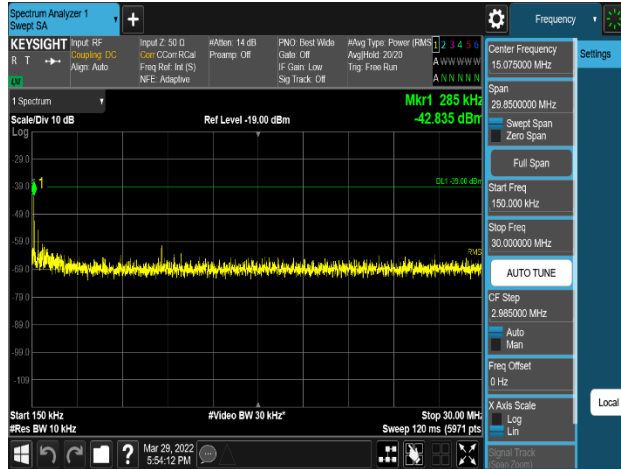
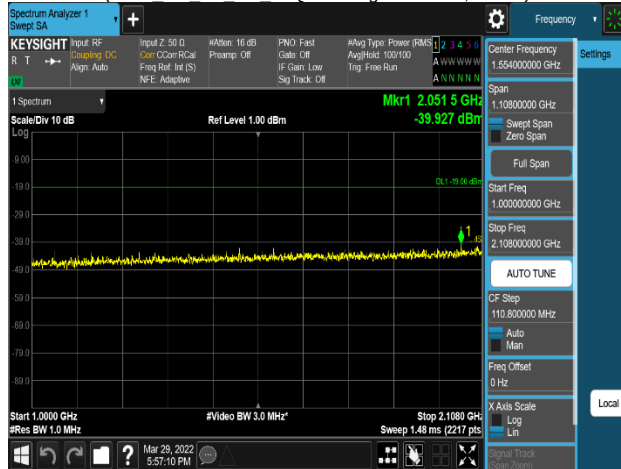




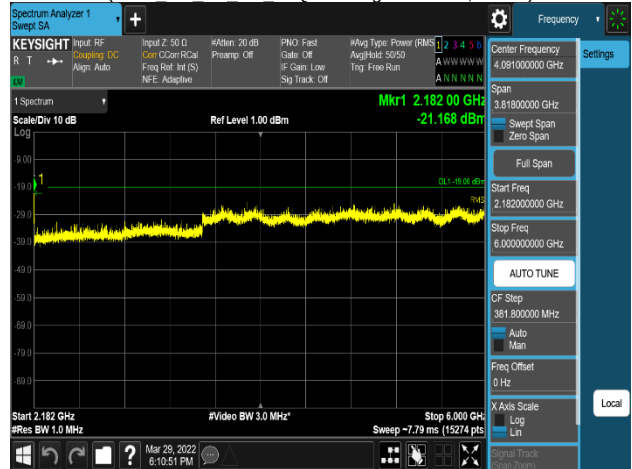
Plot 8-324. Conducted Spurious Emission Plot
150 kHz to 30 MHz
(AWS NR 1C 5M 16QAM - High Channel, Port 2)



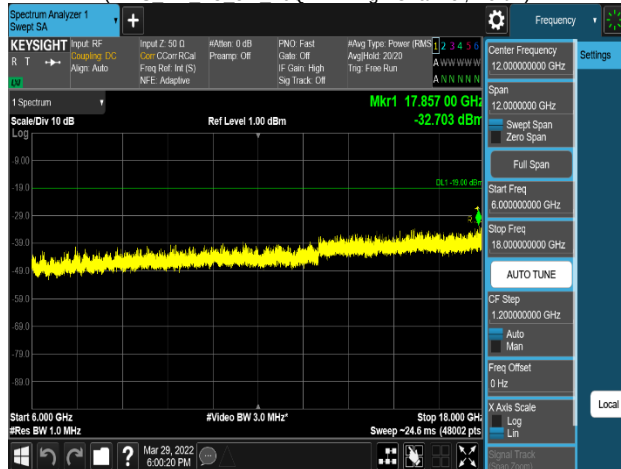
Plot 8-325. Conducted Spurious Emission Plot
30 MHz to 1 GHz
(AWS NR 1C 5M 16QAM - High Channel, Port 2)



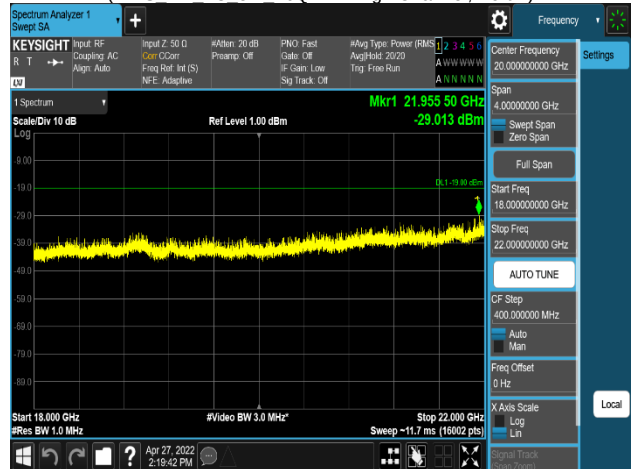
Plot 8-326. Conducted Spurious Emission Plot
1 GHz to 2.108 GHz
(AWS NR 1C 5M 16QAM - High Channel, Port 2)



Plot 8-327. Conducted Spurious Emission Plot
2.182 GHz to 6 GHz
(AWS NR 1C 5M 16QAM - High Channel, Port 2)



Plot 8-328. Conducted Spurious Emission Plot
6 GHz to 18 GHz
(AWS NR 1C 5M 16QAM - High Channel, Port 2)

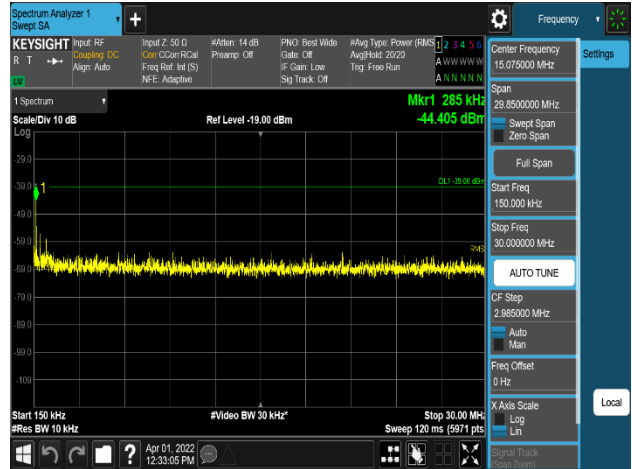


Plot 8-329. Conducted Spurious Emission Plot
18 GHz to 22 GHz
(AWS NR 1C 5M 16QAM - High Channel, Port 2)

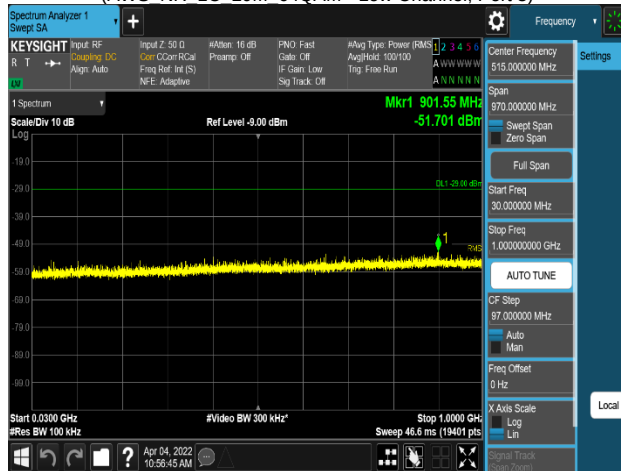
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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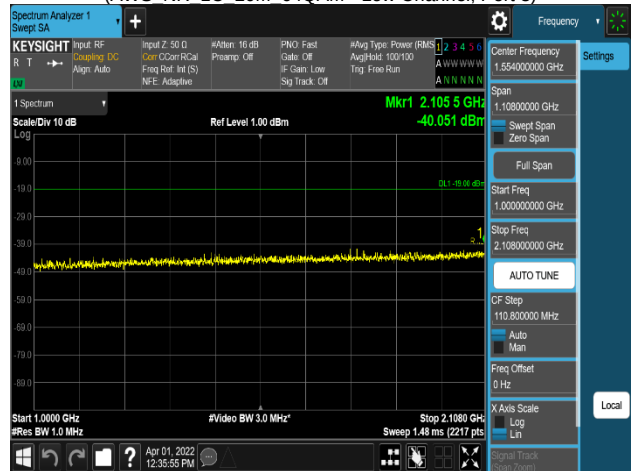
Plot 8-330. Conducted Spurious Emission Plot
9 kHz to 150 kHz
(AWS NR 1C 20M 64QAM - Low Channel, Port 3)



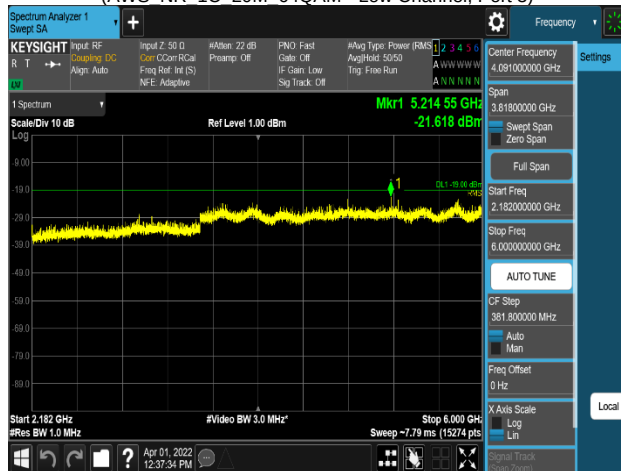
Plot 8-331. Conducted Spurious Emission Plot
150 kHz to 30 MHz
(AWS NR 1C 20M 64QAM - Low Channel, Port 3)



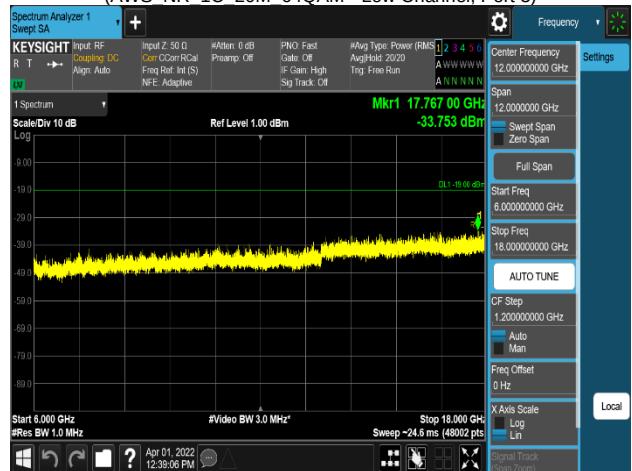
Plot 8-332. Conducted Spurious Emission Plot
30 MHz to 1 GHz
(AWS NR 1C 20M 64QAM - Low Channel, Port 3)



Plot 8-333. Conducted Spurious Emission Plot
1 GHz to 2.108 GHz
(AWS NR 1C 20M 64QAM - Low Channel, Port 3)

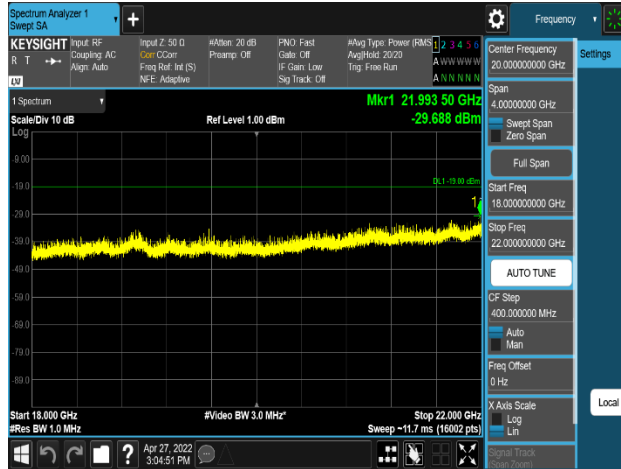


Plot 8-334. Conducted Spurious Emission Plot
2.182 GHz to 6 GHz
(AWS_NR_1C_20M_64QAM - Low Channel, Port 3)



Plot 8-335. Conducted Spurious Emission Plot
6 GHz to 18 GHz
(AWS_NR_1C_20M_64QAM - Low Channel, Port 3)

