FR542103A	2AFZZPC34G	Spot check	Y, All test items
	DTS (BLE)	2400~2483.5	2AFZZRN2DL	Full test	FR542103B	2AFZZPC34G	Spot check	Y, All test items
	DTS (WLAN)	2400~2483.5	2AFZZRN2DL	Full test	FR542103C	2AFZZPC34G	Spot check	Y, All test items
15E	U-NII	5180~5240	2AFZZRN2DL	Full test	FR542103D	2AFZZPC34G	Spot check	Y, All test items
		5260~5320	2AFZZRN2DL	Full test	FR542103D	2AFZZPC34G	Spot check	Y, All test items
		5500~5700	2AFZZRN2DL	Full test	FR542103D	2AFZZPC34G	Spot check	Y, All test items
		5745~5825	2AFZZRN2DL	Full test	FR542103D	2AFZZPC34G	Spot check	Y, All test items
		5260~5320 5500~5700	2AFZZRN2DL	Full test	FZ542103	2AFZZPC34G	Spot check	Y, All test items
22, 24, 27, 90,	PCE (GSM)	GSM 850/1900	2AFZZRN2DL	Full test	FG542103A	2AFZZPC34G	Spot check	Y, All test items
	PCE (WCDMA)	Band II, IV, V	2AFZZRN2DL	Full test	FG542103A	2AFZZPC34G	Spot check	Y, All test items
	PCE (LTE)	B2/4/5/7/26/38//41/66	2AFZZRN2DL	Full test	FG542103B FG542103C	2AFZZPC34G	Spot check	Y, All test items
	PCE (LTE)	B26 (90S)	2AFZZRN2DL	Full test	FG542103D	2AFZZPC34G	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 ddB from the reference data satisfies the following condition:

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

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

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	2AFZZRN2DL Parent Worst mode Test Result	2AFZZPC34G Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
BT 1Mbps	Number of Channels	79	79	0	3
	Hopping Channel Separation	0.986	0.999	0.013	3
	Dwell Time of Each Channel	0.307	0.307	0	3
	20dB Bandwidth	0.957	0.943	0.014	3
	99% Bandwidth	0.859	0.855	0.004	3
	Conducted Band Edges	-45.12	-45.45	0.33	3
	Conducted Spurious Emission	-38.1	-38.77	0.67	3
BT 1Mbps	Radiated Band Edges and Radiated Spurious Emission	56.90	54.47	2.43	3
BT	AC Conducted Emission	50.19	51.39	1.2	3
BLE 1Mbps	6dB Bandwidth	0.672	0.67	0.002	3
	99% Bandwidth	1.027	1.027	0	3
	Power Spectral Density	-11.7	-12.26	0.56	3
	Conducted Band Edges	-47.4	-47.54	0.14	3
	Conducted Spurious Emission	-38.93	-38.77	0.16	3
BLE 1Mbps	Radiated Band Edges and Spurious Emission	39.29	38.67	0.62	3
BLE	AC Conducted Emission	50.19	51.39	1.2	3
WIFI 2.4G	6dB Bandwidth	8.12	8.58	0.46	3
	99% Bandwidth	13.89	13.89	0	3
	Power Spectral Density	-5.49	-5.19	0.3	3
	Conducted Band Edges	-34.79	-35.13	0.34	3
	Conducted Spurious Emission	-47.92	-48.48	0.56	3
WIFI 2.4G	Radiated Band Edges and Spurious Emission	50.39	49.29	1.1	3
WIFI 2.4G	AC Conducted Emission	50.19	51.39	1.2	3
WIFI 5G	26dB &99% Bandwidth	24.84	24.60	0.24	3
	Power Spectral Density	1.12	1.39	0.27	3
	Radiated Band Edges and Spurious Emission (UNII-1/2A/2C)	50.71	50.76	0.05	3
	Radiated Band Edges and Spurious Emission(UNII-3)	54.19	53.24	0.95	3
	DFS	0.923631	0.875229	0.048402	3
WIFI 5G	AC Conducted Emission	47.60	48.58	0.98	3
Part 24(E) (LTE Band 2)	Peak-to-Average Ratio	5.07	5.25	0.18	3
	26dB Bandwidth	3.00	2.99	0.01	3
	Occupied Bandwidth	2.70	2.73	0.03	3
	Conducted Band Edge Measurement	-15.00	-17.21	2.21	3
	Conducted Spurious Emission	-45.02	-42.57	2.45	3
	Frequency Stability Temperature & Voltage	0.0021	0.0016	0.0005	3
Part 27(M) (LTE Band 41)	Radiated Spurious Emission	-51.05	-50.7	0.35	3

