HCT CO.,LTD. 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

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EVALUATION REPORT

Applicant Name:
SAMSUNG Electronics Co., Ltd.

Address:
129, Samsung-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Date of Issue:
December 14, 2021

Location:
HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

FCC ID:	**A3LSMX700**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Equipment Class(es) :	DSS, DTS, UNII, 6XD, DCD
Rule Part(s) :	15
Application's Statement :	The applicant takes full responsibility that the test data referenced below represents compliance for this FCC ID.
Differences Brief Description :	Hardware and software of this device are identical to the implementation in A3LSMX706B The operational description includes detailed information about the changes between the devices. The data from that application has been verified through appropriate spot checks to demonstrate compliance for this device as shown in the summary table below.
Test Reference :	KDB 484596 D01 Reference Test Data v01

The detail test data can be found in this documents, Appendix A.

Category	Spot Check	Verdict
Unlicensed EMC	Band Edge	Share
	Spurious Emissions	Share

Reference Detail Section

Reference FCC ID	Equipment Class	Report Title	Section
A3LSMX706B	DSS	Bluetooth Report	All sections
	DTS	DTS Report , DTS ax Report	All sections
		BT LE Report	All sections
	NII	UNII Test Report , UNII ax Report	All sections
	6XD	UNII 6e ax Report	All sections
	DCD	WPT Report	All sections

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Report prepared by : Jeong Ho Kim

Engineer of Telecommunication testing center

Approved by : Jong Seok Lee

Manager of Telecommunication testing center

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REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	December 01, 2021	Initial Release
1	December 14, 2021	WPT Result Table Revised(@300m→@30m)

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Appendix A. The Spot check test data

1. Summary of the spot check for Unlicensed EMC

Report	Test Item	Mod/Channel	Measured Frequency	A3LSMX706B Result [dBμV /m]		A3LSMX700 Result [dBμV /m]		Gap [dB]	
				Peak	Average	Peak	Average	Peak	Average
BT	Band Edge_ANT2	2-DH5/ch.78	2483.5 MHz~2500 MHz	66.99	42.26	68.69	43.96	1.70	1.70
	RSE_ANT1	3-DH5/ch.39	7323 MHz	52.00	27.27	52.42	27.69	0.42	0.42
DTS	Band Edge	802.11n_ MCS0/ch.1	2310 MHz~2390 MHz (2412MHz)	65.19	49.74	66.78	51.36	1.59	1.62
	RSE	802.11g 6Mbps/ch.6	7311 MHz	51.58	39.37	51.57	39.73	-0.01	0.36
DTS(ax)	Band Edge	802.11ax HE20(26T_RU8)_ MCS0/ch.13	2483.5 MHz(integ)	63.47	51.04	64.40	51.62	0.93	0.58
	RSE	802.11ax HE20(SU)_ MCS0/ch.6	7311 MHz	51.57	39.18	52.23	39.70	0.66	0.52
BT(LE)	Band Edge_ANT2	LE(5.2) 2M 37byte/ch.39	2483.5 MHz~2500 MHz	62.48	48.14	62.51	48.46	0.03	0.32
	RSE_ANT1	LE(5.2) 2M 37byte/ch.19	7320 MHz	51.68	43.90	51.78	44.10	0.10	0.20
UNII	Band Edge(Avg)	802.11n(40M)_ MCS0/ch.38	4500 MHz~5150 MHz	-	53.98	-	49.22	-	-4.76
	Band Edge(Peak)	802.11ac(80M)_ MCS0/ch.106	5460 MHz ~ 5470 MHz	61.11	-	59.39	-	-1.72	-
	RSE	802.11n(20M)_ MCS0/ch.36	10360 MHz	64.36	-	65.14	-	0.78	-
UNII(ax)	Band Edge(Avg)	802.11ax HE40(SU)_MCS0/ch. 62	5350 MHz ~ 5460 MHz	-	50.99	-	49.33	-	-1.66
	Band Edge(Peak)	802.11ax HE40(RU61)_MCS0/ ch.102	5460 MHz ~ 5470 MHz	64.28	-	57.59	-	-6.69	-
	RSE	802.11ax HE20(SU)_MCS0/ch. 36	10360 MHz	64.25	-	64.86	-	0.61	-
WIFI 6e (6XD)	Band Edge	802.11ax HE20(RU53)_MCS0/ ch.2	5924.5 MHz(integ)	81.48	65.99	81.28	65.61	-0.20	-0.38
	RSE	802.11ax HE20(RU61)_MCS0/ ch.229	21285 MHz	55.92	41.68	55.84	41.89	-0.08	0.21
DBS	RSE BT_ANT1	DH5/ch.39	7323 MHz	51.67	26.94	51.74	27.01	0.07	0.07
	RSE 5G	802.11n(20M)_ MCS0/ch.36	10360 MHz	56.41	-	58.83	-	2.42	-
RSDB	RSE 5G	RSDB 2.4G 802.11b 1Mbps ch.6 & **5G 802.11n(20M) MCS0 ch.36**	10360 MHz	55.85	-	58.01	-	2.16	-
	RSE 2.4G	RSDB **2.4G 802.11b 1Mbps ch.6** & 5G 802.11n(20M) MCS0 ch.36	7311 MHz	51.84	39.15	51.53	39.13	-0.31	-0.02
WPT	Field Strength	Fundamental(S-Pen Only Rx Mode)	530 kHz	13.12	-	11.88	-	-1.24	-
	RSE	(S-Pen Only Rx Mode)	150 kHz ~ 3MHz	6.97	-	-1.99	-	-8.96	-

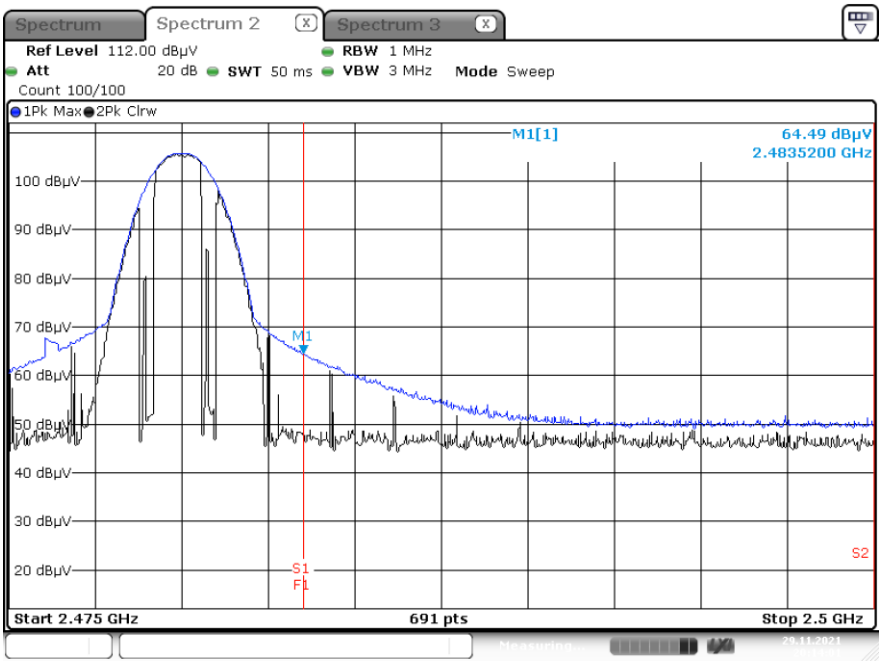
2. Test Plot

BT Band Edge (2-DH5/ch.78)

Bandedge

Frequency [MHz]	Measured Value [dBμV]	※ A.F+C.L-AMP+ATT+D.F [dB/m]	Pol. [H/V]	D.C.C.F [dB]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
2483.5	64.49	4.20	H	0	68.69	73.98	5.29	PK
2483.5	64.49	4.20	H	-24.73	43.96	53.98	10.02	AV

[Radiated Restricted Band Edges plot- Peak& Average Result]



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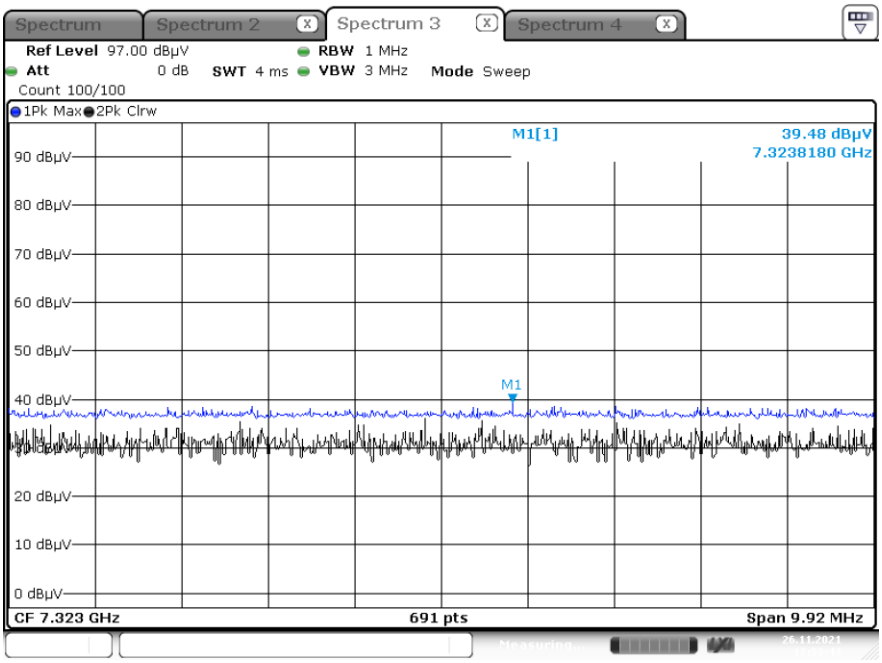
BT R.S.E 3rd Harmonic(3-DH5 /ch.39)

