Spot Check Evaluation

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

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

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

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR530724-01E	Rev. 01	Initial issue of report	Apr. 30, 2025
FR530724-01E	Rev. 02	Replaced the Appendix C. Reference Report This report is an updated version, replacing the report issued on Apr. 30, 2025.	May 14, 2025

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

1 General Description

1.1 Applicant

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

1.2 Manufacturer

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

1.3 Product Feature of Equipment Under Test

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

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

1.4 Modification of EUT

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

1.5 Testing Site

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

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

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

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

1.6 Test Software

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

1.7 Applicable Standards

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

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

1.8 Specification of Accessory

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

2 Re-use of Measured Data

2.1 Introduction Section

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

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

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

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

2.2 Model Difference Information

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

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

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

2.3 Reference detail Section:

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

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

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

2.4 Spot Check Verification Data Section

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3 List of Measuring Equipment

For BT/WIFI:

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

NCR: No Calibration Required.

For NFC:

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

NCR: No Calibration Required.

For WWAN Bands:

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

NCR: No Calibration Required.

4 Measurement Uncertainty

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

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

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

Uncertainty of Conducted Measurement (DFS)

Conducted Generated signal Levels	±0.56 dB
Conducted Time	0.38%

Uncertainty of Conducted Measurement (NFC)

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

Uncertainty of Conducted Measurement (WWAN)

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

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

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

03CH03-SZ(BT/WIF):

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

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

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

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

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

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

03CH05-SZ(NFC):

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

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

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

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

03CH02-SZ(WWAN):

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

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

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

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

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

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

-THE END-

Appendix A. Radiated Spurious Emission

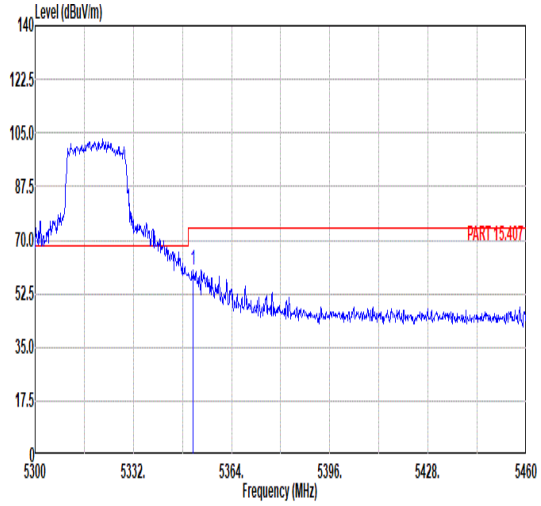
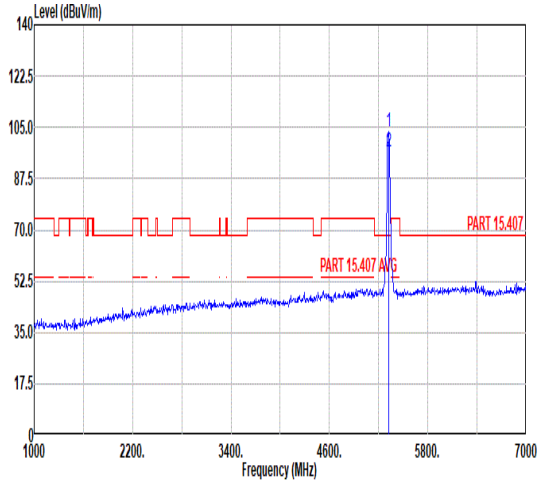
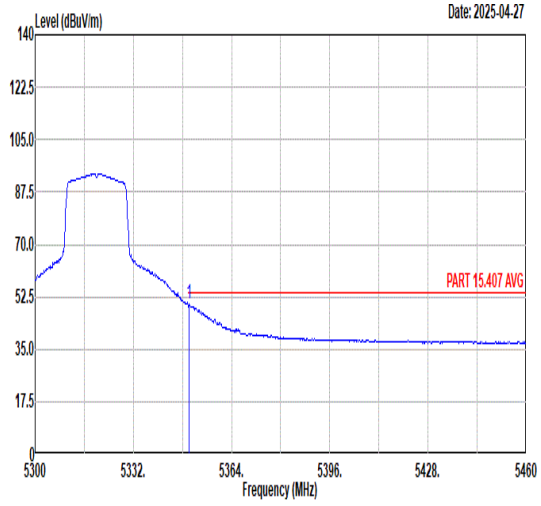
Test Engineer :	Shunping You	Relative Humidity :	50%
		Temperature :	20-24℃

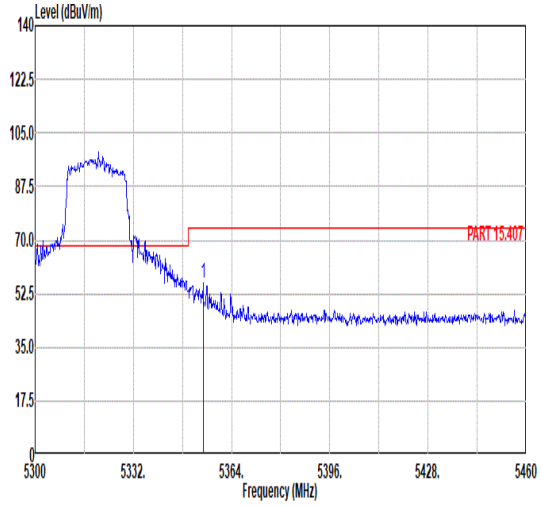
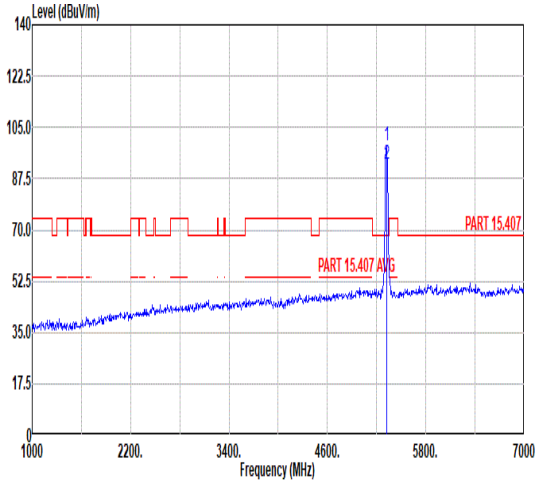
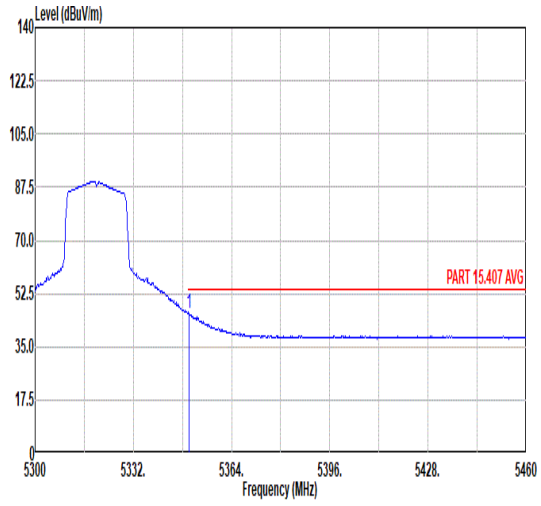
Radiated Spurious Emission Test Modes

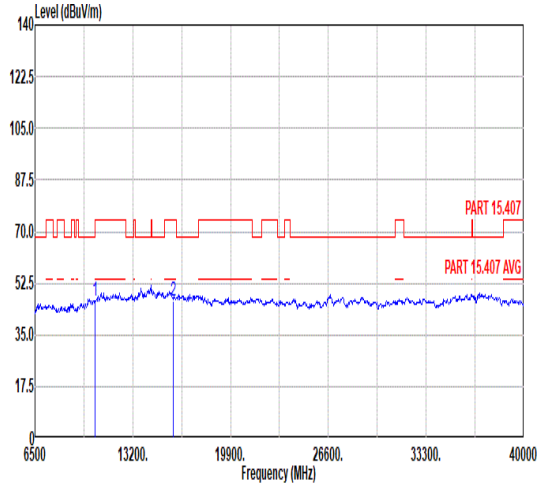
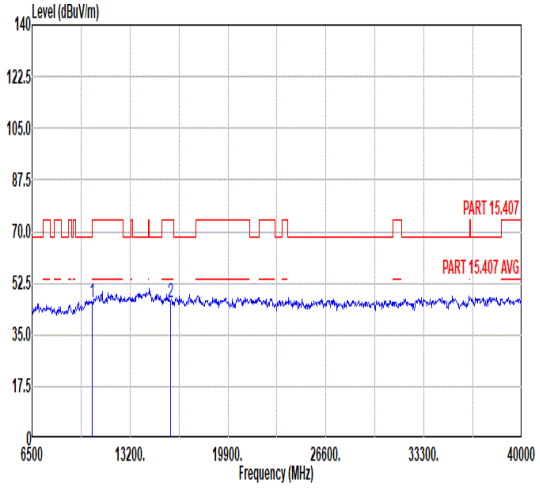
Mode	Band	Band (GHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	CO-TX	5.25-5.35	5	802.11ax HE20	64	5320	MCS0	Full	-
		-	-	BT on	-	-	-	-	-
		-	-	NFC on	-	-	-	-	-
		-	-	LTE Band 71	LINK	-	-	-	-
Mode 2	CO-TX	5.25-5.35	5	802.11ax HE20	64	5320	MCS0	Full	-
		-	-	BT on	-	-	-	-	-
		-	-	NFC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

Summary of each worse mode

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

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

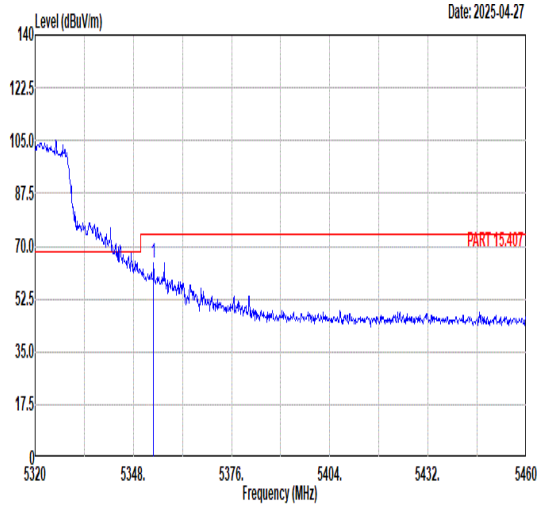
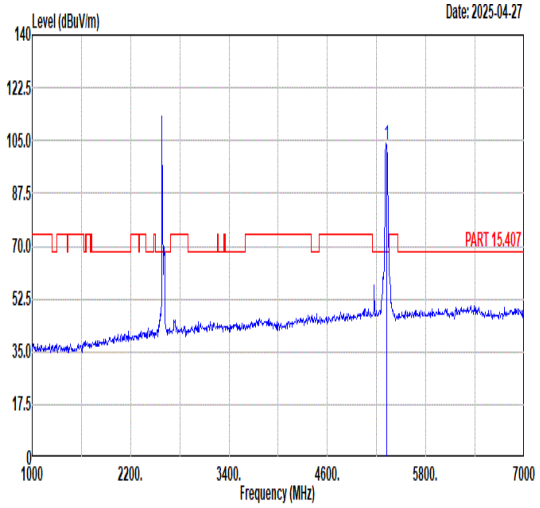
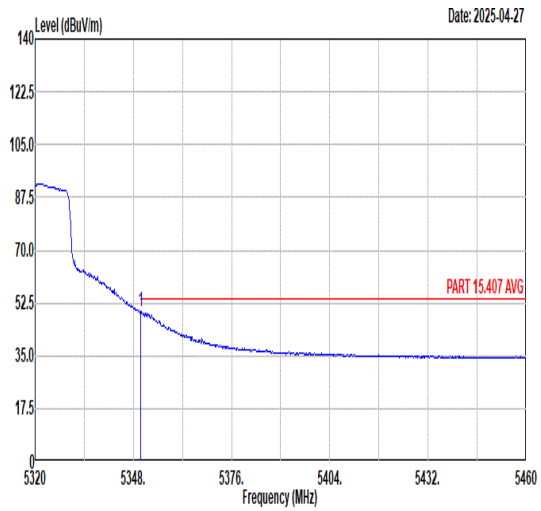
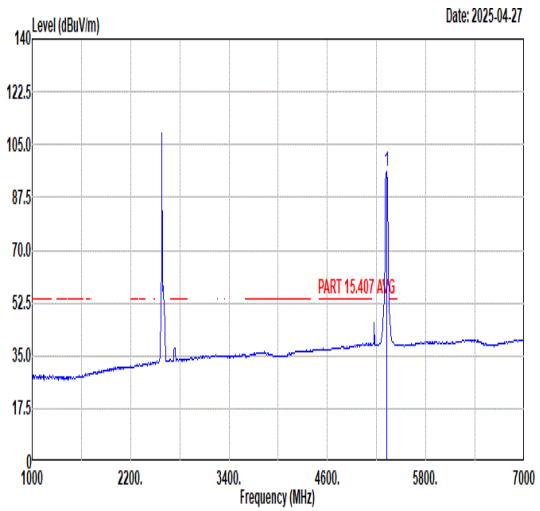
Mode	1	
	Band Edge	
	LTE Band 71 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Vertical	Fundamental
Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5354.72 56.23 74.00 -17.77 46.44 34.11 8.34 32.66 115 266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

Mode	1	
	Harmonic	
	LTE Band 71 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Horizontal	Vertical
Peak Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	10640.00	46.26	74.00	-27.74	56.23	37.78	10.94	58.69	--	--	Peak
2	15960.00	46.33	74.00	-27.67	53.41	39.59	12.70	59.37	--	--	Peak

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	10640.00	46.15	74.00	-27.85	56.12	37.78	10.94	58.69	--	--	Peak
2	15960.00	46.03	74.00	-27.97	53.11	39.59	12.70	59.37	--	--	Peak

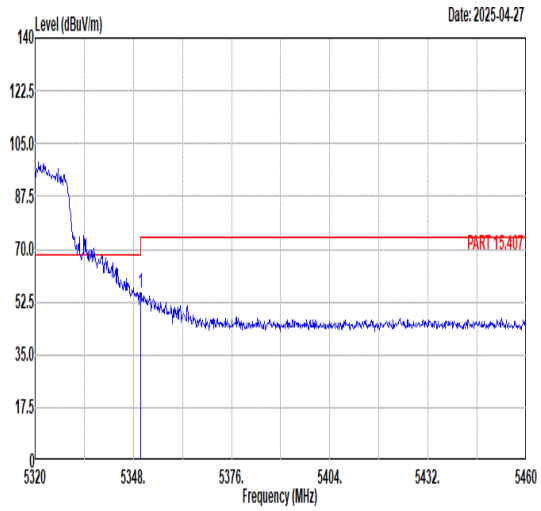
Mode	2
	Band Edge
	LTE Band 41 + 802.11ax HE20 + BT on + NFC on.
ANT	5

Pol.	Horizontal	Fundamental
Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5353.74 64.56 74.00 -9.44 54.77 34.11 8.34 32.66 106 58 PEAK	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 103.80 ------ ------ 101.53 30.64 5.06 33.43 106 58 PEAK
Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5350.10 49.71 54.00 -4.29 39.93 34.11 8.33 32.66 106 58 AVERAGE	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 5320.00 95.90 ------ ------ 93.63 30.64 5.06 33.43 106 58 AVERAGE

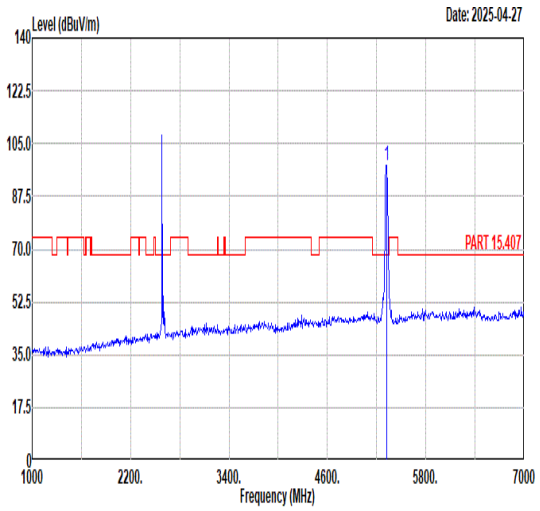
Remark: All signals exceeding the limit are fundamental frequency signals and can be ignored.