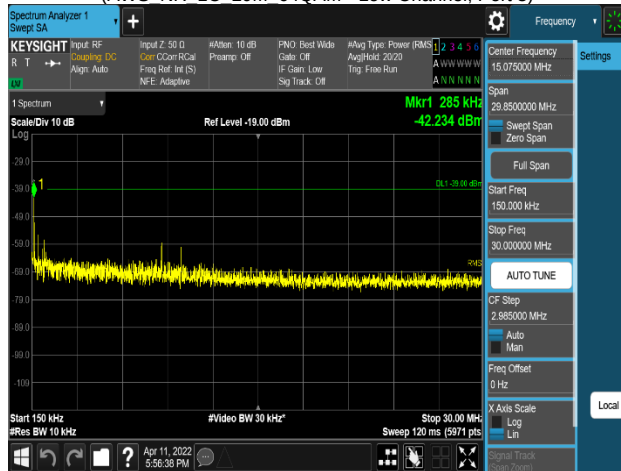
FCC ID: A3LRF4402D-D1A	MEASUREMENT REPORT (Class II Permissive Change)			Approved by: Technical Manager
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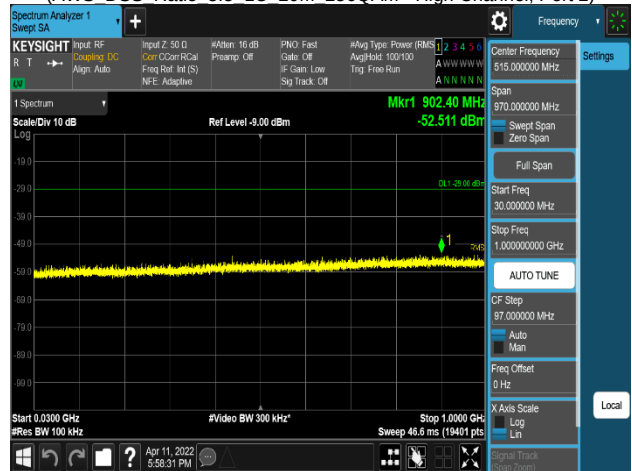
Plot 8-336. Conducted Spurious Emission Plot
18 GHz to 22 GHz
(AWS NR 1C 20M 64QAM - Low Channel, Port 3)



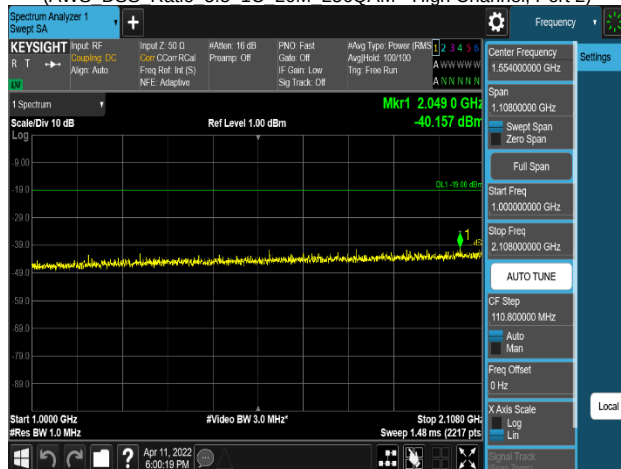
Plot 8-337. Conducted Spurious Emission Plot
9 kHz to 150 kHz
(AWS DSS Ratio 5:5 1C 20M 256QAM - High Channel, Port 2)



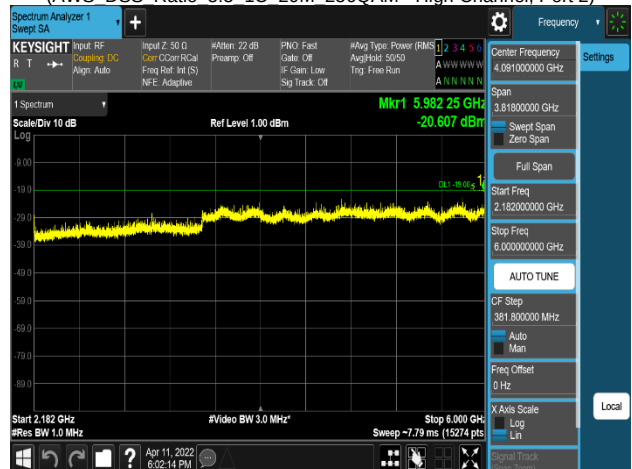
Plot 8-338. Conducted Spurious Emission Plot
150 kHz to 30 MHz
(AWS DSS Ratio 5:5 1C 20M 256QAM - High Channel, Port 2)



Plot 8-339. Conducted Spurious Emission Plot
30 MHz to 1 GHz
(AWS DSS Ratio 5:5 1C 20M 256QAM - High Channel, Port 2)

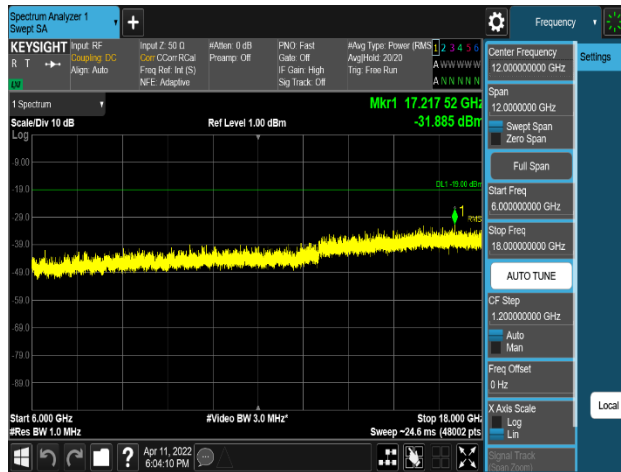


Plot 8-340. Conducted Spurious Emission Plot
1 GHz to 2.108 GHz
(AWS_DSS_Ratio_5:5_1C_20M_256QAM - High Channel, Port 2)

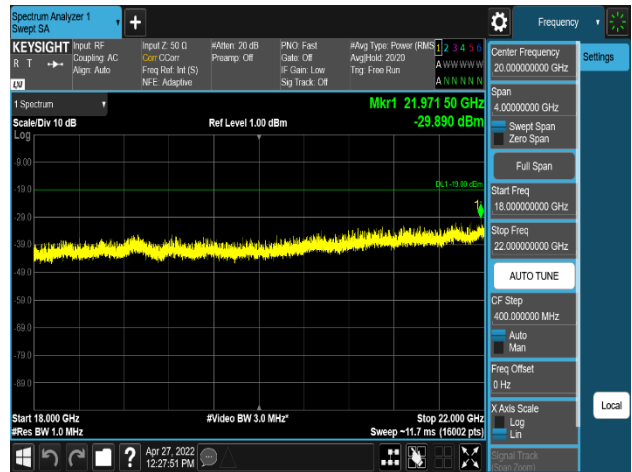


Plot 8-341. Conducted Spurious Emission Plot
2.182 GHz to 6 GHz
(AWS_DSS_Ratio_5:5_1C_20M_256QAM - High Channel, Port 2)

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Plot 8-342. Conducted Spurious Emission Plot
6 GHz to 18 GHz
(AWS_DSS_Ratio_5:5_1C_20M_256QAM - High Channel, Port 2)



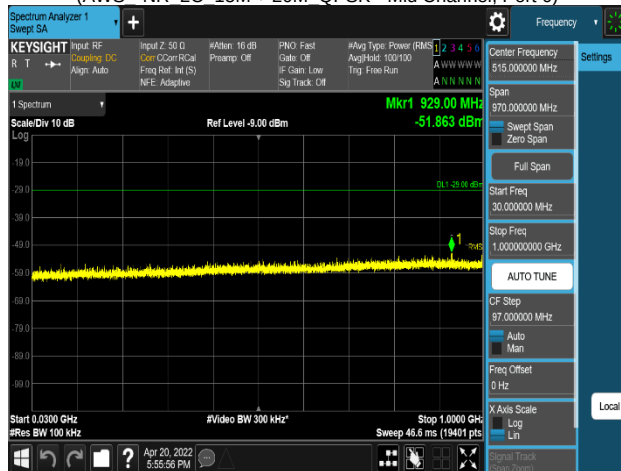
Plot 8-343. Conducted Spurious Emission Plot
18 GHz to 22 GHz
(AWS_DSS_Ratio_5:5_1C_20M_256QAM - High Channel, Port 2)



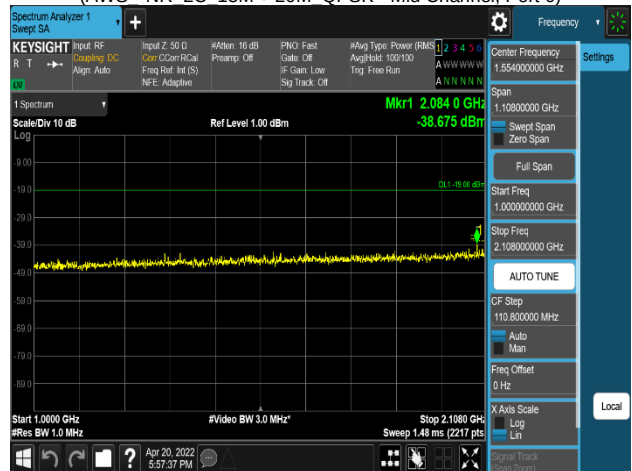
Plot 8-344. Conducted Spurious Emission Plot
9 kHz to 150 kHz
(AWS_NR_2C_15M + 20M_QPSK - Mid Channel, Port 0)



Plot 8-345. Conducted Spurious Emission Plot
150 kHz to 30 MHz
(AWS_NR_2C_15M + 20M_QPSK - Mid Channel, Port 0)

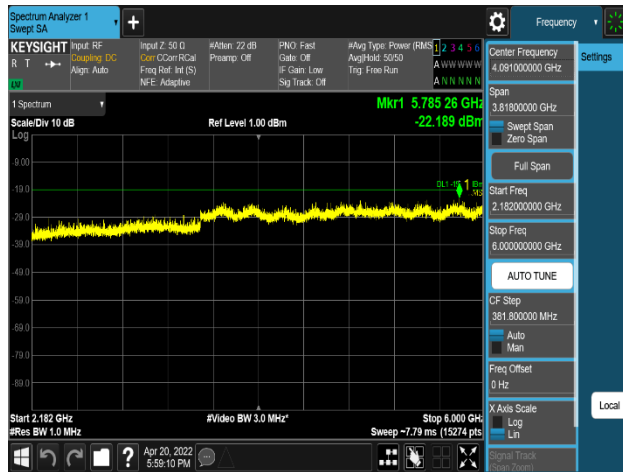


Plot 8-346. Conducted Spurious Emission Plot
30 MHz to 1 GHz
(AWS_NR_2C_15M + 20M_QPSK - Mid Channel, Port 0)

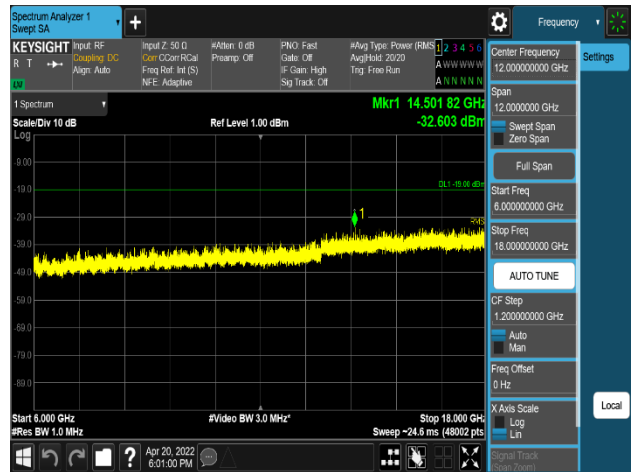


Plot 8-347. Conducted Spurious Emission Plot
1 GHz to 2.108 GHz
(AWS_NR_2C_15M + 20M_QPSK - Mid Channel, Port 0)

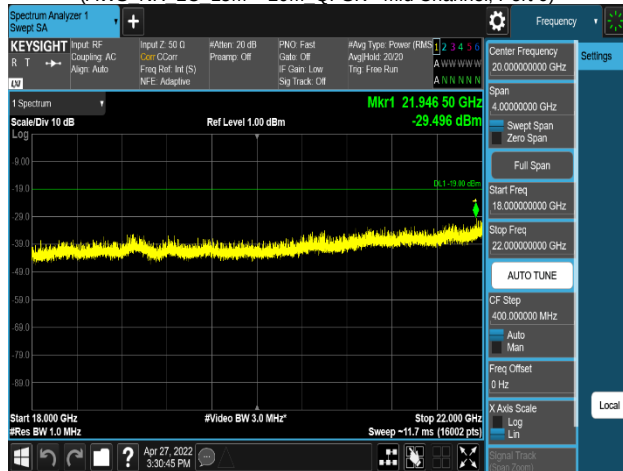
FCC ID: A3LRF4402D-D1A	MEASUREMENT REPORT (Class II Permissive Change)			Approved by: Technical Manager
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Plot 8-348. Conducted Spurious Emission Plot
2.182 GHz to 6 GHz
(AWS_NR_2C_15M + 20M_QPSK - Mid Channel, Port 0)



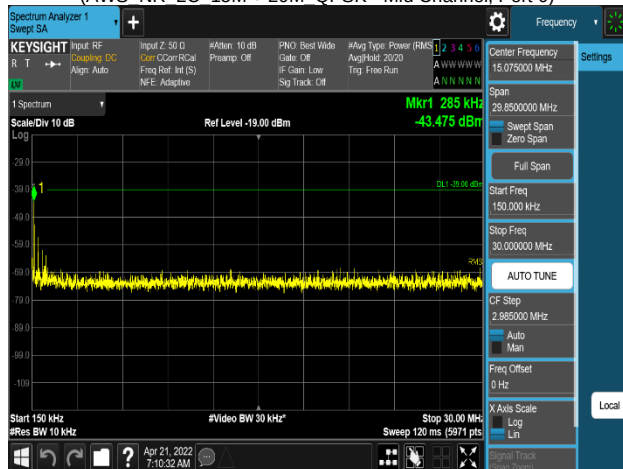
Plot 8-349. Conducted Spurious Emission Plot
6 GHz to 18 GHz
(AWS_NR_2C_15M + 20M_QPSK - Mid Channel, Port 0)