RSE

Frequency [MHz]	Measured Value [dBµV]	A.F+C.L-A.G+D.F [dB/m]	Pol. [H/V]	Duty Cycle Correction [dB]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
7323	39.48	12.94	H	0.00	52.42	73.98	21.56	PK
7323	39.48	12.94	H	-24.73	27.69	53.98	26.29	AV

[Radiated Spurious Emissions plot – Peak& Average Result]



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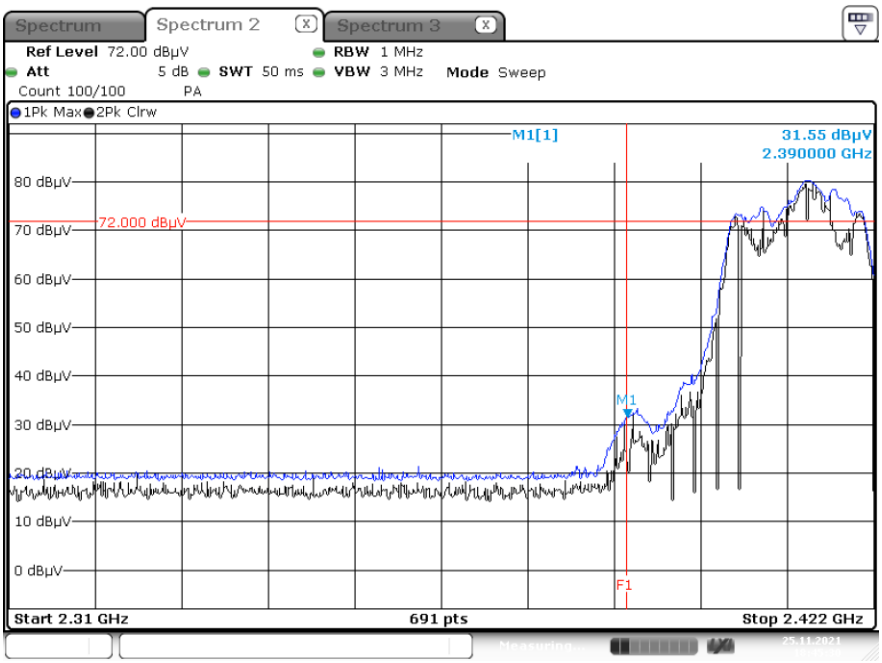
DTS Band Edge (802.11n_20 MHz BW 6.5 Mbps_ch1)

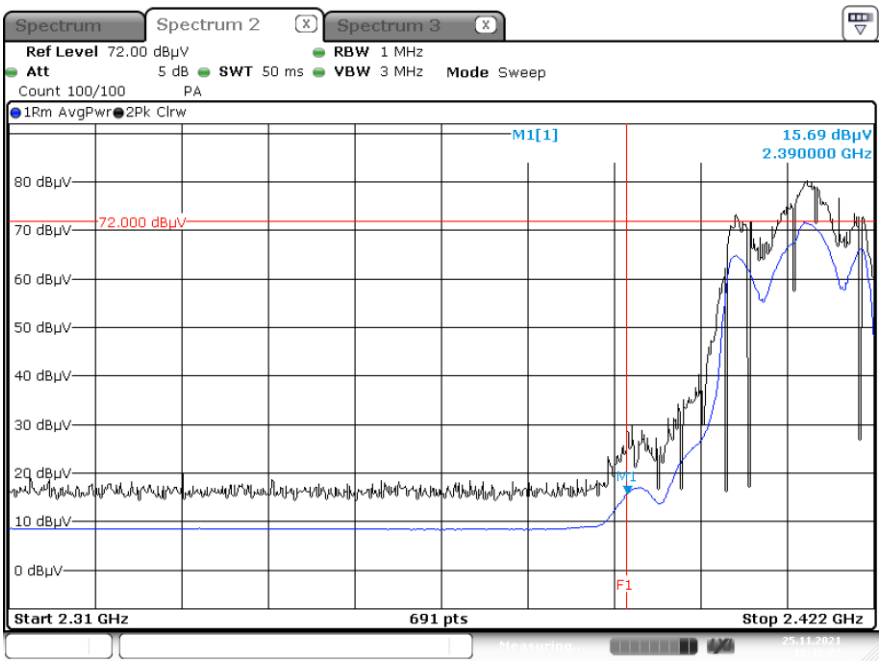
Bandedge

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor[dB]	※ A.F+C.L-A.G+ATT+D.F [dB/m]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2390.0	31.55	0.00	35.23	H	66.78	73.98	7.20	PK
2390.0	15.69	0.36	35.23	H	51.28	53.98	2.70	AV

[Radiated Restricted Band Edges plot – Peak Result]



[Radiated Restricted Band Edges plot – Average Result]



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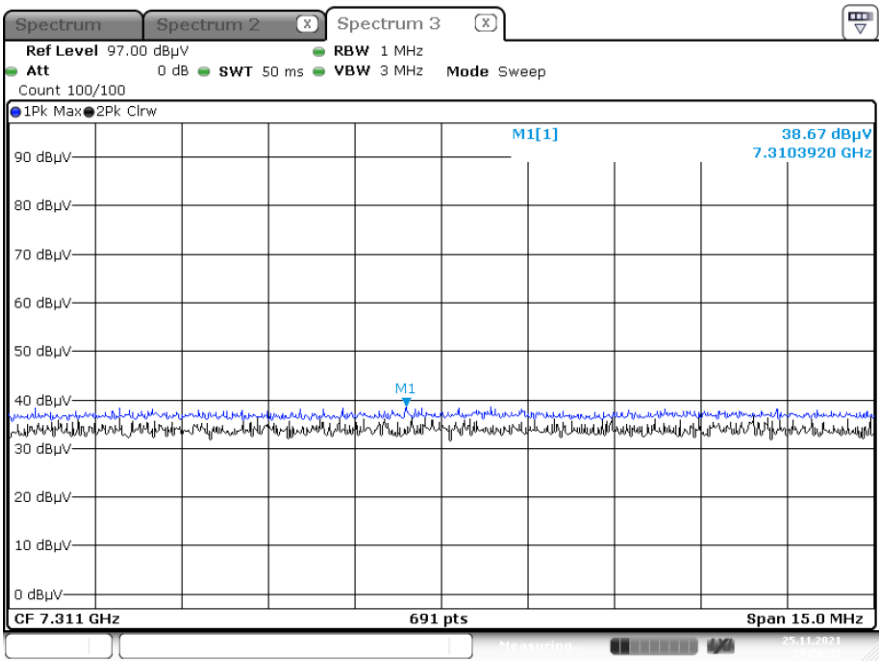
DTS R.S.E 3rd Harmonic(802.11g 6 Mbps Ch.6)

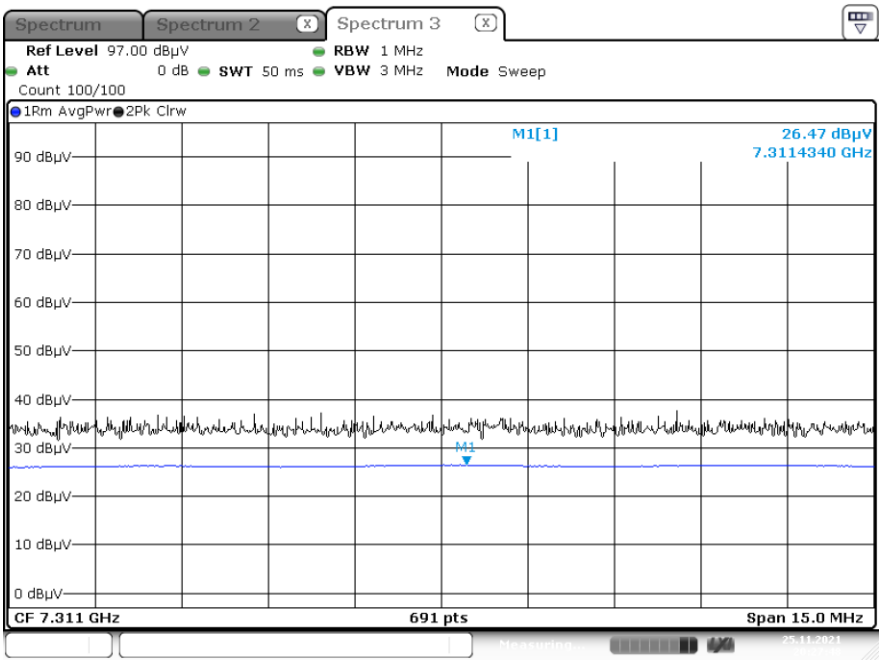
RSE

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor[dB]	A.F+C.L-AMP+D.F [dB/m]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
7311	38.67	0.00	12.90	V	51.57	73.98	22.41	PK
7311	26.47	0.36	12.90	V	39.73	53.98	14.25	AV