Test Item	Mode	2AFZZRN2DL Parent Worst mode Test Result	2AFZZPC34G Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
Conducted Power (dBm)	BT BR/EDR	9.30	9.00	0.3	3
	BLE 1Mbps	4.35	3.90	0.45	3
	11b, 2.4GHz	20.08	19.72	0.36	3
	11g, 2.4GHz	19.88	19.54	0.34	3
	11n HT20, 2.4GHz	19.33	19.03	0.3	3
	11a, 5.3GHz	13.60	13.42	0.18	3
	11n HT20, 5.2GHz	13.63	13.25	0.38	3
	11n HT40, 5.3GHz	12.97	12.69	0.28	3
	11ac VHT20, 5.2GHz	13.57	13.20	0.37	3
	11ac VHT40, 5.3GHz	12.92	12.71	0.21	3
	11ac VHT80, 5.3GHz	11.80	11.68	0.12	3
	11a, 5.8GHz	13.59	13.44	0.15	3
	11n HT20, 5.8GHz	13.62	13.46	0.16	3
	11n HT40, 5.8GHz	12.73	12.51	0.22	3
	11ac VHT20, 5.8GHz	13.60	13.35	0.25	3
	11ac VHT40, 5.8GHz	12.69	12.43	0.26	3
	11ac VHT80, 5.8GHz	11.56	11.29	0.27	3
	GSM 850	32.57	32.5	0.07	3
	EDGE 850	26.93	26.91	0.02	3
	GSM 1900	29.27	29.22	0.05	3
	EDGE 1900	26.13	26.09	0.04	3
	WCDMA II	23.71	23.66	0.05	3
	WCDMA IV	23.84	23.83	0.01	3
	WCDMA V	23.73	23.84	0.11	3
	B2	24.52	24.22	0.3	3
	B4	24.37	24.37	0	3
	B5	24.37	24.10	0.27	3
	B7	24.40	24.01	0.39	3
	B26(90S)	24.06	23.98	0.08	3
	B26	24.41	24.12	0.29	3
	B66	24.32	24.38	0.06	3
	B38	24.25	23.69	0.56	3
	B41	24.30	23.94	0.36	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	May 14, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2025	May 14, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2025	May 14, 2025	Jan. 01, 2026	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 14, 2024	May 25, 2025	Oct. 13, 2025	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	May 25, 2025	Jul. 02, 2025	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	May 25, 2025	Dec. 27, 2025	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	May 08, 2025	May 25, 2025	May 07, 2026	Radiation (03CH04-SZ)
Double Ridge Guide Antenna	ETS-Lindgren	Burgeon-3117	00240057	1GHz~18GHz	Jul. 13, 2024	May 25, 2025	Jul. 12, 2025	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 04, 2024	May 25, 2025	Jul. 03, 2025	Radiation (03CH04-SZ)
LF Amplifier	EM Electronics	EM330	060773	20MHz-3GHz	Apr. 02, 2025	May 25, 2025	Apr. 01, 2026	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	May 25, 2025	Oct. 13, 2025	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	May 25, 2025	Jul. 02, 2025	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY57280136	500MHz~26.5GHz	Jul. 03, 2024	May 25, 2025	Jul. 02, 2025	Radiation (03CH04-SZ)
AC Power Source	APC	AFV-S-600B	F119050019	N/A	Oct. 14, 2024	May 25, 2025	Oct. 13, 2025	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 25, 2025	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 25, 2025	NCR	Radiation (03CH04-SZ)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul. 03, 2024	May 14, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul. 03, 2024	May 14, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Dec. 25, 2024	May 14, 2025	Dec. 24, 2025	Conduction (CO02-SZ)
Signal Analyzer	R&S	FSV7	101473	10Hz~7GHz	Dec. 25, 2024	May 15, 2025	Dec. 24, 2025	Conducted (DFS01-SZ)
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200424	9kHz~6GHz	Apr. 02, 2025	May 15, 2025	Apr. 01, 2026	Conducted (DFS01-SZ)
Combiner	TOJOIN	PS-2AM-0460	SZE14011007	0.4~6GHz	Sep. 05, 2024	May 15, 2025	Sep. 04, 2025	Conducted (DFS01-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	May 12, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	May 12, 2025	NCR	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H20140114 40	-40~+150°C 20%~95%RH	Jul. 04, 2024	May 12, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	May 19, 2025	Jul. 02, 2025	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	May 19, 2025	Dec. 27, 2025	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	May 19, 2025	Oct. 23, 2025	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	May 19, 2025	Jul. 04, 2025	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	May 19, 2025	Jul. 03, 2025	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 03, 2025	May 19, 2025	Apr. 02, 2027	Radiation (03CH02-SZ)
LF Amplifier	EM Electronics	EM330	060788	20MHz-3GHz	Dec. 25, 2024	May 19, 2025	Dec. 24, 2025	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 14, 2024	May 19, 2025	Oct. 13, 2025	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010003043	N/A	Oct. 18, 2024	May 19, 2025	Oct. 17, 2025	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	May 19, 2025	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	May 19, 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)

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	**±0.4 Hz**

Uncertainty of Conducted Measurement (DFS)

Test Item	Uncertainty
Conducted Generated signal Levels	**±0.62 dB**
Conducted Time	**0.38%**

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	**±0.4 Hz**

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

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

03CH04-SZ(BT/WIF):

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.8 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1 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 :	Wenbo Xiao	Relative Humidity :	50%
		Temperature :	20℃~22℃

Radiated Spurious Emission Test Modes

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	CO-TX	6	802.11g	11	2462	6Mbps	-	-
		1	LTE B41 + NFC	-	-	-	-	-
Mode 2	CO_TX	6	Bluetooth-LE	39	2480	2Mbps	-	-
		1	LTE B41 + NFC	-	-	-	-	-
Mode 3	CO_TX	6	802.11ac VHT80	58	5290	MCS0	-	-
		1	LTE B41 + NFC	-	-	-	-	-

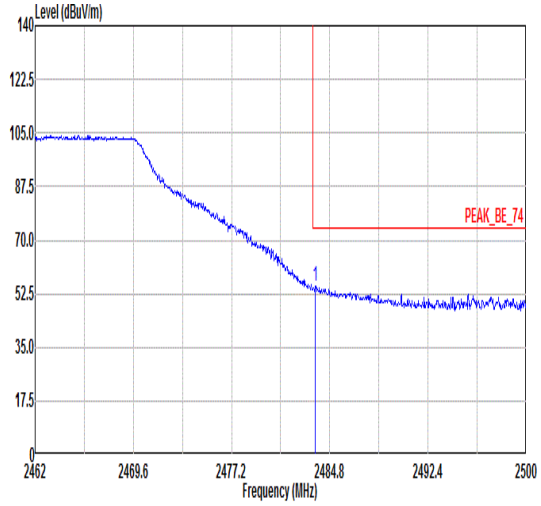
Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
1	802.11g	11	2483.51	45.06	54.00	-8.94	V	AVERAGE	Pass	Band Edge
	802.11g	11	7386.00	44.76	74.00	-29.24	V	Peak	Pass	Harmonic
2	Bluetooth-LE	39	2499.44	43.47	54.00	-10.53	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE	39	7440.00	45.22	74.00	-28.78	H	Peak	Pass	Harmonic
3	802.11ac VHT80	58	5354.60	50.29	54.00	-3.71	H	AVERAGE	Pass	Band Edge
	802.11ac VHT80	58	10580.00	47.82	68.30	-20.48	V	Peak	Pass	Harmonic