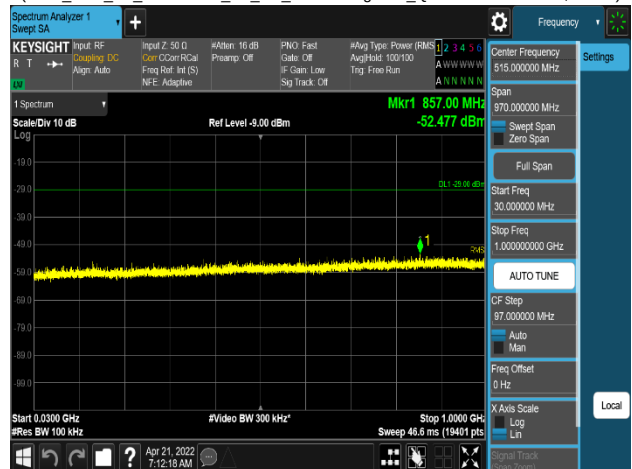
Plot 8-350. Conducted Spurious Emission Plot
18 GHz to 22 GHz
(AWS_NR_2C_15M + 20M_QPSK - Mid Channel, Port 0)



Plot 8-351. Conducted Spurious Emission Plot
9 kHz to 150 kHz
(AWS_DSS_1C_15M + LTE_1C_5M_Non-Contiguous_QPSK - Mid Channel, Port 0)

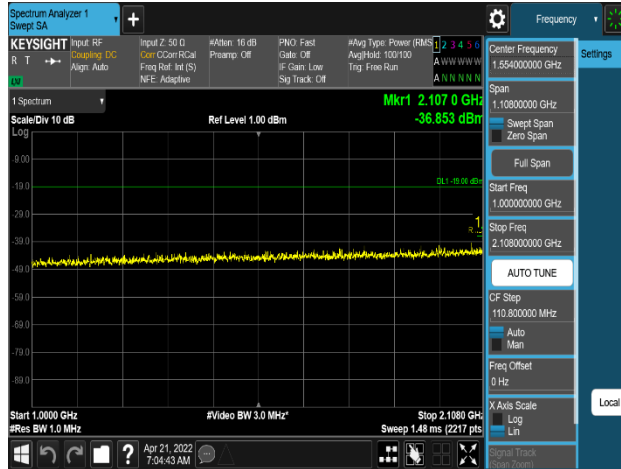


Plot 8-352. Conducted Spurious Emission Plot
150 kHz to 30 MHz
(AWS_DSS_1C_15M + LTE_1C_5M_Non-Contiguous_QPSK - Mid Channel, Port 0)



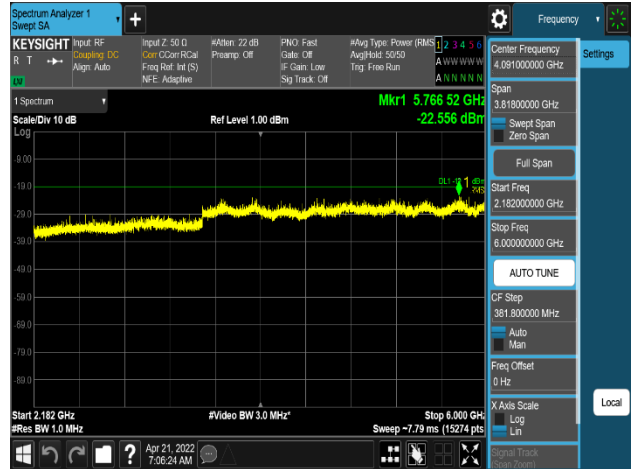
Plot 8-353. Conducted Spurious Emission Plot
30 MHz to 1 GHz
(AWS_DSS_1C_15M + LTE_1C_5M_Non-Contiguous_QPSK - Mid Channel, Port 0)

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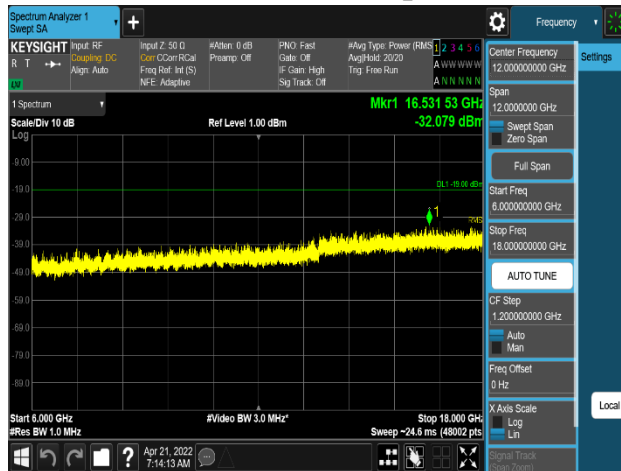
Plot 8-354. Conducted Spurious Emission Plot
1 GHz to 2.108 GHz

(AWS_DSS_1C_15M + LTE_1C_5M_Non-Contiguous_QPSK - Mid Channel, Port 0)



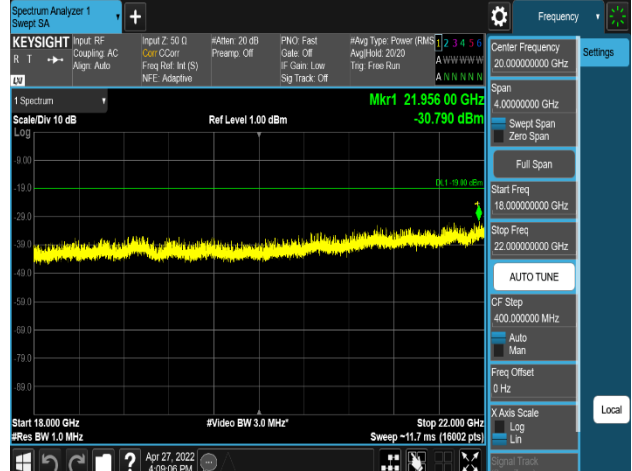
Plot 8-355. Conducted Spurious Emission Plot
2.182 GHz to 6 GHz

(AWS_DSS_1C_15M + LTE_1C_5M_Non-Contiguous_QPSK - Mid Channel, Port 0)



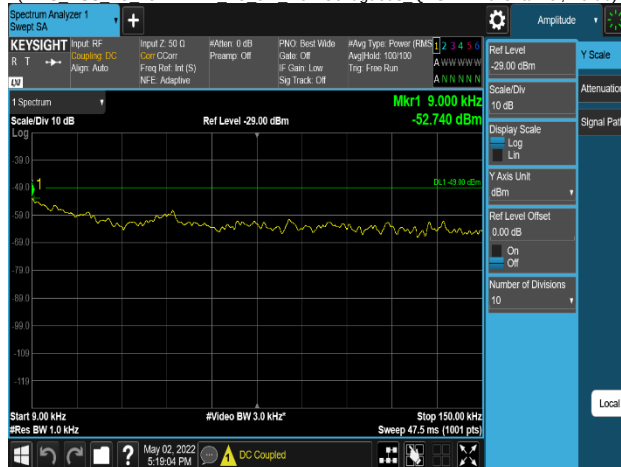
Plot 8-356. Conducted Spurious Emission Plot
6 GHz to 18 GHz

(AWS_DSS_1C_15M + LTE_1C_5M_Non-Contiguous_QPSK - Mid Channel, Port 0)



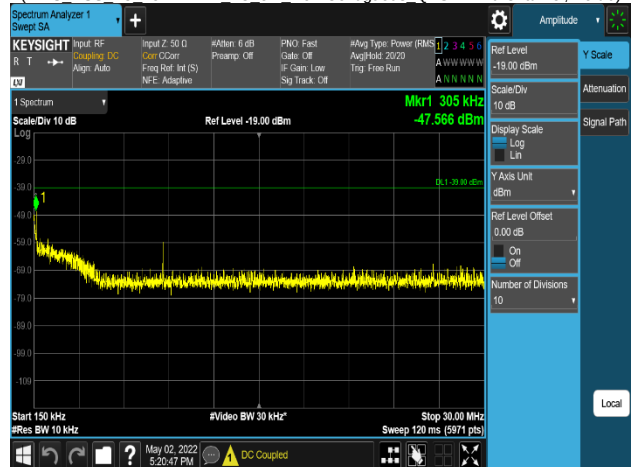
Plot 8-357. Conducted Spurious Emission Plot
18 GHz to 22 GHz

(AWS_DSS_1C_15M + LTE_1C_5M_Non-Contiguous_QPSK - Mid Channel, Port 0)



Plot 8-358. Conducted Spurious Emission Plot
9 kHz to 150 kHz

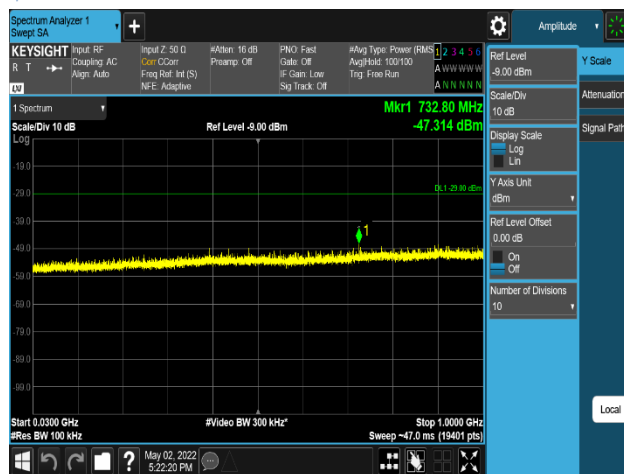
(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)



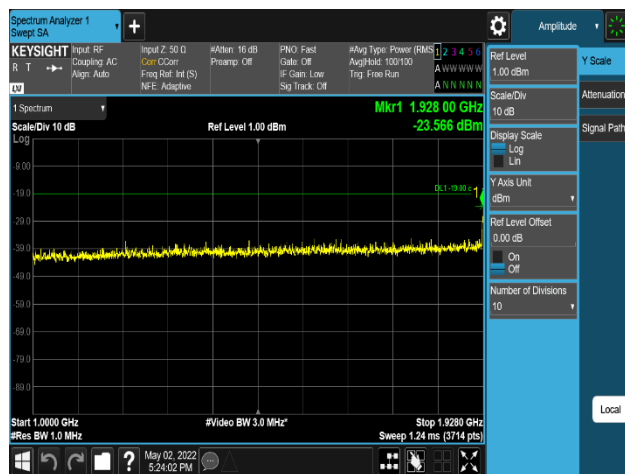
Plot 8-359. Conducted Spurious Emission Plot
150 kHz to 30 MHz

(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)

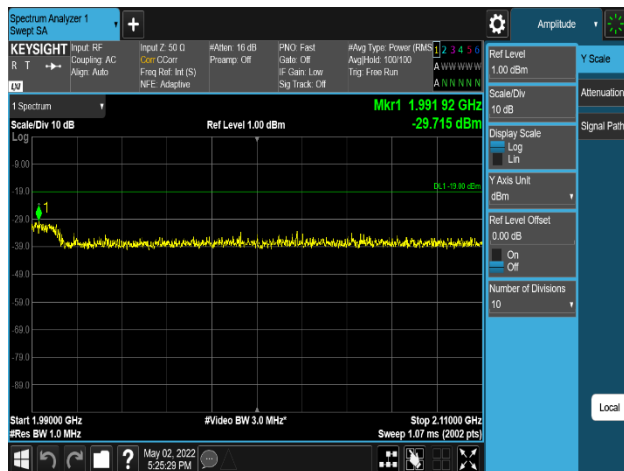
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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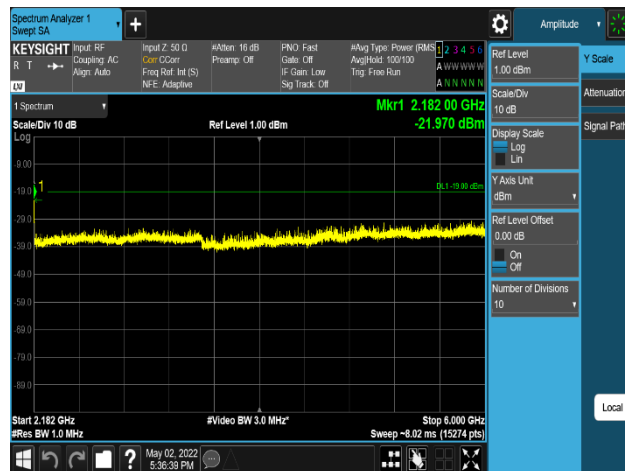
Plot 8-360. Conducted Spurious Emission Plot
30 MHz to 1 GHz
(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)



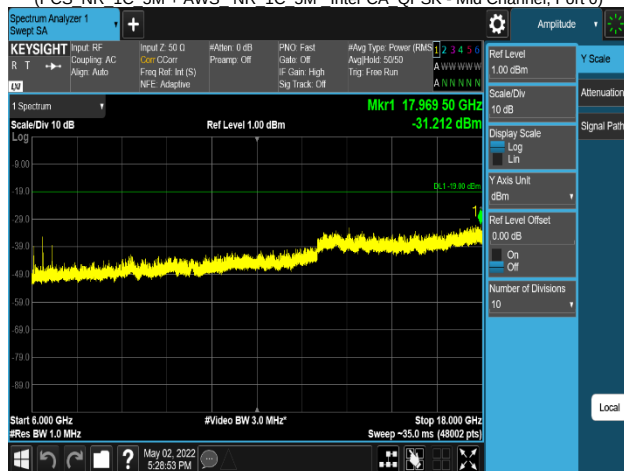
Plot 8-361. Conducted Spurious Emission Plot
1 GHz to 1.928 GHz
(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)



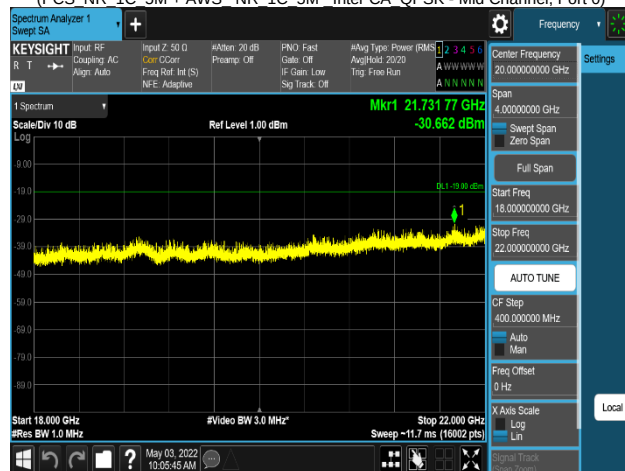
Plot 8-362. Conducted Spurious Emission Plot
1.99 GHz to 2.11 GHz
(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)



Plot 8-363. Conducted Spurious Emission Plot
2.182 GHz to 6 GHz
(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)



Plot 8-364. Conducted Spurious Emission Plot
6 GHz to 18 GHz
(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)



Plot 8-365. Conducted Spurious Emission Plot
18 GHz to 22 GHz
(PCS_NR_1C_5M + AWS_NR_1C_5M_Inter CA_QPSK - Mid Channel, Port 0)

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8.7 Radiated spurious emission

Test Overview

Radiated spurious emissions measurements are performed using the field strength method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized broadband tri-log antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas.