[Radiated Spurious Emissions plot – Peak Result]



[Radiated Spurious Emissions plot – Average Result]



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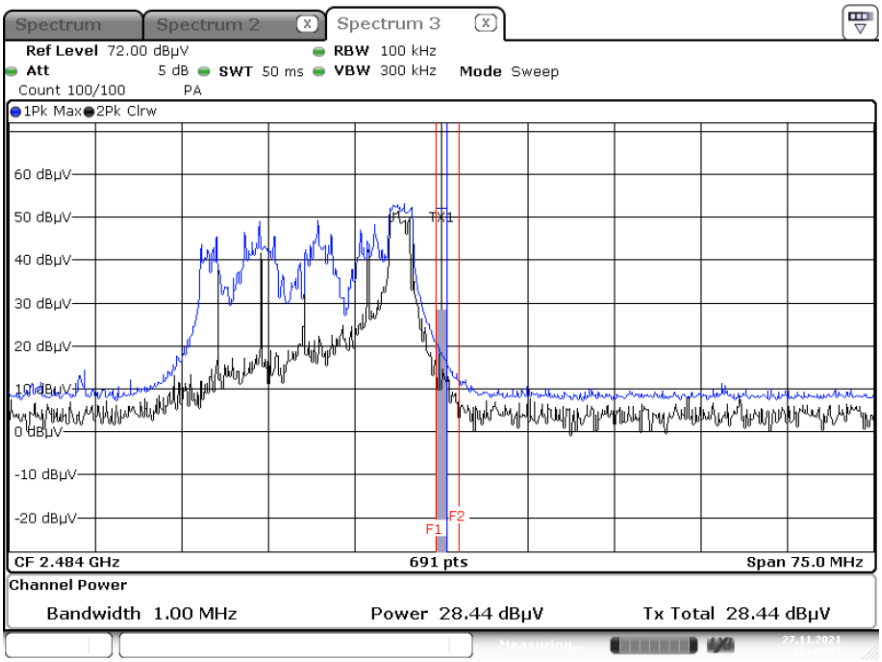
DTS ax Band Edge (802.11ax HE20(26T_RU8)_ MCS0/ch.13)

Bandedge

Frequency [MHz]	Measured Value [dBμV]	Duty Cycle Factor[dB]	A.F+C.L+D.F [dB/m]	Pol. [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
2483.5#(2484)	28.44	0.00	35.96	H	64.40	73.98	9.58	PK
2483.5#(2484)	15.66	0.00	35.96	H	51.62	53.98	2.36	AV

Note : # integration method Used (ANSI C63.10 Section11.13.3)

[Radiated Restricted Band Edges plot – Peak Result]



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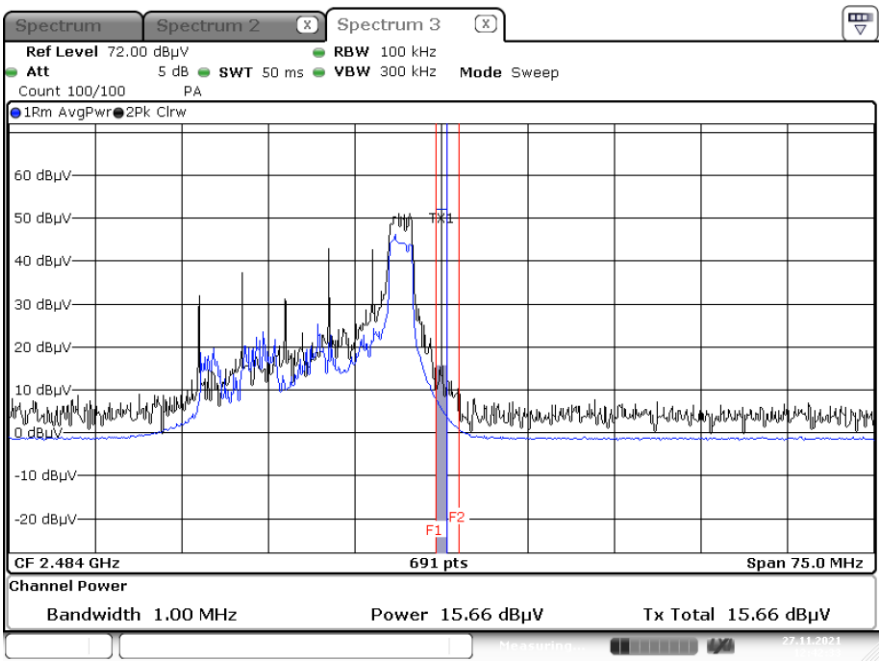
[Radiated Restricted Band Edges plot – Average Result]



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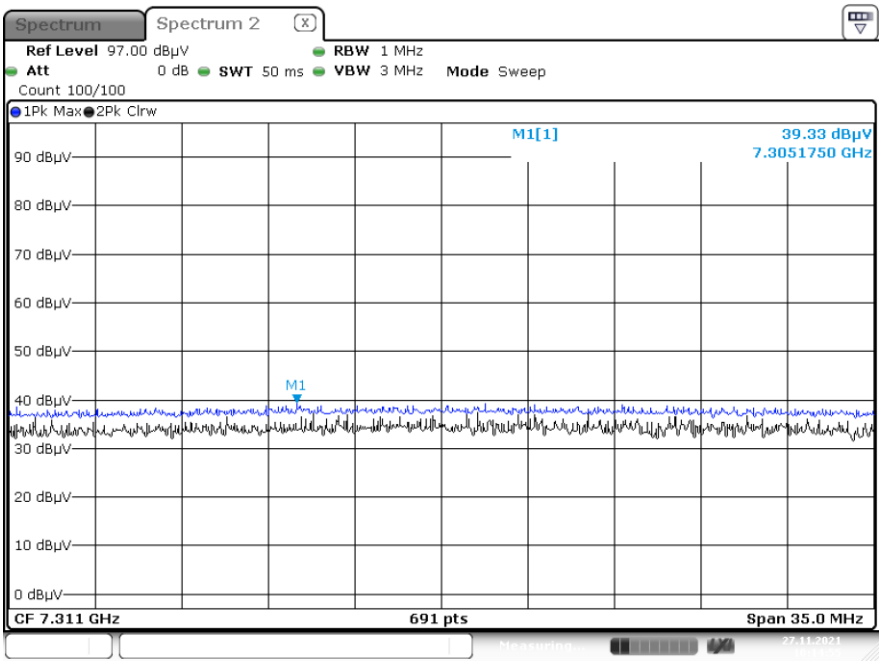
DTS ax R.S.E 3rd Harmonic(802.11ax HE20(SU)_ MCS0/ch.6)

RSE

Frequency [MHz]	Measured Value [dBμV]	Duty Cycle Factor[dB]	A.F+C.L-AMP+D.F [dB/m]	Pol. [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
7311	39.33	0.00	12.90	H	52.23	73.98	21.75	PK
7311	26.80	0.00	12.90	H	39.70	53.98	14.28	AV

[Radiated Spurious Emissions plot – Peak Result]



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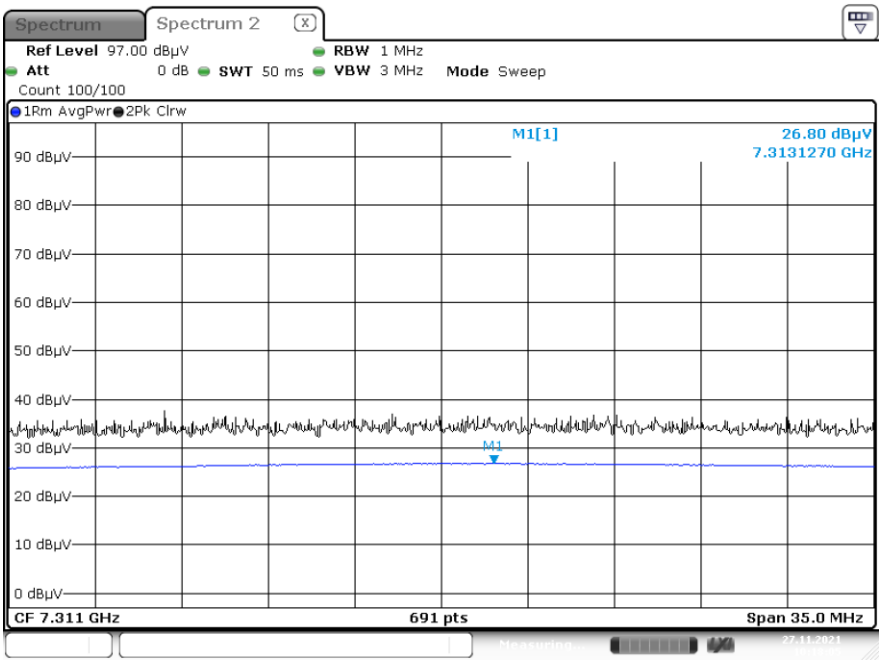
[Radiated Spurious Emissions plot – Average Result]



