

EVALUATION REPORT

Applicant Name:
SAMSUNG Electronics Co., Ltd.

Date of Issue:
December 24, 2021

Address:
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Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

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

FCC ID:	A3LSMX806B
APPLICANT:	SAMSUNG Electronics Co., Ltd.

Equipment Class(es) : PCE, DSS, DTS, UNII, 6XD, DCD
 Rule Part(s) : 15, 22, 24, 27, 2, 90
 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 A3LSMX808U
 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
Licensed EMC	ERP / EIRP	Share
	RSE	Share
Unlicensed EMC	Band Edge	Share
	Spurious Emissions	Share

Reference Detail Section

Reference FCC ID	Equipment Class	Report Title	Section
A3LSMX808U	PCE	3G Report	All sections
		LTE B2(Lower Ant) Report	All sections
		LTE B12(17) Report	All sections
		LTE B13 Report	All sections
		LTE B25 Report	All sections
		LTE B26 Report (Part 22)	All sections
		LTE B26 Report (Part 90)	All sections
		LTE B41 Report	All sections
		LTE B66(4) Report	All sections
		Sub6 n5 Report	All sections
	Sub6 n66 Report	All sections See Note1	
	DSS	Bluetooth Report	All sections
	DTS	DTS Report , DTS ax Report	All sections See Note2
		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	

Note:

- In the case of n66 of A3LSMX806B, only B.W 5/10/15/20 MHz is supported, so reuse is applied to B.W 5/10/15/20 MHz of A3LSMX808U.
- All sections except the modes listed below which are retested in the variant.
 -. Mode: DTS Ch12/13, DTS ax CH12/13



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Engineer of Telecommunication testing center



Approved by : Jong Seok Lee
Manager of Telecommunication testing center

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	November 26, 2021	Initial Release
1	December 01, 2021	Revised the EIRP & RSE data of LTE B41 (Change from Power Class 3 to Power Class 2)
2	December 07, 2021	Added the note. (Section 1.2&1.3 note added)
3	December 15, 2021	Added the note & Revised the note. (1, 7, 9 Pages Model ID revised)
4	December 24, 2021	Added Note (Page on 1)

Appendix A. The Spot check test data

1. Summary of the spot check for Licensed EMC

1.1 EFFECTIVE RADIATED POWER

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol.	Limit	ERP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA850	4132	826.4	-30.38	32.62	-10.23	1.40	V	< 7.00	0.125	20.99
LTE B26(22)	26840	829.0	-30.19	32.93	-10.22	1.40	V		0.135	21.31
LTE B26(90)	26765	821.5	-30.28	32.76	-10.26	1.39	V		0.129	21.11
LTE B26(90) (Straddle)	26790	824.0	-30.36	32.57	-10.25	1.39	V		0.124	20.93
Sub6 n5	166300	831.5	-29.30	31.60	-10.08	1.40	H		0.103	20.12

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol.	Limit	ERP	
	channel	Freq.(MHz)						W	W	dBm
LTE B12	23165	714.5	-28.64	31.52	-9.94	1.30	V	< 3.00	0.107	20.29
LTE B12(17)	23155	713.5	-28.82	31.33	-9.94	1.29	V		0.102	20.10
LTE B13	23230	782.0	-28.46	32.71	-10.09	1.36	H		0.134	21.26

Mode	Frequency (MHz)		Mode	SM-X808U (dBm)	SM-X806B (dBm)	Deviation (dB)
	MHz	Ch.				
WCDMA850	826.4	4132	RMC	22.04	20.99	1.05
LTE B12 (B.W 3 MHz)	714.5	23165	QPSK	20.31	20.29	0.02
LTE B12(17) (B.W 5 MHz)	713.5	23155	QPSK	20.10	20.06	0.04
LTE B13 (B.W 10 MHz)	782.0	23230	QPSK	21.91	21.26	0.65
LTE B26(22) (B.W 10 MHz)	829.0	26840	QPSK	22.32	21.21	1.01
LTE B26(90) (B.W 5 MHz)	821.5	26765	QPSK	22.24	21.11	1.13
LTE B26(90) (Straddle) (B.W 1.4 MHz)	824.0	26790	QPSK	22.10	20.93	1.17
Sub6 n5 (B.W 15 MHz)	831.5	166300	PI/2 BPSK	21.57	20.12	1.45

1.2 EQUIVALENT ISOTROPIC RADIATED POWER

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA1900	9538	1907.6	-17.55	16.75	10.40	2.15	V	< 2.00	0.316	25.00
LTE B2 (Lower Ant)	18650	1855.0	-20.42	12.99	10.08	2.17	H		0.123	20.90
LTE B25(2)	26683	1914.3	-17.13	17.28	10.40	2.16	V		0.356	25.52
LTE B41	40620	2593.0	-19.95	17.37	10.62	2.53	V		0.351	25.46

Mode	Ch./ Freq.		Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol.	Limit	EIRP	
	channel	Freq.(MHz)						W	W	dBm
WCDMA1700	1412	1732.4	-18.17	15.31	10.12	2.05	H	< 1.00	0.218	23.38
LTE B66 (Upper Ant)	132322	1745.0	-17.97	15.75	10.18	2.06	H		0.244	23.87
Sub6 n66	349000	1745.0	-17.96	15.17	9.97	1.99	H		0.207	23.15

Modulation	Frequency		Mode	SM-X808U (dBm)	SM-X806B (dBm)	Deviation (dB)
	MHz	Ch.				
WCDMA1700	1732.4	1412	RMC	23.75	23.38	0.37
WCDMA1900	1907.6	9538	RMC	25.78	25.00	0.78
LTE B2 (Lower Ant) (B.W 10 MHz)	1855.0	18650	QPSK	21.03	20.90	0.13
LTE B25(2) (B.W 1.4 MHz)	1914.3	26683	QPSK	25.22	25.52	-0.30
LTE B41 (B.W 5 MHz)	2593.0	40620	QPSK	26.89	25.46	1.43
LTE B66 (Upper Ant) (B.W 5 MHz)	1745.0	132322	QPSK	23.97	23.87	0.10
Sub6 n66 (B.W 20 MHz)	1745.0	349000	PI/2 BPSK	23.45	23.15	0.30

Note:

1. In the case of n66 of A3LSMX806B, only B.W 5/10/15/20 MHz is supported, so reuse is applied to B.W 5/10/15/20 MHz of A3LSMX808U.

1.3 RADIATED SPURIOUS EMISSIONS

Mode, Channel, (Frequency)	Freq. (MHz)	Measured Level (dBm)	Ant. Gain (dBd)	Substitute Level (dBm]	C.L	Pol.	Result (dBm)
WDM A850 CH 4233 (846.6)	2 539.80	-56.50	10.70	-60.58	2.51	H	-52.39
WDM A1700 CH 1513 (1752.6)	7 010.40	-57.50	11.34	-49.02	4.32	V	-42.00
WDM A1900 CH 9538 (1907.6)	7 630.40	-57.95	11.22	-47.11	4.48	V	-40.37
LTE B2 (Lower Ant) CH 18900 (1880.0)	7 520.00	-63.13	11.54	-48.68	4.51	V	-41.65
LTE B12 CH 23165 (714.5)	2 858.00	-57.03	10.84	-58.87	2.67	V	-50.70
LTE B12(17) CH 23155 (713.5)	2 854.00	-56.71	10.82	-58.69	2.68	V	-50.55
LTE B13 CH 23230 (782.0)	3 128.0	-57.35	11.26	-58.27	2.81	H	-49.82
LTE B13 Narrow Band CH 23255 (784.5)	1 608.0	-63.54	9.30	-73.16	1.99	H	-65.85
LTE B25(2) CH 26683 (1914.3)	7 657.20	-57.48	11.32	-47.40	4.47	V	-40.55
LTE B26(part22) CH 26990 (844.0)	2 532.00	-56.04	10.70	-59.79	2.50	V	-51.59
LTE B26(part90) CH 26765 (821.5)	2 464.50	-56.53	10.42	-61.19	2.47	V	-53.23
LTE B26(part90) (Straddle) CH 26790 (824.0)	2 472.00	-56.19	10.46	-60.84	2.47	H	-52.85
LTE B41 CH 41515 (2682.5)	8 047 50	-44.60	10.80	-43.11	4.60	V	-36.91
LTE B66 (Upper Ant) CH 132647 (1777.5)	7 110.00	-57.33	10.88	-48.18	4.34	V	-41.64
Sub6 n5 CH 168300 (841.5)	2 524.50	-54.12	10.40	-58.53	2.56	H	-50.68
Sub6 n66 CH 344000 (1720.0)	10 320.00	-62.48	11.74	-45.02	5.41	V	-38.69