Test Procedure Used

ANSI C63.26 - Section 5.5.3.2

Test Setting

1. Start frequency was set to 30 MHz and stop frequency was set to at least 10 * the fundamental frequency
2. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1GHz
3. VBW $\geq 3 \times$ RBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = Peak for the pre-scan, (In cases where the level is within 2 dB of the limit, the final measurement is taken using RMS detector.)
6. Trace mode = Max Hold (In cases where the level is within 2 dB of the limit, the final measurement is taken using triggering/gating and trace averaging.)
7. The trace was allowed to stabilize.

Limit

The minimum permissible attenuation level of any spurious emission is $43 + \log_{10}(P_{\text{Watts}})$, where P is the transmitter power in Watts.

The power of any emission outside of the authorized operating frequency range cannot exceed -13 dBm.

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

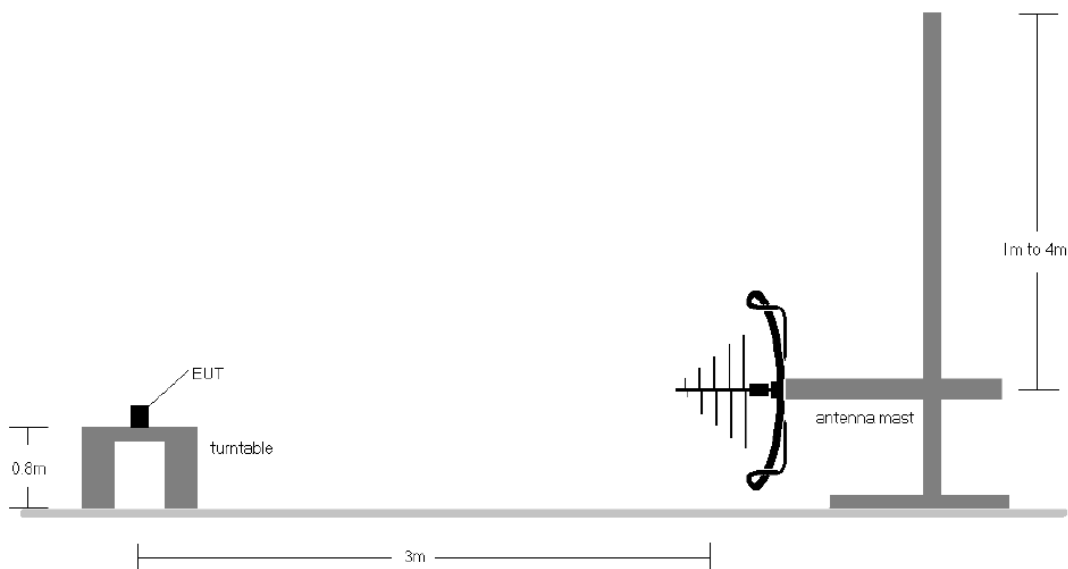


Figure 7-7. Test Instrument & Measurement Setup < 1 GHz

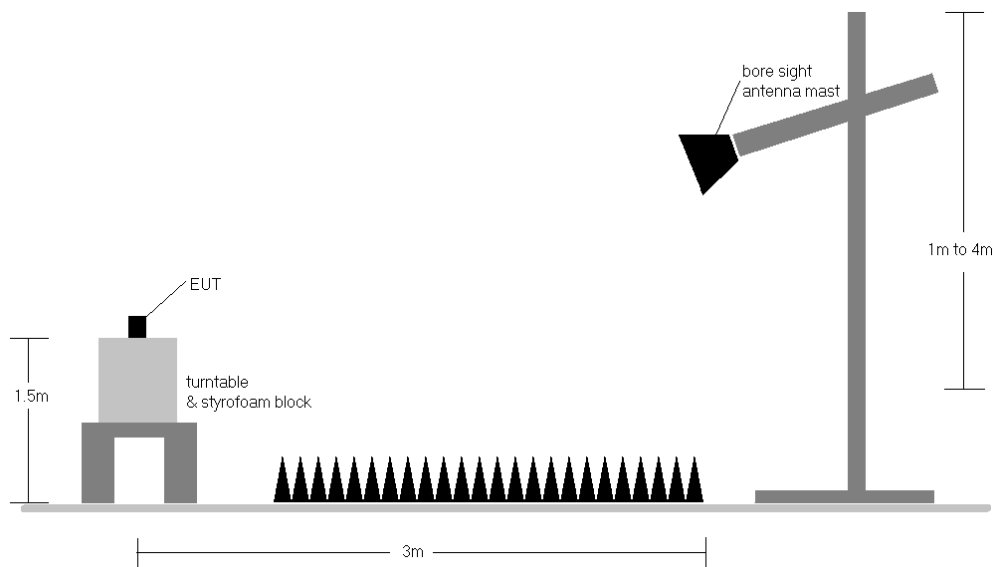


Figure 7-8. Test Instrument & Measurement Setup > 1 GHz

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Test Notes

1. The average EIRP reported below is calculated per 5.2.7 of ANSI C63.26-2015 which states:

The measured e.i.r.p is converted to E-field in V/m. Then the distance correction is applied before converted back to calculated e.i.r.p.as explained in KDB 971168 D01 D01 v03r01.

Effective Isotropic Radiated Power Sample Calculation

Field Strength [dBμV/m] = Measured Value [dBm] + AFCL [dB/m] + 107

$$= -79.24 \text{ dBm} + (35.29 \text{ dBm}) + 107 = 63.05 \text{ dBμV/m}$$

e.i.r.p. [dBm] = E[dB μV/m] + 20 log₁₀(d[m]) - 104.8

$$= 63.05 + (20 \cdot \log(3)) - 104.8$$

$$= -32.21 \text{ dBm e.i.r.p.}$$

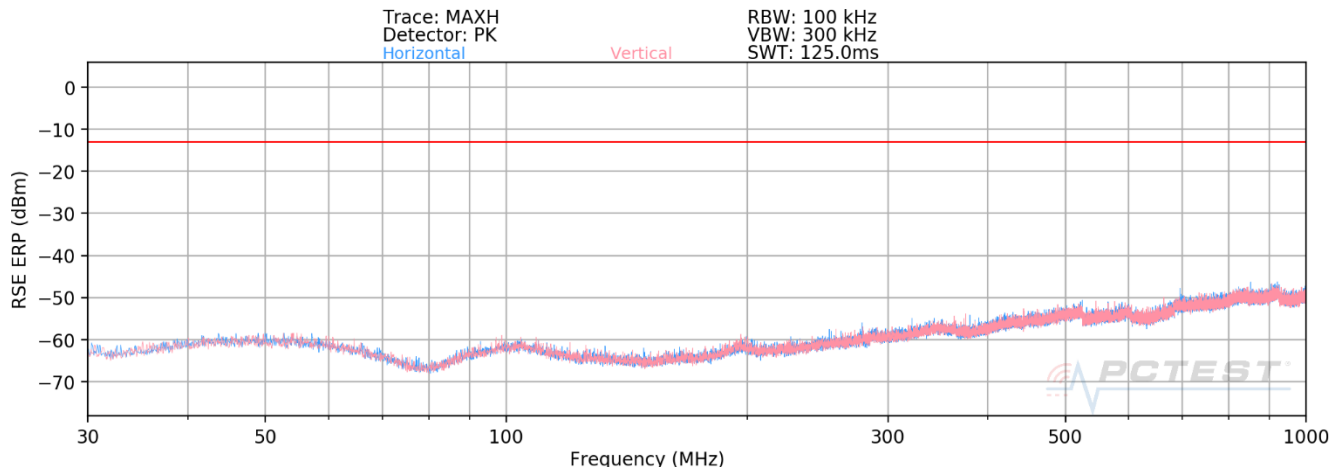
*AFCL (dB/m) contains measurement antenna factor(dB/m) and cable loss(dB) as below:

Frequency [MHz]	Antenna Factor (dB/m)	Chamber measurement cable loss + amplifier [dB]	AFCL (dB/m)
993.24	23.35	2.69	26.04
17962.15	49.19	-13.90	35.29

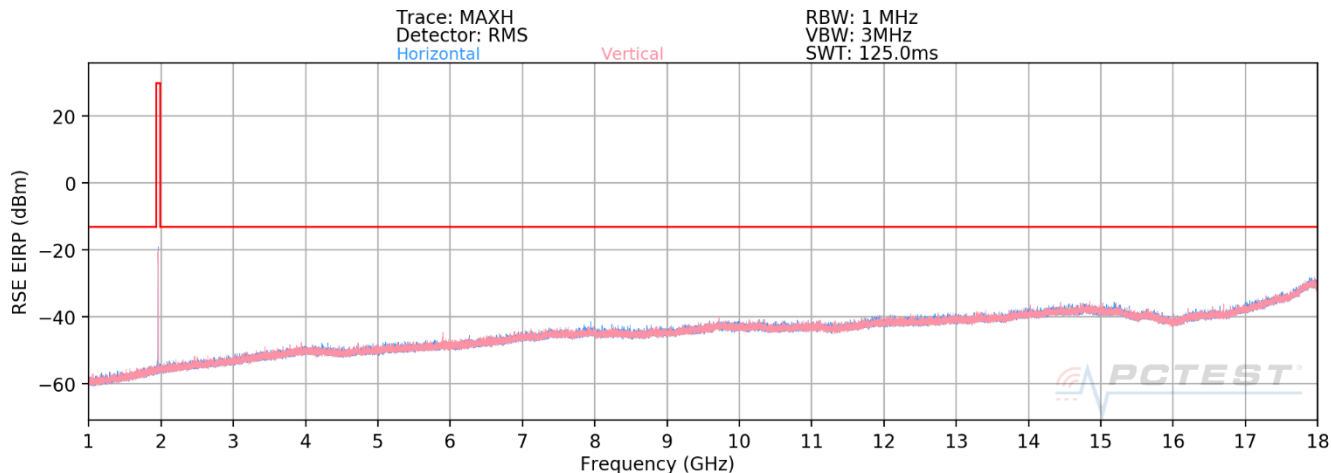
Table 8-110. Adopted AFCL value in the calculation

2. The EUT was tested in both horizontal and vertical antenna polarizations and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, channel bandwidth configurations shown in the tables below.
3. The spectrum is measured from 30 MHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
4. All emissions were measured at a 3-meter test distance.
5. Spurious emissions were measured with all EUT antennas transmitting simultaneously and all antenna ports terminated.
6. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

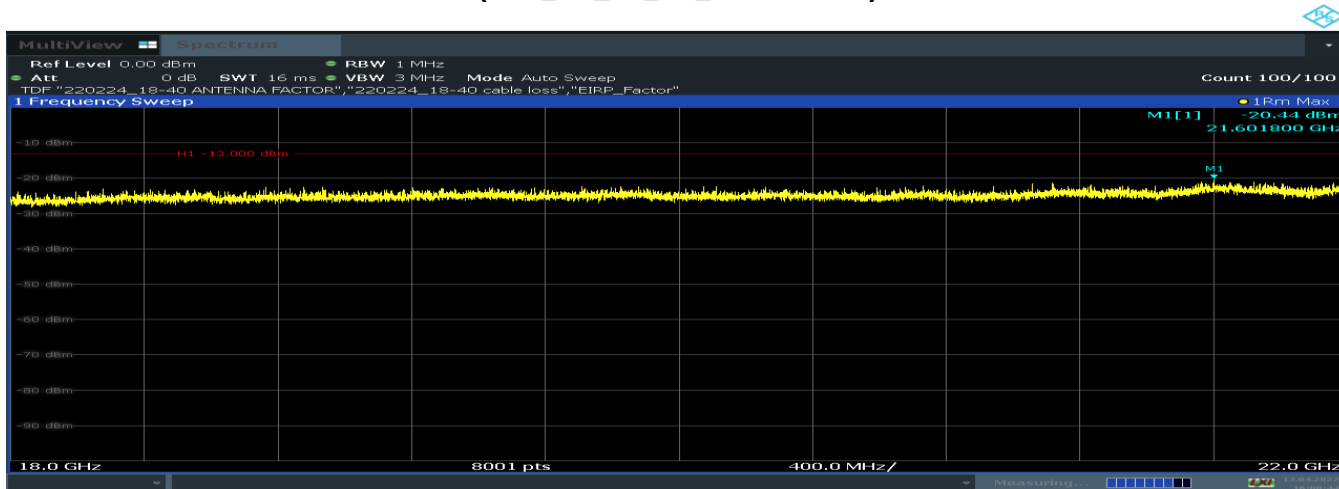
FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
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**Plot 8-366. Radiated spurious emission_30 MHz to 1000 MHz
(PCS_NR_1C_5M_Mid Channel)**