Mode	2	
	Band Edge	
	LTE Band 41 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Vertical	Fundamental

Peak

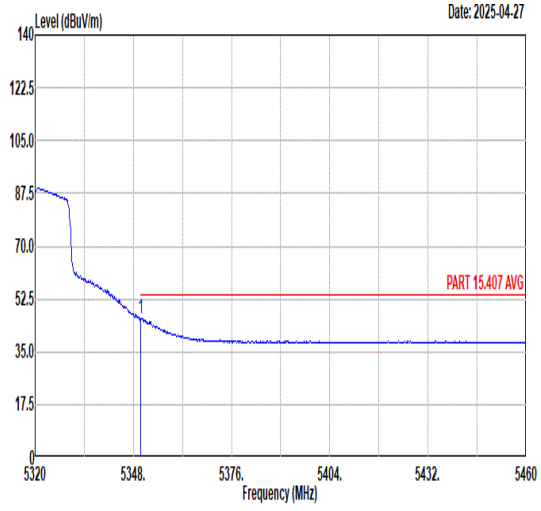


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5350.10	55.49	74.00	-18.51	45.71	34.11	8.33	32.66	103	257	PEAK

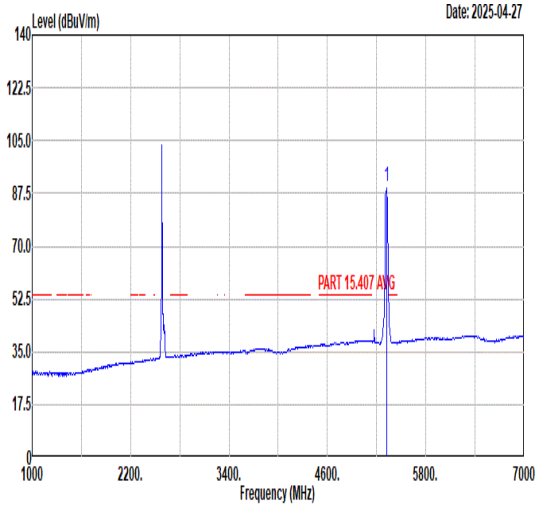


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5320.00	97.58	------	------	95.31	30.64	5.06	33.43	103	257	PEAK

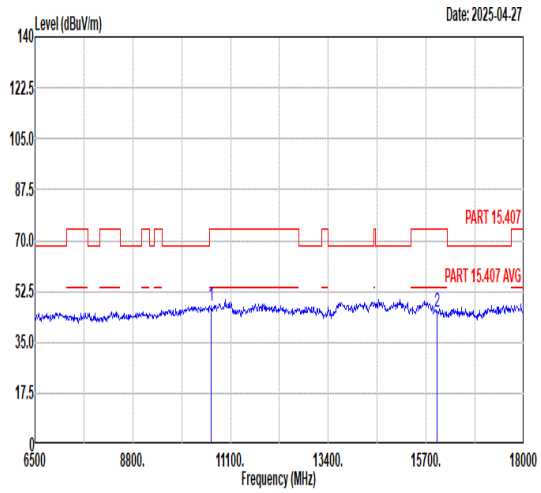
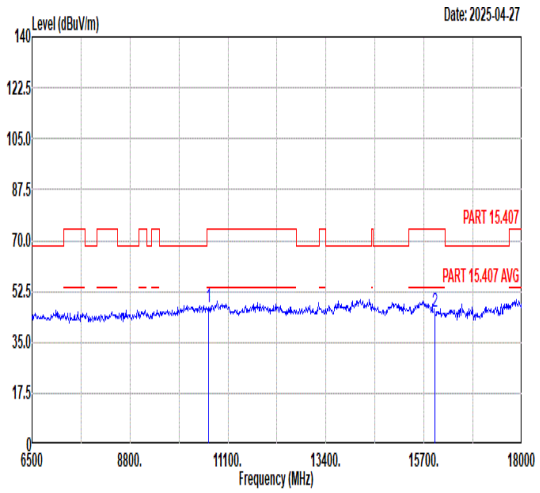
Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5350.10	46.21	54.00	-7.79	36.43	34.11	8.33	32.66	103	257	AVERAGE



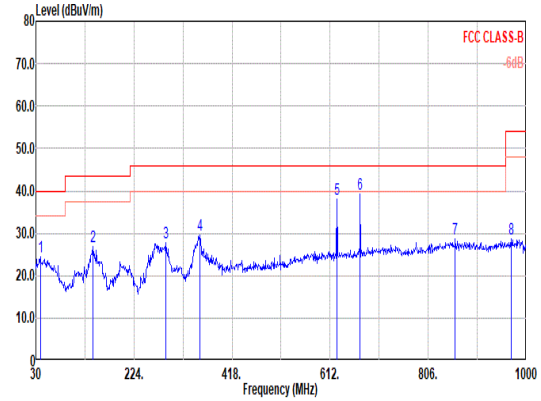
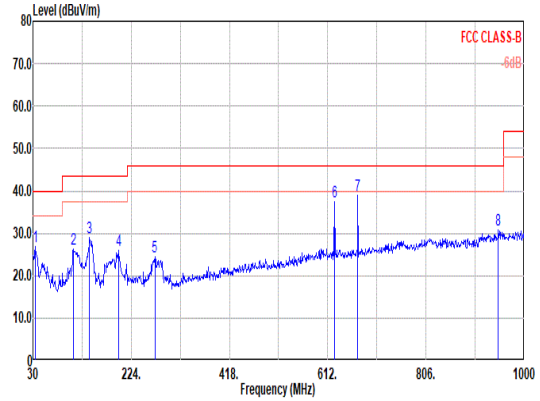
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	5320.00	89.80	------	------	87.53	30.64	5.06	33.43	103	257	AVERAGE

Mode	2	
	Harmonic	
	LTE Band 41 + 802.11ax HE20 + BT on + NFC on.	
ANT	5	
Pol.	Horizontal	Vertical
Peak Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	10640.00	47.57	74.00	-26.43	57.54	37.78	10.94	58.69	--	--	Peak
2	15960.00	45.19	74.00	-28.81	52.27	39.59	12.70	59.37	--	--	Peak

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	10640.00	46.77	74.00	-27.23	56.74	37.78	10.94	58.69	--	--	Peak
2	15960.00	45.21	74.00	-28.79	52.29	39.59	12.70	59.37	--	--	Peak

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

Pol.	Horizontal	Vertical
Peak Avg		

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

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

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

Appendix C. Reference Report

FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2527-1
FCC ID	:	IHDT56AV5
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure
TEST DATE(S)	:	Mar. 29, 2025 ~ Apr. 17, 2025

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

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

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

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

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR530724E	Rev. 01	Initial issue of report	Apr. 21, 2025
FR530724E	Rev. 02	1. Updated Conducted Output Power for 802.11n HT20/ 802.11ac VHT20/802.11ax HE20 CH64 2. Updated PSD for 802.11ax HE20 CH64 This report is an updated version, replacing the report issued on Apr. 21, 2025.	May 14, 2025

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit for U-NII-1/2A/2C	Limit for U-NII-3	Result	Remark
3.1	2.1049 & 15.403(i)	6dB, 26dB & 99% Bandwidth	-	6dB Bandwidth > 500kHz	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	≤ 30 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm/MHz	≤ 30 dBm/500kHz	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	15.407(b)(4)(i) &15.209(a)	Pass	Under limit 3.23 dB at 5350.24 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	15.207(a)	Pass	Under limit 3.40 dB at 0.190 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	15.203 & 15.407(a)	15.203 & 15.407(a)	Pass	-

Conformity Assessment Condition:

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

Disclaimer:

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

1 General Description

1.1 Applicant

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

1.2 Manufacturer

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

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2527-1
FCC ID	IHDT56AV5
SN / IMEI Code	Conducted: NN0R250102 Conduction: 358887330039734/358887330039742 Radiation: 358887330040591/358887330040609
HW Version	DVT2
SW Version	V2VN35.50
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5720 MHz 5745 MHz ~ 5825 MHz
Maximum Output Power to Antenna	**<5180 MHz ~ 5240 MHz>** 802.11a : 18.24 dBm / 0.0667 W 802.11n HT20 : 18.07 dBm / 0.0641 W 802.11n HT40 : 17.29 dBm / 0.0536 W 802.11ac VHT20: 18.12 dBm / 0.0649 W 802.11ac VHT40: 17.36 dBm / 0.0545 W 802.11ac VHT80: 14.35 dBm / 0.0272 W 802.11ax HE20: 18.23 dBm / 0.0665 W 802.11ax HE40: 17.47 dBm / 0.0558 W 802.11ax HE80: 14.49 dBm / 0.0281 W **<5260 MHz ~ 5320 MHz>** 802.11a : 18.30 dBm / 0.0676 W 802.11n HT20 : 18.25 dBm / 0.0668 W 802.11n HT40 : 17.42 dBm / 0.0552 W 802.11ac VHT20: 18.28 dBm / 0.0673 W 802.11ac VHT40: 17.49 dBm / 0.0561 W 802.11ac VHT80: 13.53 dBm / 0.0225 W 802.11ax HE20: 18.34 dBm / 0.0682 W 802.11ax HE40: 17.61 dBm / 0.0577 W 802.11ax HE80: 13.67 dBm / 0.0233 W **<5500 MHz ~ 5720 MHz >** 802.11a : 18.07 dBm / 0.0641 W 802.11n HT20 : 18.08 dBm / 0.0643 W 802.11n HT40 : 17.19 dBm / 0.0524 W 802.11ac VHT20: 18.11 dBm / 0.0647 W 802.11ac VHT40: 17.25 dBm / 0.0531 W 802.11ac VHT80: 16.27 dBm / 0.0424 W 802.11ax HE20: 18.21 dBm / 0.0662 W 802.11ax HE40: 17.37 dBm / 0.0546 W 802.11ax HE80: 16.38 dBm / 0.0435 W **<5745 MHz ~ 5825 MHz>** 802.11a : 17.92 dBm / 0.0619 W 802.11n HT20 : 17.84 dBm / 0.0608 W 802.11n HT40 : 17.18 dBm / 0.0522 W 802.11ac VHT20: 17.88 dBm / 0.0614 W 802.11ac VHT40: 17.24 dBm / 0.0530 W 802.11ac VHT80: 16.20 dBm / 0.0417 W 802.11ax HE20: 17.97 dBm / 0.0627 W 802.11ax HE40: 17.34 dBm / 0.0542 W 802.11ax HE80: 16.33 dBm / 0.0430 W

99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 17.822 MHz 802.11ax HE20: 19.421 MHz 802.11ax HE40: 38.202 MHz 802.11ax HE80: 77.682 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 17.702 MHz 802.11ax HE20: 19.381 MHz 802.11ax HE40: 38.282 MHz 802.11ax HE80: 77.842 MHz **<5500 MHz ~ 5720 MHz>** 802.11a : 17.622 MHz 802.11ax HE20: 19.341 MHz 802.11ax HE40: 38.202 MHz 802.11ax HE80: 77.842 MHz **<5745 MHz ~ 5825 MHz>** 802.11a : 17.662 MHz 802.11ax HE20: 19.341 MHz 802.11ax HE40: 38.202 MHz 802.11ax HE80: 77.682 MHz
Antenna Type / Gain	**<5180 MHz ~ 5240 MHz>** IFA Antenna with gain -2.5 dBi **<5260 MHz ~ 5320 MHz>** IFA Antenna with gain -3 dBi **<5500 MHz ~ 5720 MHz>** IFA Antenna with gain -2 dBi **<5745 MHz ~ 5825 MHz>** IFA Antenna with gain -2 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)

Note:

1. For 802.11n/ac & 802.11ax mode, the whole testing have assessed only 802.11ax HE20/40/80 by referring to the higher output power.
2. 802.11ax support OFDMA full RU tone and partial RU tone, both full RU and partial RU-left (for low CH) and partial RU-right (for high CH) test output power, the full RU power/PSD > partial RU, therefore the full RU perform full, and partial RU verify bandedge/spurious.

1.5 Modification of EUT

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

1.6 Testing Location

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

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

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.**
	03CH03-SZ, CO02-SZ	CN1256	421272

Note: Test data subcontracted: Radiation test & Conduction test case in section 3.4 &3.5 of this report

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	TH01-KS	Tonscend	JS1120-3 test system China_210602	3.3.10
2.	03CH03-SZ	AUDIX	E3	6.2009-8-24
3.	CO02-SZ	AUDIX	E3	6.120613b

1.8 Applicable Standards

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

- 47 CFR Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ANSI C63.10-2013

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.

1.9 Specification of Accessory

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

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5180-5240 MHz U-NII-1	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210	-	-

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5260-5320 MHz U-NII-2A	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290	-	-

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5500-5720MHz U-NII-2C	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
5745-5825 MHz U-NII-3	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

Frequency Band	Channel	Freq.(MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640
	-	-	114##	5570

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710	-	-

Note:

1. The above Frequency and Channel in "*" are 40MHz bandwidth.
2. The above Frequency and Channel in "#" are 80MHz bandwidth.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

SISO Mode

Modulation	Data Rate
802.11a	**6 Mbps**
802.11n HT20	**MCS0**
802.11n HT40	**MCS0**
802.11ac VHT20	**MCS0**
802.11ac VHT40	**MCS0**
802.11ac VHT80	**MCS0**
802.11ax HE20	**MCS0**
802.11ax HE40	**MCS0**
802.11ax HE80	**MCS0**

AC Conducted Emission	Mode 1 : GSM 850 Idle + Bluetooth Link with Wireless Earphones + WLAN Link (5G) + USB Cable2 (Charging from Adapter2)

Remark:

1. For Radiated Test Cases, The tests were performance with Adapter2 and USB Cable2.

2. Accessories from 15B worse mode.

RSE Co-location modes
802.11ax HE20 CH64+ LTE Band 13 Link Bluetooth LE(2 Mbps) CH38_TX + 802.11ax HE20 CH64+ LTE Band 13 Link Bluetooth LE(2 Mbps) CH38_TX + 802.11ax HE20 CH64

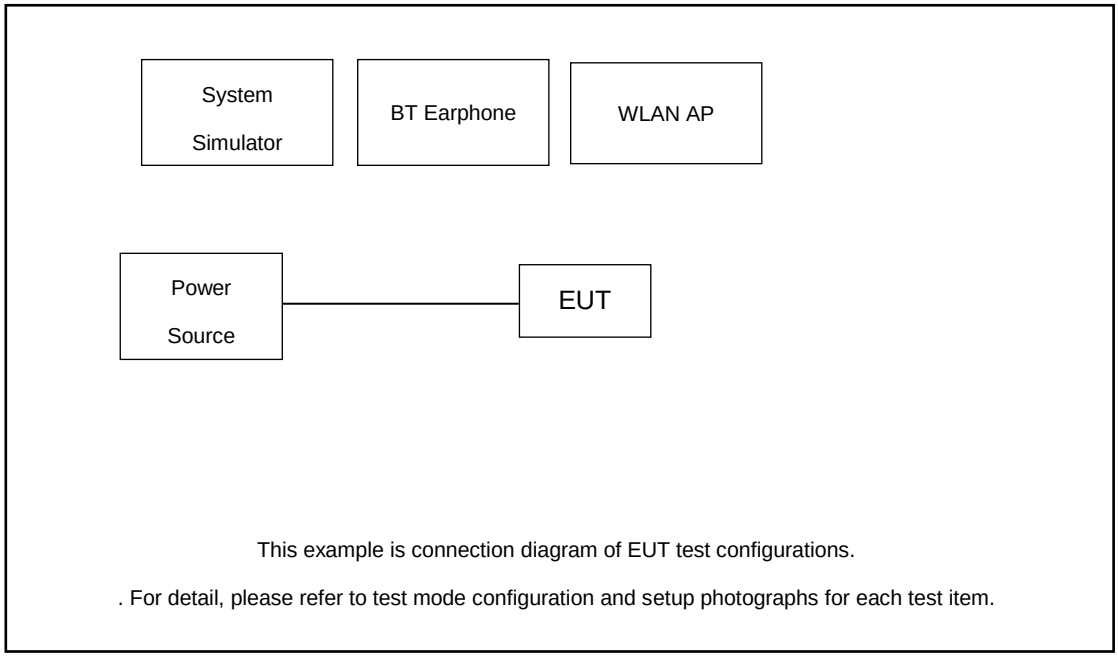
Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		20M BW	20M BW	20M BW	20M BW
L	Low	36	52	100	149
M	Middle	44	60	116	157
H	High	48	64	140	165
Straddle		-	-	144	-

Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		40M BW	40M BW	40M BW	40M BW
L	Low	38	54	102	151
M	Middle	-	-	110	-
H	High	46	62	134	159
Straddle		-	-	142	-

Ch. #		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
		80M BW	80M BW	80M BW	80M BW
L	Low	-	-	106	-
M	Middle	42	58	-	155
H	High	-	-	122	-
Straddle		-	-	138	-

2.3 Connection Diagram of Test System

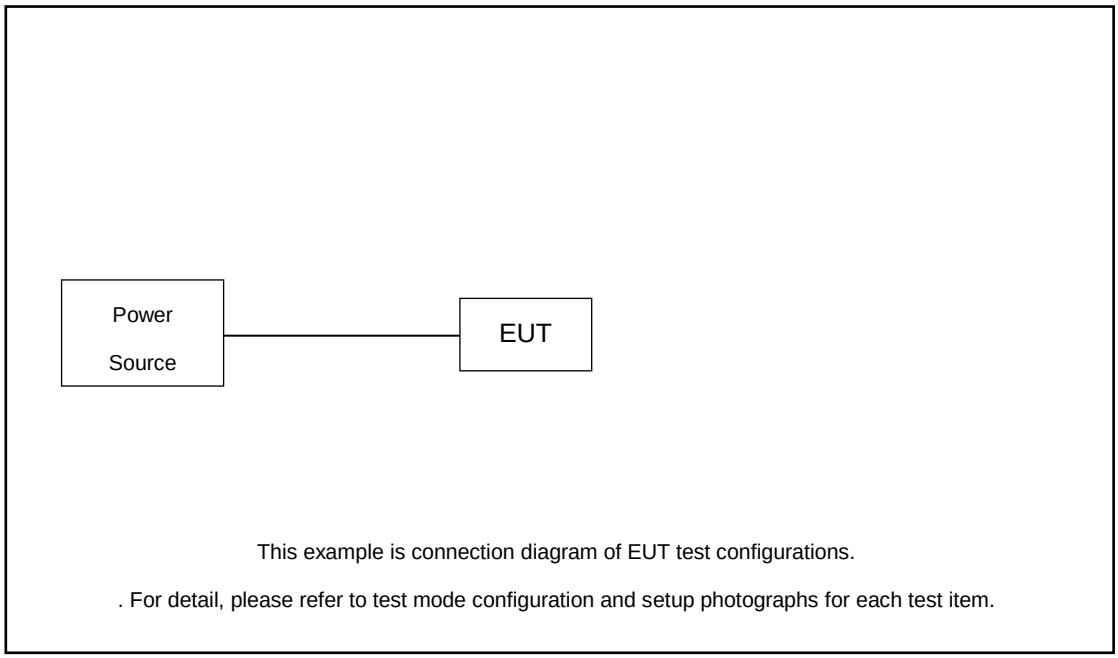
AC Conducted Emission:



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

Radiated Emission:



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.4 Support Unit used in test configuration and system

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

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.95 dB and 20dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 5.95 + 20 = 25.95 (dB)

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

3.1.2 Measuring Instruments

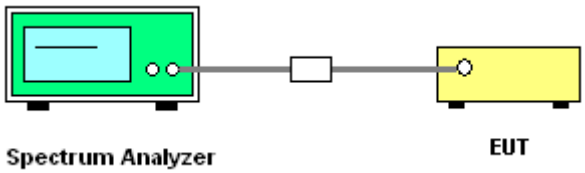
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

☒	Section C) Bandwidth Measurement 1. Emission Bandwidth (EBW) and 99% OBW
	1. Set RBW = approximately 1% of the emission bandwidth. **2.** Set the VBW > RBW. **3.** Detector = Peak. **4.** Trace mode = max hold **5.** Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%. **6.** For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set to 1%~5% of the OBW and set the Video bandwidth (VBW) ≥ 3 * RBW. **7.** Measure and record the results in the test report.
☒	Section C) Bandwidth Measurement 2. Minimum Emission Bandwidth for the band 5.725 - 5.85 GHz
	1. Set RBW = 100kHz. **2.** Set the VBW ≥ 3 x RBW. **3.** Detector = Peak. **4.** Trace mode = max hold **5.** Measure the maximum width of the emission that is 6 dB down from the peak of the emission. **6.** Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm +10 $\log_{10}$ B, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

.