Modulation	Frequency		Mode	SM-X808U (dBm)	SM-X806B (dBm)	Deviation (dB)
	MHz	Ch.				
WDMA850	2 539.80	4233	RMC	-38.09	-52.39	14.30
WDMA1700	7 010.40	513	RMC	-39.83	-42.00	2.17
WDMA1900	7 630.40	9538	RMC	-38.69	-40.37	1.68
LTE B2 (Lower Ant) (B.W 10 MHz)	7 520.00	18900	QPSK	-42.46	-41.65	-0.81
LTE B12 (B.W 3 MHz)	2 858.00	23165	QPSK	-49.98	-50.70	0.72
LTE B12(17) (B.W 5 MHz)	2 854.00	23155	QPSK	-50.55	-51.63	1.08
LTE B13 (B.W 5 MHz)	3 128.0	23230	QPSK	-49.63	-49.82	0.19
LTE B13 Narrow Band (B.W 5 MHz)	1 608.0	23255	QPSK	-65.75	-65.85	0.10
LTE B25(2) (B.W 1.4 MHz)	7 657.20	26683	QPSK	-36.63	-40.55	3.92
LTE B26(part22) (B.W 10 MHz)	2 532.00	26990	QPSK	-19.04	-51.59	32.55
LTE B26(part90) (B.W 5 MHz)	2 464.50	26765	QPSK	-30.98	-53.23	22.25
LTE B26(part90) (Straddle) (B.W 1.4 MHz)	2 472.00	26790	QPSK	-24.66	-52.85	28.19
LTE B41 (B.W 15 MHz)	8 047.50	41515	QPSK	-32.38	-36.91	4.53
LTE B66 (Upper Ant) (B.W 5 MHz)	7 110.00	132647	QPSK	-39.93	-41.64	1.71
Sub6 n5 (B.W 15 MHz)	2 524.50	168300	PI/2 BPSK	-29.78	-50.68	20.90
Sub6 n66 (B.W 20 MHz)	10 320.00	344000	PI/2 BPSK	-39.21	-38.69	-0.52

Note:

1. In the case of n66 of A3LSMX806B, only B.W 5/10/15/20 MHz is supported, so reuse is applied to B.W 5/10/15/20 MHz of A3LSMX808U.

2. Summary of the spot check for Unlicensed EMC

Mod	Test Item	Mod / Channel	Measured Frequency [MHz]	SM-X808U Result [dB μ V/m]		SM-X806B Result [dB μ V/m]		Deviation (dB)	
				Average	Peak	Average	Peak	Average	Peak
BT	Band Edge	DH 5 / ch 78 / ANT1	2483.5 MHz ~ 2500 MHz	28.74	61.79	27.27	59.96	1.47	1.83
	RSE	DH 5 / ch 0 / ANT1	7206 MHz	15.26	53.17	14.84	53.15	0.42	0.02
BT LE	Band Edge	2M_37 Bytes / ch 39 / ANT1	2483.5 MHz ~ 2500 MHz	50.63	63.89	50.42	62.63	0.21	1.26
	RSE	2M_37 Bytes / ch 0 / ANT1	7206 MHz	44.71	52.51	45.07	52.66	-0.36	-0.15
WLAN	DTS BE	802.11g / ch11	2483.5 MHz ~ 2500 MHz	50.33	63.05	50.75	63.12	-0.42	-0.07
	DTS RSE	802.11g / ch6	7311 MHz	40.53	53.08	40.97	54.23	-0.44	-1.15
	DTS_ax BE	802.11n40 / ch38	4500 MHz ~ 5150 MHz	51.54	66.01	51.45	63.67	0.09	2.34
	DTS_ax RSE	802.11ax / CH144 / SU	17160 MHz	-	59.34	-	55.68	-	3.66
WIFI 6E	Band Edge	802.11ax20 / CH 2 / 26T	Std 5850 MHz ~ 5923 MHz	61.36	81.11	56.43	76.67	4.93	4.44
			Integral 5923 MHz ~ 5924 MHz	59.58	73.1	59.82	72.31	-0.24	0.79
			Integral 5924 MHz ~ 5925 MHz	66.11	80.56	66.21	79.23	-0.10	1.33
	RSE	802.11ax20 / CH 233 / SU	21345 MHz	43.92	56.29	43.56	55.87	0.36	0.42
WPT	Fundamental		530 kHz	20.53		20.27		0.26	
	RSE		150 kHz ~ 3 MHz	3.83		3.33		0.50	

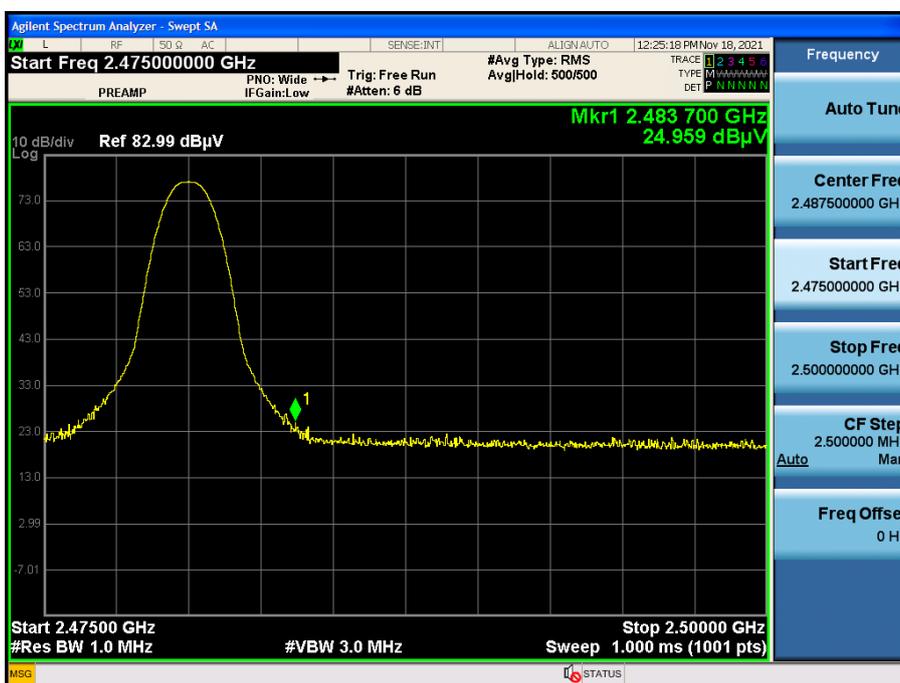
3. Test Plot

BT Band Edge (DH5/ch.78)

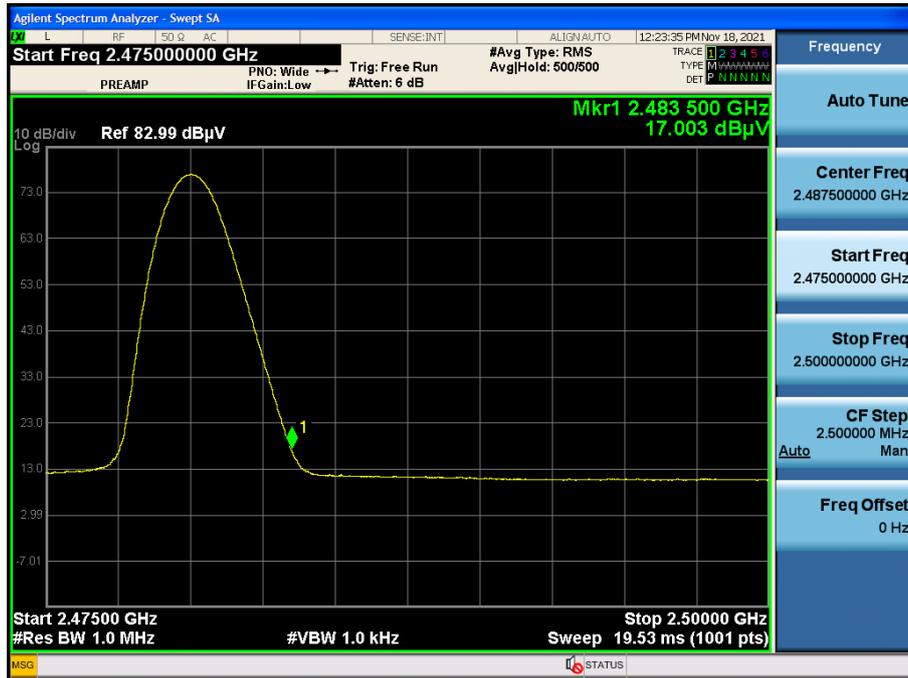
Bandedge

Frequency [MHz]	Measured Value [dBμV]	A.F.+C.L.+D.F [dB/m]	Pol. [H/V]	D.C.C.F [dB]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
2483.5	24.959	35.00	H	0	59.96	73.98	14.02	PK
2483.5	17.003	35.00	H	-24.73	27.27	53.98	26.71	AV