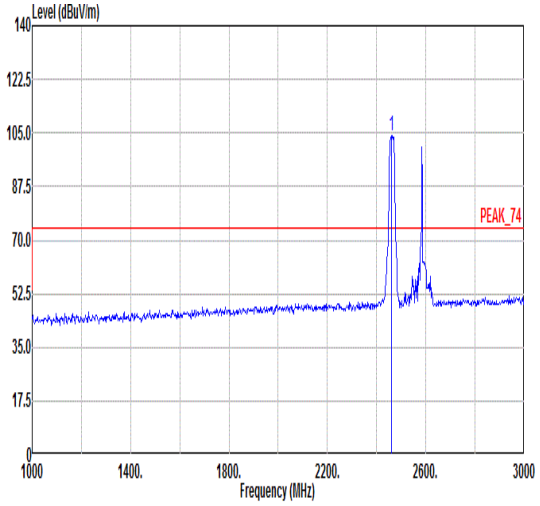
Mode	1
	Band Edge
	CO_TX
ANT	6

Pol.	Horizontal	Fundamental

Peak

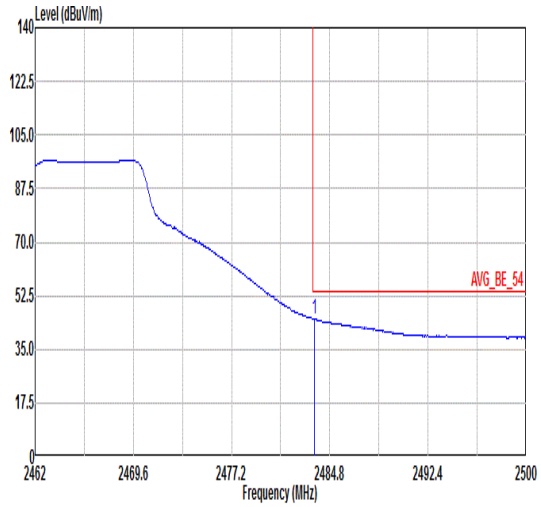


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.70	54.77	74.00	-19.23	52.62	30.80	5.46	34.11	291	360	PEAK

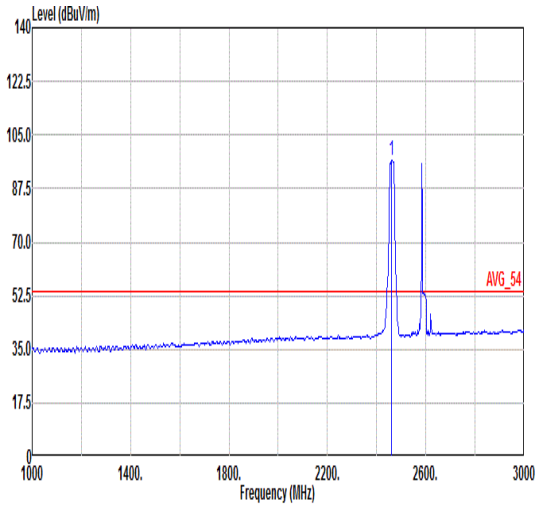


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2462.00	104.13	------	------	102.03	30.79	5.43	34.12	291	360	PEAK

Avg



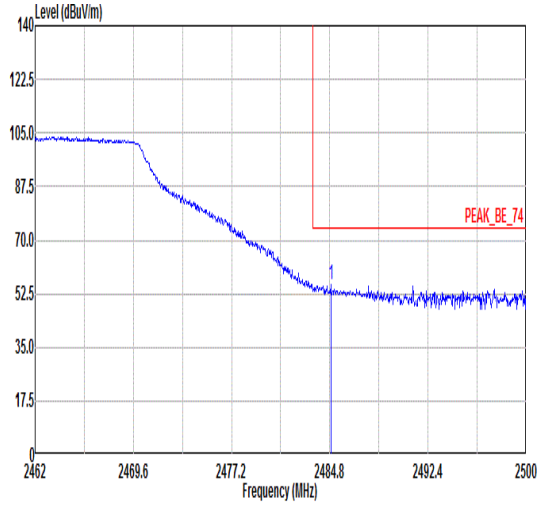
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.58	44.98	54.00	-9.02	42.83	30.80	5.46	34.11	291	360	AVERAGE



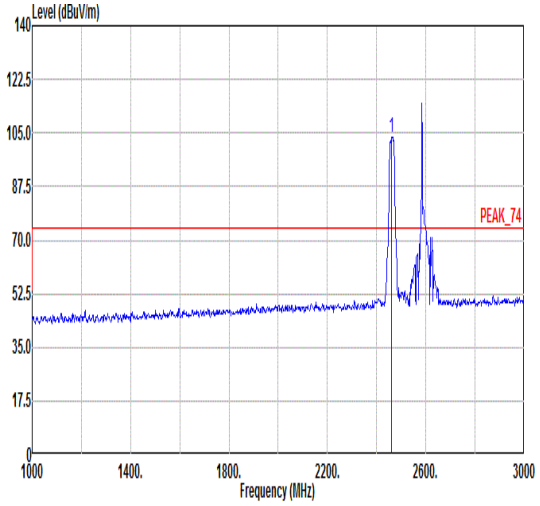
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2462.00	96.57	------	------	94.47	30.79	5.43	34.12	291	360	AVERAGE

Mode	1	
	Band Edge	
	CO_TX	
ANT	6	
Pol.	Vertical	Fundamental

Peak

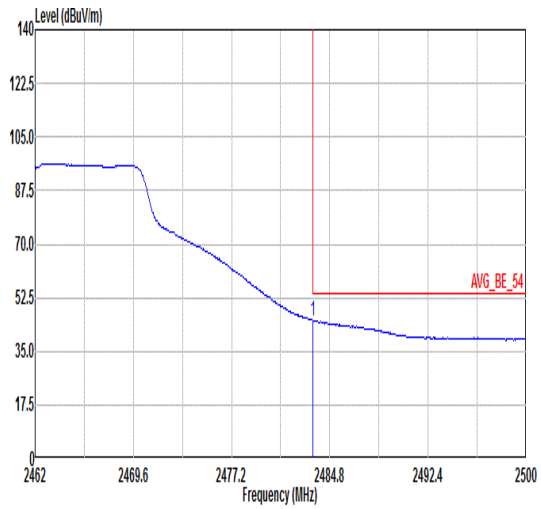


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2484.88	55.39	74.00	-18.61	53.24	30.80	5.46	34.11	358	231	PEAK