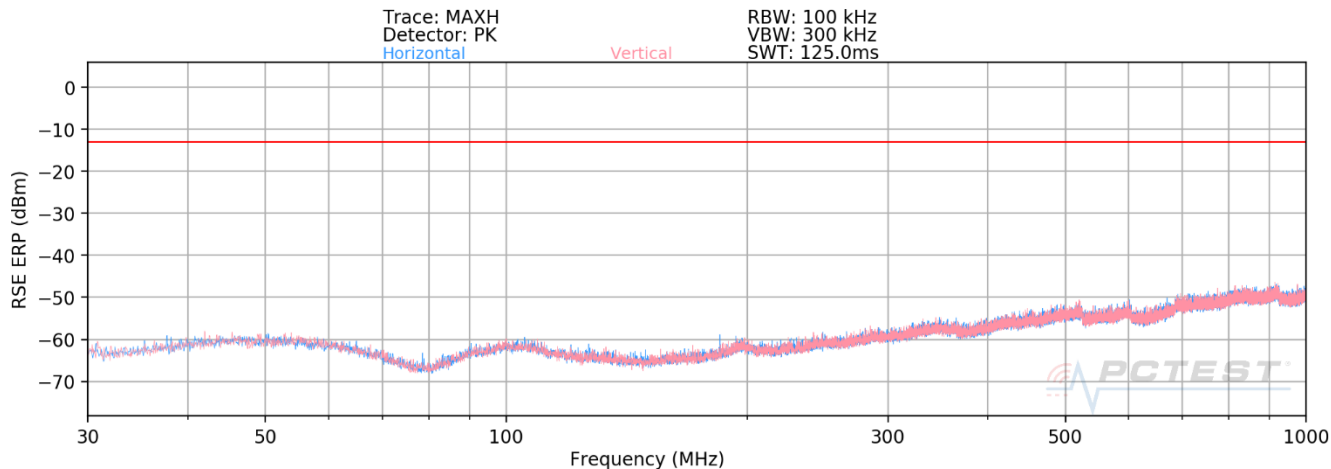


**Plot 8-367. Radiated spurious emission_1 GHz to 18 GHz
(PCS_NR_1C_5M_Mid Channel)**

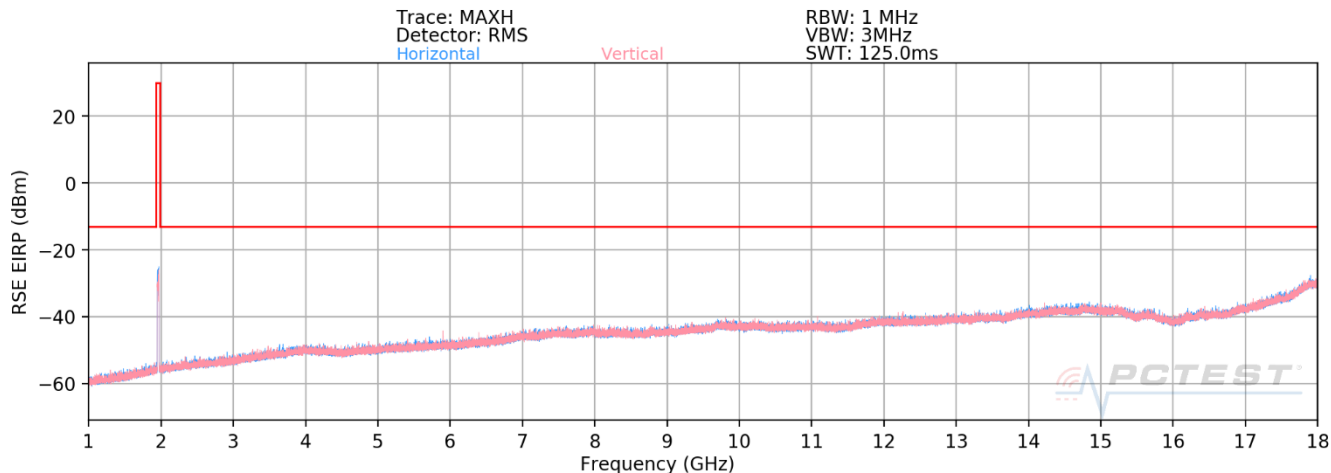


**Plot 8-368. Radiated spurious emission_18 GHz to 22 GHz
(PCS_NR_1C_5M_Mid Channel)**

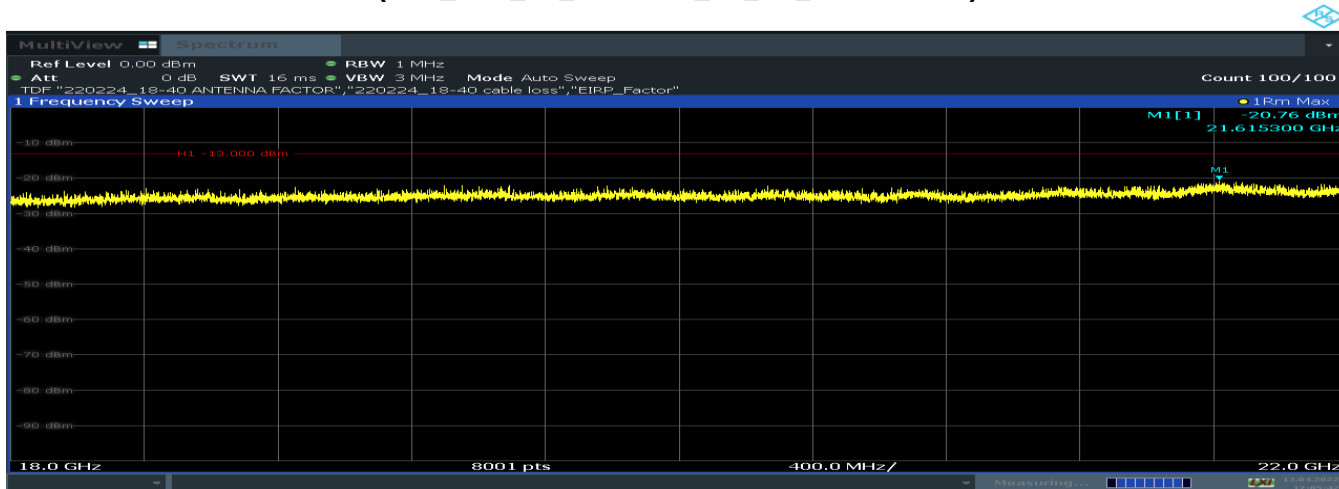
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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Plot 8-369. Radiated spurious emission 30 MHz to 1000 MHz
(PCS_DSS_1C_20M + NR_1C_5M_Mid Channel)

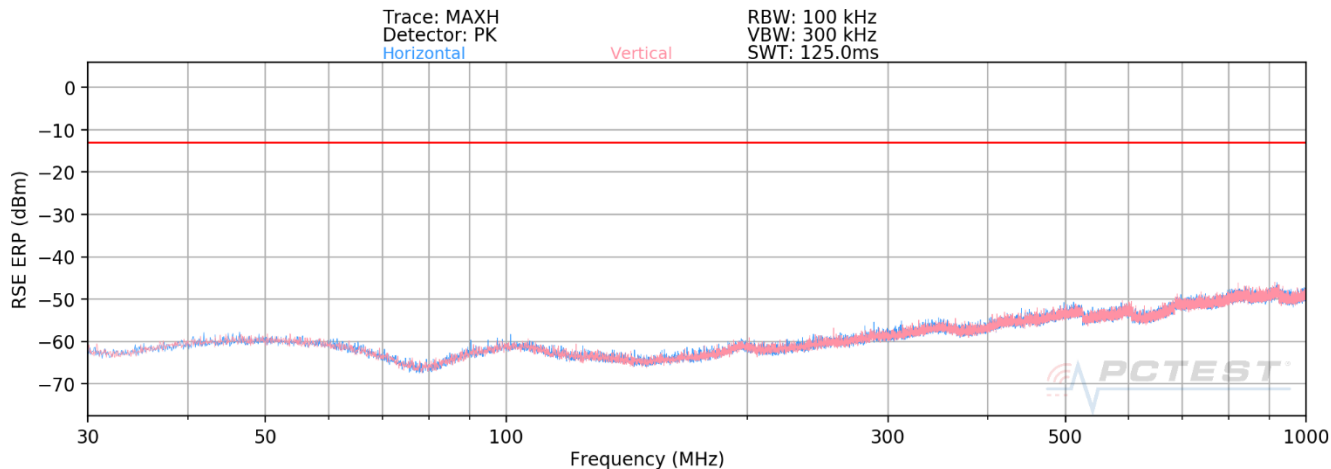


Plot 8-370. Radiated spurious emission Plot 1 GHz to 18 GHz
(PCS_DSS_1C_20M + NR_1C_5M_Mid Channel)

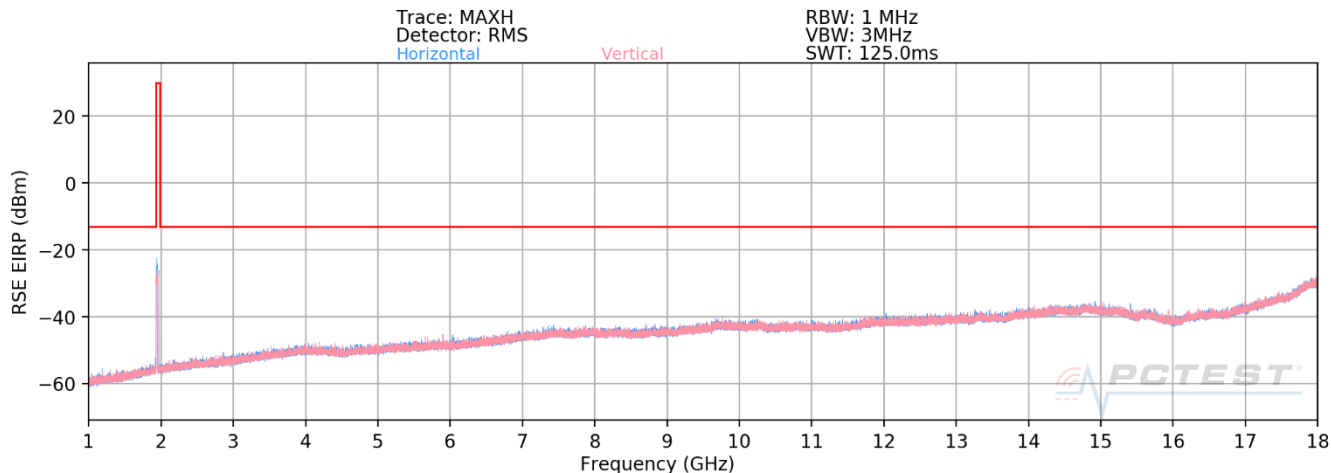


Plot 8-371. Radiated spurious emission Plot 18 GHz to 22 GHz
(PCS_DSS_1C_20M + NR_1C_5M_Mid Channel)

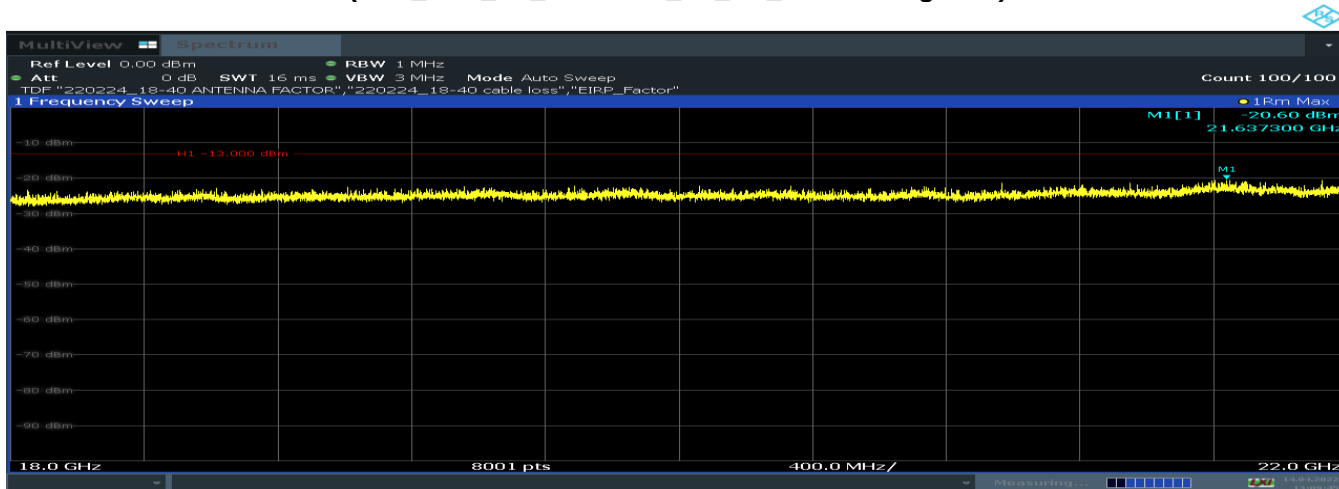
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 198 of 225