[Radiated Restricted Band Edges plot- Peak Result]



[Radiated Restricted Band Edges plot- Average Result]

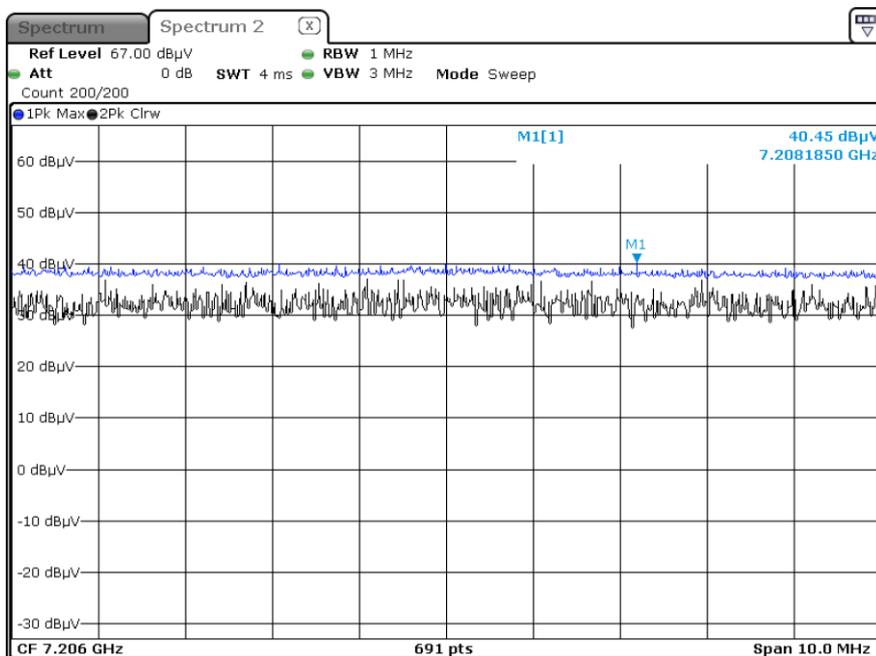


BT R.S.E 3rd Harmonic(DH5/ch.0)

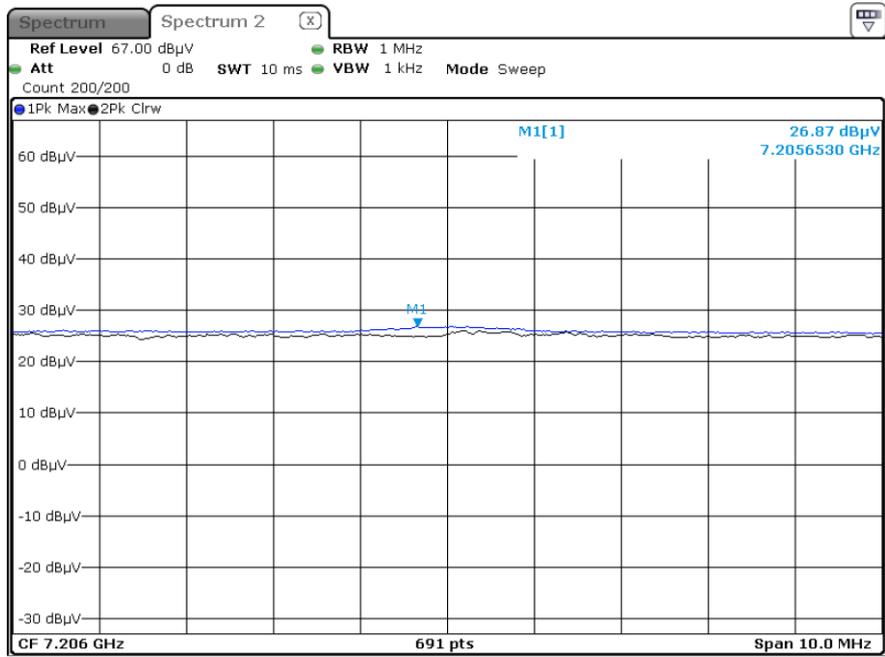
RSE

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
7206	40.45	12.70	H	0	53.15	73.98	20.83	PK
7206	26.87	12.70	H	-24.73	14.84	53.98	39.14	AV

[Radiated Spurious Emissions plot – Peak Result]



[Radiated Spurious Emissions plot – Average Result]



DTS Band Edge (802.11g 6 Mbps_ch11)

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	28.116	0.000	35.00	H	63.12	73.98	10.86	PK
2483.5	15.443	0.305	35.00	H	50.75	53.98	3.23	AV

[Radiated Restricted Band Edges plot – Peak Result]



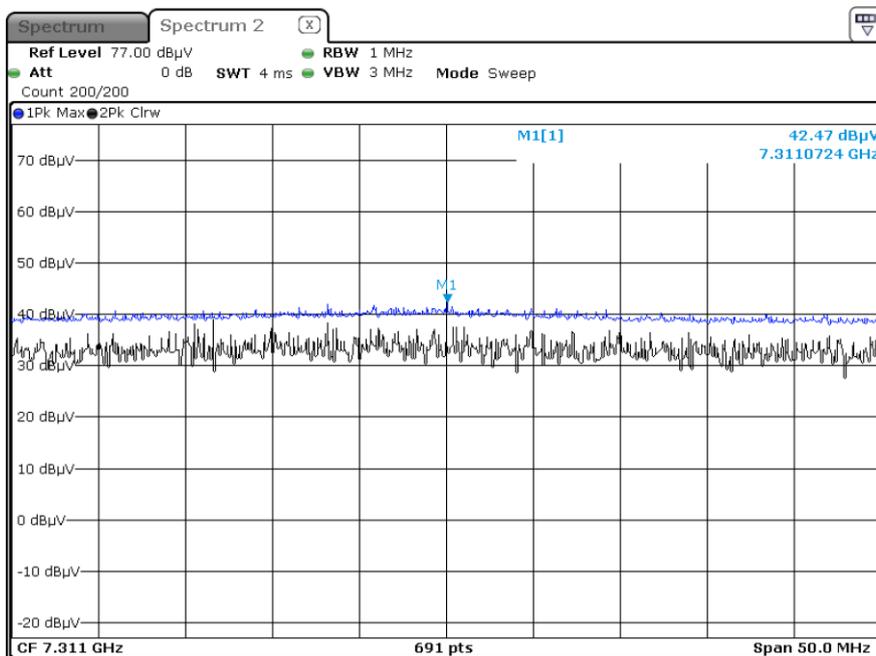
[Radiated Restricted Band Edges plot – Average Result]