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

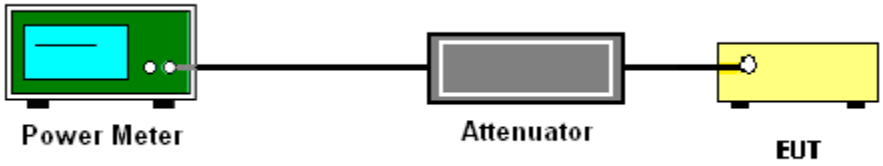
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

FCC U-NII-1 single antenna										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail	Power Setting
					Ant 5	Ant 5	Ant 5	Ant 5		Ant 5
11a	6Mbps	1	36	5180	0.13	18.06	24.00	-2.50	Pass	18
11a	6Mbps	1	44	5220	0.13	18.06	24.00	-2.50	Pass	18
11a	6Mbps	1	48	5240	0.13	18.24	24.00	-2.50	Pass	18
HT20	MCS0	1	36	5180	0.13	17.05	24.00	-2.50	Pass	17
HT20	MCS0	1	44	5220	0.13	18.07	24.00	-2.50	Pass	18
HT20	MCS0	1	48	5240	0.13	18.06	24.00	-2.50	Pass	18
HT40	MCS0	1	38	5190	0.30	14.69	24.00	-2.50	Pass	14.5
HT40	MCS0	1	46	5230	0.30	17.29	24.00	-2.50	Pass	17
VHT20	MCS0	1	36	5180	0.14	17.17	24.00	-2.50	Pass	17
VHT20	MCS0	1	44	5220	0.14	18.12	24.00	-2.50	Pass	18
VHT20	MCS0	1	48	5240	0.14	18.12	24.00	-2.50	Pass	18
VHT40	MCS0	1	38	5190	0.30	14.81	24.00	-2.50	Pass	14.5
VHT40	MCS0	1	46	5230	0.30	17.36	24.00	-2.50	Pass	17
VHT80	MCS0	1	42	5210	0.58	14.35	24.00	-2.50	Pass	14

FCC U-NII-2A single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail	Power Setting
					Ant 5	Ant 5	Ant 5	Ant 5			Ant 5
11a	6Mbps	1	52	5260	0.13	18.20	23.98	-3.00	26.99	Pass	18
11a	6Mbps	1	60	5300	0.13	18.28	23.98	-3.00	26.99	Pass	18
11a	6Mbps	1	64	5320	0.13	18.30	23.98	-3.00	26.99	Pass	18
HT20	MCS0	1	52	5260	0.13	18.13	23.98	-3.00	26.99	Pass	18
HT20	MCS0	1	60	5300	0.13	18.25	23.98	-3.00	26.99	Pass	18
HT20	MCS0	1	64	5320	0.13	16.08	23.98	-3.00	26.99	Pass	15.5
HT40	MCS0	1	54	5270	0.30	17.42	23.98	-3.00	26.99	Pass	17
HT40	MCS0	1	62	5310	0.30	14.52	23.98	-3.00	26.99	Pass	14
VHT20	MCS0	1	52	5260	0.14	18.18	23.98	-3.00	26.99	Pass	18
VHT20	MCS0	1	60	5300	0.14	18.28	23.98	-3.00	26.99	Pass	18
VHT20	MCS0	1	64	5320	0.14	16.15	23.98	-3.00	26.99	Pass	15.5
VHT40	MCS0	1	54	5270	0.30	17.49	23.98	-3.00	26.99	Pass	17
VHT40	MCS0	1	62	5310	0.30	14.61	23.98	-3.00	26.99	Pass	14
VHT80	MCS0	1	58	5290	0.58	13.53	23.98	-3.00	26.99	Pass	13

FCC U-NII-2C single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail	Power Setting
					Ant 5	Ant 5	Ant 5	Ant 5			Ant 5
11a	6Mbps	1	100	5500	0.13	18.01	23.98	-2.00	26.99	Pass	18
11a	6Mbps	1	116	5580	0.13	18.07	23.98	-2.00	26.99	Pass	18
11a	6Mbps	1	140	5700	0.13	17.54	23.98	-2.00	26.99	Pass	17.5
HT20	MCS0	1	100	5500	0.13	17.49	23.98	-2.00	26.99	Pass	17.5
HT20	MCS0	1	116	5580	0.13	18.08	23.98	-2.00	26.99	Pass	18
HT20	MCS0	1	140	5700	0.13	15.85	23.98	-2.00	26.99	Pass	16
HT40	MCS0	1	102	5510	0.30	16.11	23.98	-2.00	26.99	Pass	16
HT40	MCS0	1	110	5550	0.30	17.19	23.98	-2.00	26.99	Pass	17
HT40	MCS0	1	134	5670	0.30	17.15	23.98	-2.00	26.99	Pass	17
VHT20	MCS0	1	100	5500	0.14	17.63	23.98	-2.00	26.99	Pass	17.5
VHT20	MCS0	1	116	5580	0.14	18.11	23.98	-2.00	26.99	Pass	18
VHT20	MCS0	1	140	5700	0.14	15.97	23.98	-2.00	26.99	Pass	16
VHT40	MCS0	1	102	5510	0.30	16.23	23.98	-2.00	26.99	Pass	16
VHT40	MCS0	1	110	5550	0.30	17.25	23.98	-2.00	26.99	Pass	17
VHT40	MCS0	1	134	5670	0.30	17.18	23.98	-2.00	26.99	Pass	17
VHT80	MCS0	1	106	5530	0.58	14.79	23.98	-2.00	26.99	Pass	14.5
VHT80	MCS0	1	122	5610	0.58	16.27	23.98	-2.00	26.99	Pass	16

FCC U-NII-2C straddle channel single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail	Power Setting
					Ant 5	Ant 5	Ant 5	Ant 5			Ant 5
11a	6Mbps	1	144	5720	0.13	17.96	23.98	-2.00	26.99	Pass	18
HT20	MCS0	1	144	5720	0.13	17.88	23.98	-2.00	26.99	Pass	18
HT40	MCS0	1	142	5710	0.30	17.10	23.98	-2.00	26.99	Pass	17
VHT20	MCS0	1	144	5720	0.14	17.92	23.98	-2.00	26.99	Pass	18
VHT40	MCS0	1	142	5710	0.30	17.17	23.98	-2.00	26.99	Pass	17
VHT80	MCS0	1	138	5690	0.58	16.17	23.98	-2.00	26.99	Pass	16

FCC U-NII-1 single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail	Power Setting
						Ant 5	Ant 5	Ant 5	Ant 5		Ant 5
HE20	MCS0	1	36	5180	Full	0.18	17.29	24.00	-2.50	Pass	17
HE20	MCS0	1	36	5180	26/0	0.13	8.87	24.00	-2.50	Pass	8.5
HE20	MCS0	1	36	5180	52/37	0.06	11.53	24.00	-2.50	Pass	11
HE20	MCS0	1	36	5180	106/53	0.08	14.56	24.00	-2.50	Pass	14
HE20	MCS0	1	44	5220	Full	0.18	18.23	24.00	-2.50	Pass	18
HE20	MCS0	1	44	5220	26/0	0.13	9.62	24.00	-2.50	Pass	9
HE20	MCS0	1	44	5220	52/37	0.06	12.88	24.00	-2.50	Pass	12
HE20	MCS0	1	44	5220	106/53	0.08	15.43	24.00	-2.50	Pass	14.5
HE20	MCS0	1	48	5240	Full	0.18	18.21	24.00	-2.50	Pass	18
HE20	MCS0	1	48	5240	26/8	0.13	9.72	24.00	-2.50	Pass	9
HE20	MCS0	1	48	5240	52/40	0.06	12.24	24.00	-2.50	Pass	11.5
HE20	MCS0	1	48	5240	106/54	0.08	15.20	24.00	-2.50	Pass	14.5
HE40	MCS0	1	38	5190	Full	0.36	14.99	24.00	-2.50	Pass	14.5
HE40	MCS0	1	46	5230	Full	0.36	17.47	24.00	-2.50	Pass	17
HE80	MCS0	1	42	5210	Full	0.65	14.49	24.00	-2.50	Pass	14

FCC U-NII-2A single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail	Power Setting
						Ant 5	Ant 5	Ant 5	Ant 5			Ant 5
HE20	MCS0	1	52	5260	Full	0.18	18.25	23.98	-3.00	26.99	Pass	18
HE20	MCS0	1	52	5260	26/0	0.13	9.79	23.98	-3.00	26.99	Pass	9
HE20	MCS0	1	52	5260	52/37	0.06	12.29	23.98	-3.00	26.99	Pass	11.5
HE20	MCS0	1	52	5260	106/53	0.08	15.32	23.98	-3.00	26.99	Pass	14.5
HE20	MCS0	1	60	5300	Full	0.18	18.34	23.98	-3.00	26.99	Pass	18
HE20	MCS0	1	60	5300	26/0	0.13	9.77	23.98	-3.00	26.99	Pass	9
HE20	MCS0	1	60	5300	52/37	0.06	12.93	23.98	-3.00	26.99	Pass	12
HE20	MCS0	1	60	5300	106/53	0.08	15.60	23.98	-3.00	26.99	Pass	14.5
HE20	MCS0	1	64	5320	Full	0.18	16.22	23.98	-3.00	26.99	Pass	15.5
HE20	MCS0	1	64	5320	26/8	0.13	6.90	23.98	-3.00	26.99	Pass	6
HE20	MCS0	1	64	5320	52/40	0.06	10.17	23.98	-3.00	26.99	Pass	9
HE20	MCS0	1	64	5320	106/54	0.08	13.13	23.98	-3.00	26.99	Pass	12
HE40	MCS0	1	54	5270	Full	0.36	17.61	23.98	-3.00	26.99	Pass	17
HE40	MCS0	1	62	5310	Full	0.36	14.81	23.98	-3.00	26.99	Pass	14
HE80	MCS0	1	58	5290	Full	0.65	13.67	23.98	-3.00	26.99	Pass	13

FCC U-NII-2C single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail	Power Setting
						Ant 5	Ant 5	Ant 5	Ant 5			Ant 5
HE20	MCS0	1	100	5500	Full	0.18	17.79	23.98	-2.00	26.98970004	Pass	17.5
HE20	MCS0	1	100	5500	26/0	0.13	9.08	23.98	-2.00	26.98970004	Pass	8.5
HE20	MCS0	1	100	5500	52/37	0.06	12.13	23.98	-2.00	26.98970004	Pass	11.5
HE20	MCS0	1	100	5500	106/53	0.08	15.09	23.98	-2.00	26.98970004	Pass	14.5
HE20	MCS0	1	116	5580	Full	0.18	18.21	23.98	-2.00	26.98970004	Pass	18
HE20	MCS0	1	116	5580	26/0	0.13	9.56	23.98	-2.00	26.98970004	Pass	9
HE20	MCS0	1	116	5580	52/37	0.06	12.83	23.98	-2.00	26.98970004	Pass	12
HE20	MCS0	1	116	5580	106/53	0.08	15.81	23.98	-2.00	26.98970004	Pass	15
HE20	MCS0	1	140	5700	Full	0.18	16.16	23.98	-2.00	26.98970004	Pass	16
HE20	MCS0	1	140	5700	26/8	0.13	7.05	23.98	-2.00	26.98970004	Pass	7
HE20	MCS0	1	140	5700	52/40	0.06	9.58	23.98	-2.00	26.98970004	Pass	9.5
HE20	MCS0	1	140	5700	106/54	0.08	12.74	23.98	-2.00	26.98970004	Pass	12.5
HE40	MCS0	1	102	5510	Full	0.36	16.41	23.98	-2.00	26.98970004	Pass	16
HE40	MCS0	1	110	5550	Full	0.36	17.37	23.98	-2.00	26.98970004	Pass	17
HE40	MCS0	1	134	5670	Full	0.36	17.26	23.98	-2.00	26.98970004	Pass	17
HE80	MCS0	1	106	5530	Full	0.65	14.93	23.98	-2.00	26.98970004	Pass	14.5
HE80	MCS0	1	122	5610	Full	0.65	16.38	23.98	-2.00	26.98970004	Pass	16

FCC U-NII-2C straddle channel single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail	Power Setting
						Ant 5	Ant 5	Ant 5	Ant 5			Ant 5
HE20	MCS0	1	144	5720	Full	0.18	18.01	23.98	-2.00	26.98970004	Pass	18
HE20	MCS0	1	144	5720	26/8	0.13	8.85	23.98	-2.00	26.98970004	Pass	8.5
HE20	MCS0	1	144	5720	52/40	0.06	11.98	23.98	-2.00	26.98970004	Pass	11.5
HE20	MCS0	1	144	5720	106/54	0.08	15.00	23.98	-2.00	26.98970004	Pass	14.5
HE40	MCS0	1	142	5710	Full	0.36	17.28	23.98	-2.00	26.98970004	Pass	17
HE80	MCS0	1	138	5690	Full	0.65	16.27	23.98	-2.00	26.98970004	Pass	16

U-NII-3 single antenna										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail	Power Setting
					Ant 5	Ant 5	Ant 5	Ant 5		Ant 5
11a	6Mbps	1	149	5745	0.13	17.92	30.00	-2.00	Pass	18
11a	6Mbps	1	157	5785	0.13	17.90	30.00	-2.00	Pass	18
11a	6Mbps	1	165	5825	0.13	17.76	30.00	-2.00	Pass	18
HT20	MCS0	1	149	5745	0.13	17.81	30.00	-2.00	Pass	18
HT20	MCS0	1	157	5785	0.13	17.84	30.00	-2.00	Pass	18
HT20	MCS0	1	165	5825	0.13	17.81	30.00	-2.00	Pass	18
HT40	MCS0	1	151	5755	0.30	17.18	30.00	-2.00	Pass	17
HT40	MCS0	1	159	5795	0.30	17.02	30.00	-2.00	Pass	17
VHT20	MCS0	1	149	5745	0.14	17.88	30.00	-2.00	Pass	18
VHT20	MCS0	1	157	5785	0.14	17.87	30.00	-2.00	Pass	18
VHT20	MCS0	1	165	5825	0.14	17.85	30.00	-2.00	Pass	18
VHT40	MCS0	1	151	5755	0.30	17.24	30.00	-2.00	Pass	17
VHT40	MCS0	1	159	5795	0.30	17.04	30.00	-2.00	Pass	17
VHT80	MCS0	1	155	5775	0.58	16.20	30.00	-2.00	Pass	16

U-NII-3 single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)	Average Conducted Power with duty factor (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail	Power Setting
						Ant 5	Ant 5	Ant 5	Ant 5		Ant 5
HE20	MCS0	1	149	5745	Full	0.18	17.97	30.00	-2.00	Pass	18
HE20	MCS0	1	149	5745	26/0	0.18	9.34	30.00	-2.00	Pass	9
HE20	MCS0	1	149	5745	52/37	0.18	12.04	30.00	-2.00	Pass	11.5
HE20	MCS0	1	149	5745	106/53	0.18	14.95	30.00	-2.00	Pass	14.5
HE20	MCS0	1	157	5785	Full	0.18	17.96	30.00	-2.00	Pass	18
HE20	MCS0	1	157	5785	26/0	0.18	9.30	30.00	-2.00	Pass	9
HE20	MCS0	1	157	5785	52/37	0.18	12.09	30.00	-2.00	Pass	11.5
HE20	MCS0	1	157	5785	106/53	0.18	14.86	30.00	-2.00	Pass	14.5
HE20	MCS0	1	165	5825	Full	0.18	17.92	30.00	-2.00	Pass	18
HE20	MCS0	1	165	5825	26/8	0.18	8.92	30.00	-2.00	Pass	8.5
HE20	MCS0	1	165	5825	52/40	0.18	11.88	30.00	-2.00	Pass	11.5
HE20	MCS0	1	165	5825	106/54	0.18	14.92	30.00	-2.00	Pass	14.5
HE40	MCS0	1	151	5755	Full	0.36	17.34	30.00	-2.00	Pass	17
HE40	MCS0	1	159	5795	Full	0.36	17.15	30.00	-2.00	Pass	17
HE80	MCS0	1	155	5775	Full	0.65	16.33	30.00	-2.00	Pass	16

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04.
Section F) Maximum power spectral density.

For devices operating in the bands UNII-1/2A/2C

 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

For devices operating in the band UNII-3

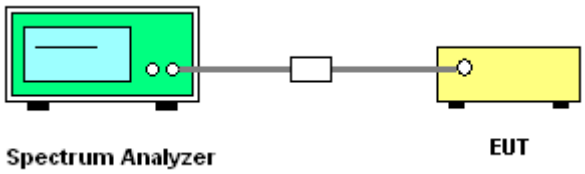
 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 500KHz (or 300 kHz if the SA can’t set RBW=500KHz).
- Set VBW ≥ 1 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- If the SA can’t set RBW=500KHz, then add 10 log(500kHz/RBW) to the test result.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Unwanted Emissions Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) For transmitters operating in the 5.725-5.85 GHz band:
15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(3) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

(4) EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

Note: The following formula is used to convert the EIRP to field strength.

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

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 testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on.

   (4) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 3 MHz
   - Detector = power averaging (rms), set span/(# of points in sweep) ≥ RBW/2.
   - Averaging type = power averaging(RMS)
   - The correction factor shall be offset is 10 log (1/x), where x is the duty cycle.

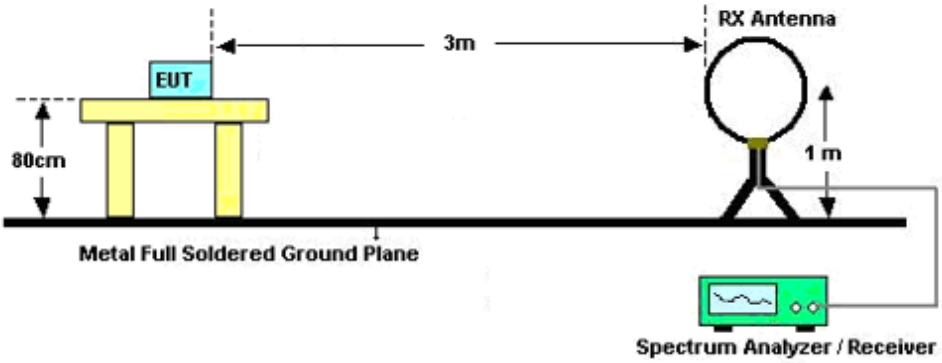
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the

limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.