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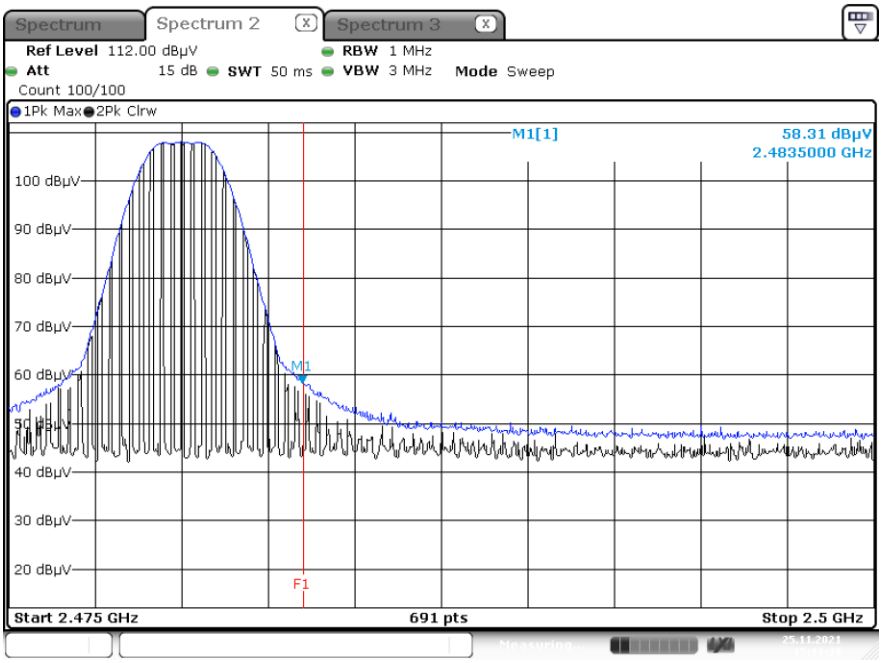
BT(LE) Band Edge_ANT2 (LE(5.2) 2M 37 byte/ch.39)

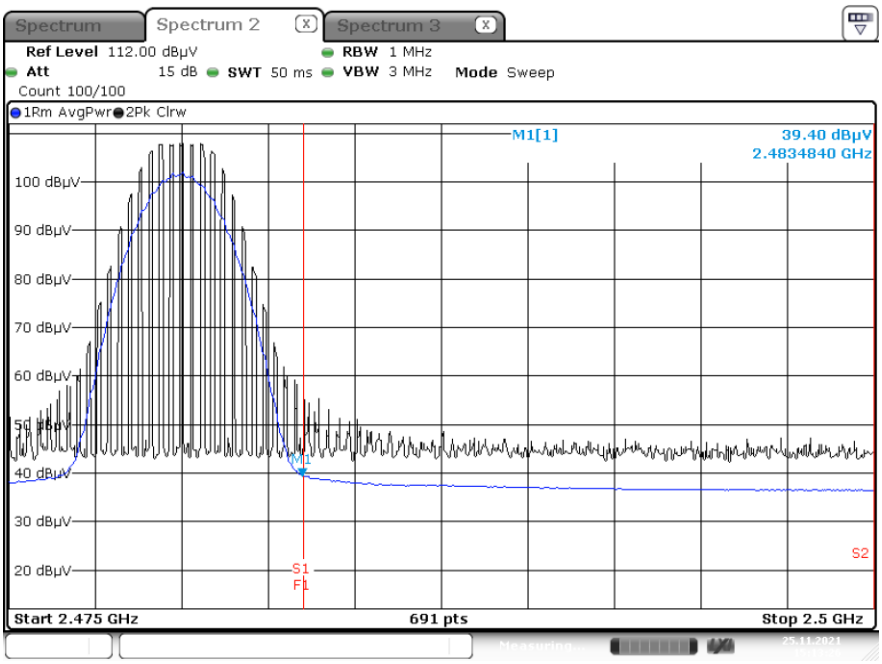
Bandedge

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor[dB]	※ A.F+C.L+ ATT-A.G+D.F [dB]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5	58.31	0.00	4.20	H	62.51	73.98	11.47	PK
2483.5	39.40	4.86	4.20	H	48.46	53.98	5.52	AV

[Radiated Restricted Band Edges plot – Peak Result]



[Radiated Restricted Band Edges plot – Average Result]



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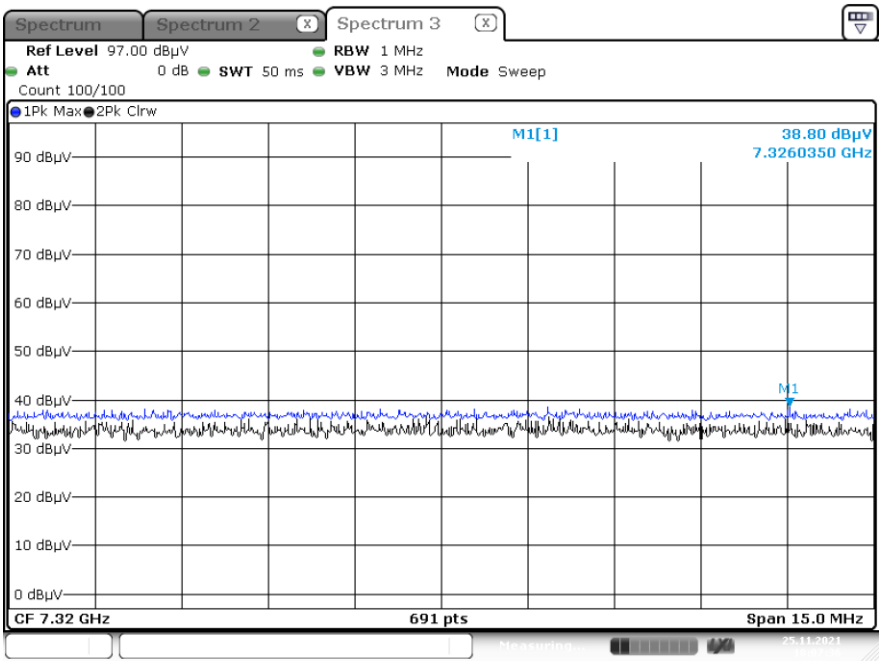
BT(LE) R.S.E_ANT1 3rd Harmonic (LE(5.2) 2M 37 byte/ch.19)

RSE

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor[dB]	A.F+C.L-A.G+D.F [dB/m]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
7320	38.80	0.00	12.98	H	51.78	73.98	22.20	PK
7320	26.26	4.86	12.98	H	44.10	53.98	9.88	AV

[Radiated Spurious Emissions plot – Peak Result]



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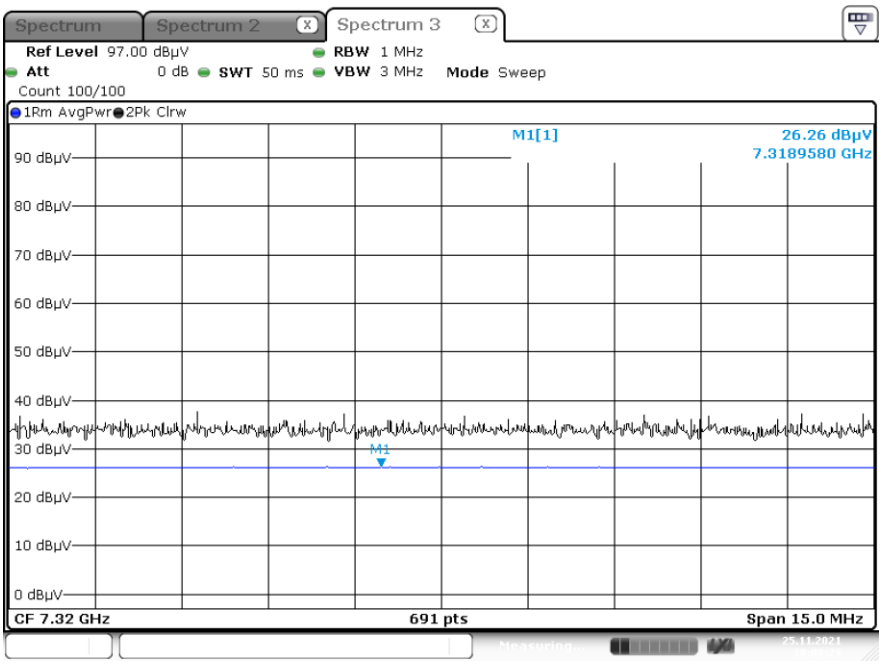
[Radiated Spurious Emissions plot – Average Result]