**Plot 8-372. Radiated spurious emission 30 MHz to 1000 MHz
(PCS_DSS_1C_20M + NR_1C_5M_ Non-Contiguous)**

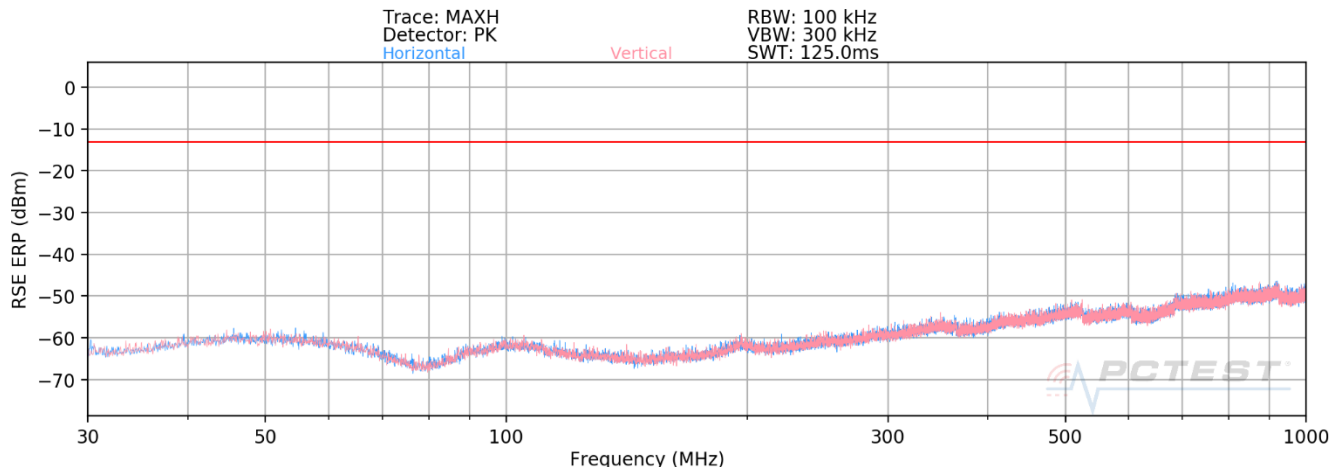


**Plot 8-373. Radiated spurious emission Plot 1 GHz to 18 GHz
(PCS_DSS_1C_20M + NR_1C_5M_ Non-Contiguous)**

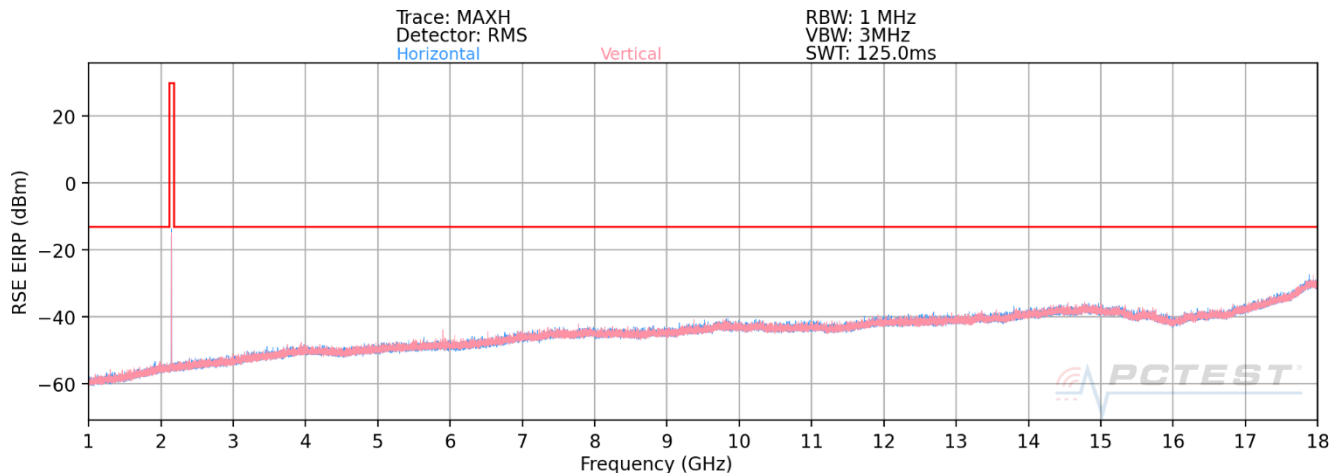


**Plot 8-374. Radiated spurious emission Plot 18 GHz to 22 GHz
(PCS_DSS_1C_20M + NR_1C_5M_ Non-Contiguous)**

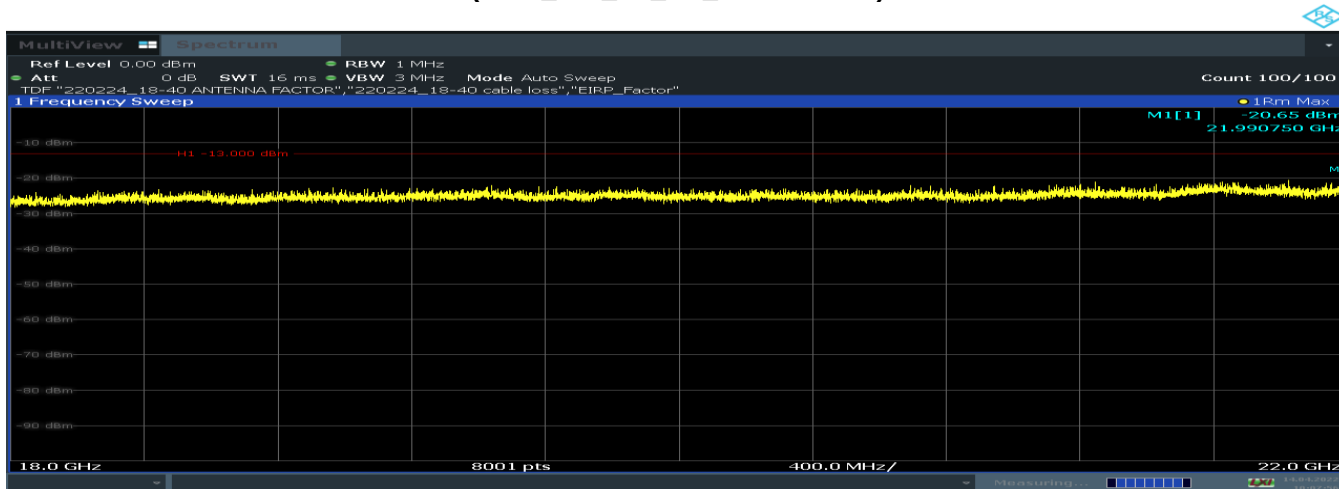
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 199 of 225



**Plot 8-375. Radiated spurious emission 30 MHz to 1000 MHz
(AWS_NR_1C_5M_Mid Channel)**

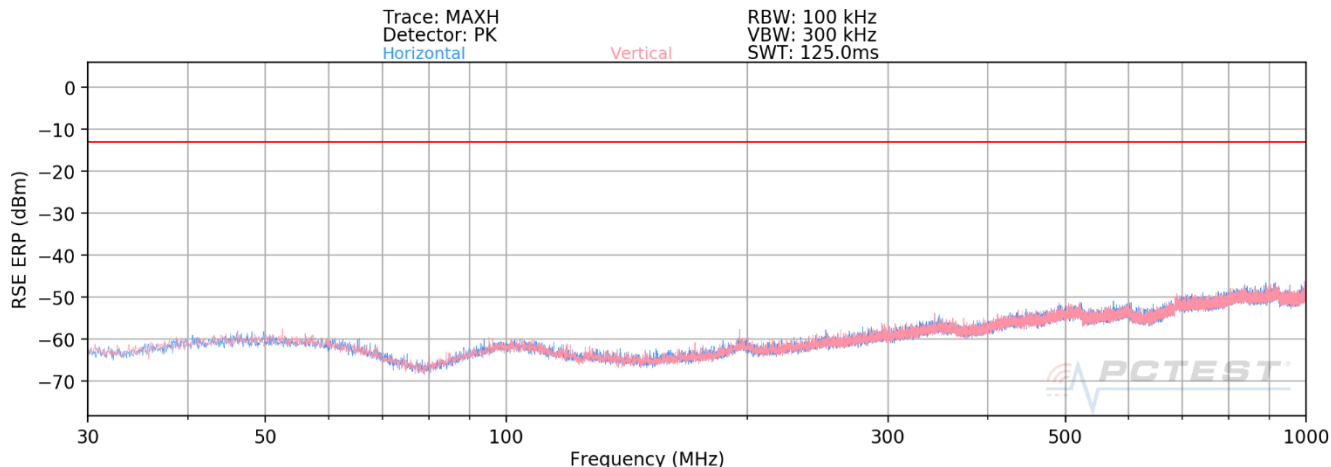


**Plot 8-376. Radiated spurious emission Plot 1 GHz to 18 GHz
(AWS_NR_1C_5M_Mid Channel)**

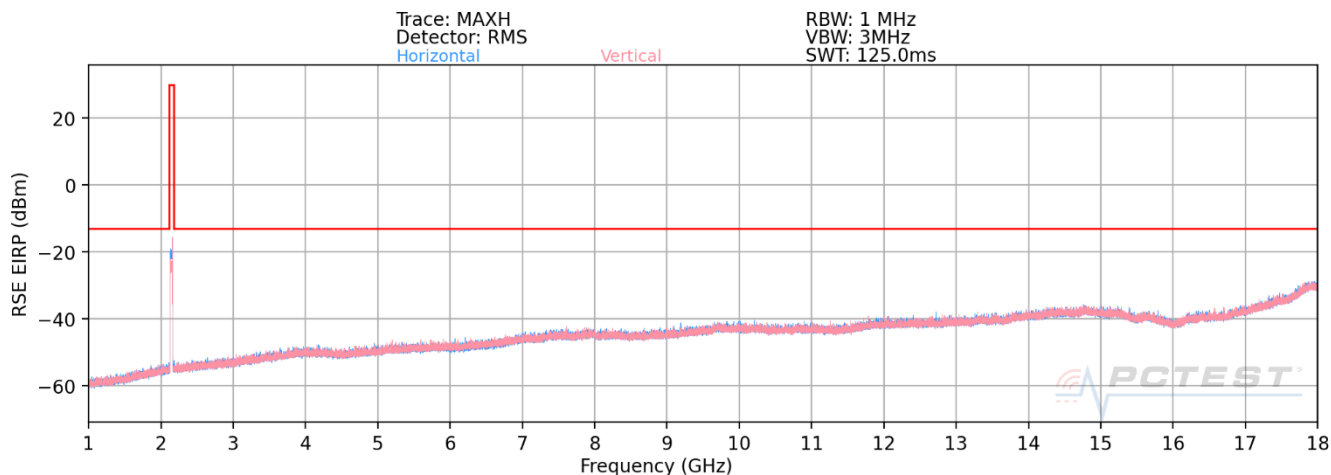


**Plot 8-377. Radiated spurious emission Plot 18 GHz to 22 GHz
(AWS_NR_1C_5M_Mid Channel)**

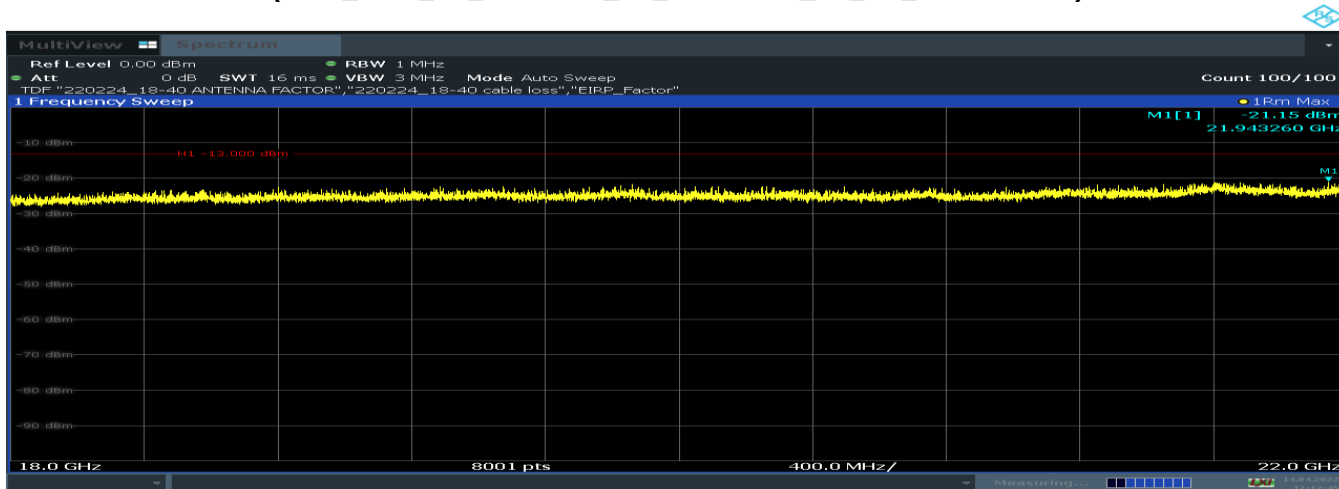
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 200 of 225