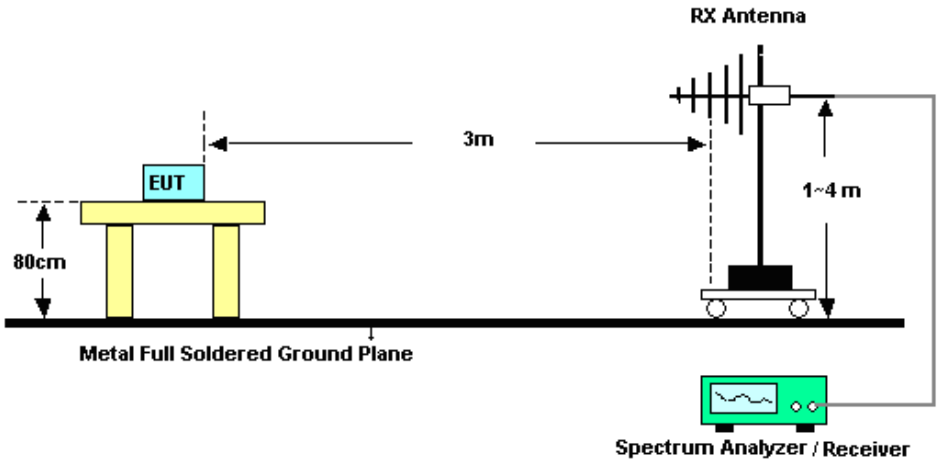
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

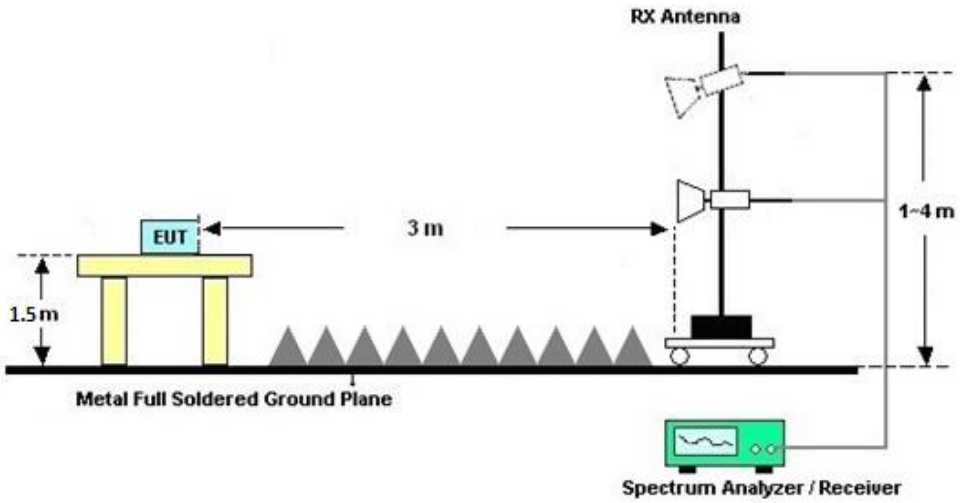
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

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.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

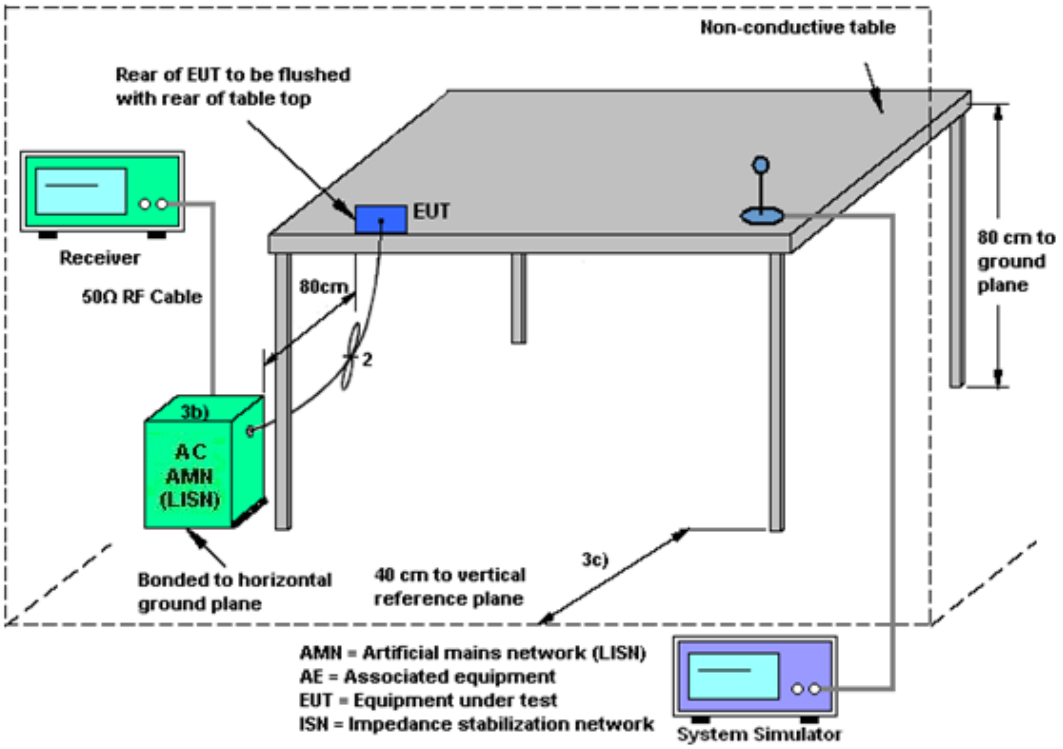
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Apr. 08, 2025~ Apr. 11, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2025	Apr. 08, 2025~ Apr. 11, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2025	Apr. 08, 2025~ Apr. 11, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Apr. 08, 2025~ Apr. 11, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 09, 2024	Mar. 29, 2025~ Apr. 15, 2025	Apr. 08, 2025	Radiation (03CH03-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 08, 2025		Apr. 07, 2026	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 09, 2024	Mar. 29, 2025~ Apr. 15, 2025	Apr. 08, 2025	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 08, 2025		Apr. 07, 2026	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Mar. 29, 2025~ Apr. 15, 2025	Dec. 27, 2025	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 20, 2023	Mar. 29, 2025~ Apr. 15, 2025	Aug. 19, 2025	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 09, 2024	Mar. 29, 2025~ Apr. 15, 2025	Apr. 08, 2025	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 08, 2025		Apr. 07, 2026	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Mar. 29, 2025~ Apr. 15, 2025	Jul. 02, 2025	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Mar. 29, 2025~ Apr. 15, 2025	Apr. 08, 2025	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 08, 2025		Apr. 07, 2026	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2024	Mar. 29, 2025~ Apr. 15, 2025	Oct. 17, 2025	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Mar. 29, 2025~ Apr. 15, 2025	Oct. 13, 2025	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 26, 2024	Mar. 29, 2025~ Apr. 15, 2025	Dec. 25, 2025	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010002729	N/A	Oct. 18, 2024	Mar. 29, 2025~ Apr. 15, 2025	Oct. 17, 2025	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Mar. 29, 2025~ Apr. 15, 2025	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Mar. 29, 2025~ Apr. 15, 2025	NCR	Radiation (03CH03-SZ)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul. 03, 2024	Apr. 17, 2025	Jul. 02, 2025	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Dec. 25, 2024	Apr. 17, 2025	Dec. 24, 2025	Conduction (CO02-SZ)

NCR: No Calibration Required

5 Measurement Uncertainty

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

Uncertainty of Conducted Measurement

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 AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.9dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

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

Appendix A. Conducted Test Results

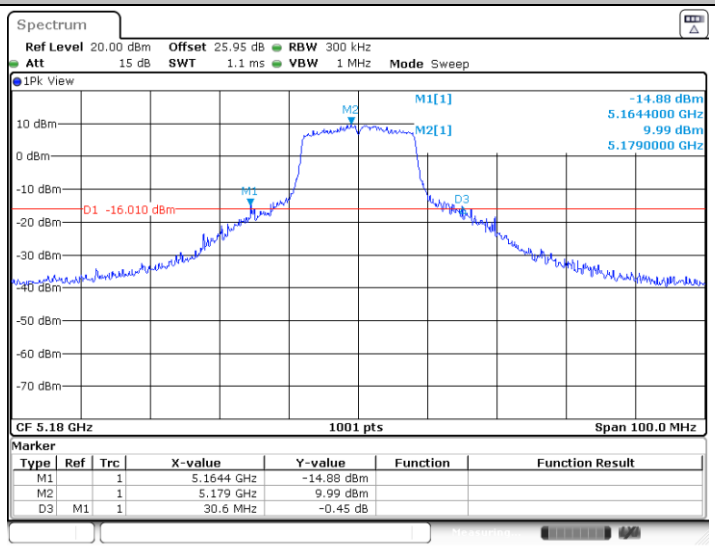
Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant5	5180	30.60	5164.40	5195.00	---	---
		5220	26.90	5206.90	5233.80	---	---
		5240	30.70	5223.90	5254.60	---	---
		5260	29.10	5244.90	5274.00	---	---
		5300	32.00	5283.90	5315.90	---	---
		5320	30.80	5303.90	5334.70	---	---
		5500	28.20	5485.80	5514.00	---	---
		5580	27.00	5566.90	5593.90	---	---
		5700	24.80	5688.00	5712.80	---	---
		5720	29.30	5703.90	5733.20	---	---
		5745	31.50	5728.80	5760.30	---	---
		5785	27.60	5771.90	5799.50	---	---
		5825	25.70	5812.20	5837.90	---	---
11AX20SISO	Ant5	5180	28.30	5163.60	5191.90	---	---
		5220	33.40	5203.80	5237.20	---	---
		5240	25.40	5228.10	5253.50	---	---
		5260	28.00	5245.60	5273.60	---	---
		5300	25.10	5288.50	5313.60	---	---
		5320	31.90	5303.00	5334.90	---	---
		5500	25.00	5487.00	5512.00	---	---
		5580	26.30	5567.70	5594.00	---	---
		5700	32.20	5685.50	5717.70	---	---
		5720	32.80	5702.20	5735.00	---	---
		5745	29.00	5732.00	5761.00	---	---
		5785	30.80	5769.70	5800.50	---	---
		5825	25.10	5813.00	5838.10	---	---
11AX40SISO	Ant5	5190	52.20	5166.20	5218.40	---	---
		5230	60.40	5198.00	5258.40	---	---
		5270	48.00	5250.20	5298.20	---	---
		5310	48.40	5289.80	5338.20	---	---
		5510	53.20	5484.40	5537.60	---	---
		5550	44.00	5530.40	5574.40	---	---
		5670	42.00	5650.20	5692.20	---	---
		5710	44.80	5689.40	5734.20	---	---
		5755	53.80	5725.20	5779.00	---	---
		5795	40.00	5775.00	5815.00	---	---
11AX80SISO	Ant5	5210	88.00	5170.00	5258.00	---	---
		5290	80.40	5250.00	5330.40	---	---
		5530	80.40	5490.00	5570.40	---	---
		5610	80.80	5570.00	5650.80	---	---
		5690	80.40	5650.00	5730.40	---	---
		5775	80.40	5735.00	5815.40	---	---

Test Graphs

11A_5180



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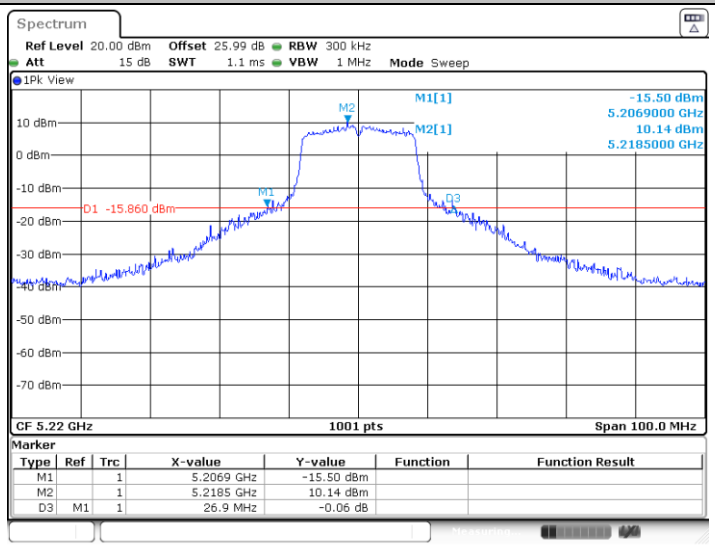

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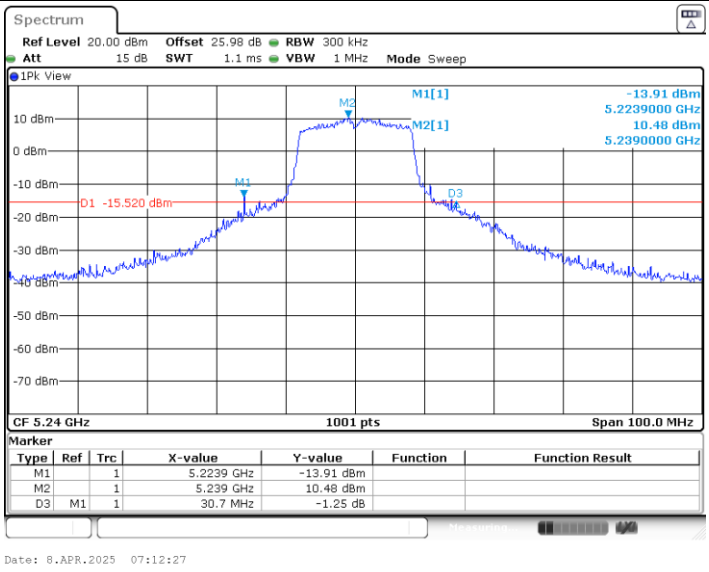

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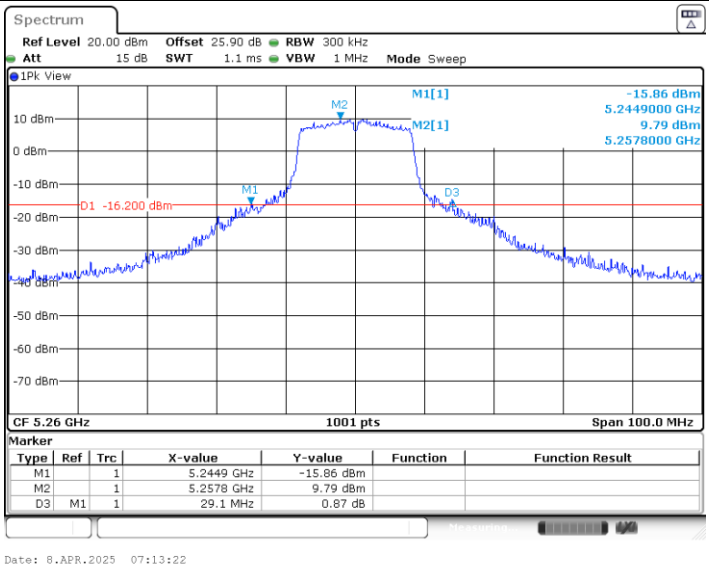

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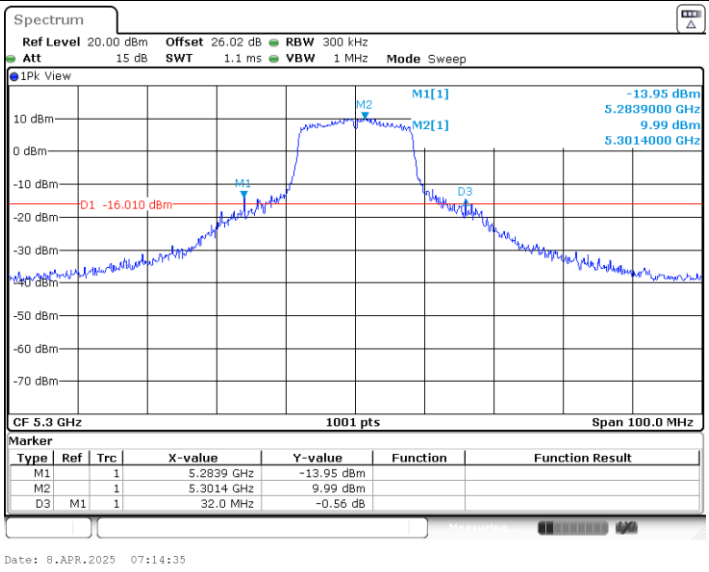

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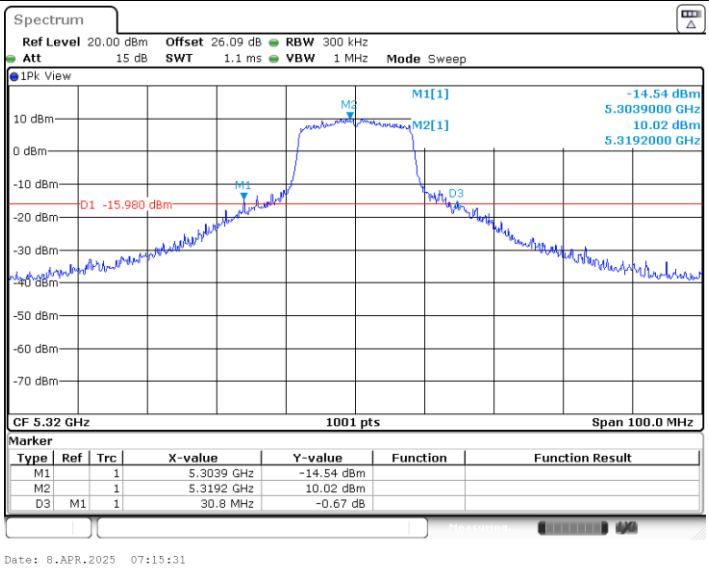