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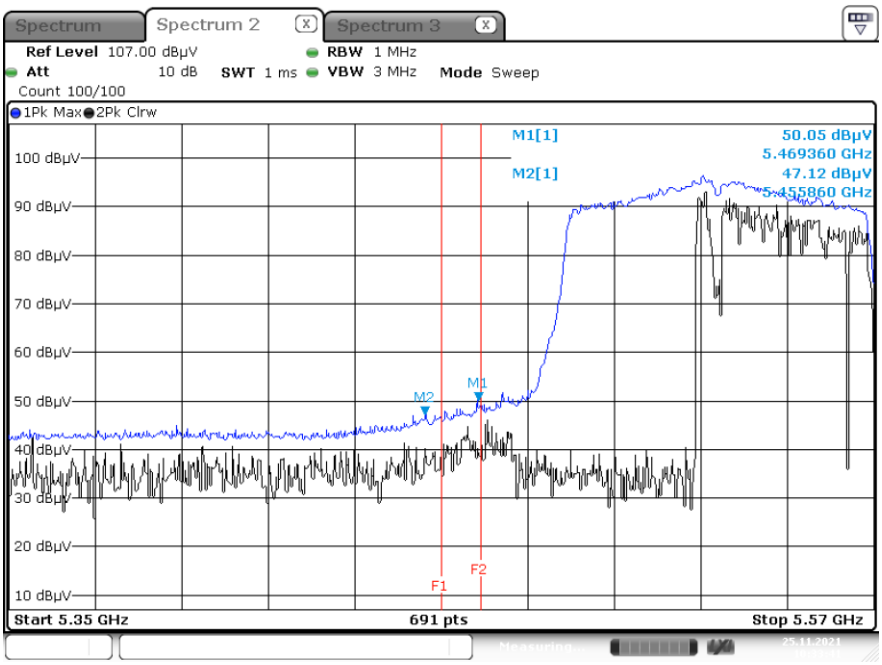
U-NII Band Edge Peak (802.11ac_80 MHz BW 29.3 Mbps_ch.106)

Bandedge

Frequency [MHz]	Measured Value [dBµV]	A.F+C.L-A.G+ATT+D.F [dB]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5470	50.05	9.34	H	59.39	68.20	8.81	PK

Radiated Restricted Band Edges plot – Peak Result



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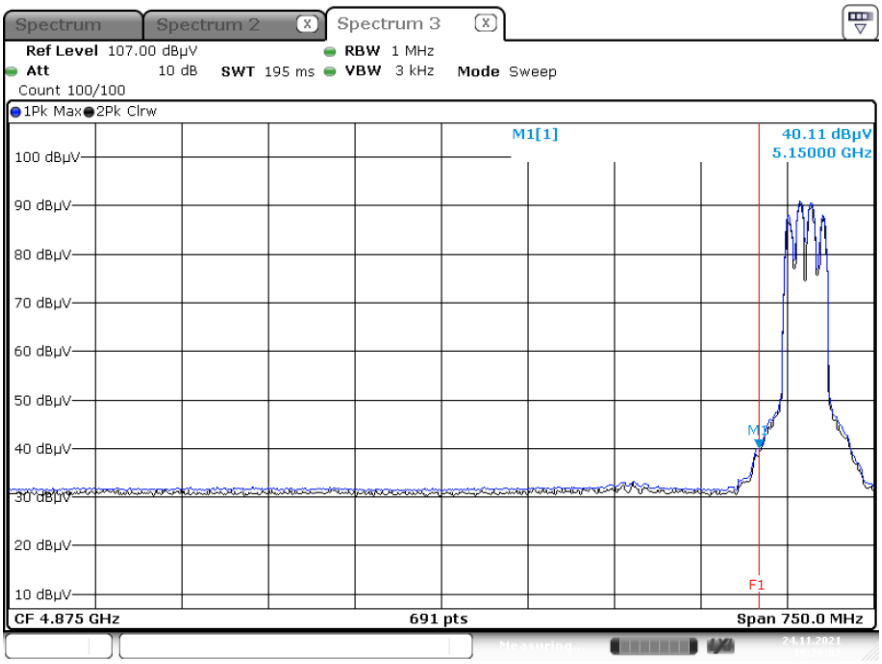
U-NII Band Edge Avg (802.11n_40 MHz BW 13.5 Mbps_ch.38)

Bandedge

Frequency [MHz]	Measured Value [dBµV]	A.F+C.L-A.G+ATT+D.F [dB]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	40.11	9.11	H	49.22	53.98	4.76	AV

Radiated Restricted Band Edges plot – Average Result



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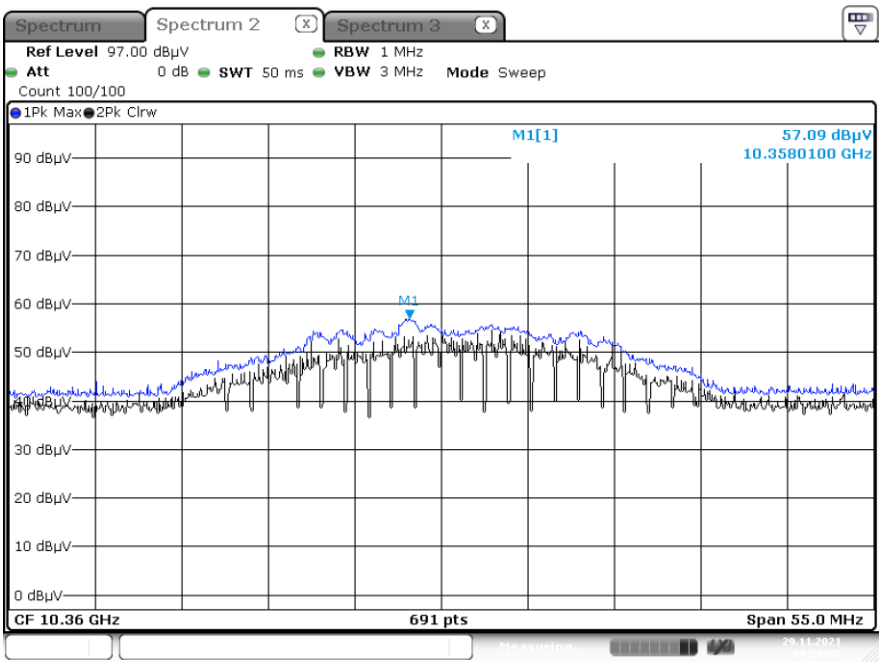
U-NII R.S.E 2nd Harmonic (802.11n_MCS0_ch.36)

RSE

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10360	57.09	8.05	V	65.14	68.20	3.06	PK

[Radiated Spurious Emissions plot – Peak Result]



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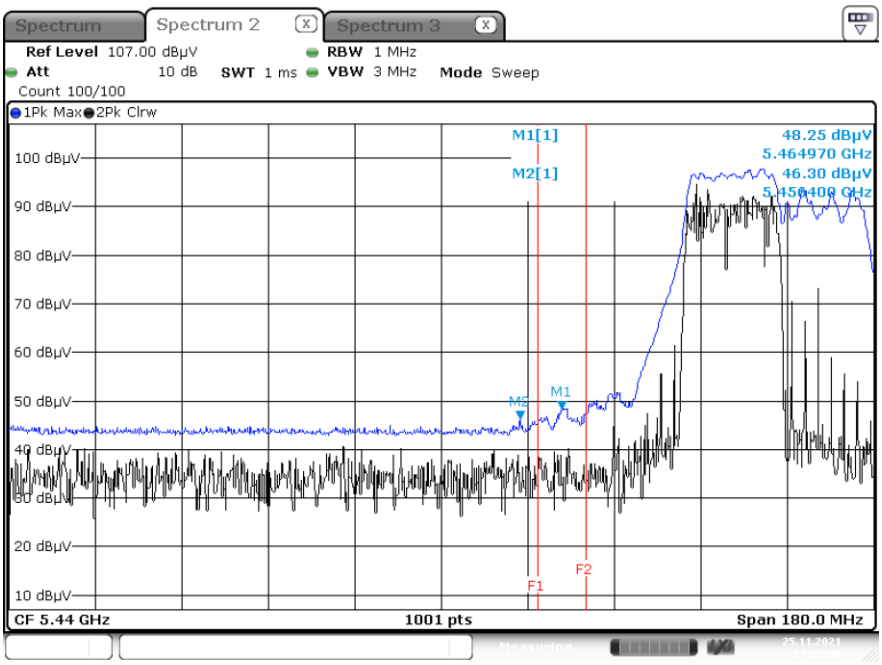
U-NII ax Band Edge Peak (802.11ax_HE 40 242 T_ch.102)

Bandedge

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5470	48.25	9.34	H	57.59	68.20	10.61	PK