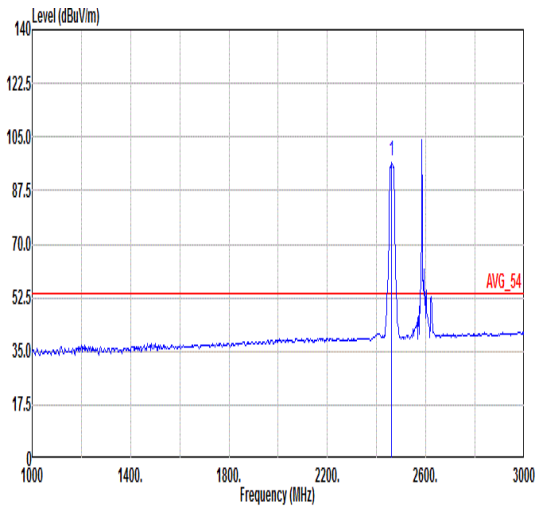


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2462.00	103.63	------	------	101.11	31.02	5.57	34.07	358	231	PEAK

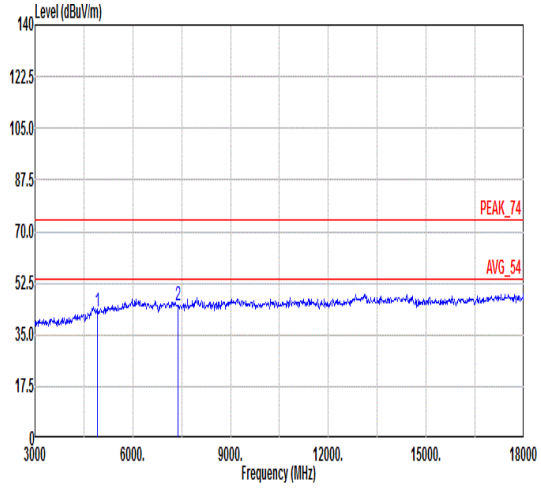
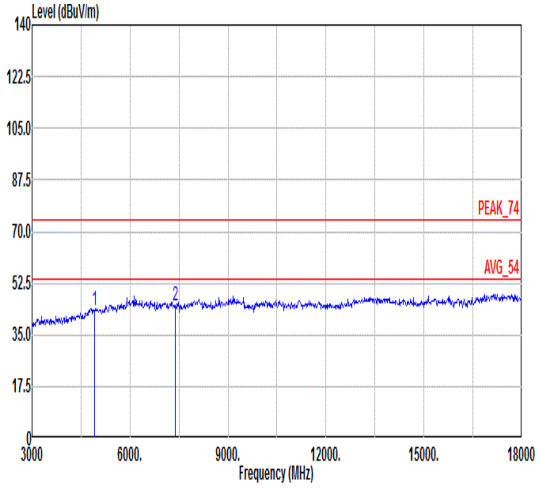
Avg



	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	2483.51	45.06	54.00	-8.94	42.91	30.80	5.46	34.11	358	231	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	2462.00	97.03	------	------	94.51	31.02	5.57	34.07	358	231	AVERAGE

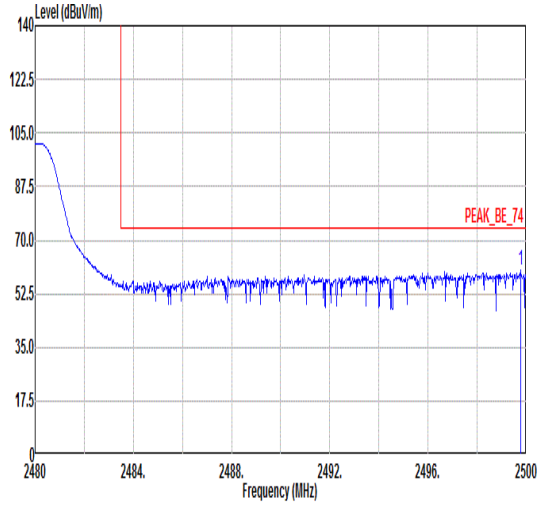
Mode	1	
	Harmonic	
	CO_TX	
ANT	6	
Pol.	Horizontal	Vertical
Peak Avg		

	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	4924.00	42.84	74.00	-31.16	62.51	36.58	8.57	64.82	---	---	Peak
2	7386.00	44.67	74.00	-29.33	62.66	36.81	10.18	64.98	---	---	Peak

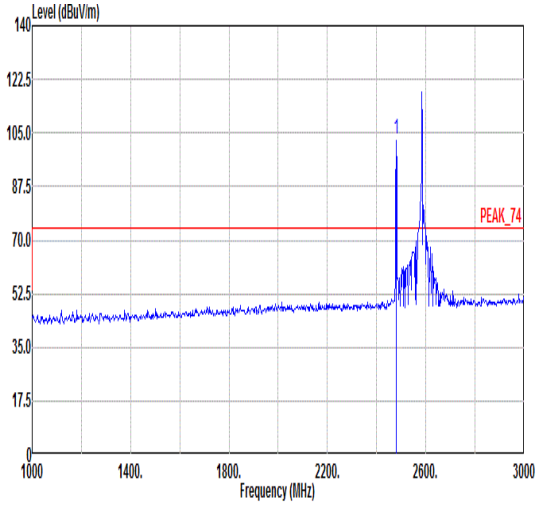
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4924.00	43.48	74.00	-30.52	63.15	36.58	8.57	64.82	---	---	Peak
2	7386.00	44.76	74.00	-29.24	62.75	36.81	10.18	64.98	---	---	Peak