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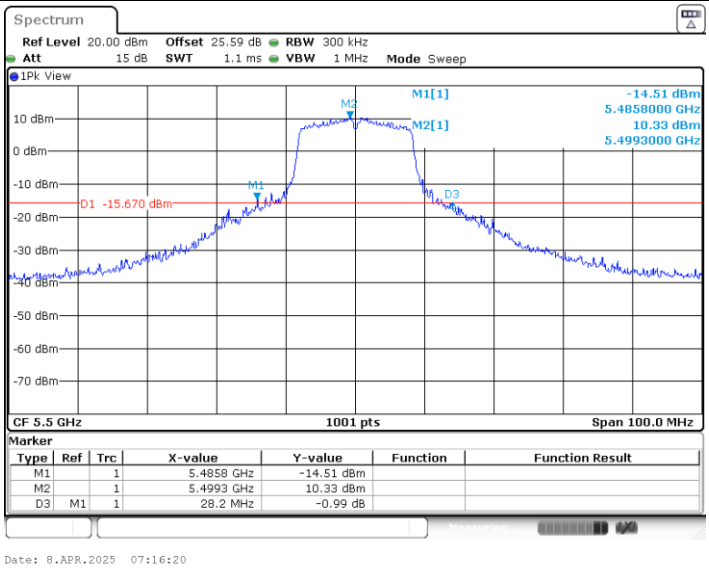

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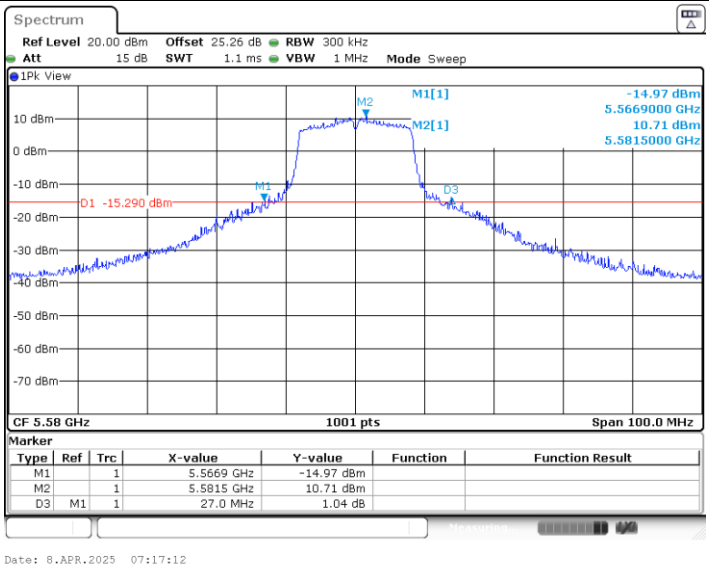

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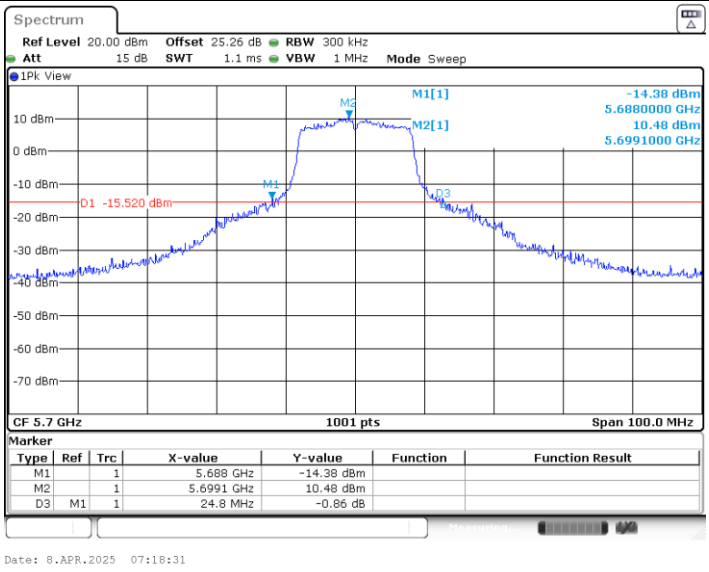

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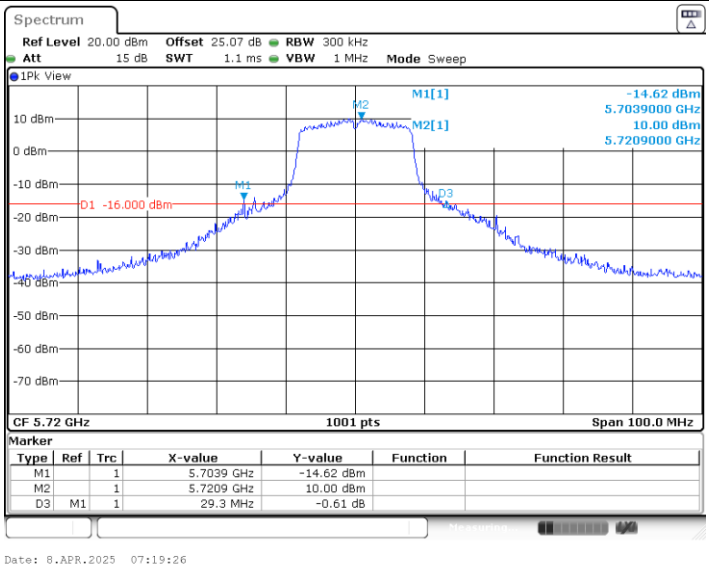

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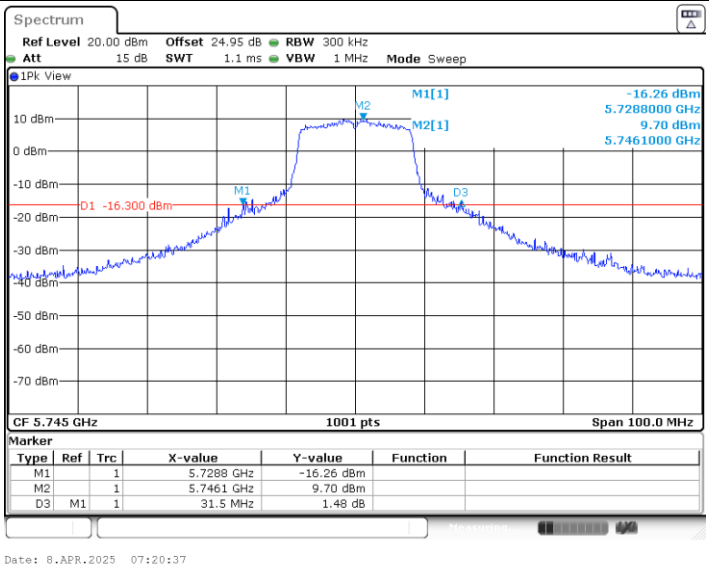

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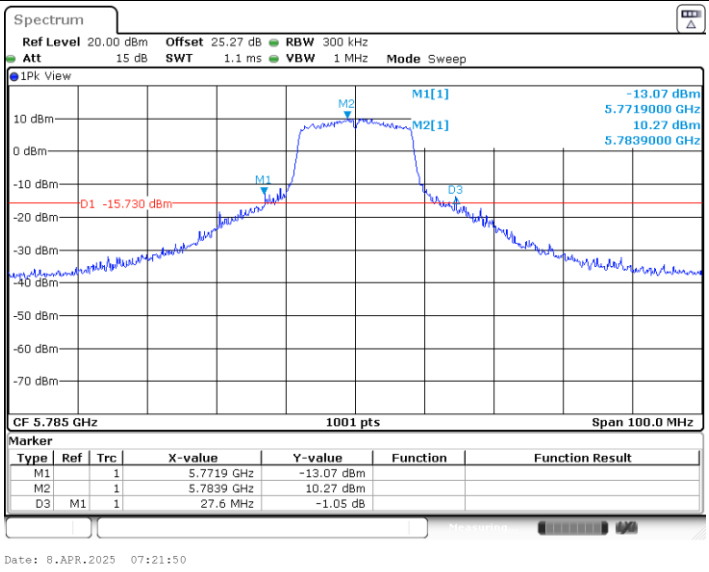

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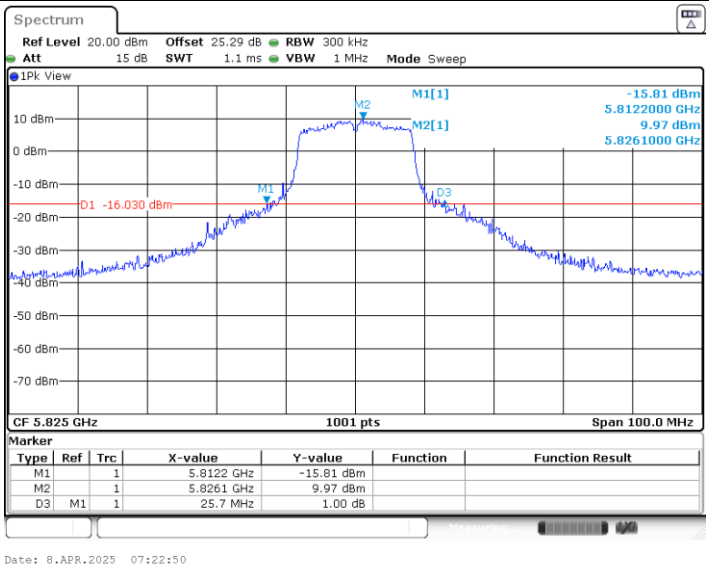

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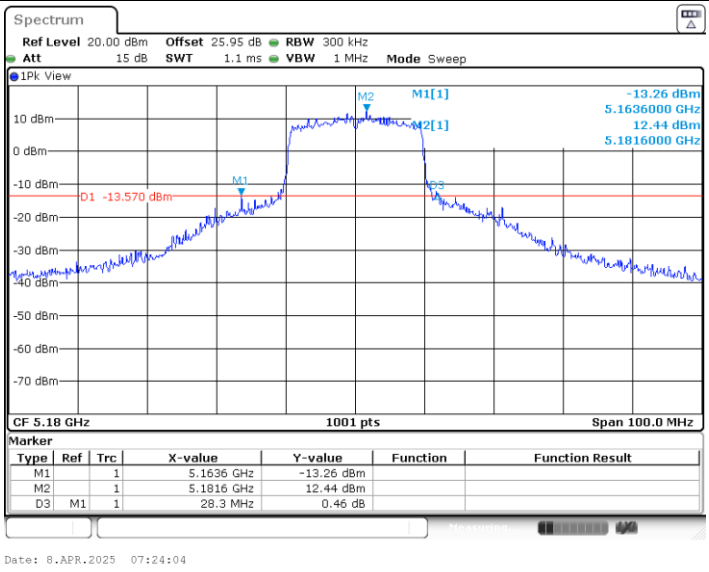

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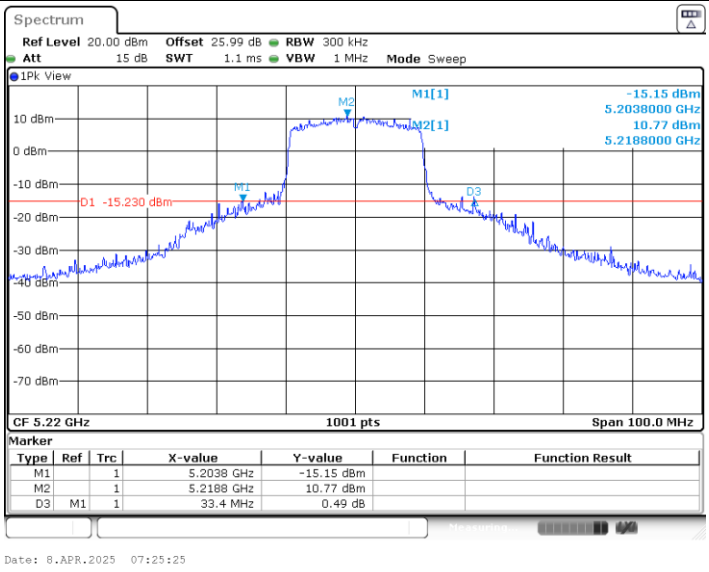

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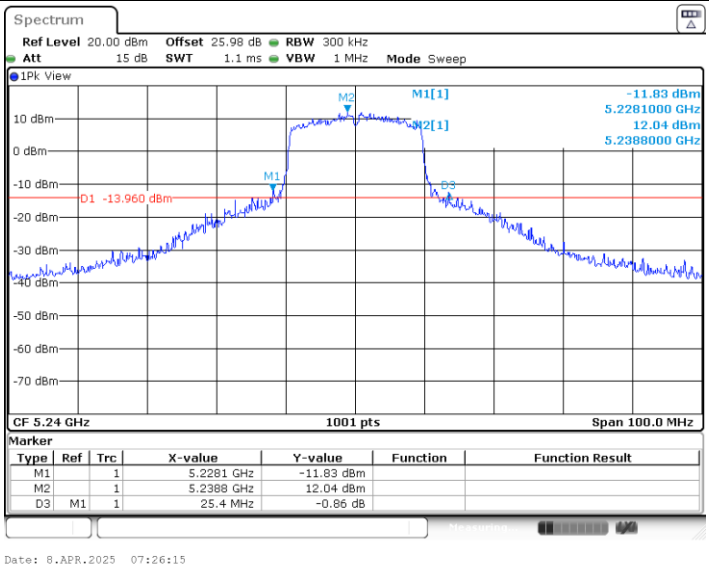

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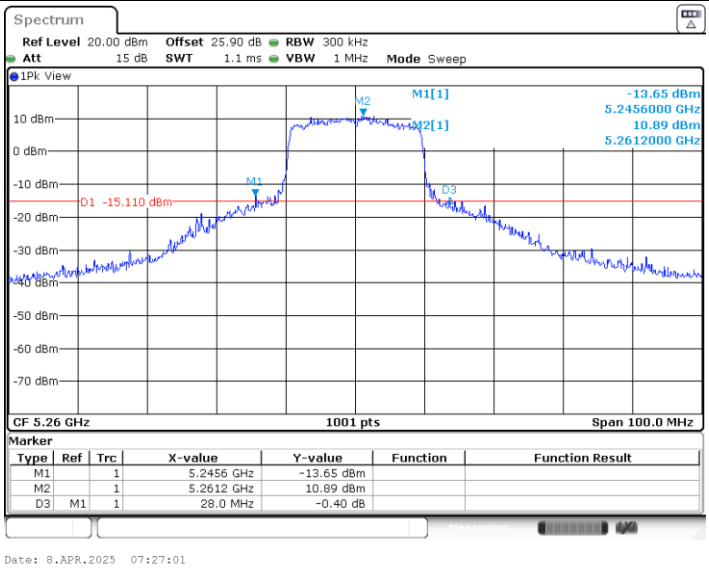

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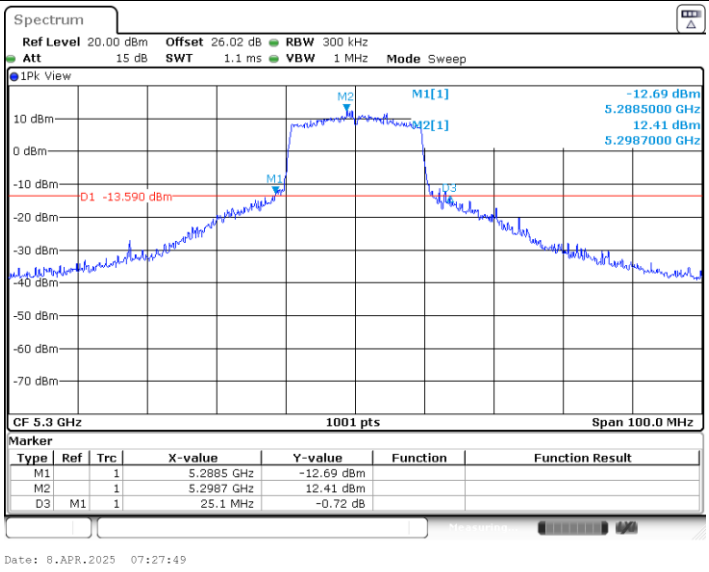

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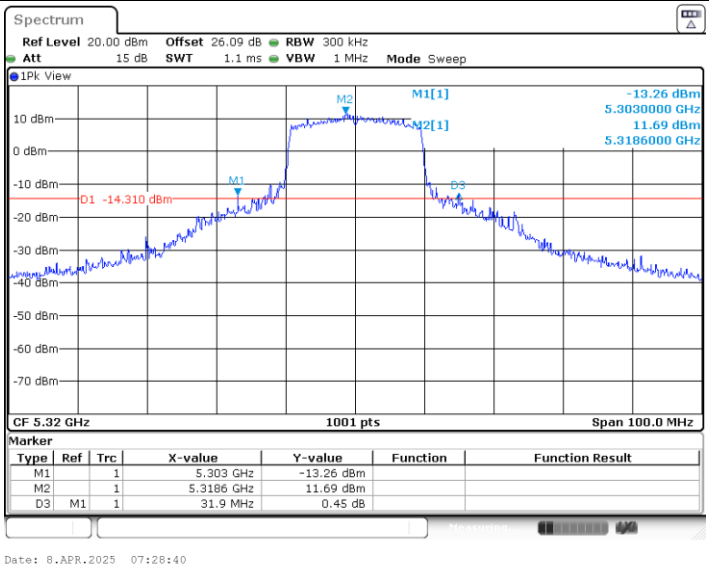

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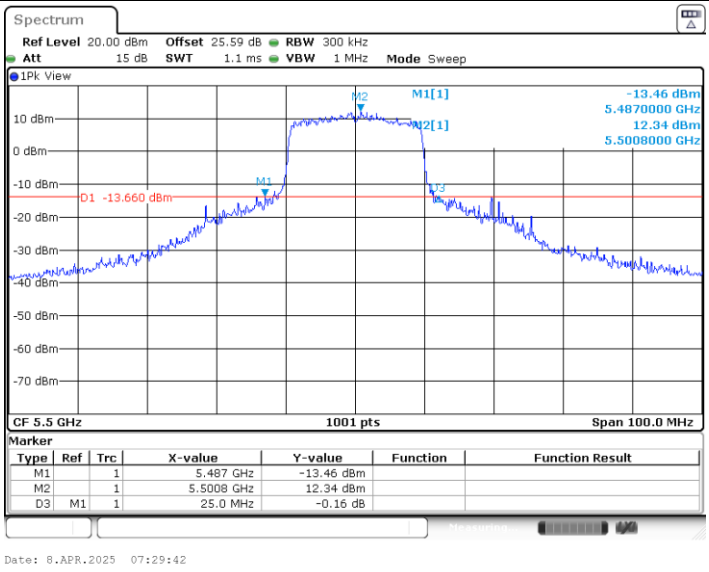