**Plot 8-378. Radiated spurious emission 30 MHz to 1000 MHz
(AWS_DSS_1C_10M + NR_1C_20M + LTE_1C_5M_Mid Channel)**

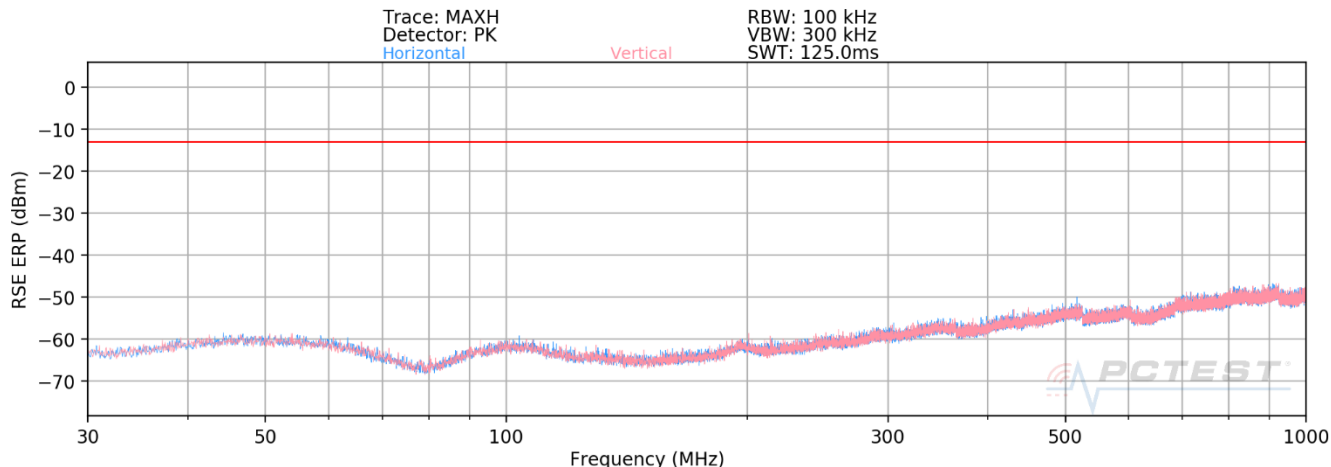


**Plot 8-379. Radiated spurious emission Plot 1 GHz to 18 GHz
(AWS_DSS_1C_10M + NR_1C_20M + LTE_1C_5M_Mid Channel)**

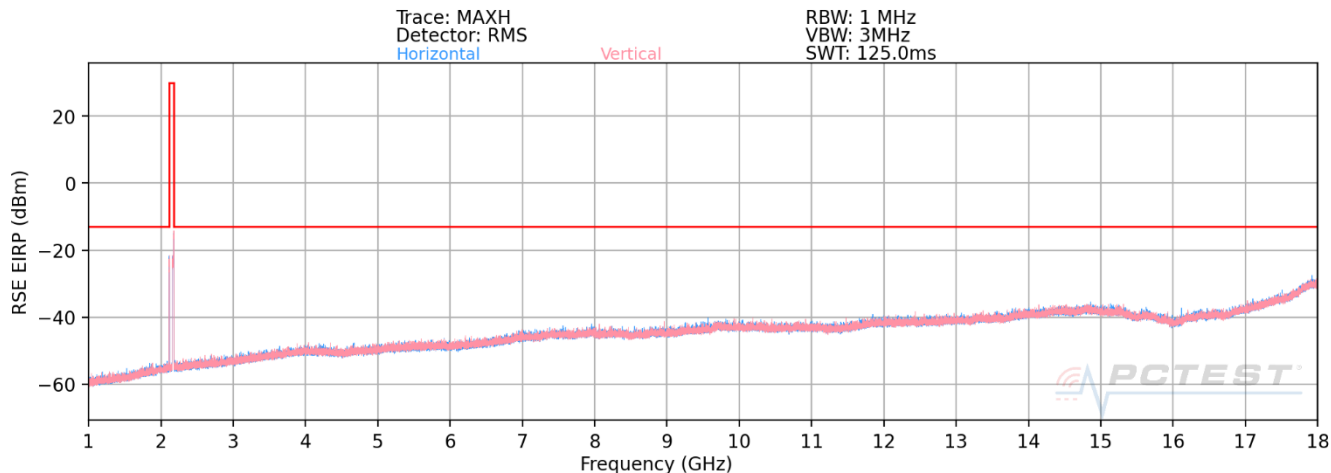


**Plot 8-380. Radiated spurious emission Plot 18 GHz to 22 GHz
(AWS_DSS_1C_10M + NR_1C_20M + LTE_1C_5M_Mid Channel)**

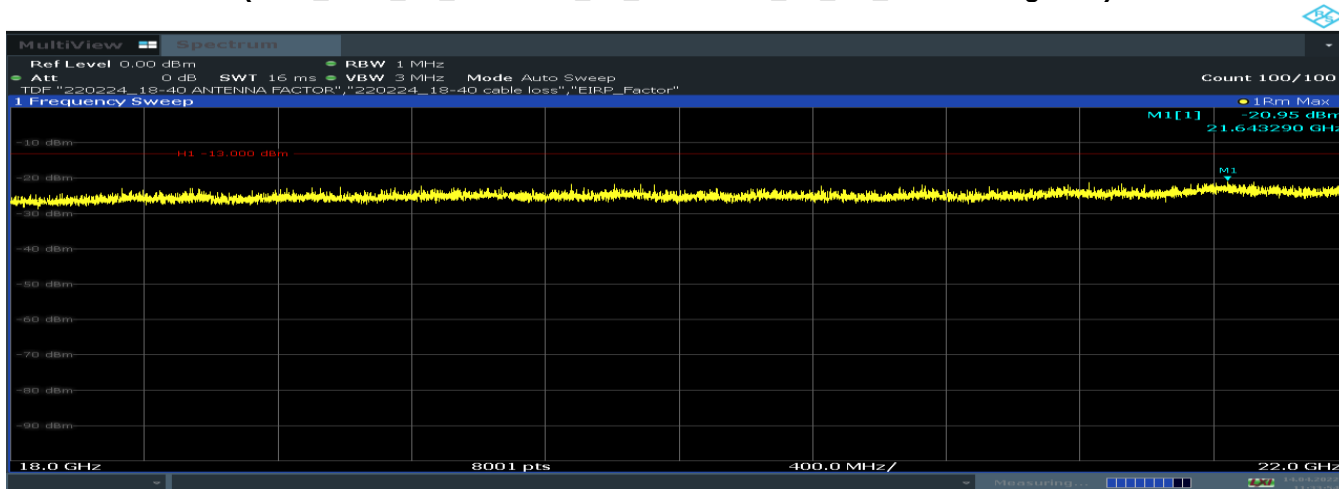
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 201 of 225



**Plot 8-381. Radiated spurious emission 30 MHz to 1000 MHz
(AWS_DSS_1C_10M + NR_1C_20M + LTE_1C_5M_Non-Contiguous)**

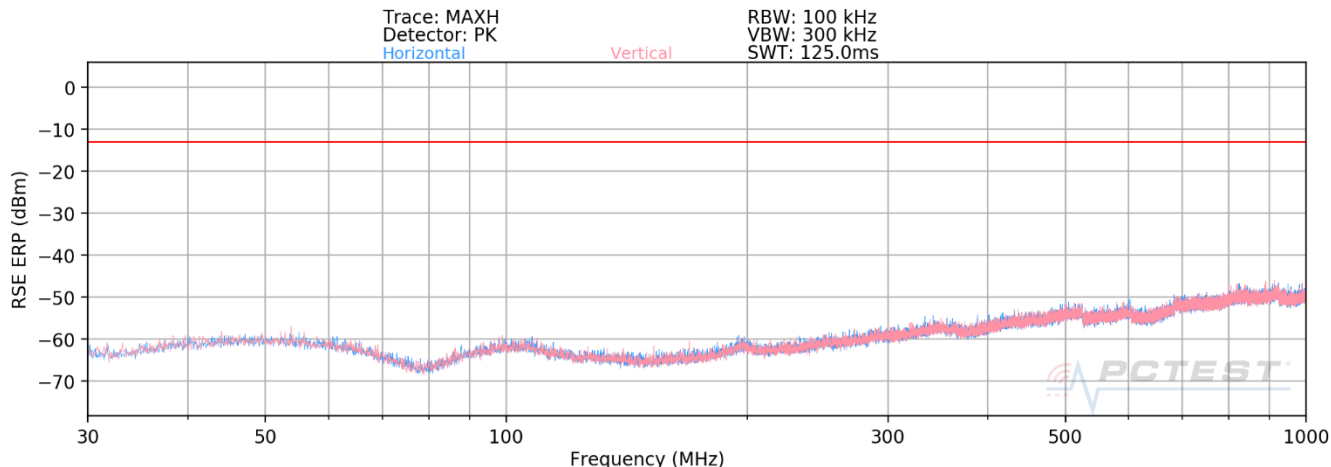


**Plot 8-382. Radiated spurious emission Plot 1 GHz to 18 GHz
(AWS_DSS_1C_10M + NR_1C_20M + LTE_1C_5M_Non-Contiguous)**

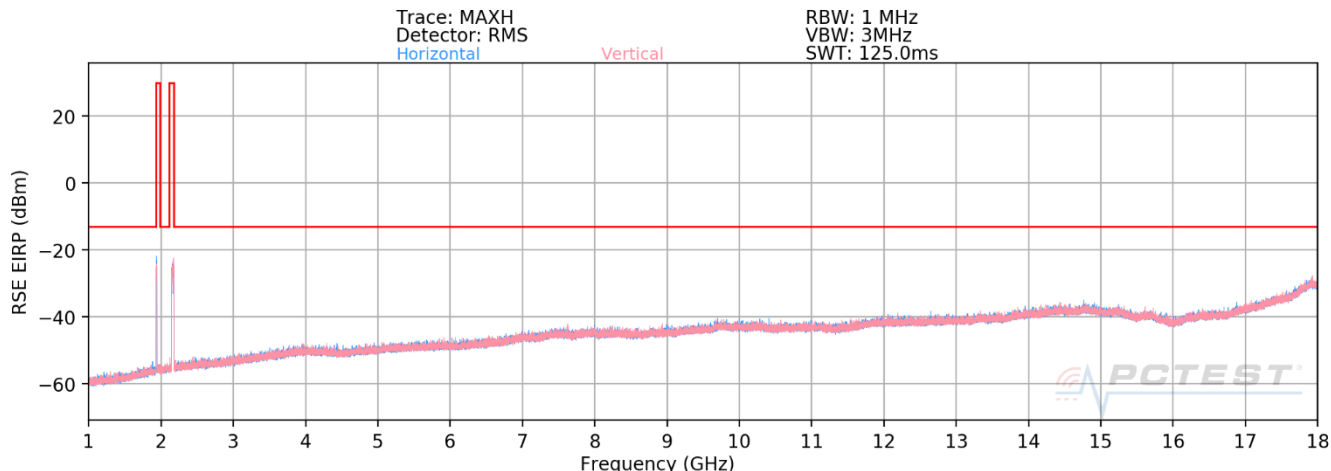


**Plot 8-383. Radiated spurious emission Plot 18 GHz to 22 GHz
(AWS_DSS_1C_10M + NR_1C_20M + LTE_1C_5M_Non-Contiguous)**

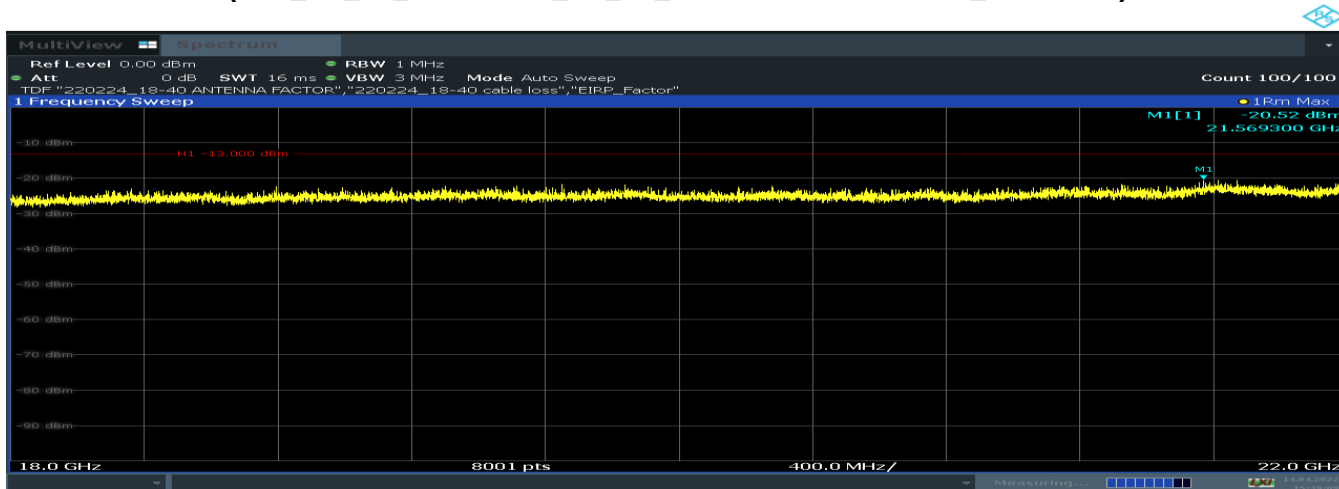
FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 202 of 225