Radiated Restricted Band Edges plot – Peak Result



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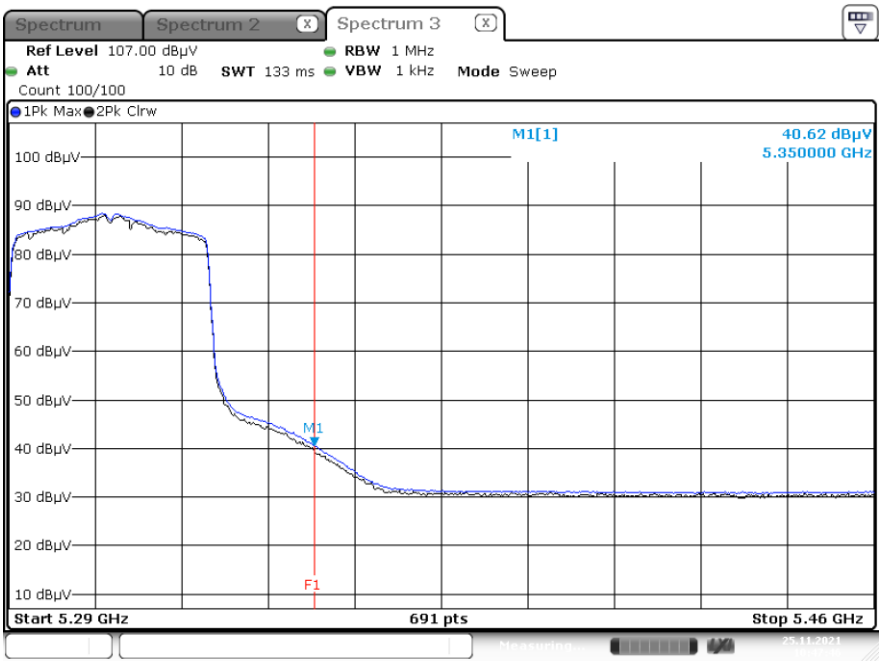
U-NII ax Band Edge Avg (802.11ax HE40(SU)_MCS0_ch.62)

Bandedge

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5350	40.62	8.71	H	49.33	53.98	4.65	AV

Radiated Restricted Band Edges plot – Average Result

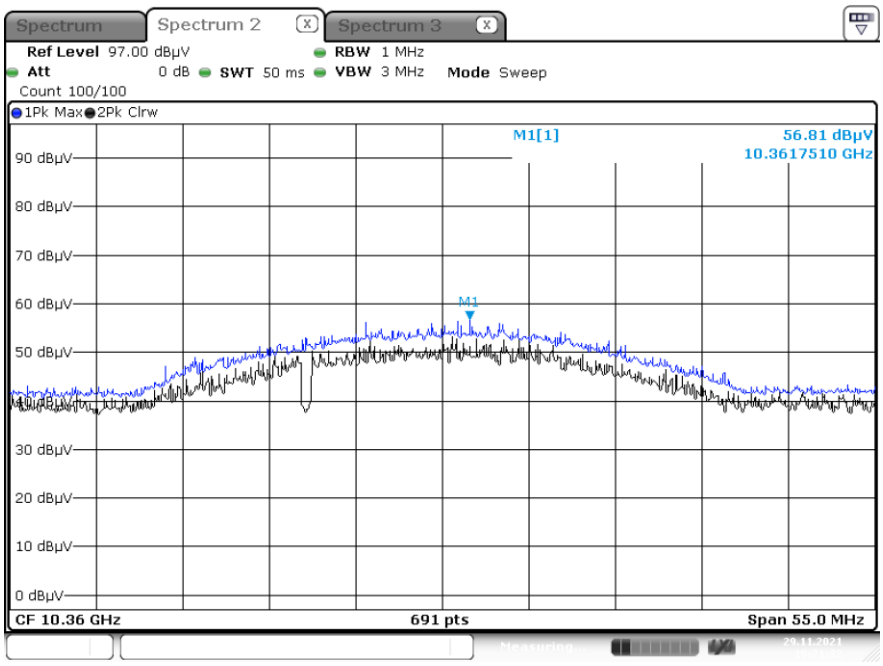


U-NII ax R.S.E 2nd Harmonic (802.11ax HE20(SU)_MCS0_ch36)

RSE

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10360	56.81	8.05	V	64.86	68.20	3.34	PK

[Radiated Spurious Emissions plot – Peak Result]



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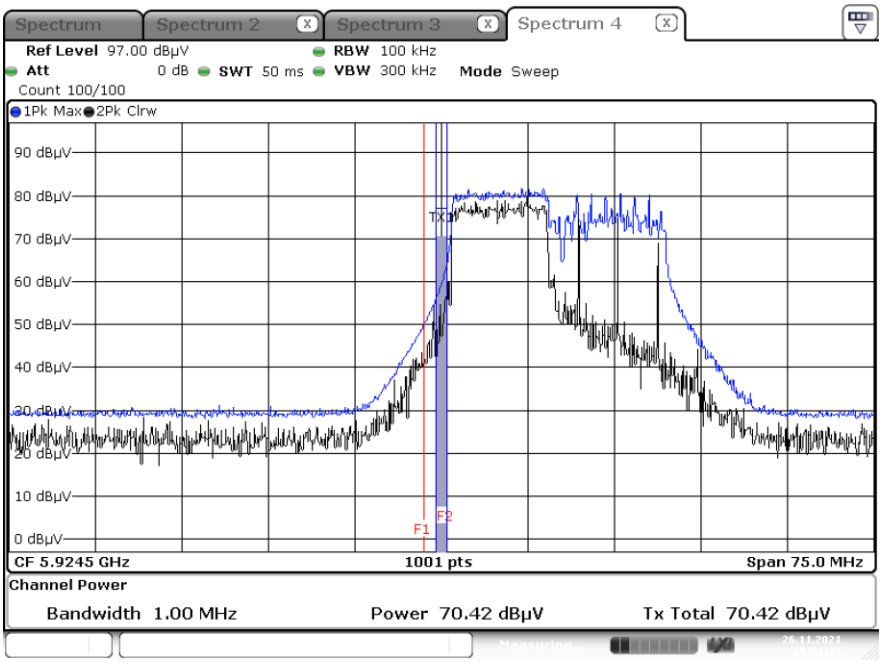
WIFI 6E Band Edge (802.11ax(HE20) 106T(RU53)_ch2)

Bandedge

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor	A.F+C.L+D.F-A.G+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5924.5	70.42	0.00	10.86	H	81.28	88.23	6.95	PK
5924.5	54.75	0.00	10.86	H	65.61	68.23	2.62	AV

Note : # integration method Used (ANSI C63.10 Section12.7.4.4.3)

[Radiated Restricted Band Edges plot – Peak Result]



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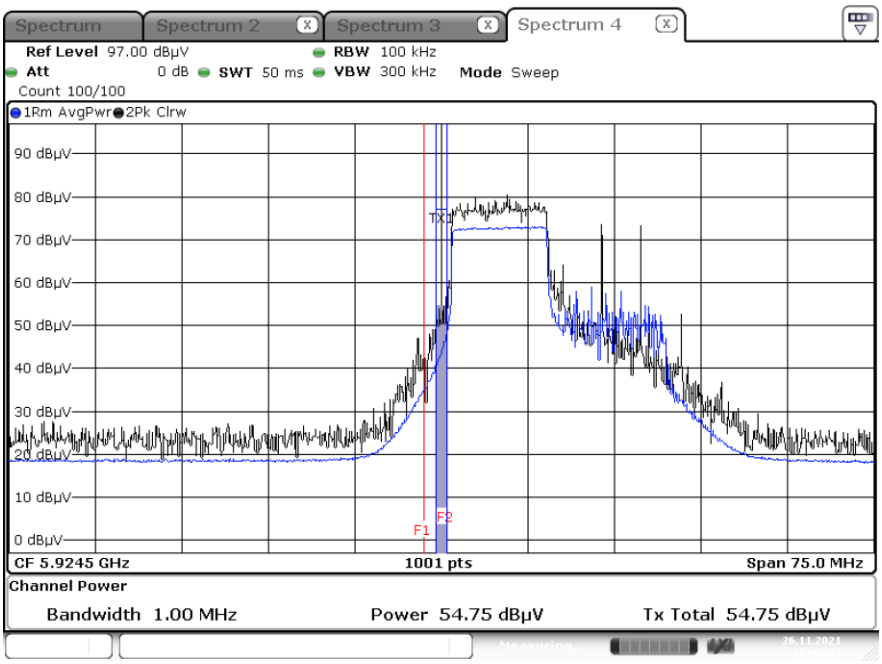
[Radiated Restricted Band Edges plot – Average Result]