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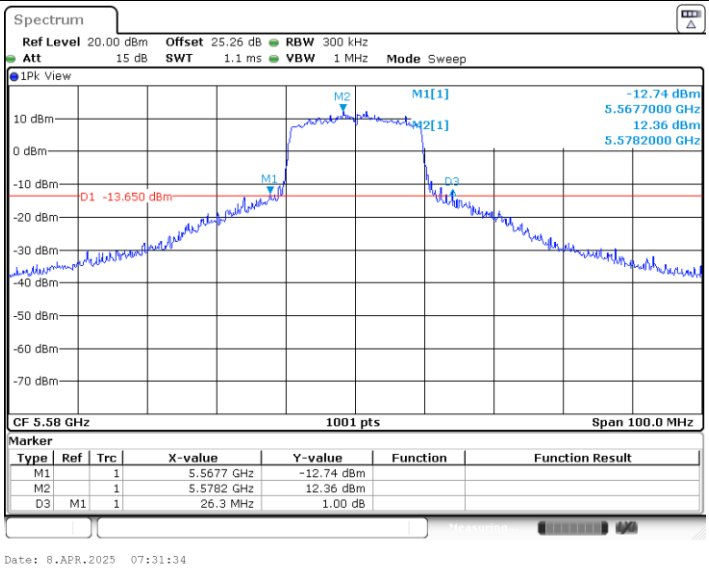

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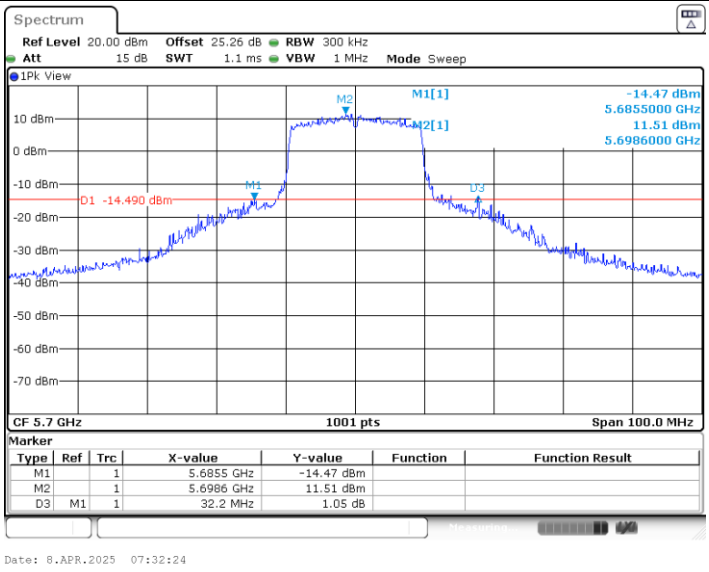

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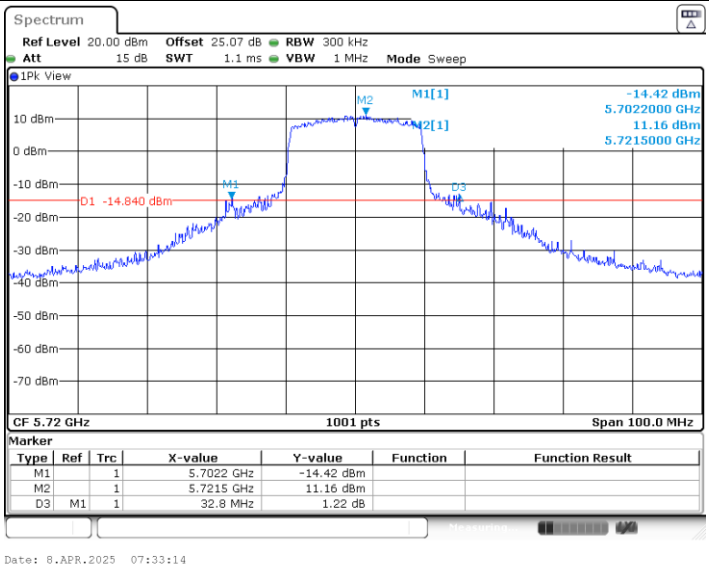

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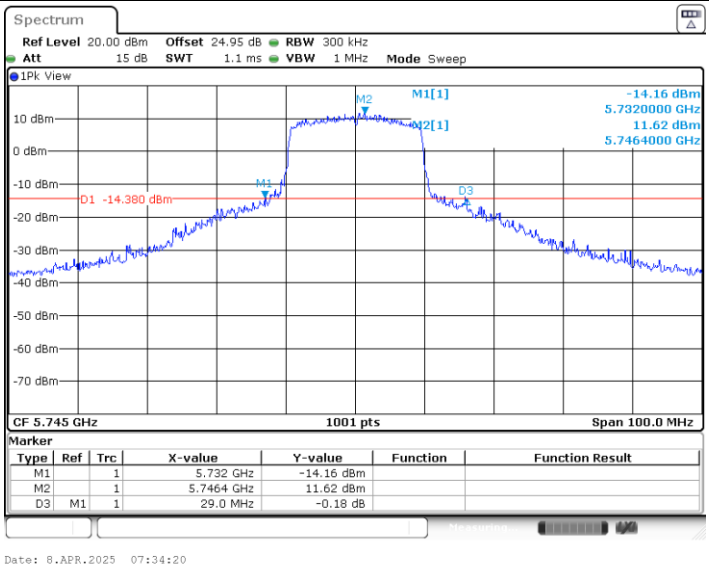

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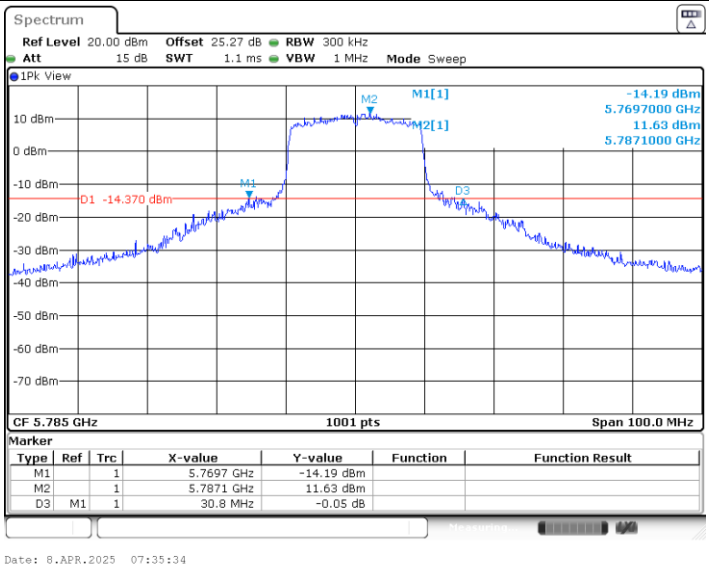

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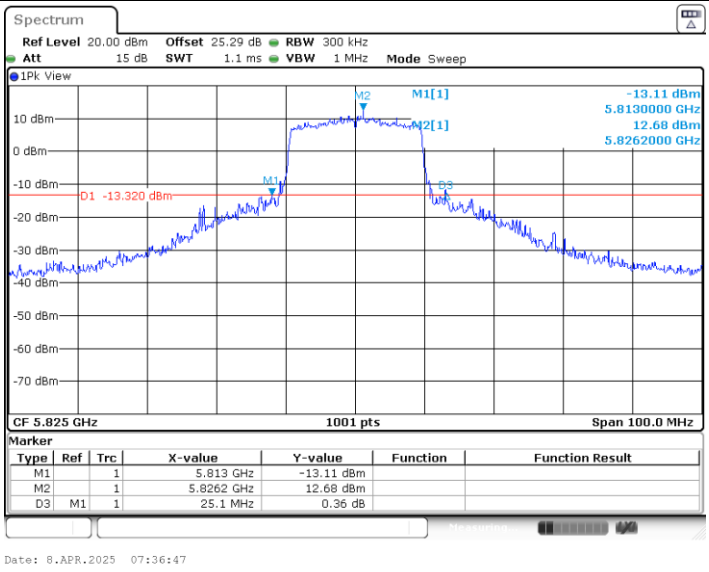

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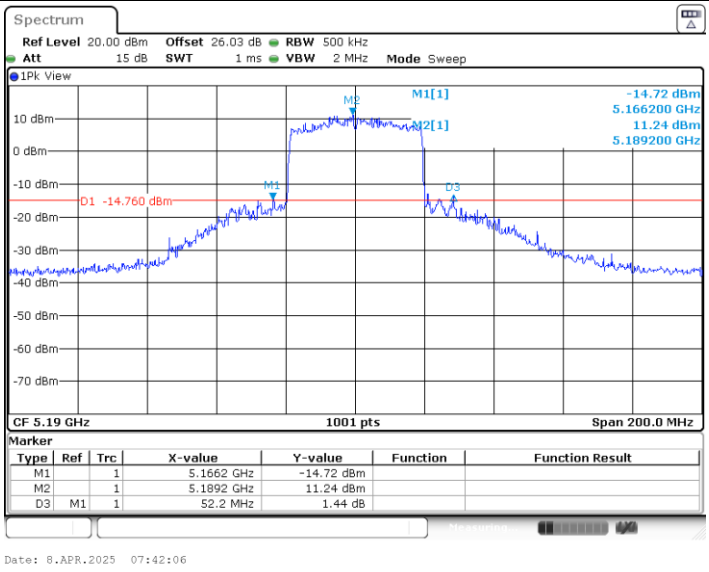

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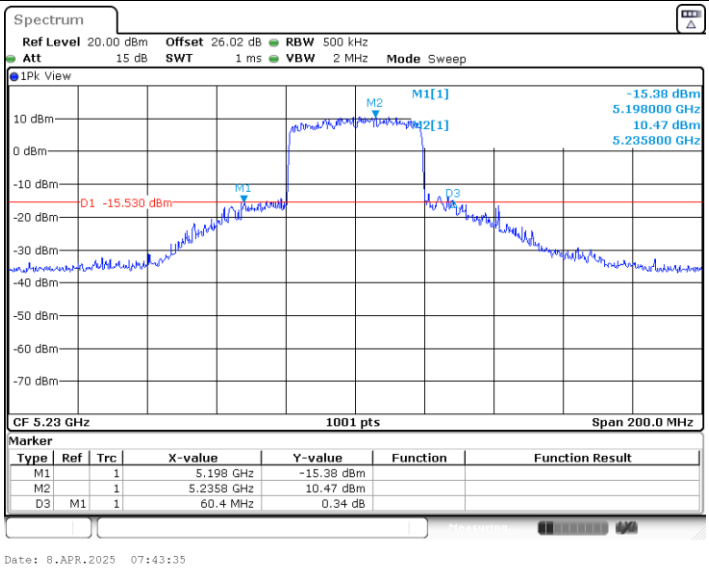

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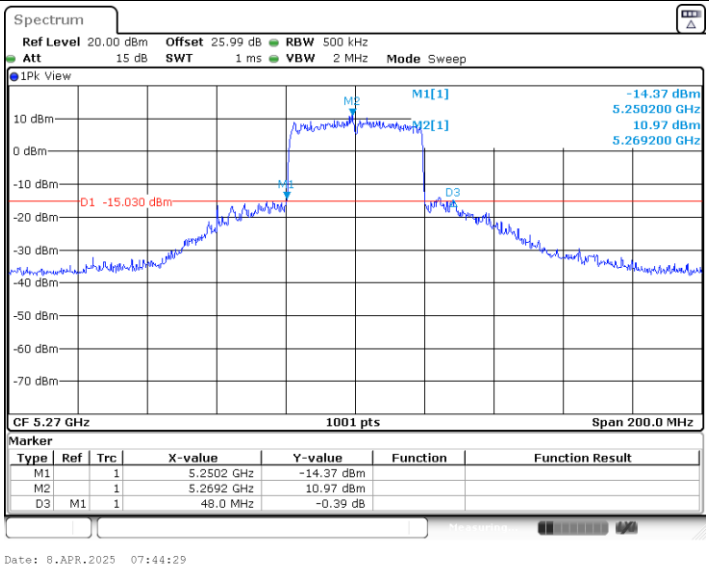
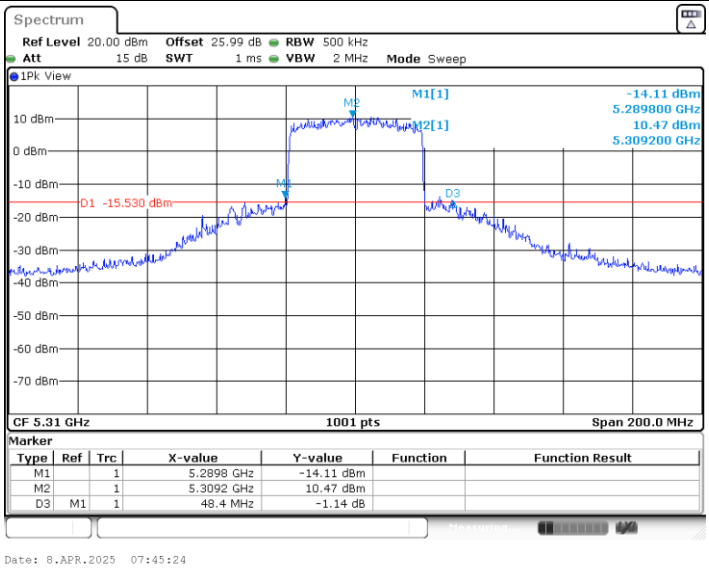
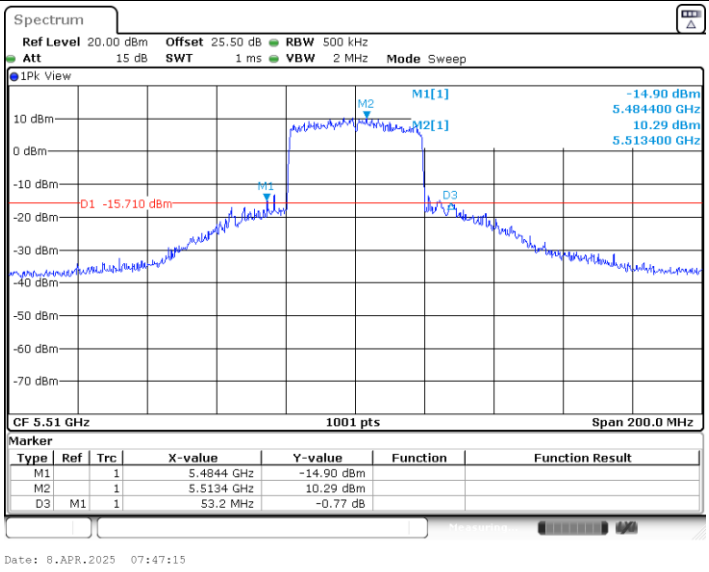
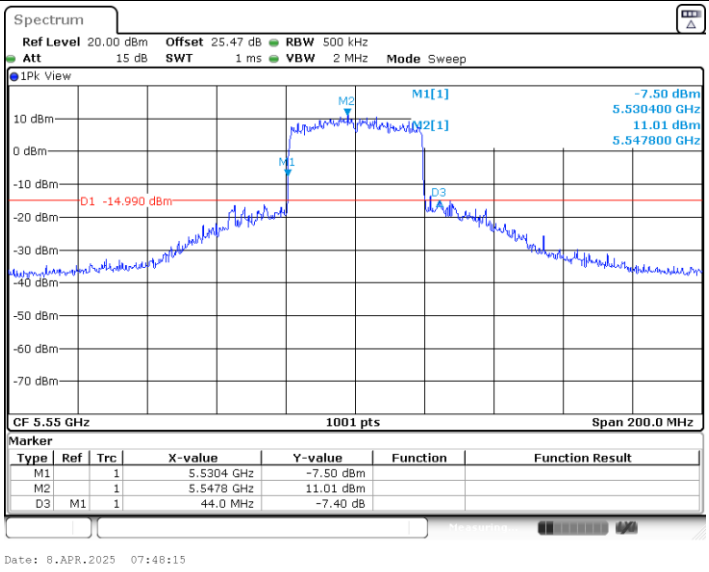
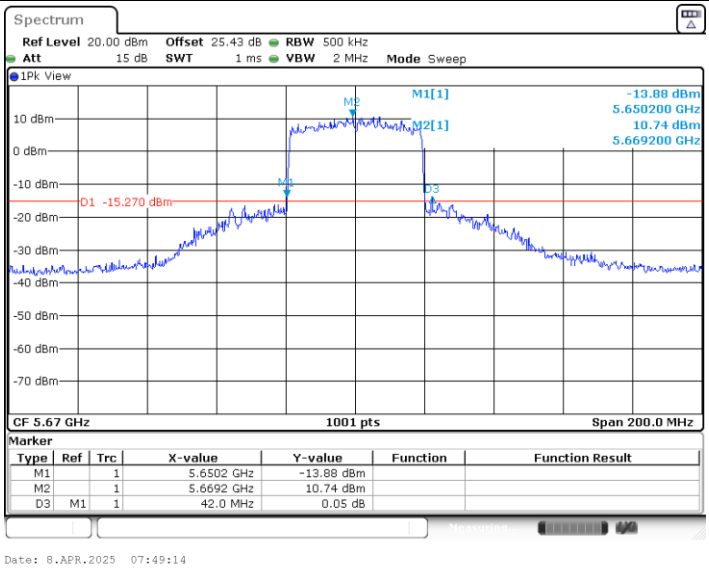


11AX40SISO_5310


11AX40SISO_5510


11AX40SISO_5550


11AX40SISO_5670


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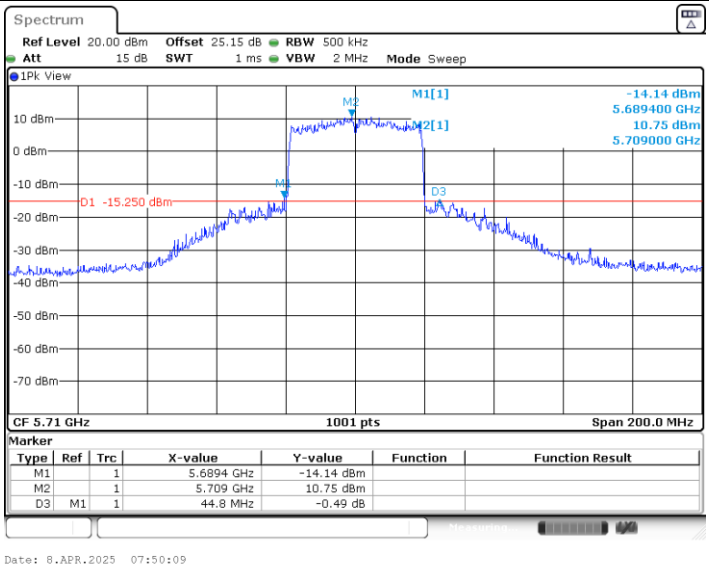