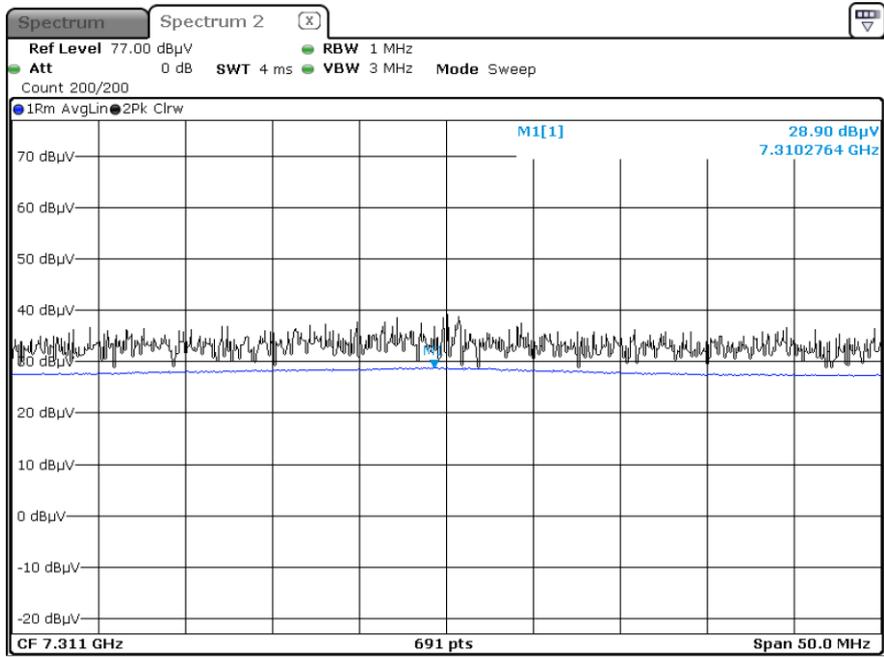
DTS R.S.E 3rd Harmonic(802.11g 6 Mbps Ch.6)

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
7311	42.47	0.000	11.76	H	54.23	73.98	19.75	PK
7311	28.90	0.305	11.76	H	40.97	53.98	13.02	AV

[Radiated Spurious Emissions plot – Peak Result]



[Radiated Spurious Emissions plot – Average Result]

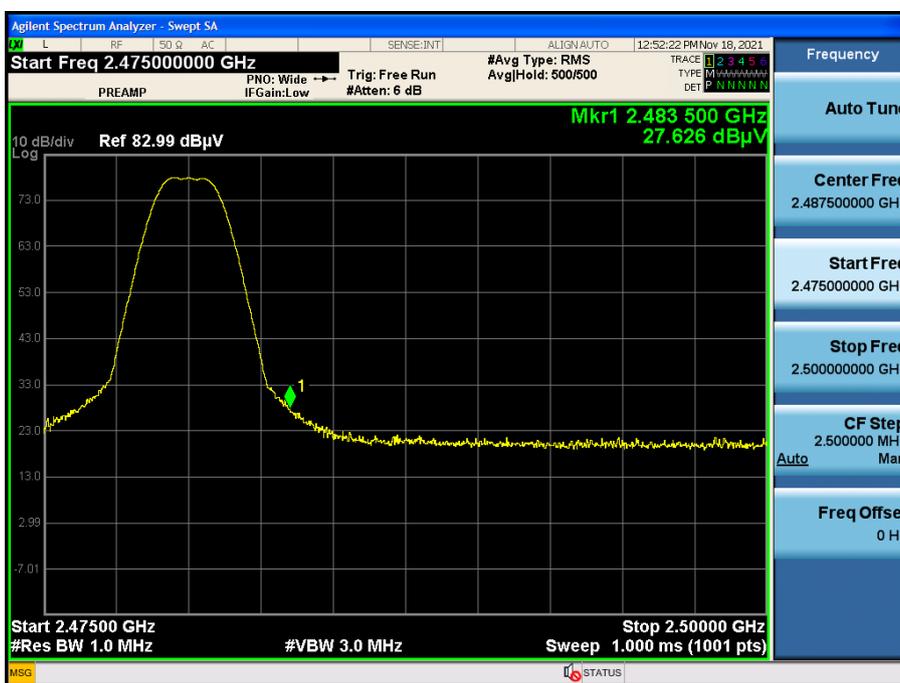


BT(LE) Band Edge (LE(5.2) 2M 37 byte/ch.39)

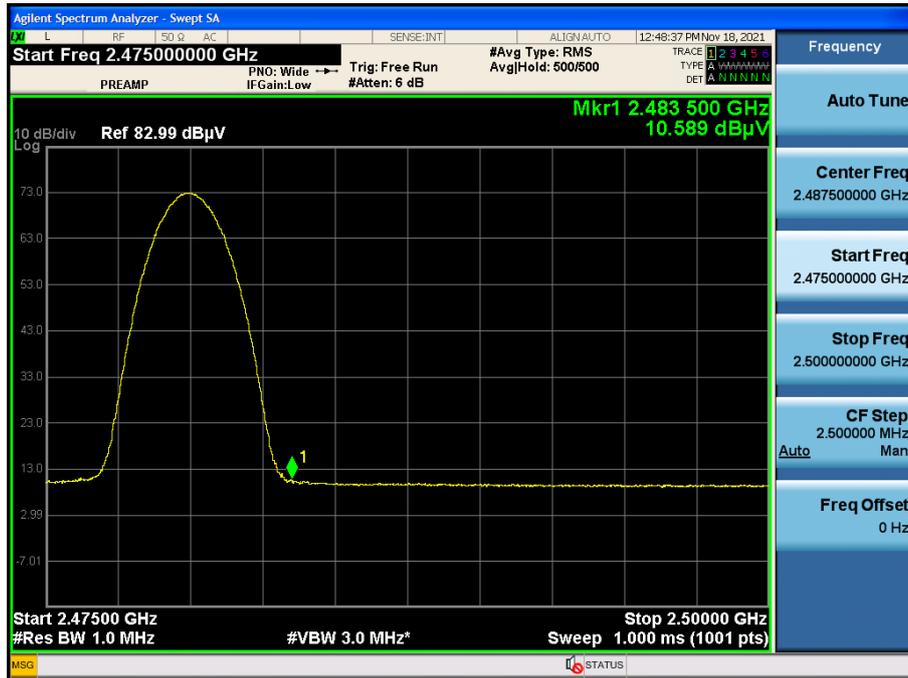
Bandedge

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	27.626	0.00	35.00	H	62.63	73.98	11.35	PK
2483.5	10.589	4.83	35.00	H	50.42	53.98	3.56	AV

[Radiated Restricted Band Edges plot – Peak Result]



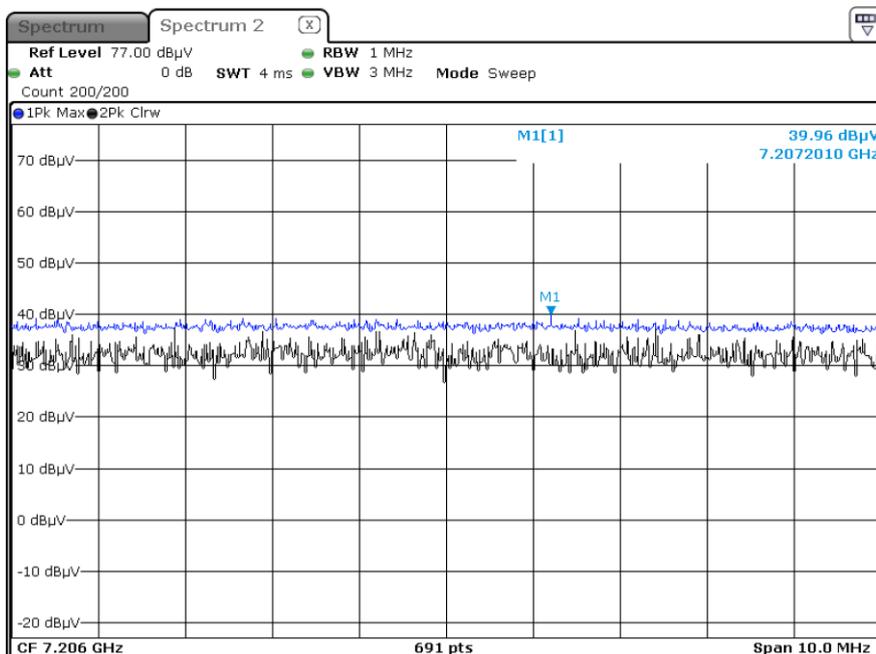
[Radiated Restricted Band Edges plot – Average Result]