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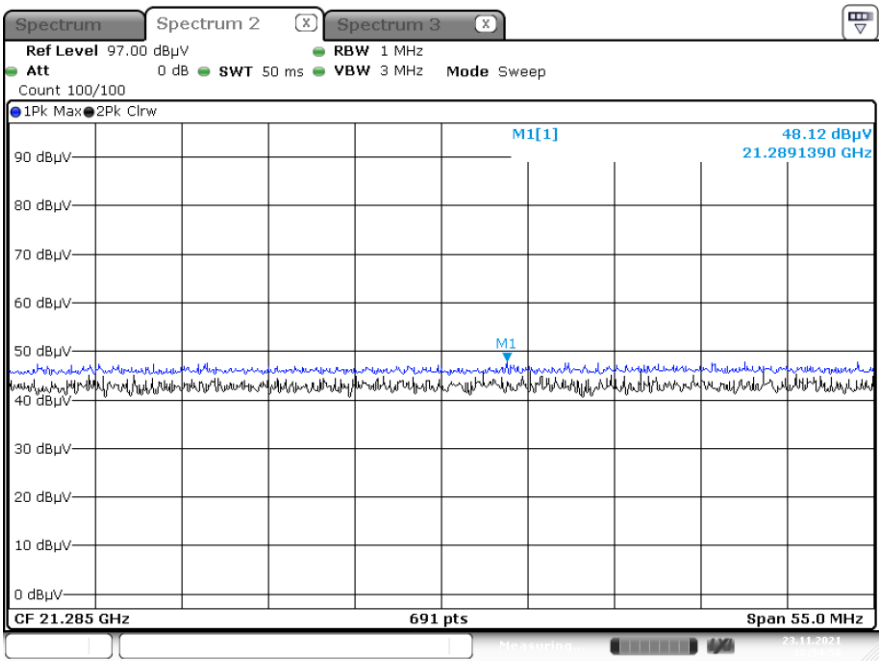
WIFI 6E R.S.E 3rd Harmonic(802.11ax(HE20) RU61 Ch.229)

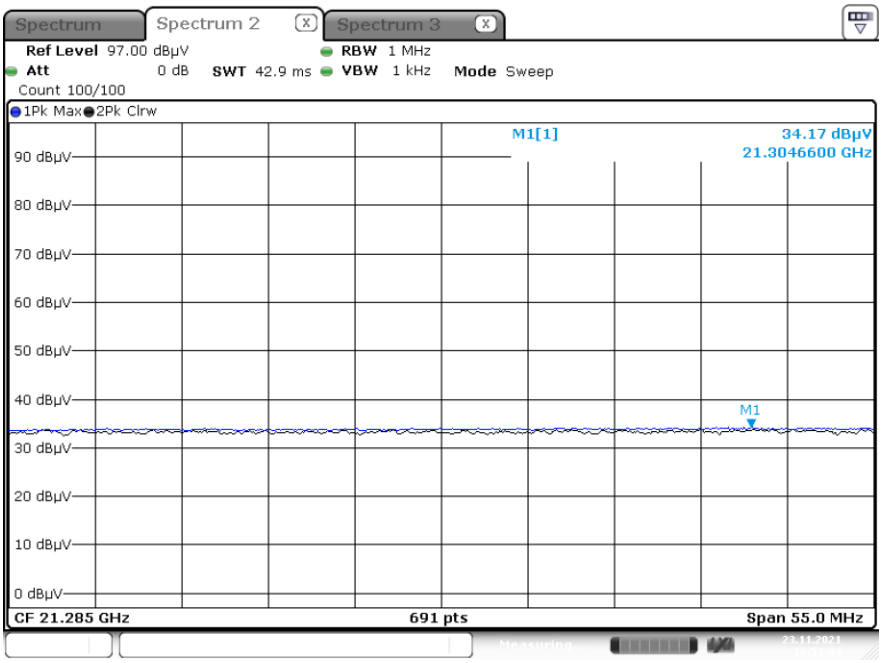
RSE

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor	A.F+C.L-A.G+D.F [dB/m]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
21285	48.12	0.0	7.72	H	55.84	73.98	18.14	PK
21285	34.17	0.0	7.72	H	41.89	53.98	12.09	AV

[Radiated Spurious Emissions plot – Peak Result]



[Radiated Spurious Emissions plot – Average Result]



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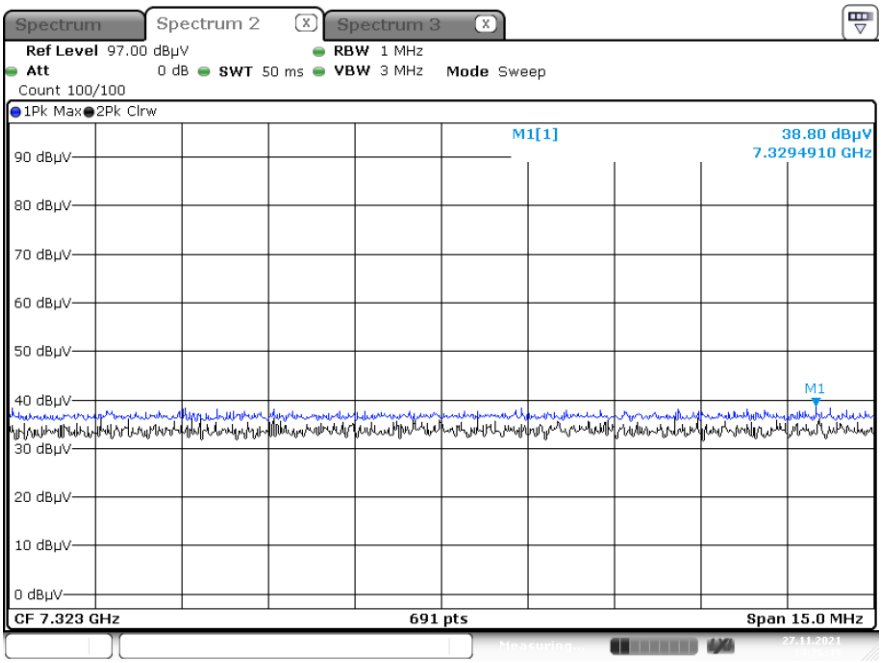
DBS BT R.S.E 3rd Harmonic ANT1 (DH5_ch39)

RSE

Frequency [MHz]	Measured Value [dBµV]	A.F+C.L-A.G+D.F [dB/m]	ANT. POL [H/V]	Duty Cycle Correction [dB]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
7323	38.80	12.94	H	0.00	51.74	73.98	22.24	PK
7323	38.80	12.94	H	-24.73	27.01	53.98	26.97	AV

[Radiated Spurious Emissions plot – Peak& Average Result]

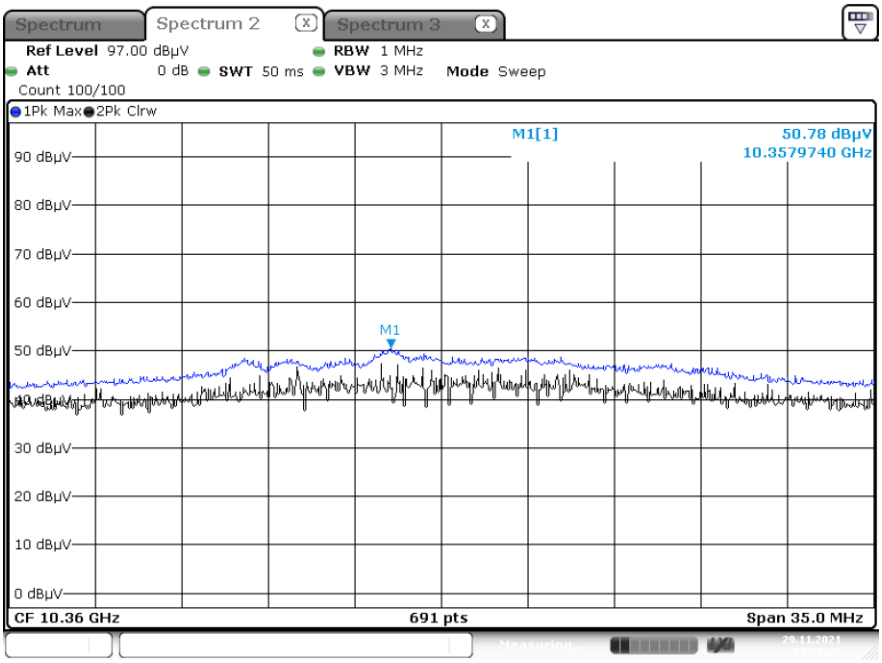


DBS 5G R.S.E 3rd Harmonic(802.11n(20M)_ MCS0/ch.36)

RSE

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10360	50.78	8.05	V	58.83	68.20	9.37	PK

[Radiated Spurious Emissions plot – Peak Result]



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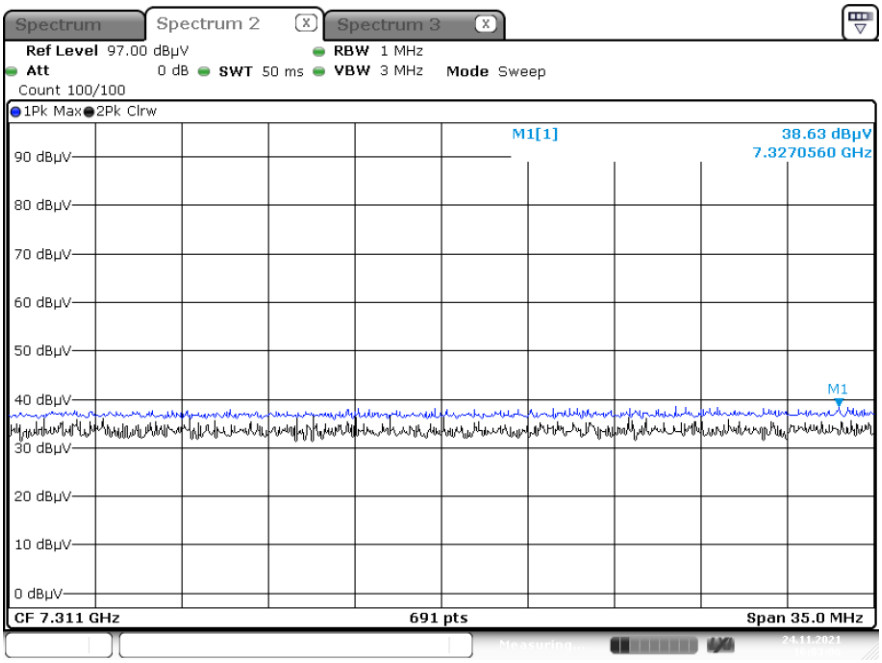
RSDB 2.4G R.S.E 3rd Harmonic
(2.4G 802.11b 1Mbps ch.6 & 5G 802.11n(20M) MCS0 ch.36)