Mode	2	
	Band Edge	
	CO_TX	
ANT	6	
Pol.	Horizontal	Fundamental

Peak

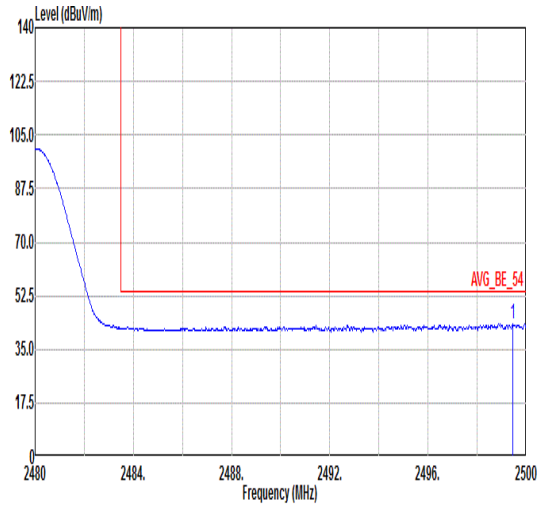


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2499.76	60.09	74.00	-13.91	57.91	30.80	5.48	34.10	379	307	PEAK

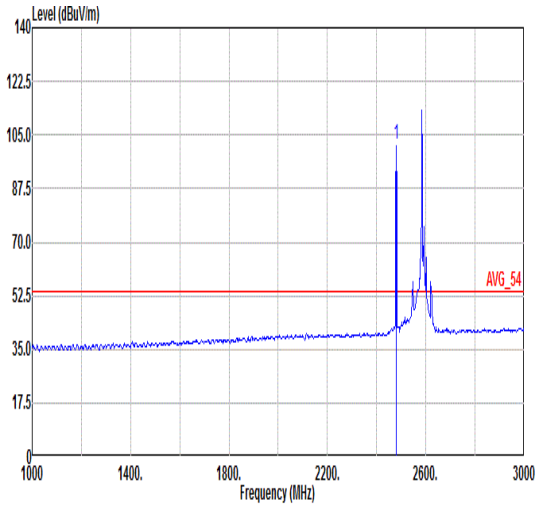


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	103.25	------	------	100.73	31.02	5.57	34.07	379	307	PEAK

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	2499.44	43.47	54.00	-10.53	41.29	30.80	5.48	34.10	379	307	AVERAGE

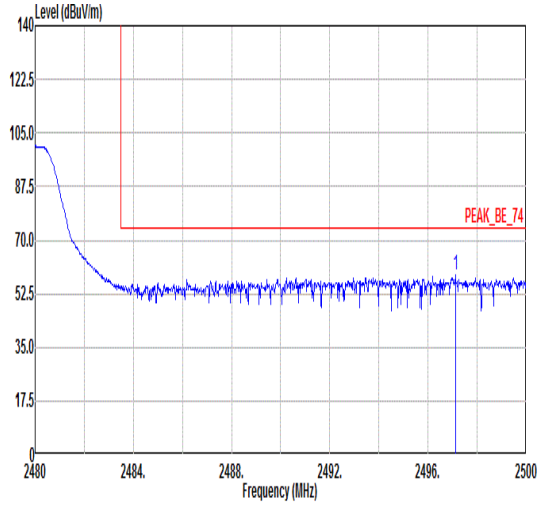


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	102.14	------	------	99.62	31.02	5.57	34.07	379	307	AVERAGE

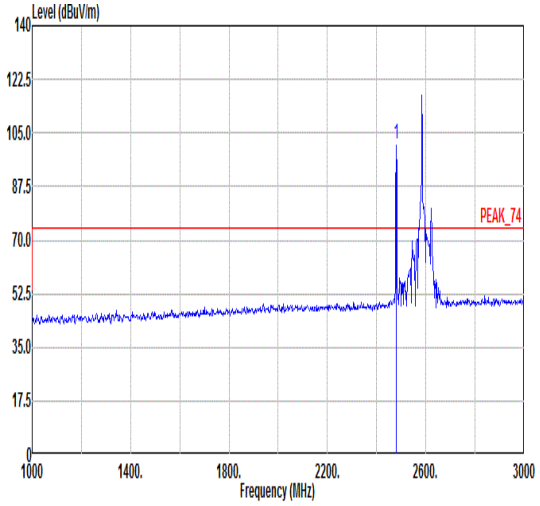
Mode	2
	Band Edge
	CO_TX
ANT	6

Pol.	Vertical	Fundamental

Peak

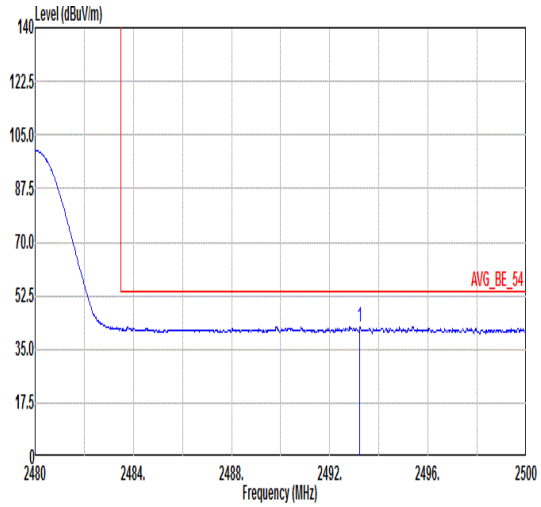


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2497.12	58.52	74.00	-15.48	56.34	30.80	5.48	34.10	211	313	PEAK

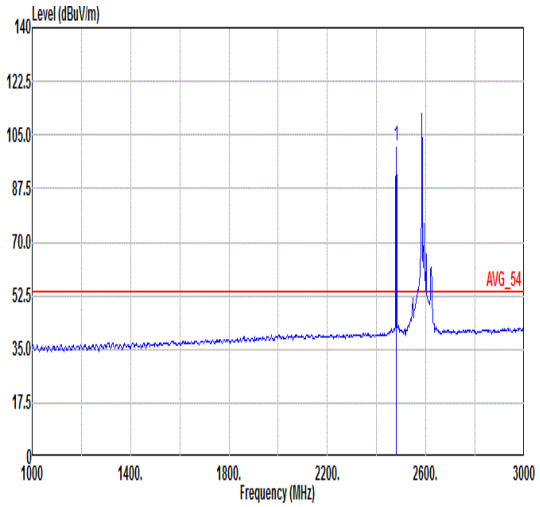


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	101.55	------	------	99.03	31.02	5.57	34.07	211	313	PEAK