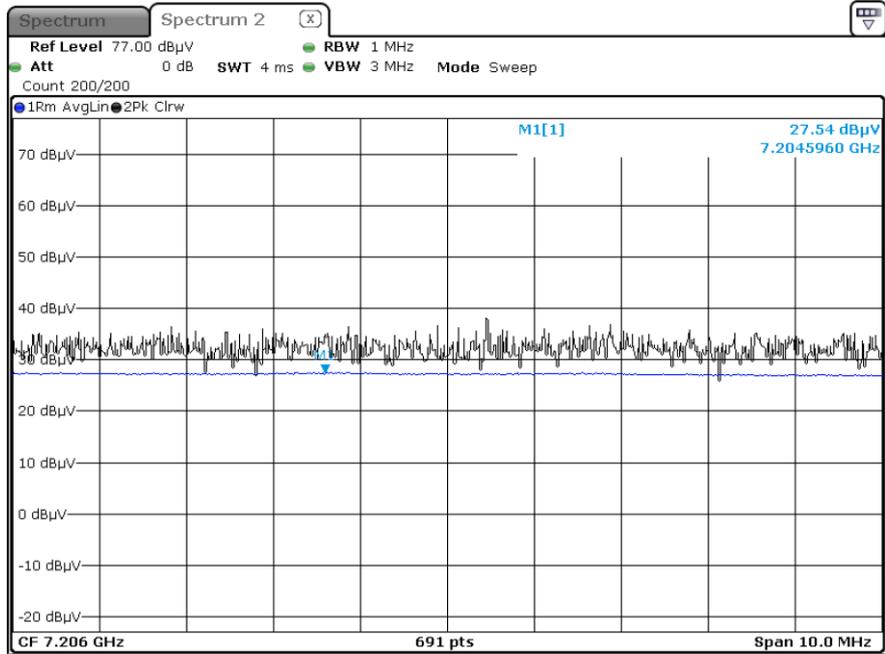
BT(LE) R.S.E 3rd Harmonic (LE(5.2) 2M 37 byte/ch.0)

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
7206	39.96	0.00	12.70	H	52.66	73.98	21.32	PK
7206	27.54	4.83	12.70	H	45.07	53.98	8.91	AV

[Radiated Spurious Emissions plot – Peak Result]



[Radiated Spurious Emissions plot – Average Result]

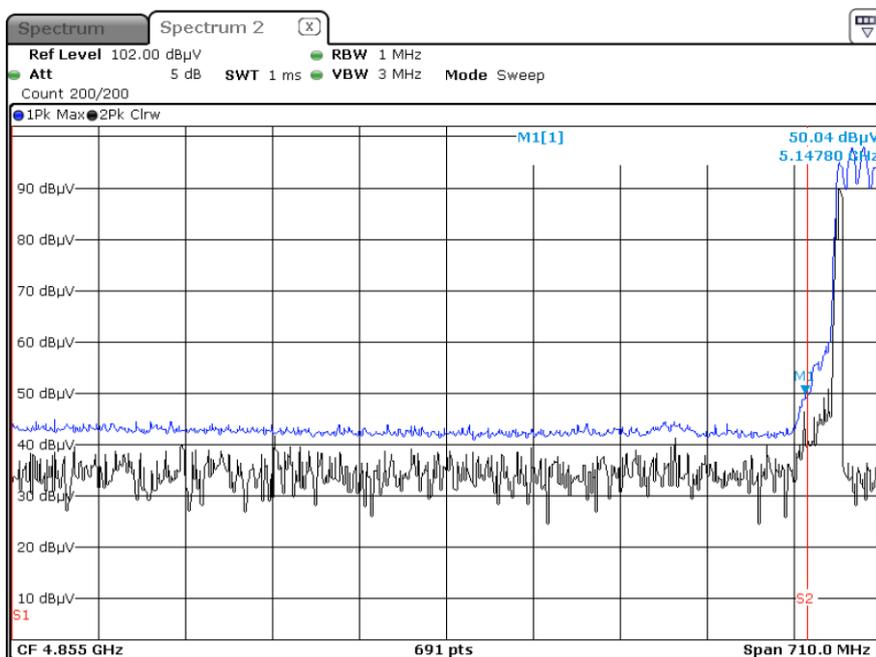


U-NII Band Edge (802.11n_40 MHz BW 13.5 Mbps_ch38)

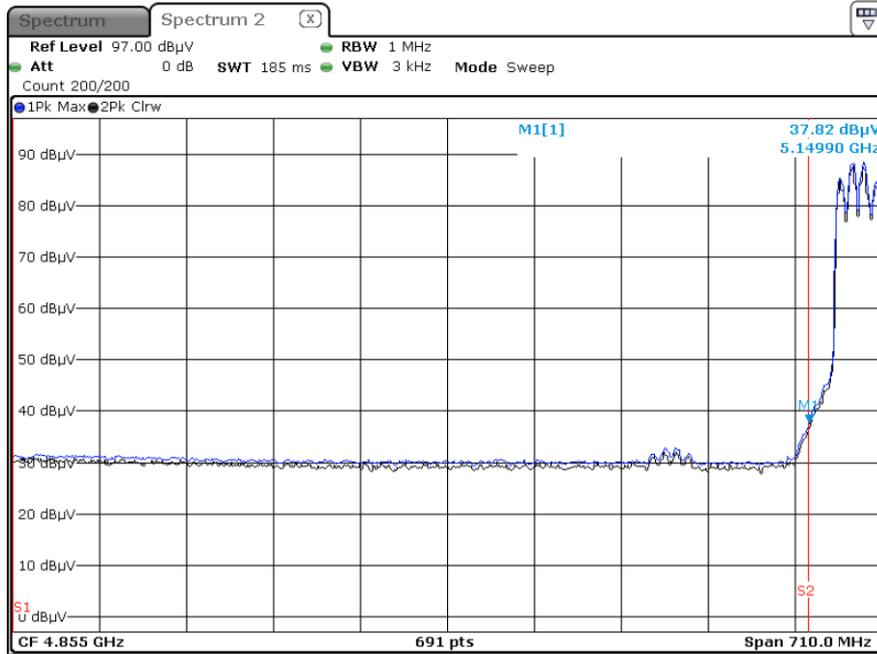
Bandedge

Frequency [MHz]	Measured Value [dBμV]	A.F+C.L-A.G+D.F+ATT [dB/m]	Pol. [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5150	50.04	13.63	H	63.67	73.98	10.31	PK
5150	37.82	13.63	H	51.45	53.98	2.53	AV

Radiated Restricted Band Edges plot – Peak Result



Radiated Restricted Band Edges plot – Average Result

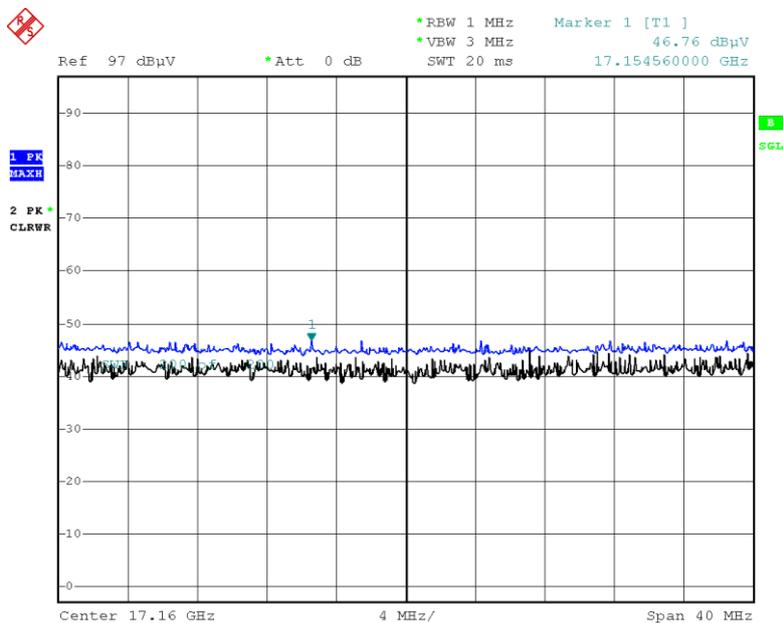


U-NII R.S.E 3rd Harmonic (802.11ax_HE20_ch144)

RSE

Frequency [MHz]	Measured Value [dBμV]	C.L.+A.F.+D.F.-A.G. [dB]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
17 160	46.76	8.92	V	55.68	68.20	12.52	PK

[Radiated Spurious Emissions plot – Peak Result]