RSE

Frequency [MHz]	Measured Value [dBμV]	A.F+C.L-AMP+D.F [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
7311	38.63	12.90	H	51.53	73.98	22.45	PK
7311	26.23	12.90	H	39.13	53.98	14.85	AV

[Radiated Spurious Emissions plot – Peak Result]



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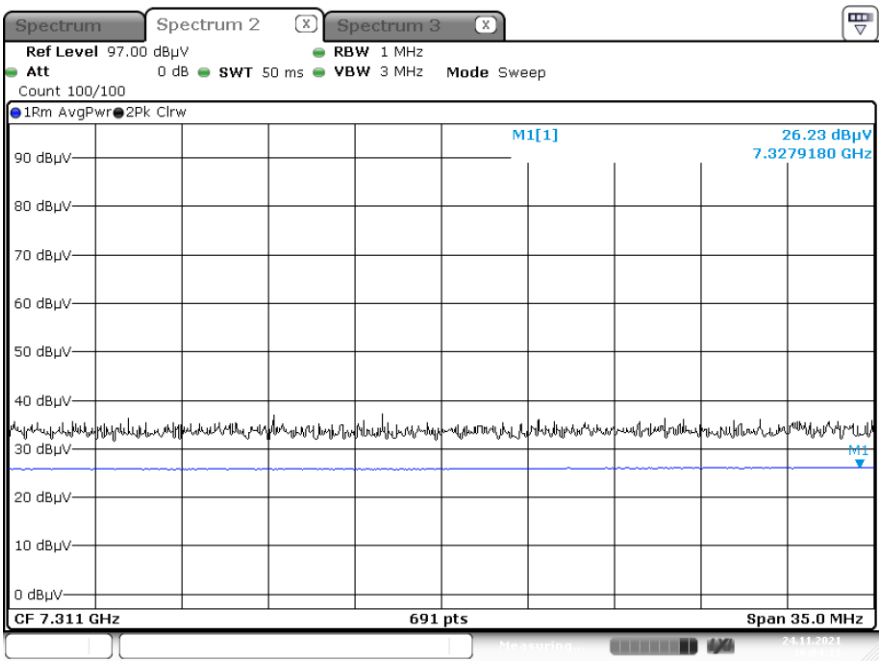
[Radiated Spurious Emissions plot – Average Result]

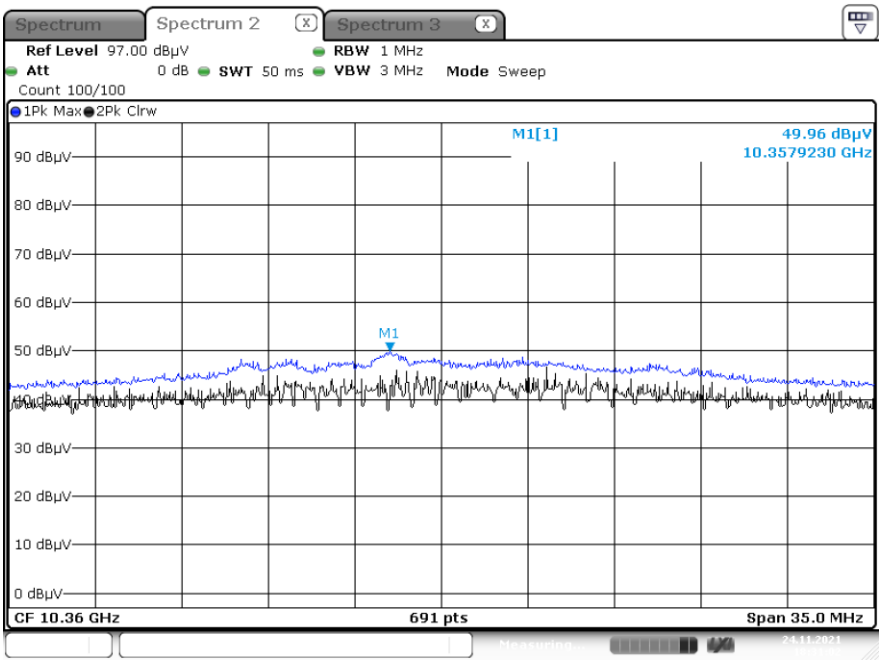


RSDB 5G R.S.E 2nd Harmonic
(2.4G 802.11b 1Mbps ch.6 **&5G 802.11n(20M) MCS0 ch.36)**

RSE

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	Pol. [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10360	49.96	8.05	V	58.01	68.20	10.19	PK

[Radiated Spurious Emissions plot – Peak Result]

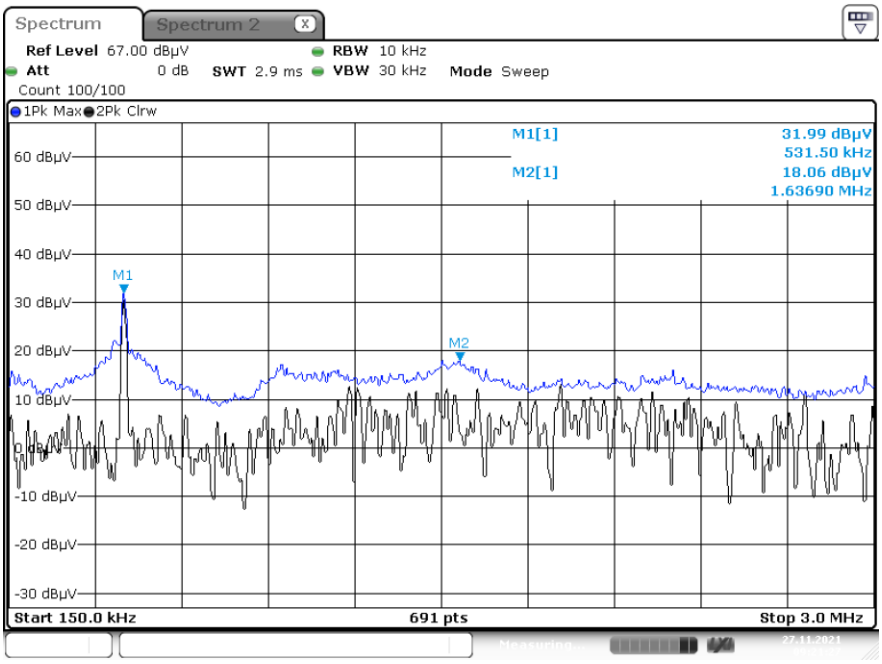


WPT

Fundamental & RSE

Frequency [kHz]	Measured Value Level [dBµV]@3 m	Ant. Factor [dB/m]	Cable Loss [dB]	Distance Correction [dB]	Result Level [dBµV/m] @30 m	Limit [dBµV/m]	Margin [dB]
531.5	31.99	19.20	0.69	-40	11.88	33.09	21.21
1636.9	18.06	19.26	0.69	-40	-1.99	23.32	25.31

[WPT plot]



3. List of test equipment

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Controller(Antenna mast)	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP-EP	Innco system	N/A	N/A	N/A
Controller	EM1000	Audix	060520	N/A	N/A
Turn Table	N/A	Audix	N/A	N/A	N/A
Amp & Filter Bank Switch Controller	FBSM-01B	TNM system	TM19050002	N/A	N/A
Loop Antenna	1513	Schwarzbeck	1513-333	03/19/2022	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	09/04/2022	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	02296	05/19/2022	Biennial
Horn Antenna(15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Spectrum Analyzer	FSV(10 Hz ~ 40 GHz)	Rohde & Schwarz	101055	05/14/2022	Annual
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	01/06/2022	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	5	06/24/2022	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	6	06/24/2022	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/04/2021	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/23/2022	Annual
HPF(3~18GHz) + LNA1(1~18GHz)	FMSR-05B	TNM system	F6	01/20/2022	Annual
ATT(10dB) + LNA1(1~18GHz)	FMSR -05B	TNM system	None	01/20/2022	Annual
ATT(3dB) + LNA1(1~18GHz)	FMSR -05B	TNM system	None	01/20/2022	Annual
LNA1(1~18GHz)	FMSR -05B	TNM system	25540	01/20/2022	Annual
HPF(7~18GHz) + LNA2(6~18GHz)	FMSR -05B	TNM system	28550	01/20/2022	Annual
Thru(30MHz ~ 18GHz)	FMSR -05B	TNM system	None	01/20/2022	Annual