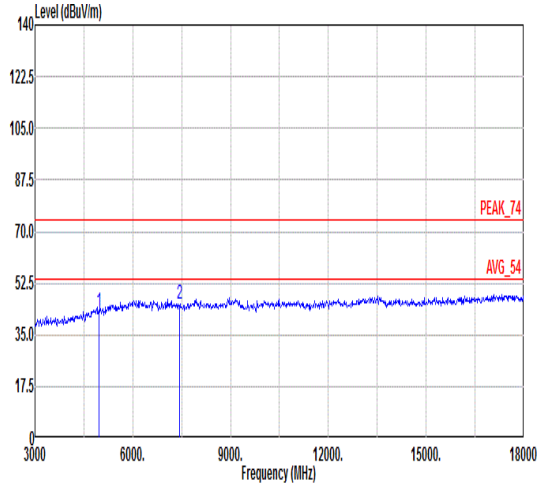
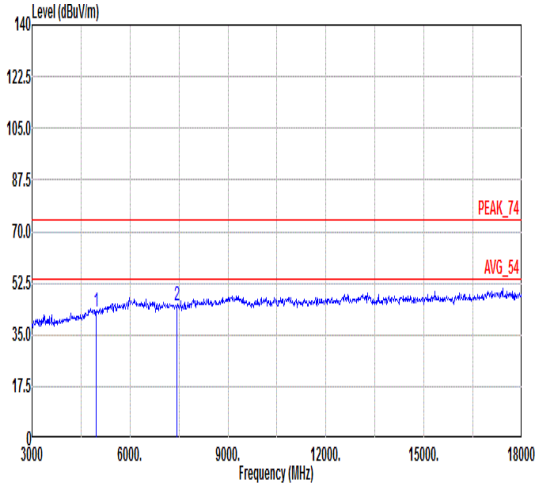
Avg



	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	2493.22	42.48	54.00	-11.52	40.31	30.80	5.47	34.10	211	313	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	2480.00	101.20	------	------	98.68	31.02	5.57	34.07	211	313	AVERAGE

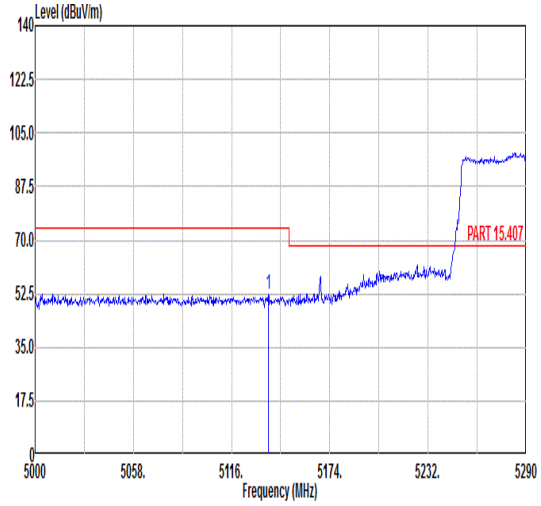
Mode	2	
	Harmonic	
	CO_TX	
ANT	6	
Pol.	Horizontal	Vertical
Peak Avg		

	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	4960.00	42.91	74.00	-31.09	62.62	36.64	8.46	64.81	---	---	Peak
2	7440.00	45.22	74.00	-28.78	63.26	36.76	10.17	64.97	---	---	Peak

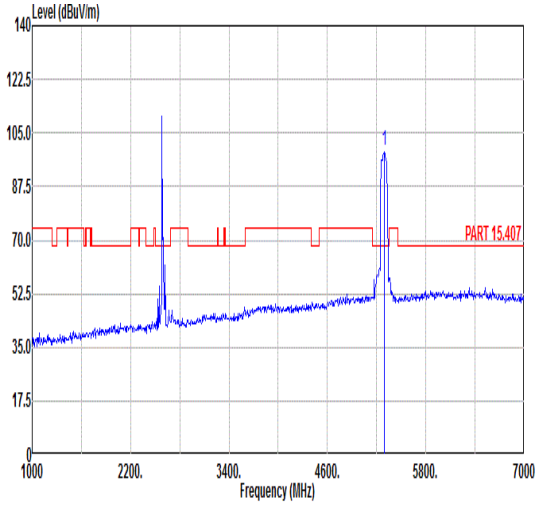
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4960.00	42.93	74.00	-31.07	62.64	36.64	8.46	64.81	---	---	Peak
2	7440.00	44.85	74.00	-29.15	62.89	36.76	10.17	64.97	---	---	Peak

Mode	3	
	Band Edge - L	
	CO_TX	
ANT	6	
Pol.	Horizontal	Fundamental

Peak

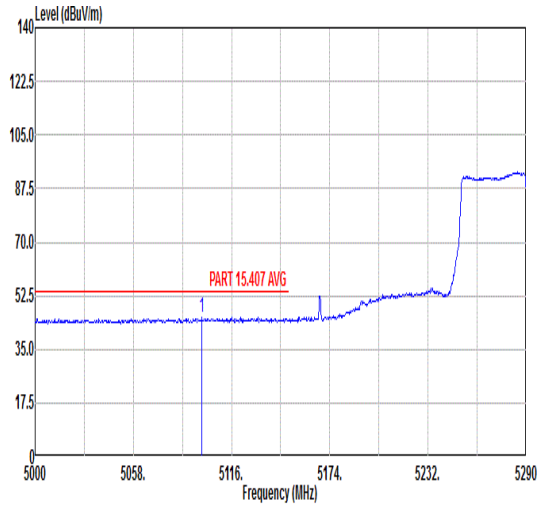


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5137.75	52.22	74.00	-21.78	40.59	36.59	8.51	33.47	100	62	PEAK