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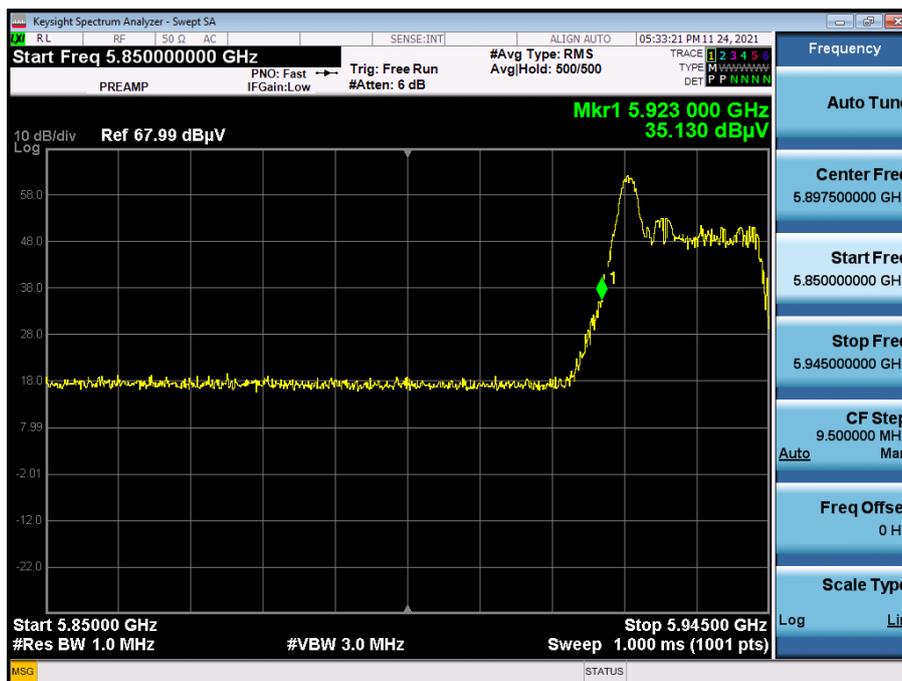
WIFI 6E Band Edge (802.11ax(HE20) 26T_ch2)

Bandedge

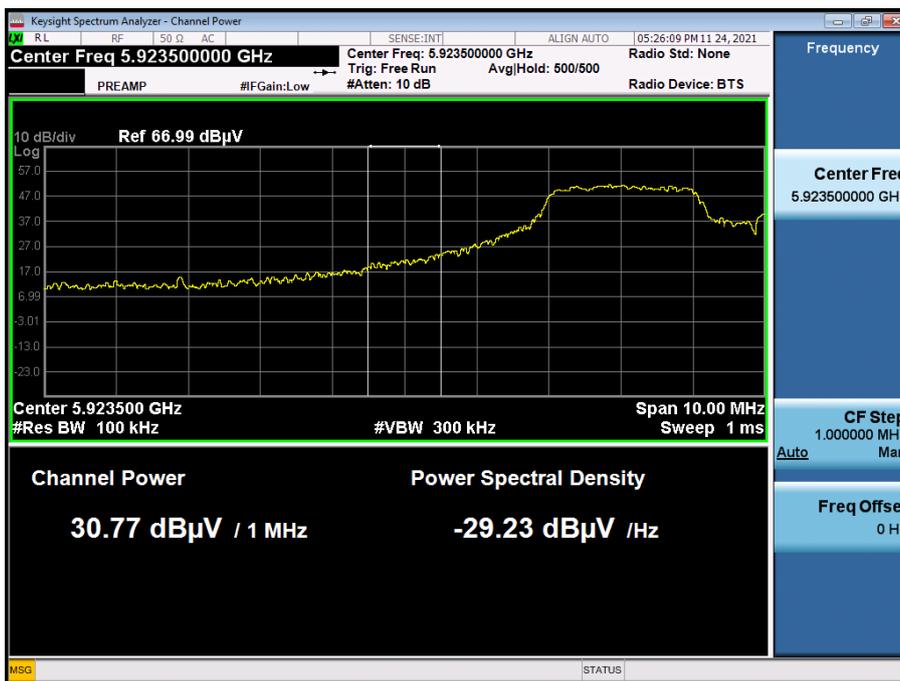
Frequency [MHz]	Measured Value [dBμV]	Duty Cycle Factor	C.L.+A.F.+D.F. [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
5850-5923	35.13	0.00	41.54	H	76.67	88.23	11.56	PK
#5923-5924	30.77	0.00	41.54	H	72.31	88.23	15.92	PK
#5924-5925	37.69	0.00	41.54	H	79.23	88.23	9.00	PK
5850-5923	14.89	0.00	41.54	H	56.43	68.23	11.80	AV
#5923-5924	18.28	0.00	41.54	H	59.82	68.23	8.41	AV
#5924-5925	24.67	0.00	41.54	H	66.21	68.23	2.02	AV

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

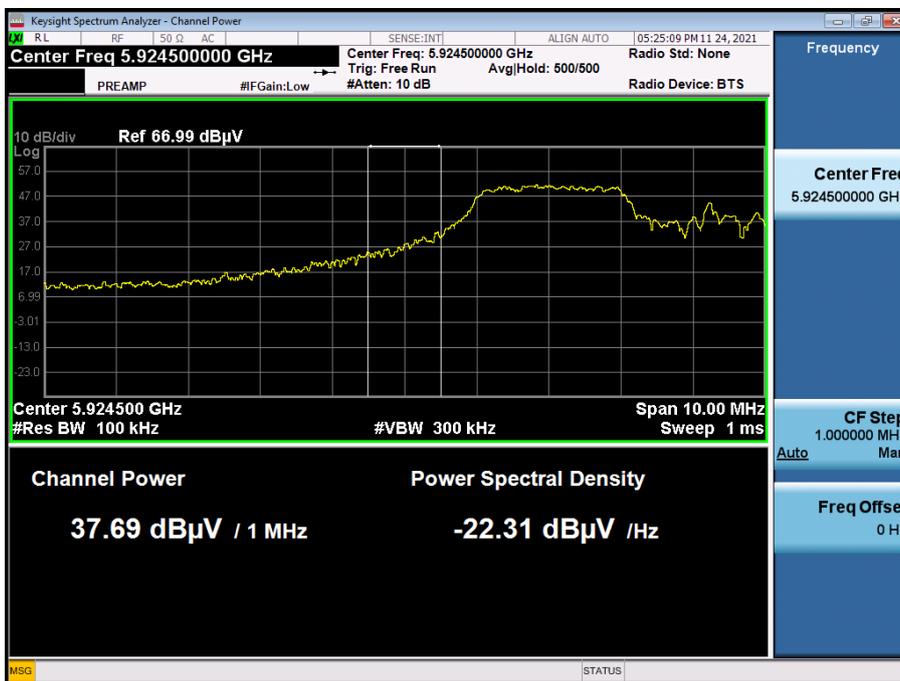
[Radiated Restricted Band Edges plot – Peak Result(Std 5850 MHz ~ 5923 MHz)]



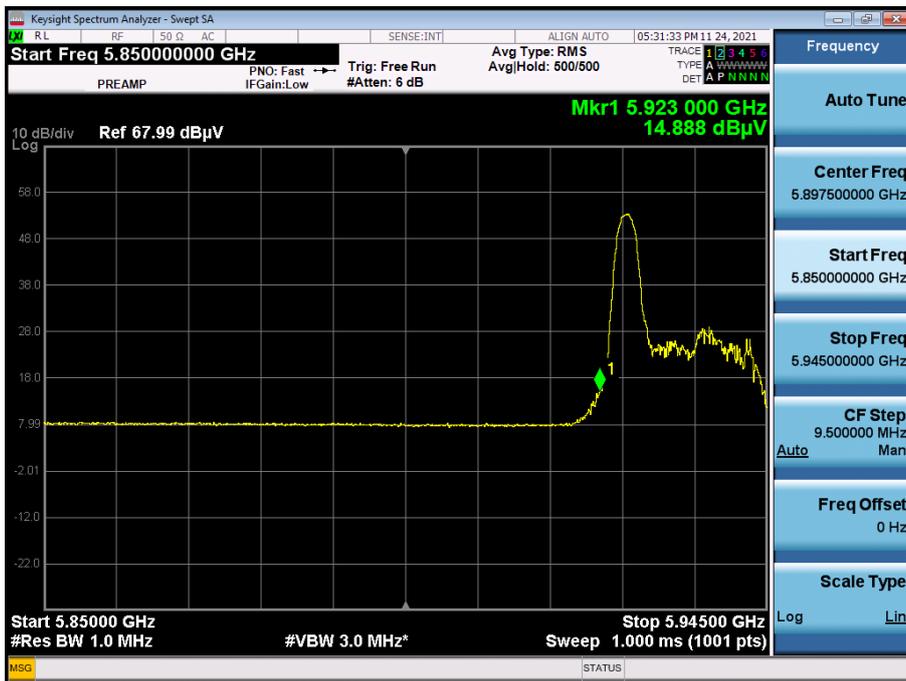
[Radiated Restricted Band Edges plot – Peak Result(Integral 5923 MHz ~ 5924 MHz)]