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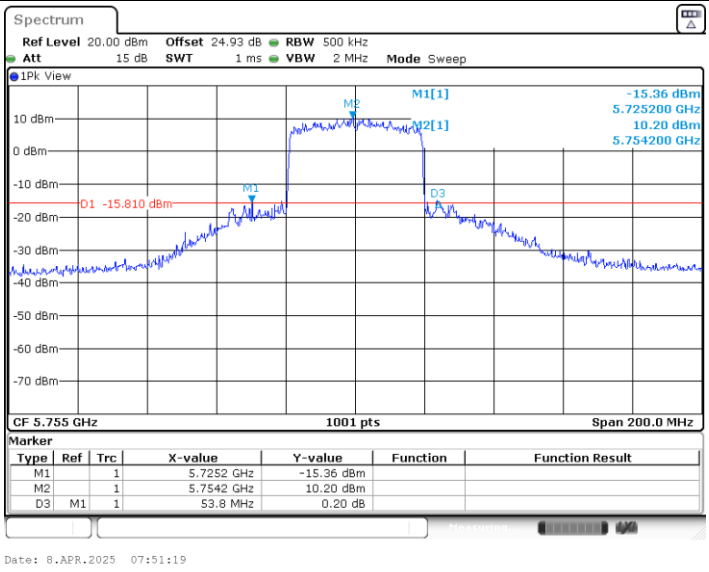
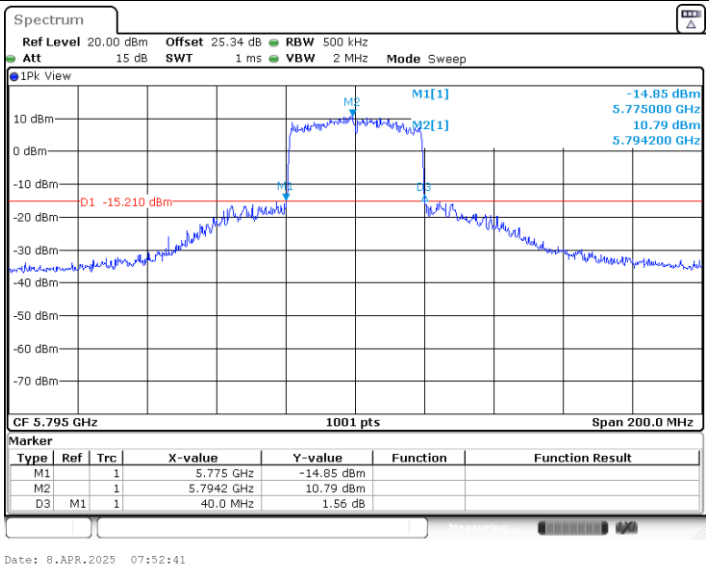


11AX40SISO_5795


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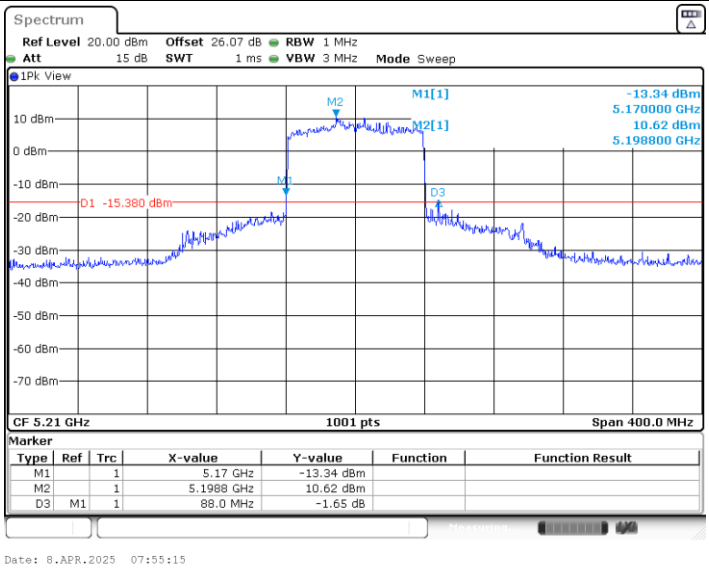

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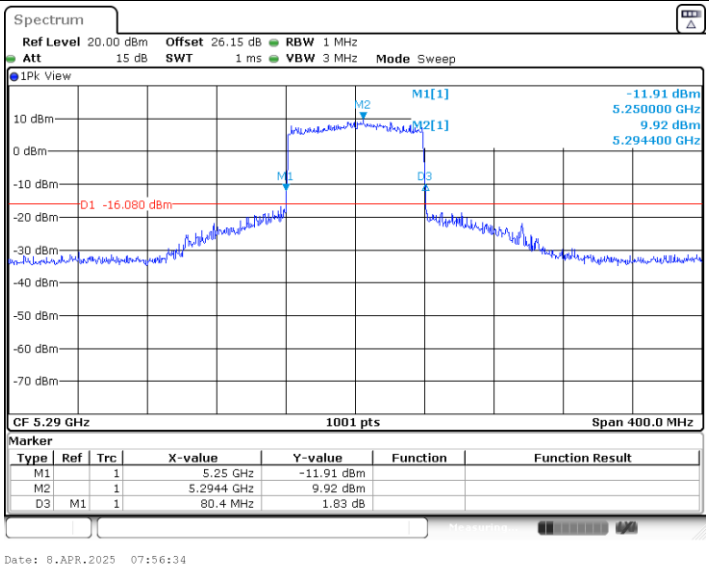
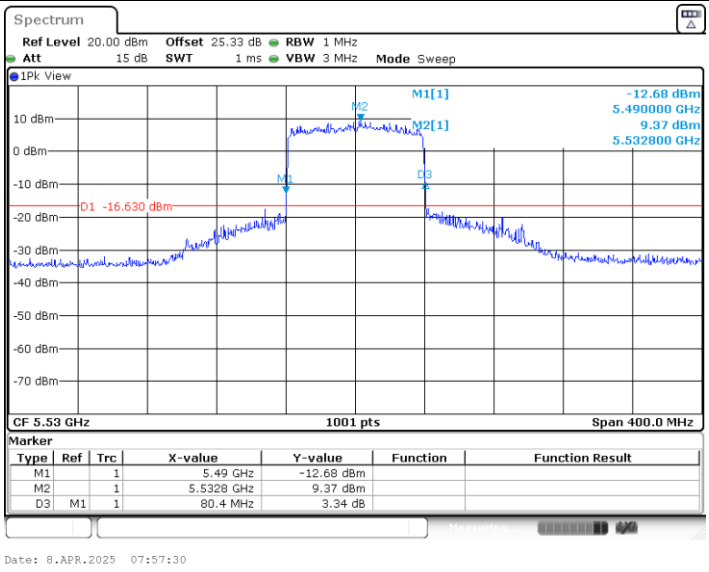


11AX80SISO_5530


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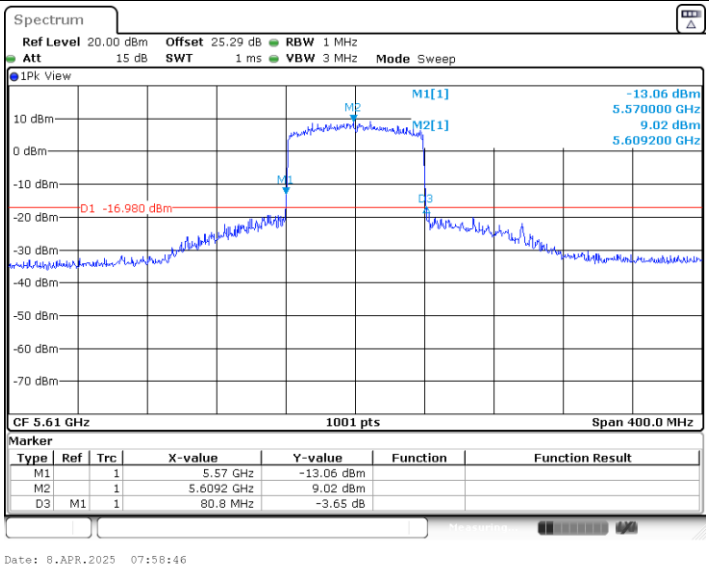
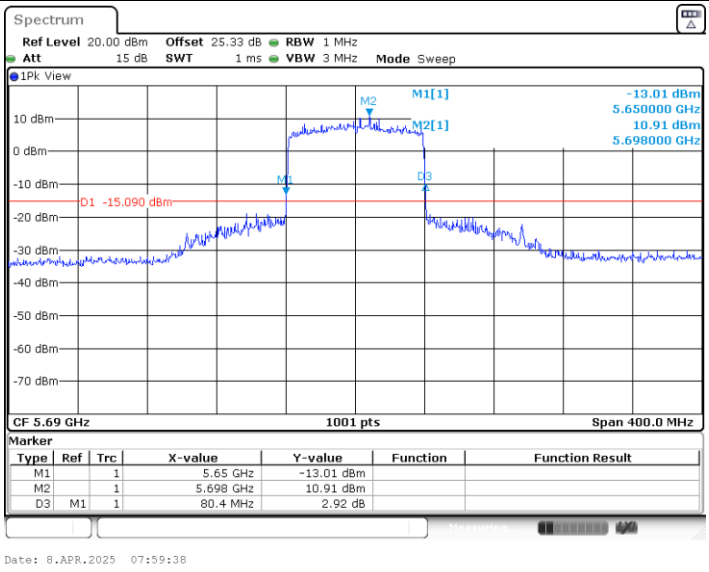


11AX80SISO_5690


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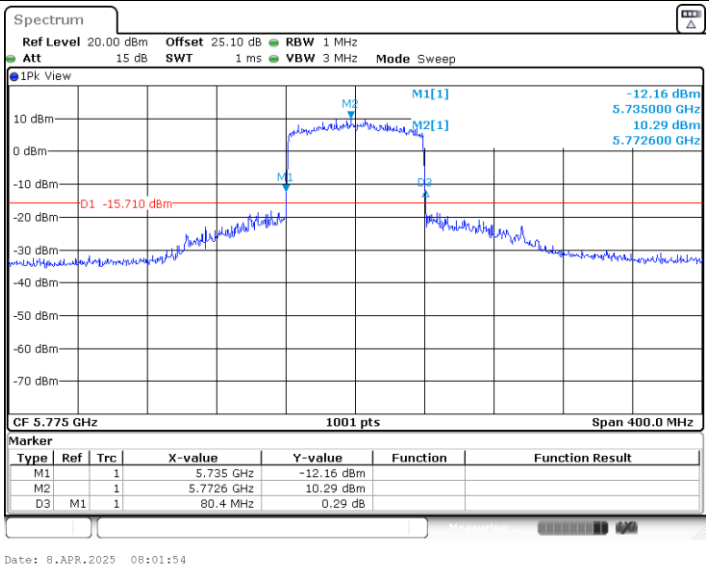


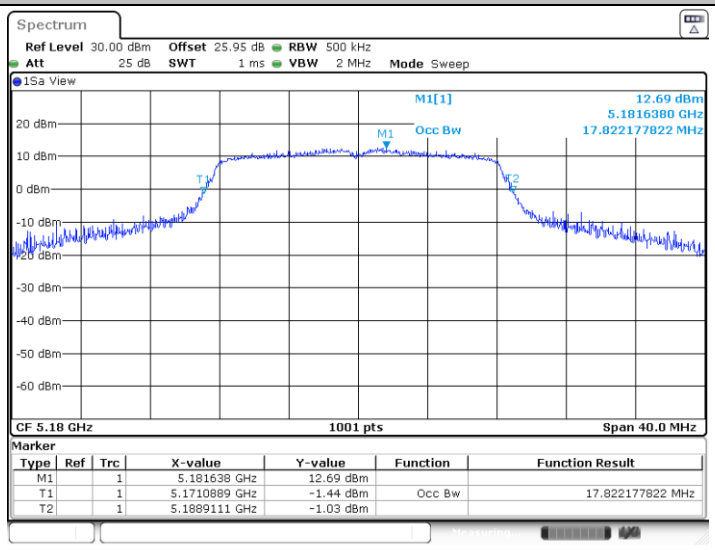
Occupied channel bandwidth

Test Result

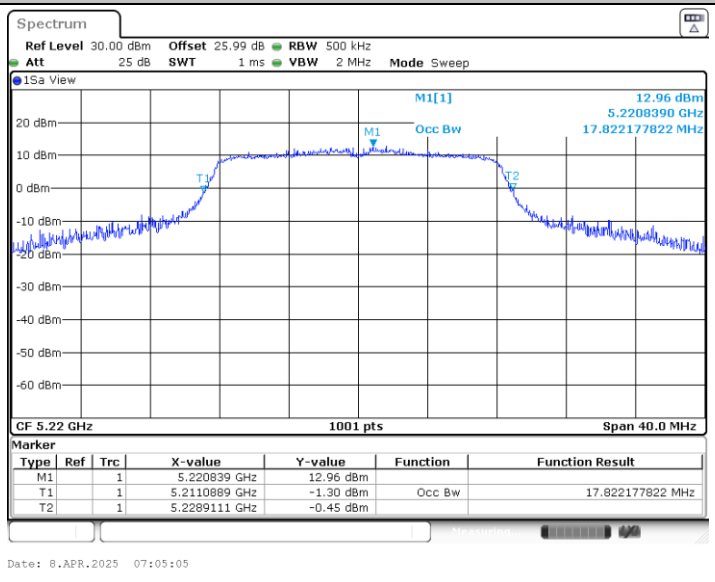
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant5	5180	17.822	5171.0889	5188.9111	---	---
		5220	17.822	5211.0889	5228.9111	---	---
		5240	17.622	5231.2488	5248.8711	---	---
		5260	17.702	5251.1289	5268.8312	---	---
		5300	17.702	5291.1688	5308.8711	---	---
		5320	17.662	5311.1289	5328.7912	---	---
		5500	17.463	5491.2488	5508.7113	---	---
		5580	17.502	5571.2887	5588.7912	---	---
		5700	17.622	5691.2088	5708.8312	---	---
		5720	17.542	5711.2488	5728.7912	---	---
		5745	17.622	5736.1688	5753.7912	---	---
		5785	17.582	5776.2088	5793.7912	---	---
		5825	17.662	5816.2088	5833.8711	---	---
11AX20SISO	Ant5	5180	19.421	5170.3297	5189.7502	---	---
		5220	19.421	5210.2897	5229.7103	---	---
		5240	19.341	5230.3696	5249.7103	---	---
		5260	19.341	5250.3297	5269.6703	---	---
		5300	19.341	5290.3696	5309.7103	---	---
		5320	19.381	5310.2897	5329.6703	---	---
		5500	19.341	5490.3297	5509.6703	---	---
		5580	19.301	5570.3696	5589.6703	---	---
		5700	19.301	5690.3696	5709.6703	---	---
		5720	19.301	5710.3696	5729.6703	---	---
		5745	19.341	5735.3297	5754.6703	---	---
		5785	19.301	5775.3297	5794.6304	---	---
		5825	19.341	5815.3696	5834.7103	---	---
11AX40SISO	Ant5	5190	38.202	5170.8991	5209.1009	---	---
		5230	38.122	5210.9790	5249.1009	---	---
		5270	38.282	5250.8991	5289.1808	---	---
		5310	38.042	5290.9790	5329.0210	---	---
		5510	38.042	5490.9790	5529.0210	---	---
		5550	38.122	5530.9790	5569.1009	---	---
		5670	38.202	5650.8991	5689.1009	---	---
		5710	38.122	5690.9790	5729.1009	---	---
		5755	38.202	5735.8991	5774.1009	---	---
		5795	38.122	5775.8991	5814.0210	---	---
11AX80SISO	Ant5	5210	77.682	5171.1588	5248.8412	---	---
		5290	77.842	5250.9990	5328.8412	---	---
		5530	77.842	5490.9990	5568.8412	---	---
		5610	77.682	5571.1588	5648.8412	---	---
		5690	77.842	5651.1588	5729.0010	---	---
		5775	77.682	5736.1588	5813.8412	---	---