Plot 8-384. Radiated spurious emission 30 MHz to 1000 MHz
(PCS_NR_1C_15M + ASW_NR_2C_10M +20M + LTE 1C 5M _ INTER CA)



Plot 8-385. Radiated spurious emission Plot 1 GHz to 18 GHz
(PCS_NR_1C_15M + ASW_NR_2C_10M +20M + LTE 1C 5M _ INTER CA)



Plot 8-386. Radiated spurious emission Plot 18 GHz to 22 GHz
(PCS_NR_1C_15M + ASW_NR_2C_10M +20M + LTE 1C 5M _ INTER CA)

FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 203 of 225

- 30 MHz – 40 GHz

Bandwidth (MHz):	PCS_NR_1C_15M + ASW_NR_2C_10M +20M + LTE 1C 5M _ INTER CA
Frequency (MHz):	1937.5 + 2155.0 + 2172.5 + 2142.5
Modulation Signal:	QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable azimuth [degree]	Analyzer Level [dBm/MHz]	AFCL [dBm]	Field Strength [dBμV/m]	RSE EIRP [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]
993.24	H	100	60	-87.79	26.04	45.25	-50.01	-13.00	-37.01
988.35	V	120	110	-88.14	26.00	44.86	-50.40	-13.00	-37.40
17957.35	H	150	250	-78.52	35.46	63.77	-31.49	-13.00	-18.49
17905.32	V	150	220	-79.24	35.29	63.05	-32.21	-13.00	-19.21

**Table 8-111. Radiated spurious emission Worst case Summary Data
(PCS_NR_1C_15M + ASW_NR_2C_10M +20M + LTE 1C 5M _ INTER CA)**

FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 204 of 225

9.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung RRU(RF4402d)** FCC ID: **A3LRF4202D-D1A** complies with all of the requirements of Part 24, and 27 FCC Rules.

FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 205 of 225

10.0 APPENDIX. A

10.1 Conducted Average Output Power

Test Overview

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Description

KDB 971168 D01 v03r01 – Section 5

KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements

ANSI C63.26-2015 – Section 5.2.4.4.1

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

1. Conducted power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 ~ 5% of the expected OBW
3. VBW $\geq 3 \times$ RBW
4. Span = 2 ~ 3 x OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger Settings is set to "RF Power" for signals with non-continuous operation with the sweep times set to "auto". Refer test note 3 for details.
8. Trace mode = Trace-Averaging (RMS) set to average over 100 sweeps
9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

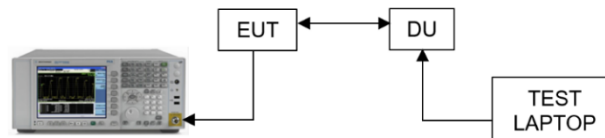


Figure 10-1. Test Instrument & Measurement Setup

Limit

N/A

FCC ID: A3LRF4402D-D1A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 206 of 225

Note

1. Conducted Average Output Power test result used to Grant of Authorization power and MPE.
2. MIMO Calculations are done considering output channel power for all ports and respective margins are calculated according to procedures in section 6.4 of ANSI C63.26 and section D of KDB 971168 D01 v03r01.
3. Consider the following factors for MIMO Power:
 Conducted power for each port is measured in dBm.
 Powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01-Section D.
 Conducted power per port (dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO conducted power in milliWatts (mW).
4. Sample Calculation:
 Let us assume the following numbers:
 - a) Total MIMO Conducted Power as 91605.08 mW
 - b)

Factors		Value	Unit
Summed MIMO Conducted Power (linear sum)		91605.08	mW
Summed MIMO Conducted Power (dBm)	$= 10 * \log (91605.08) =$	49.62	dBm/10MHz

FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)	Page 207 of 225	

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.24	43.18	43.03	43.32
	1	43.26	43.08	43.10	43.26
	2	43.26	43.29	43.34	43.29
	3	43.40	43.33	43.50	43.48
	Total Conducted Power (mW)	85331.12	83978.80	84472.96	86276.72
	Total Conducted Power(dBm)	49.31	49.24	49.27	49.36
Mid	0	43.42	43.54	43.37	43.45
	1	43.43	43.49	43.31	43.37
	2	43.50	43.54	43.45	43.55
	3	43.52	43.58	43.50	43.52
	Total Conducted Power (mW)	88885.62	90327.86	87674.08	88994.95
	Total Conducted Power(dBm)	49.49	49.56	49.43	49.49
High	0	43.50	43.15	43.38	43.45
	1	43.50	43.14	43.43	43.37
	2	43.70	43.33	43.57	43.61
	3	43.69	43.22	43.53	43.49
	Total Conducted Power (mW)	91605.08	83777.32	89099.73	89155.17
	Total Conducted Power(dBm)	49.62	49.23	49.50	49.50

Table 10-1. Conducted Average Output Power Table (PCS_NR_1C_5M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.33	43.32	43.35	43.30
	1	43.33	43.39	43.35	43.44
	2	43.33	43.25	43.38	43.34
	3	43.43	43.46	43.37	43.43
	Total Conducted Power (mW)	86612.72	86622.46	86758.48	87066.38
	Total Conducted Power(dBm)	49.38	49.38	49.38	49.40
Mid	0	43.55	43.56	43.56	43.58
	1	43.52	43.55	43.57	43.57
	2	43.64	43.53	43.58	43.54
	3	43.53	43.55	43.50	43.47
	Total Conducted Power (mW)	90800.03	90533.93	90640.25	90381.85
	Total Conducted Power(dBm)	49.58	49.57	49.57	49.56
High	0	43.51	43.63	43.63	43.54
	1	43.41	43.63	43.49	43.47
	2	43.67	43.66	43.63	43.65
	3	43.70	43.64	43.69	43.71
	Total Conducted Power (mW)	91090.07	92482.96	91859.04	91497.73
	Total Conducted Power(dBm)	49.59	49.66	49.63	49.61

Table 10-2. Conducted Average Output Power Table (PCS_NR_1C_10M)

FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 208 of 225

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.37	43.18	43.34	43.41
	1	43.19	43.20	43.28	43.36
	2	43.35	43.32	43.32	43.31
	3	43.46	43.43	43.33	43.36
	Total Conducted Power (mW)	86381.07	85197.50	85864.96	86711.04
	Total Conducted Power(dBm)	49.36	49.30	49.34	49.38
Mid	0	43.46	43.49	43.47	43.46
	1	43.35	43.39	43.20	43.37
	2	43.52	43.45	43.47	43.52
	3	43.40	43.37	43.34	43.44
	Total Conducted Power (mW)	88177.31	88020.98	86936.60	88479.57
	Total Conducted Power(dBm)	49.45	49.45	49.39	49.47
High	0	43.46	43.39	43.43	43.51
	1	43.19	43.38	43.43	43.49
	2	43.64	43.63	43.70	43.67
	3	43.47	43.55	43.66	42.75
	Total Conducted Power (mW)	88380.62	89318.31	90728.19	86891.94
	Total Conducted Power(dBm)	49.46	49.51	49.58	49.39

Table 10-3. Conducted Average Output Power Table (PCS_NR_2C_5M+5M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.27	43.25	43.23	43.25
	1	43.26	43.21	42.98	43.24
	2	43.24	43.19	43.11	43.23
	3	43.31	43.30	43.25	43.33
	Total Conducted Power (mW)	84931.24	84300.54	82498.07	84786.77
	Total Conducted Power(dBm)	49.29	49.26	49.16	49.28
Mid	0	43.35	43.30	43.36	43.36
	1	43.24	43.10	43.22	43.27
	2	43.45	43.45	43.35	43.45
	3	43.38	43.31	43.27	43.29
	Total Conducted Power (mW)	86621.51	85356.85	85526.07	86370.88
	Total Conducted Power(dBm)	49.38	49.31	49.32	49.36
High	0	43.36	43.34	43.34	43.32
	1	43.30	43.25	43.26	43.29
	2	43.53	43.50	43.48	43.53
	3	43.43	43.42	43.44	43.45
	Total Conducted Power (mW)	87628.32	87078.14	87125.45	87482.09
	Total Conducted Power(dBm)	49.43	49.40	49.40	49.42

Table 10-4. Conducted Average Output Power Table (PCS_NR_1C_5M + LTE_1C_5M)

FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 209 of 225

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.16	43.10	43.13	43.22
	1	43.25	43.25	43.12	43.22
	2	43.18	42.96	43.05	43.02
	3	43.24	43.08	43.17	43.18
	Total Conducted Power (mW)	83719.55	81645.54	82003.33	82820.48
	Total Conducted Power(dBm)	49.23	49.12	49.14	49.18
Mid	0	43.36	43.34	43.43	43.30
	1	43.19	43.22	43.22	43.22
	2	43.37	43.31	43.35	43.26
	3	43.29	43.25	43.38	43.21
	Total Conducted Power (mW)	85579.41	85130.64	86422.95	84493.76
	Total Conducted Power(dBm)	49.32	49.30	49.37	49.27
High	0	43.33	43.35	43.00	43.28
	1	43.21	43.31	42.99	43.22
	2	43.41	43.51	43.13	43.46
	3	43.30	43.44	43.10	43.39
	Total Conducted Power (mW)	85776.61	87574.96	80835.64	86280.05
	Total Conducted Power(dBm)	49.33	49.42	49.08	49.36

Table 10-5. Conducted Average Output Power Table (PCS_NR_1C_15M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.03	43.03	42.99	42.99
	1	42.91	42.77	43.11	42.75
	2	42.98	42.91	42.94	42.85
	3	43.26	42.98	43.15	42.95
	Total Conducted Power (mW)	80678.88	78418.71	80703.84	77742.70
	Total Conducted Power(dBm)	49.07	48.94	49.07	48.91
Mid	0	43.26	43.19	43.10	43.12
	1	43.24	43.08	42.98	43.09
	2	43.21	43.08	43.16	43.10
	3	43.09	43.03	43.07	43.01
	Total Conducted Power (mW)	83581.44	81582.98	81256.57	81298.04
	Total Conducted Power(dBm)	49.22	49.12	49.10	49.10
High	0	43.17	43.16	43.11	43.03
	1	43.13	43.08	43.18	42.98
	2	43.23	43.22	43.38	43.19
	3	43.16	43.21	43.20	43.10
	Total Conducted Power (mW)	83047.24	82955.51	83931.47	81214.17
	Total Conducted Power(dBm)	49.19	49.19	49.24	49.10

Table 10-6. Conducted Average Output Power Table (PCS_DSS_1C_15M)

FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 210 of 225

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.43	43.31	43.20	43.18
	1	43.29	43.13	43.18	43.20
	2	43.24	43.10	43.15	43.15
	3	43.41	43.28	43.20	43.21
	Total Conducted Power (mW)	86374.04	83686.58	83236.69	83284.85
	Total Conducted Power(dBm)	49.36	49.23	49.20	49.21
Mid	0	43.43	43.29	43.26	43.44
	1	43.15	43.16	43.25	43.15
	2	43.36	43.41	43.37	43.43
	3	43.52	43.34	43.27	43.38
	Total Conducted Power (mW)	86850.65	85537.36	85277.96	86540.21
	Total Conducted Power(dBm)	49.39	49.32	49.31	49.37
High	0	43.35	43.30	43.34	43.26
	1	43.28	43.22	43.14	43.19
	2	43.52	43.45	43.47	43.50
	3	43.43	43.43	43.38	43.45
	Total Conducted Power (mW)	87428.39	86529.23	86193.94	86546.68
	Total Conducted Power(dBm)	49.42	49.37	49.35	49.37

Table 10-7. Conducted Average Output Power Table (PCS_DSS_1C_10M + NR_1C_5M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	43.07	43.02	43.01	43.04
	1	43.21	43.18	43.12	43.25
	2	42.93	42.90	42.95	42.87
	3	43.00	43.00	43.10	43.03
	Total Conducted Power (mW)	80804.18	80292.76	80651.85	80727.28
	Total Conducted Power(dBm)	49.07	49.05	49.07	49.07
Mid	0	43.20	43.25	43.22	43.23
	1	43.14	43.09	43.01	43.09
	2	43.20	43.13	43.12	43.22
	3	43.02	43.03	43.11	43.07
	Total Conducted Power (mW)	82436.94	82155.15	81964.09	82674.43
	Total Conducted Power(dBm)	49.16	49.15	49.14	49.17
High	0	43.15	43.00	43.15	43.07
	1	43.04	43.01	43.06	42.97
	2	43.29	43.31	43.28	43.25
	3	43.18	43.30	43.19	43.19
	Total Conducted Power (mW)	82918.46	82759.77	83010.29	82071.90
	Total Conducted Power(dBm)	49.19	49.18	49.19	49.14

Table 10-8. Conducted Average Output Power Table (PCS_NR_1C_20M)

FCC ID: A3LRF4402D-D1A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Technical Manager
Test Report S/N: 8K22032101-00.A3L	Test Dates: 03/25/2022 - 05/03/2022	EUT Type: RRU(RF4402d)		Page 211 of 225