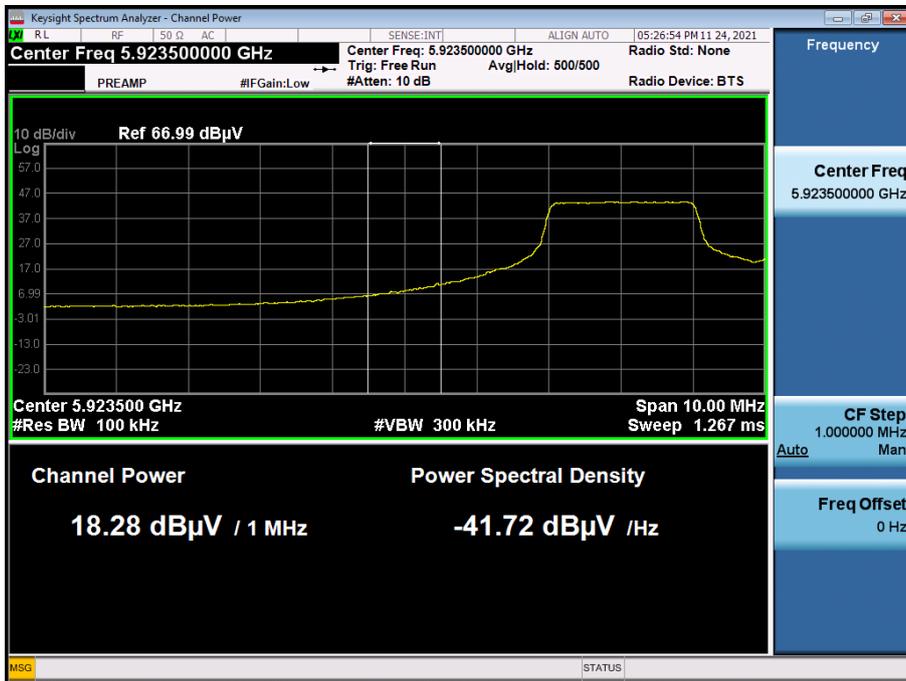
[Radiated Restricted Band Edges plot – Peak Result(Integral 5924 MHz ~ 5925 MHz)]



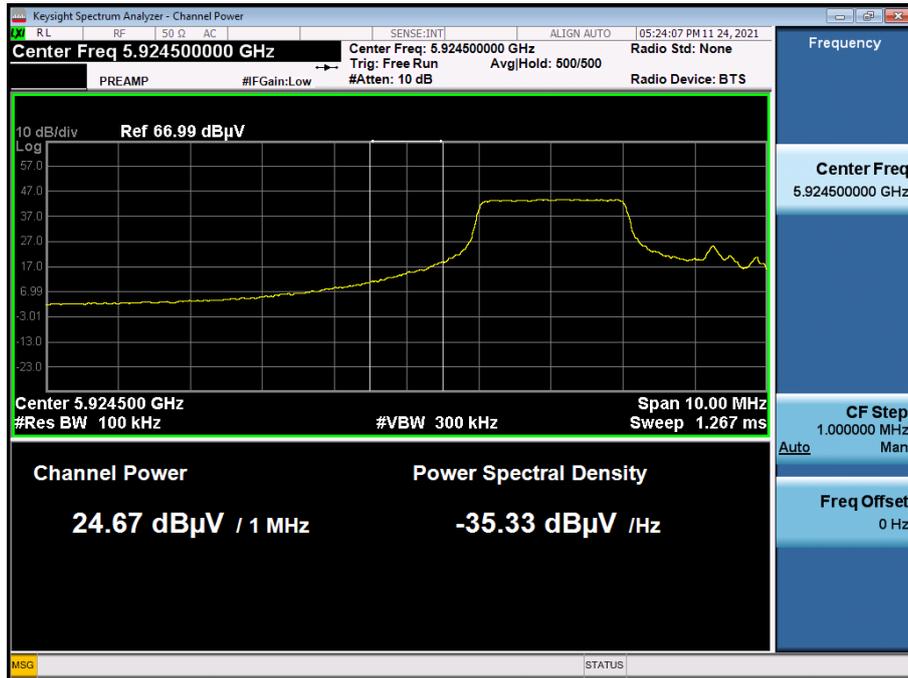
[Radiated Restricted Band Edges plot – Average Result(Std 5850 MHz ~ 5923 MHz)]



[Radiated Restricted Band Edges plot – Average Result(Integral 5923 MHz ~ 5924 MHz)]



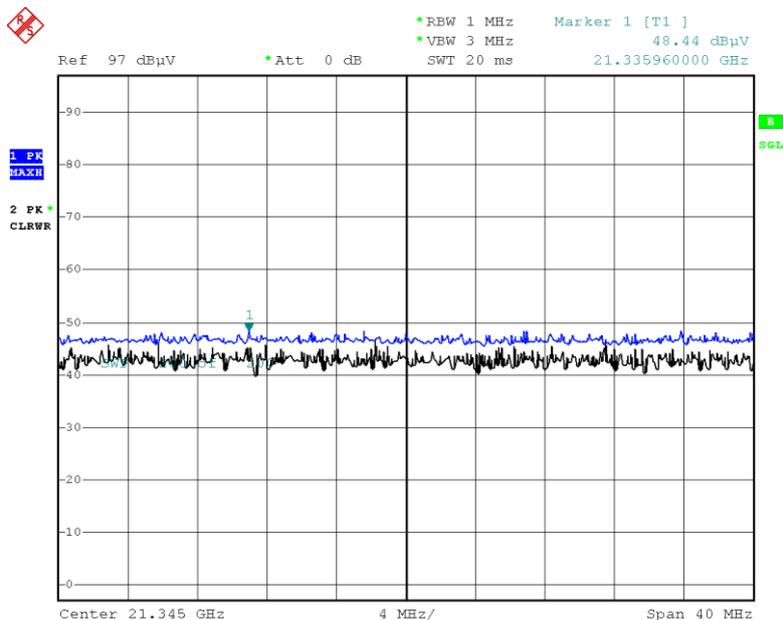
[Radiated Restricted Band Edges plot – Average Result(Integral 5924 MHz ~ 5925 MHz)]



WIFI 6E R.S.E 3rd Harmonic(802.11ax(HE20) SU Ch.233)

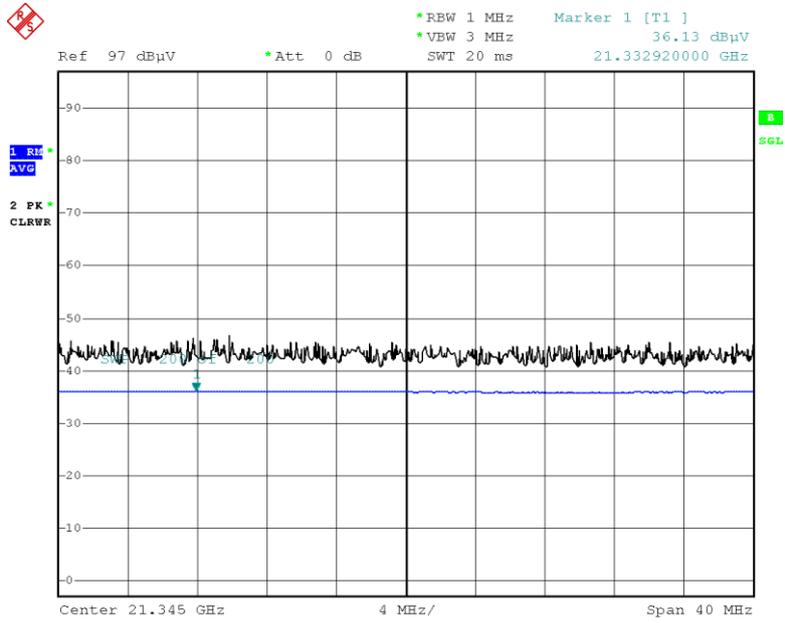
Frequency [MHz]	Measured Value [dBμV]	Duty Cycle Factor	C.L.+A.F.+D.F.-A.G. [dB/m]	Pol. [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
21345	48.44	0.000	7.43	H	55.87	73.98	18.11	PK
21345	36.13	0.000	7.43	H	43.56	53.98	10.42	AV