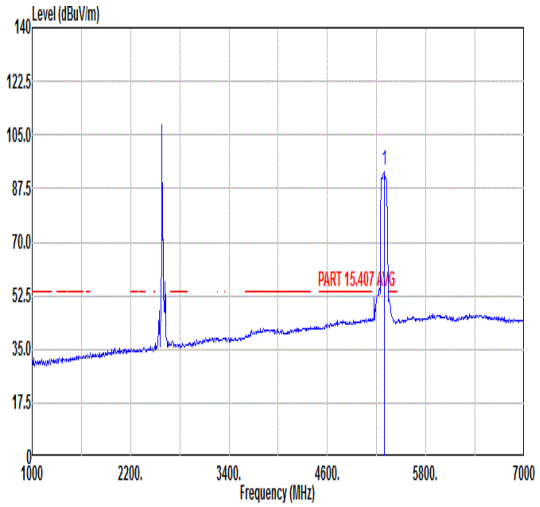


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5290.00	99.55	------	------	97.03	31.02	5.57	34.07	100	62	PEAK

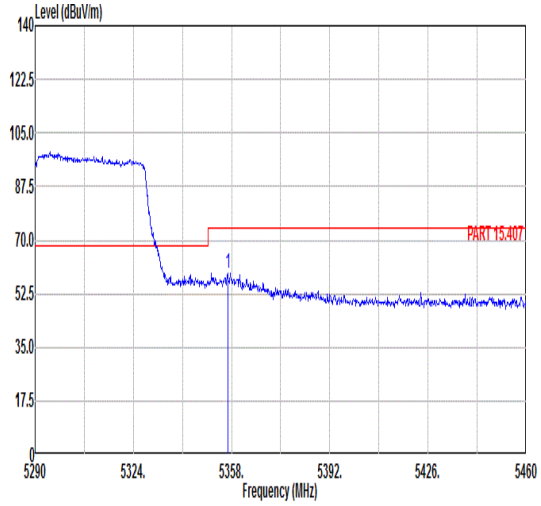
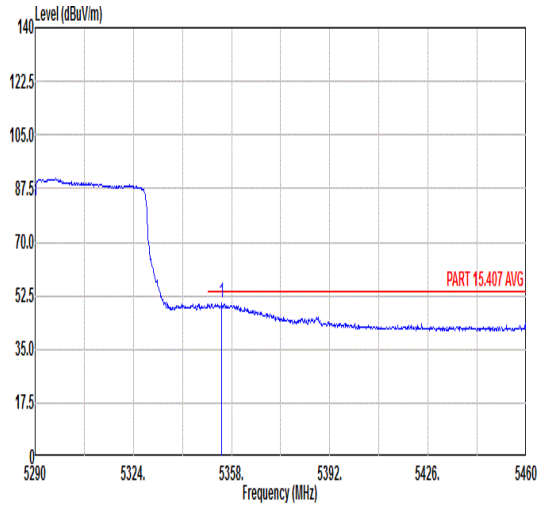
Avg



	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	5098.60	45.69	54.00	-8.31	34.11	36.62	8.44	33.48	100	62	AVERAGE

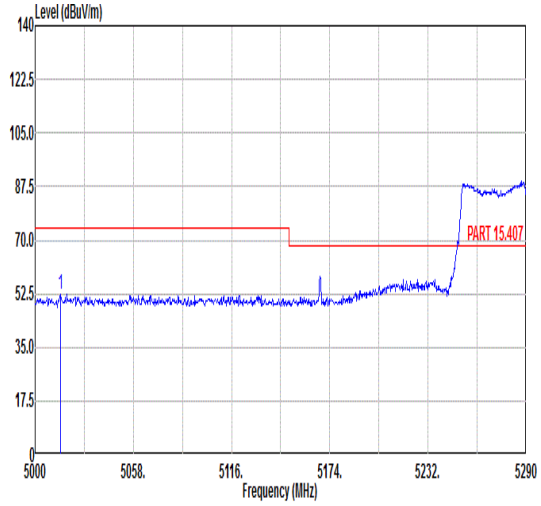


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5290.00	93.53	------	------	91.01	31.02	5.57	34.07	100	62	AVERAGE

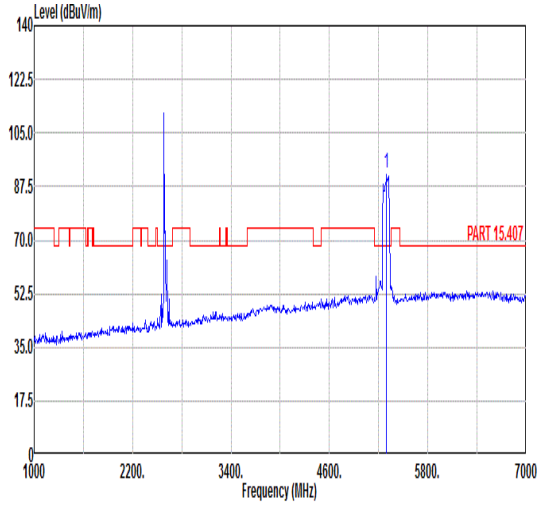
Mode	3	
	Band Edge - R	
	CO_TX	
ANT	6	
Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5356.64 59.27 74.00 -14.73 46.89 36.41 9.40 33.43 100 62 PEAK	Blank
Avg	 Freq Level Limit 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 5354.60 50.29 54.00 -3.71 37.91 36.42 9.39 33.43 100 62 AVERAGE	Blank

Mode	3	
	Band Edge - L	
	CO_TX	
ANT	6	
Pol.	Vertical	Fundamental

Peak

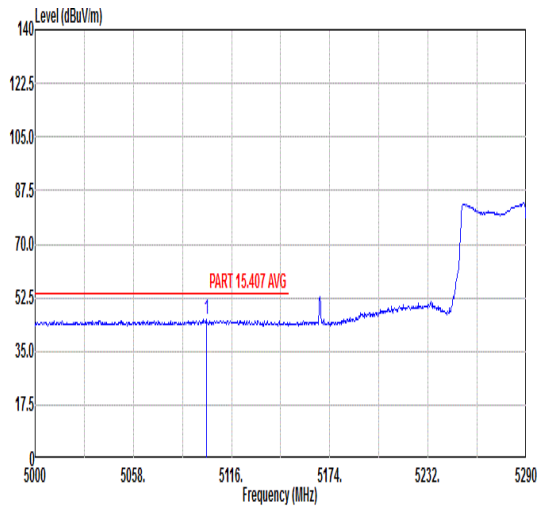


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5014.79	52.50	74.00	-21.50	41.01	36.69	8.30	33.50	400	197	PEAK