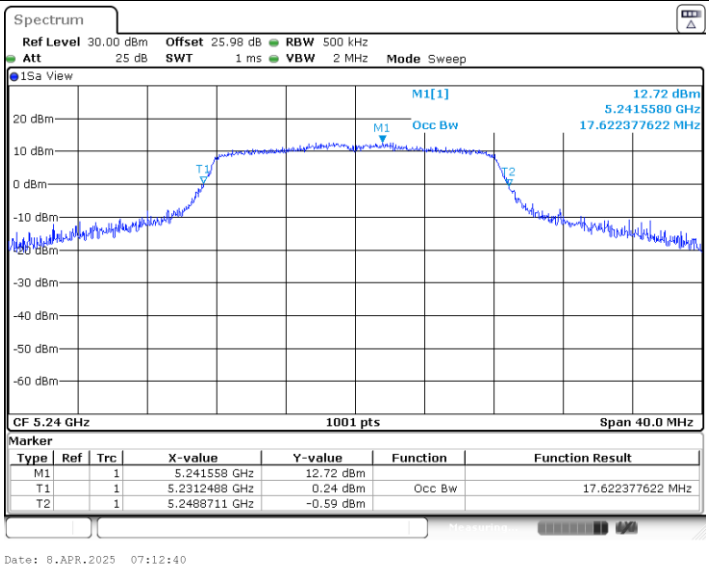
Test Graphs

11A_5180



11A_5220



11A_5240


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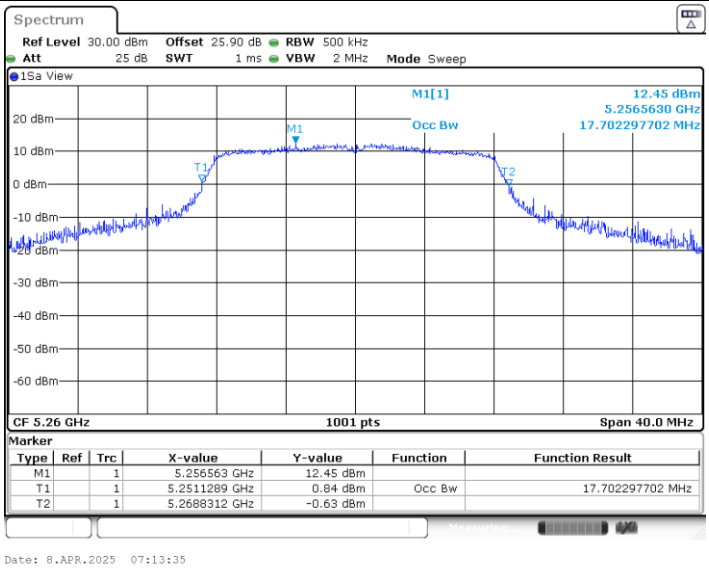
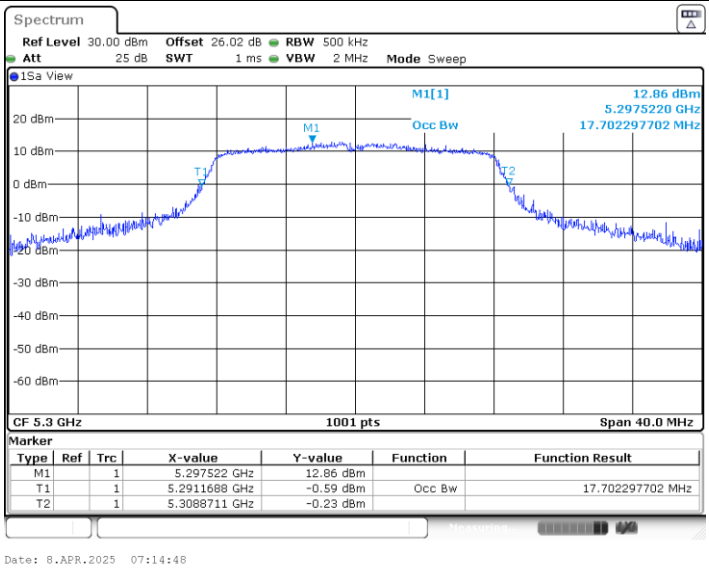
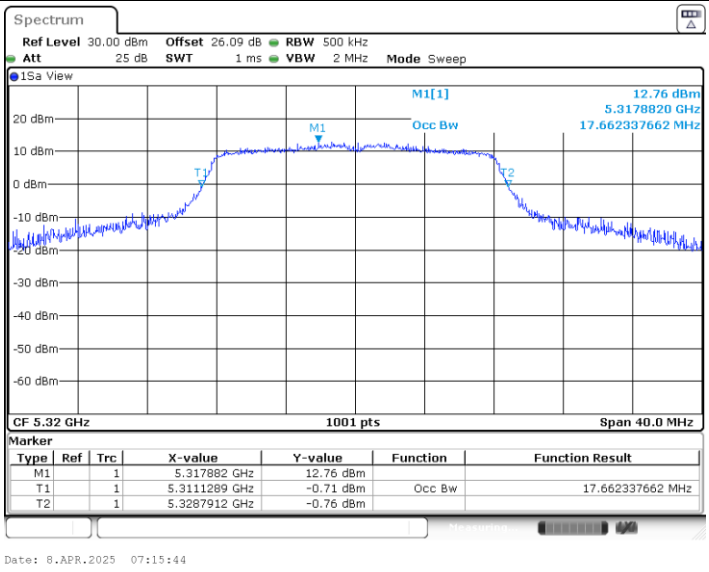


11A_5300


11A_5320


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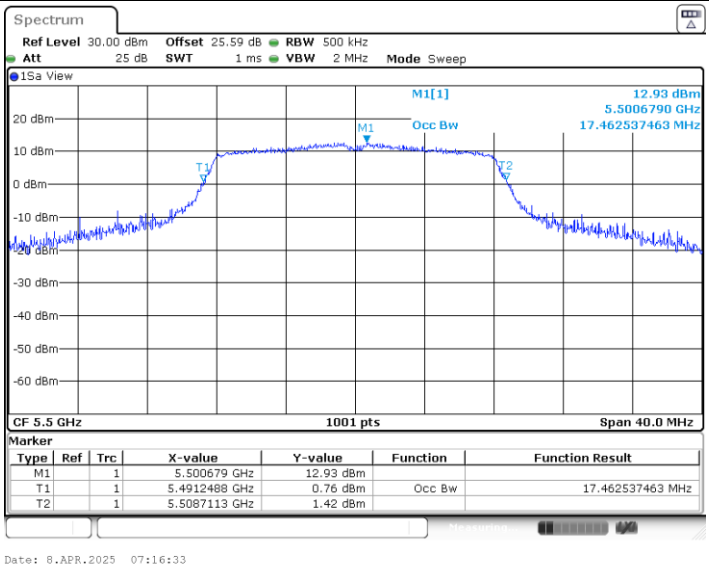
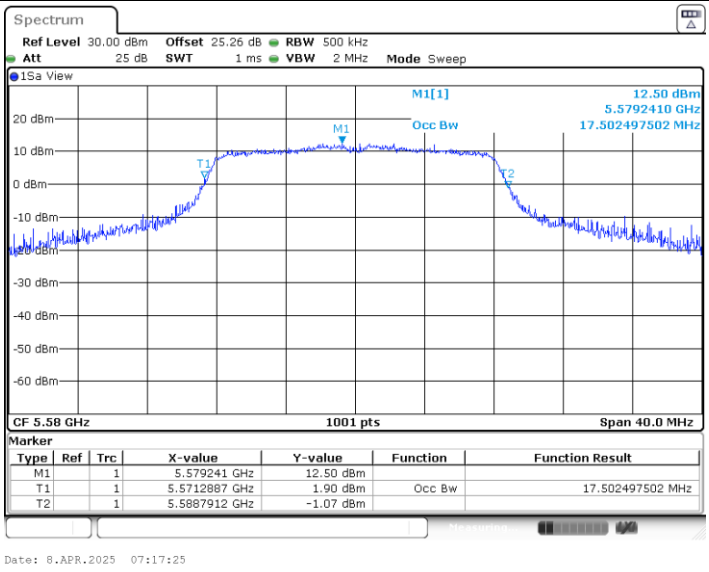
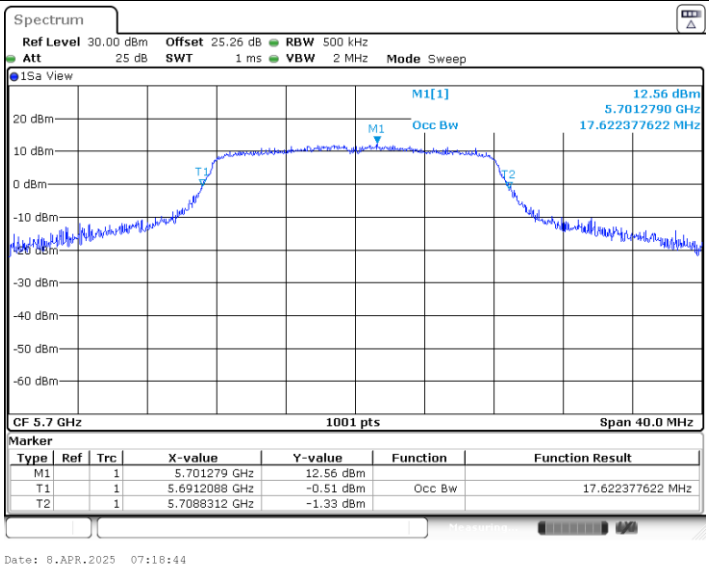


11A_5580


11A_5700


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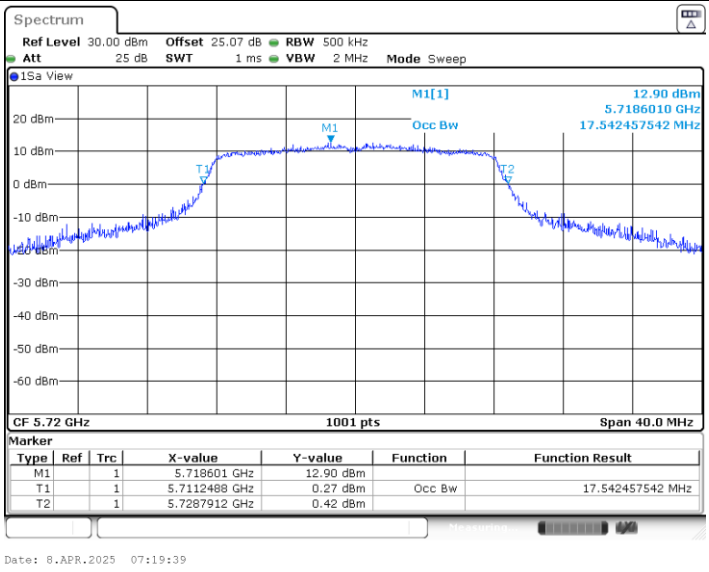

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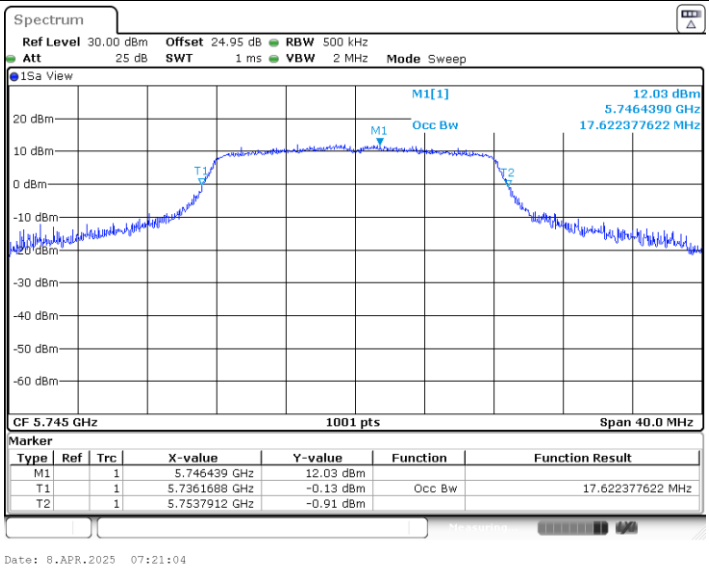

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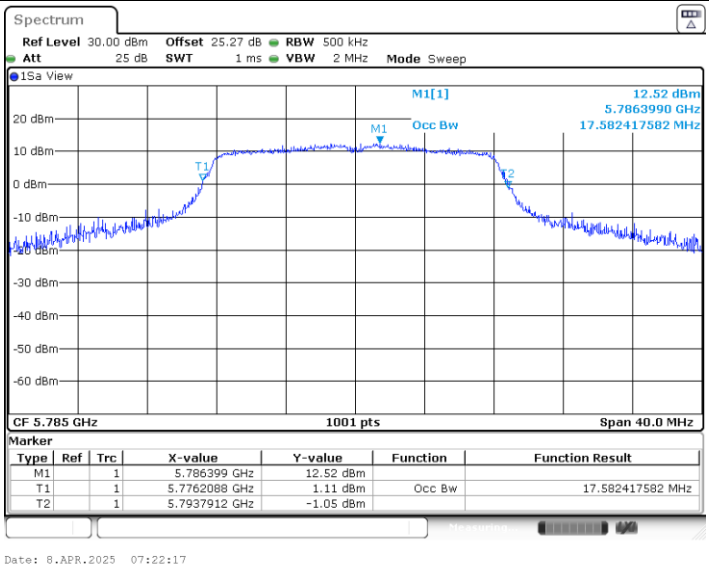

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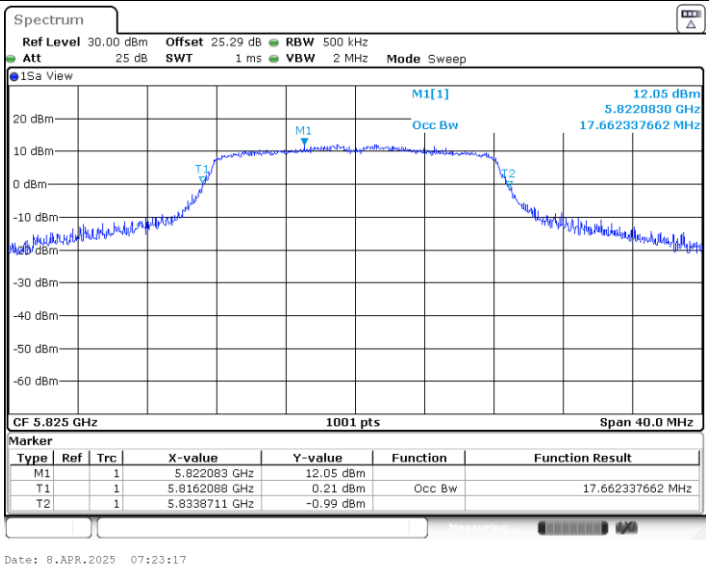
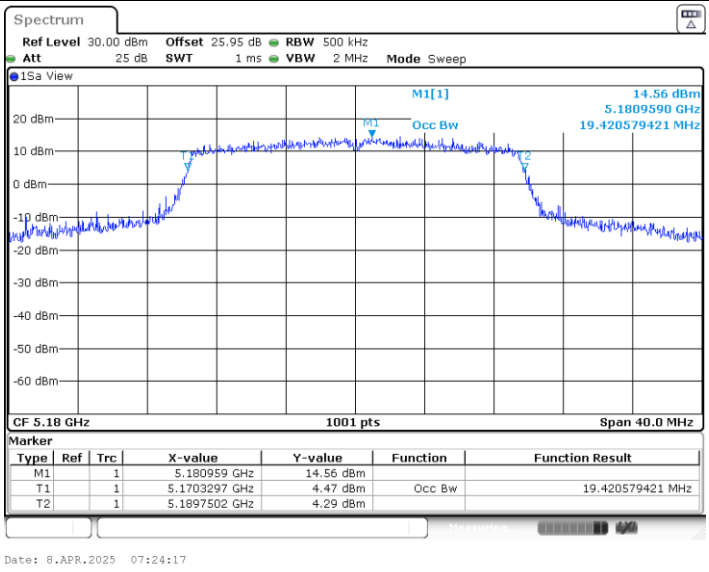


11AX20SISO_5180


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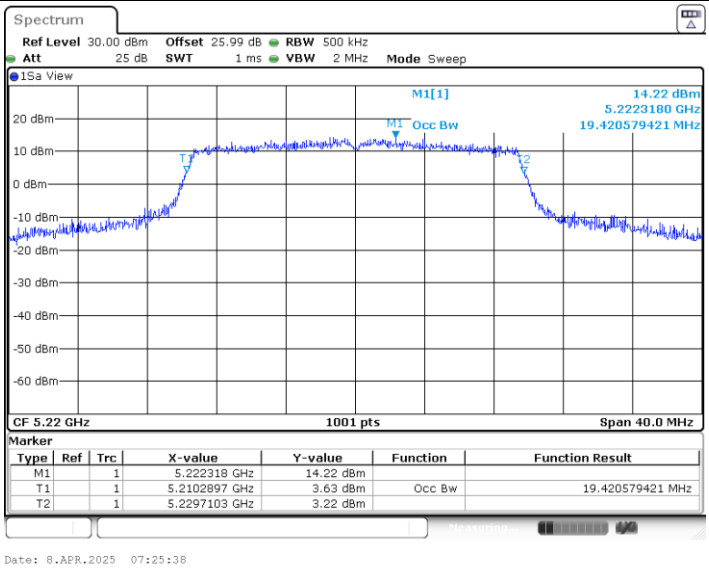

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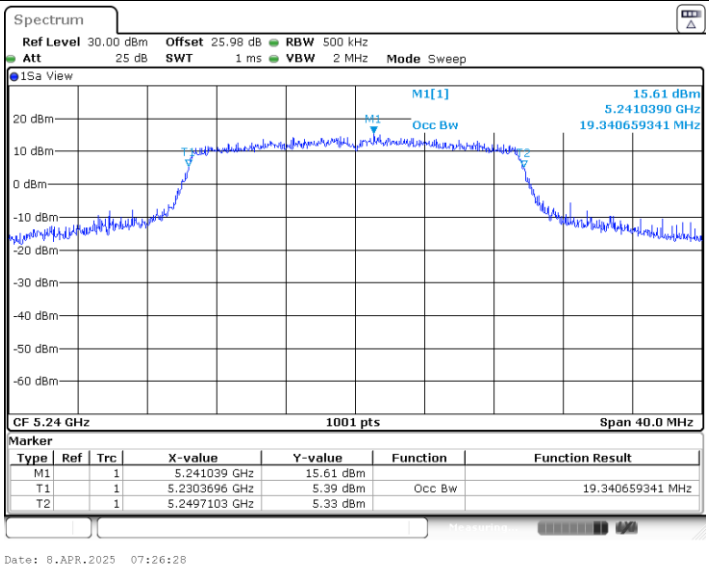

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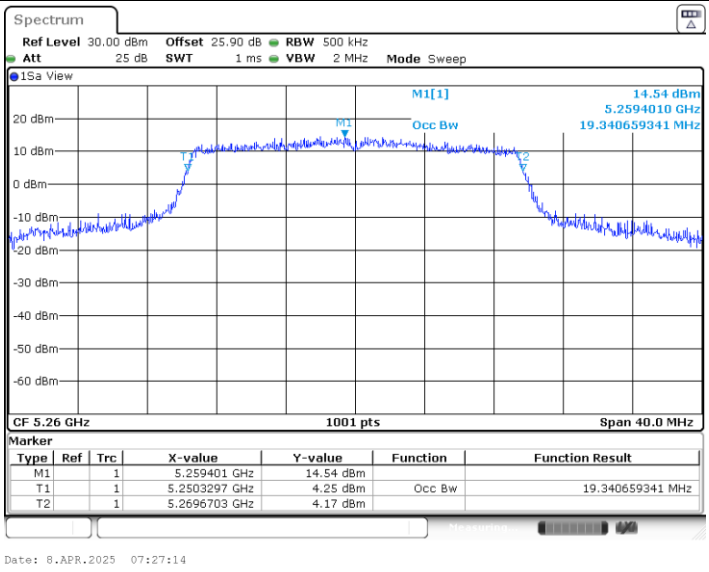

11AX20SISO_5300