[Radiated Spurious Emissions plot – Peak Result]



Date: 22.NOV.2021 14:43:19

[Radiated Spurious Emissions plot – Average Result]



Date: 22.NOV.2021 14:43:00

WPT

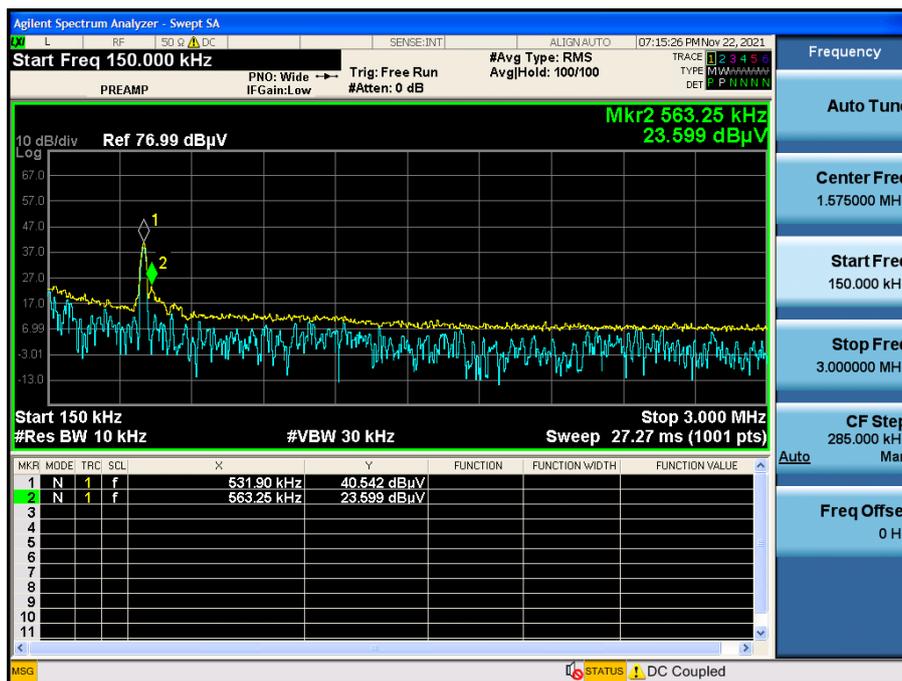
Fundamental

Frequency [kHz]	Measured Value Level [dBμV]@3 m	Ant. Factor [dB/m]	Cable Loss [dB]	Distance Correction [dB]	Result Level [dBμV/m] @300 m	Limit [dBμV/m]	Margin [dB]
531.90	40.542	19.2	0.53	-40	20.27	33.09	12.82

RSE

Frequency [kHz]	Measured Value Level [dBμV]@3 m	Ant. Factor [dB/m]	Cable Loss [dB]	Distance Correction [dB]	Result Level [dBμV/m] @300 m	Limit [dBμV/m]	Margin [dB]
568.95	23.599	19.2	0.53	-40	3.33	32.50	29.17

[WPT plot]



4. List of test equipment

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
H.P.F	FBSR-02B(WHK1.2/15 G-10EF)	T&M SYSTEM	-	03/02/2022	Annual
H.P.F	FBSR-02B(WHK3.3/18 G-10EF)	T&M SYSTEM	-	03/02/2022	Annual
Power Splitter(DC ~ 26.5 GHz)	11667B	Hewlett Packard	11275	04/07/2022	Annual
DC Power Supply	E3632A	Agilent	MY40010147	06/28/2022	Annual
Dipole Antenna	UHAP	Schwarzbeck	557	04/05/2023	Biennial
Dipole Antenna	UHAP	Schwarzbeck	558	04/05/2023	Biennial
Chamber	SU-642	ESPEC	93008124	03/15/2022	Annual
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	147	08/30/2022	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1298	09/15/2023	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	10/13/2022	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	02/11/2022	Biennial
Signal Analyzer(10 Hz ~ 26.5 GHz)	N9020A	Agilent	MY52090906	05/18/2022	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	06/01/2022	Annual
Spectrum Analyzer(10 Hz ~ 40 GHz)	FSV40	REOHDE & SCHWARZ	100931	09/29/2022	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/18/2022	Annual
Loop Antenna(9 kHz ~ 30 MHz)	FMZB1513	Schwarzbeck	1513-333	03/19/2022	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/03/2023	Biennial
Hybrid Antenna	VULB9168	Schwarzbeck	760	02/22/2023	Biennial
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262116770	07/12/2022	Annual
Wideband Radio Communication Tester	MT8820C	Anritsu Corp.	6201026545	01/07/2022	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/05/2022	Annual
Signal Analyzer(5 Hz ~ 40.0 GHz)	N9030B	KEYSIGHT	MY55480167	06/02/2022	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Equipment	Model	Manufacture	Serial No.	Due to Calibration	Calibration Interval
Precision Dipole Antenna	UHAP	Schwarzbeck	01273	05/30/2022	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	05/30/2022	Biennial
Horn Antenna(1~18GHz)	BBHA 9120D	Schwarzbeck	02289	05/08/2022	Biennial
Horn Antenna(1~18GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	05/04/2022	Biennial
Horn Antenna(15~40GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	10/13/2022	Biennial
Horn Antenna(15~40GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	02/11/2022	Biennial
Loop Antenna(9kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	05/18/2022	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/03/2023	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/22/2023	Biennial
High Pass Filter	WHKX10-900-1000-15000-40SS	Wainwright Instruments	15	06/15/2022	Annual
High Pass Filter	WHKX10-2700-3000-18000-40SS	Wainwright Instruments	145	06/15/2022	Annual
High Pass Filter	WHNX6-4740-6000-26500-40CC	Wainwright Instruments	11	06/15/2022	Annual
LOW NOISE AMP (100 MHz ~ 18GHz)	CBLU1183540B-01	CERNEX	26822	06/15/2022	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/04/2021	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/23/2022	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	09/15/2022	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	04/07/2022	Annual
Chamber	SU-642	ESPEC	93008124	03/15/2022	Annual
Signal Analyzer(10Hz~26.5GHz)	N9020A	Agilent	MY51110063	04/22/2022	Annual
ATTENUATOR(20dB)	8493C	Hewlett Packard	17280	06/01/2022	Annual
Spectrum Analyzer(10Hz~40GHz)	FSV40	REOHDE & SCHWARZ	101436	03/02/2022	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/18/2022	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287700	05/25/2022	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/26/2022	Annual
SIGNAL GENERATOR (100kHz~40GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/05/2022	Annual
Signal Analyzer(5Hz~40.0GHz)	N9030B	KEYSIGHT	MY55480167	06/02/2022	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/27/2022	Annua
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

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
Loop Antenna	FMZB 1513	Rohde & Schwarz	1513-333	03/19/2022	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	760	02/22/2023	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	02299	05/19/2022	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1191	11/18/2023	Biennial
Horn Antenna (15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170541	11/29/2021	Biennial
Horn Antenna (15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Spectrum Analyzer	FSV40-N	Rohde & Schwarz	102168	07/05/2022	Annual
Spectrum Analyzer	FSP	Rohde & Schwarz	836650/016	09/13/2022	Annual
Signal Analyzer	N9030A	Agilent	MY49431210	01/11/2022	Annual
Signal Analyzer	N9030A	Agilent	MY55410508	09/07/2022	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
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	01/06/2022	Annual
Band Reject Filter	WRCJV5100/5850-40/50-8EEK	Wainwright Instruments	1	02/08/2022	Annual
High Pass Filter	WHK3.0/18G-10EF	Wainwright Instruments	8	02/03/2022	Annual
High Pass Filter	WHKX8-6090-7000-18000-40SS	Wainwright Instruments	25	02/03/2022	Annual
High Pass Filter	WHKX10-7150-8000-18000-50SS	Wainwright Instruments	1	04/02/2022	Annual
Attenuator (3 dB)	18B-03	Api tech.	1	02/03/2022	Annual
Attenuator(10 dB)	8493C-10	Agilent	08285	02/03/2022	Annual
Power Amplifier	CBLU1183540	CERNEX	22964	02/03/2022	Annual
Power Amplifier	CBL06185030	CERNEX	22965	02/03/2022	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/04/2021	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/23/2022	Annual