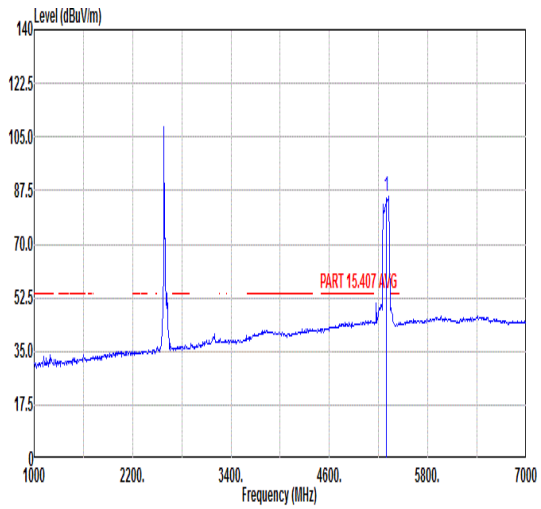


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5290.00	91.66	------	------	89.14	31.02	5.57	34.07	400	197	PEAK

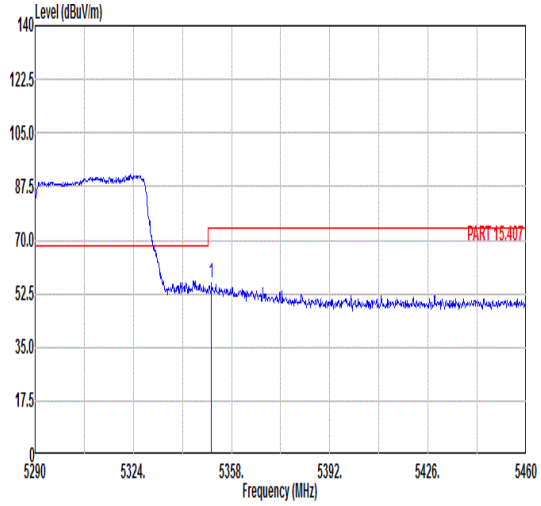
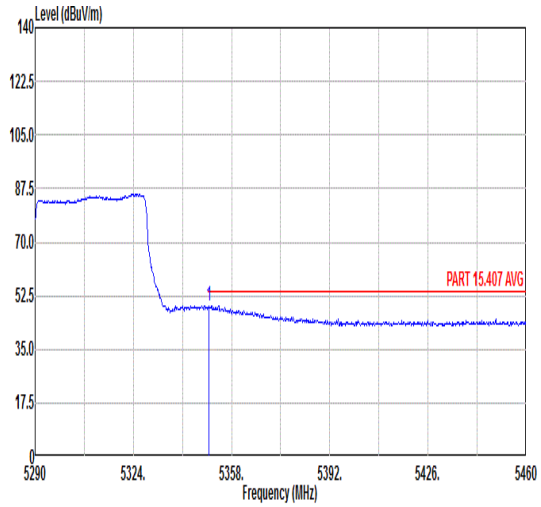
Avg

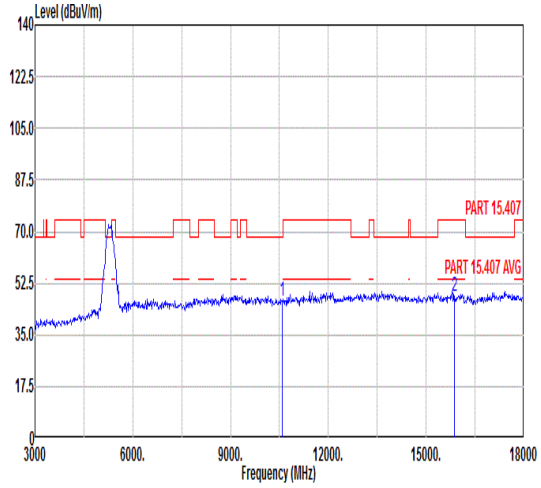
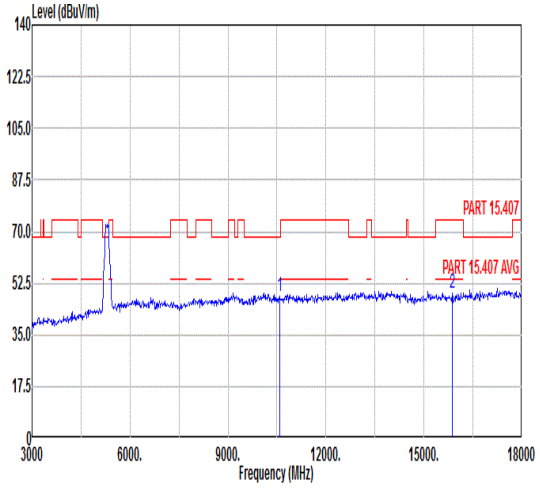


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5101.21	45.44	54.00	-8.56	33.85	36.62	8.45	33.48	400	197	AVERAGE



	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	5290.00	85.56	------	------	83.04	31.02	5.57	34.07	400	197	AVERAGE

Mode	3	
	Band Edge - R	
	CO_TX	
ANT	6	
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 5351.03 55.89 74.00 -18.11 43.53 36.42 9.37 33.43 400 197 PEAK	Blank
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 5350.18 49.18 54.00 -4.82 36.82 36.42 9.37 33.43 400 197 AVERAGE	Blank

Mode	3	
	Harmonic	
	CO_TX	
ANT	6	
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	10580.00	46.65	68.30	-21.65	59.58	38.52	12.22	63.67	---	---	Peak
2	15870.00	48.25	74.00	-25.75	56.61	41.52	14.73	64.61	---	---	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	10580.00	47.82	68.30	-20.48	60.75	38.52	12.22	63.67	---	---	Peak
2	15870.00	48.97	74.00	-25.03	57.33	41.52	14.73	64.61	---	---	Peak

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