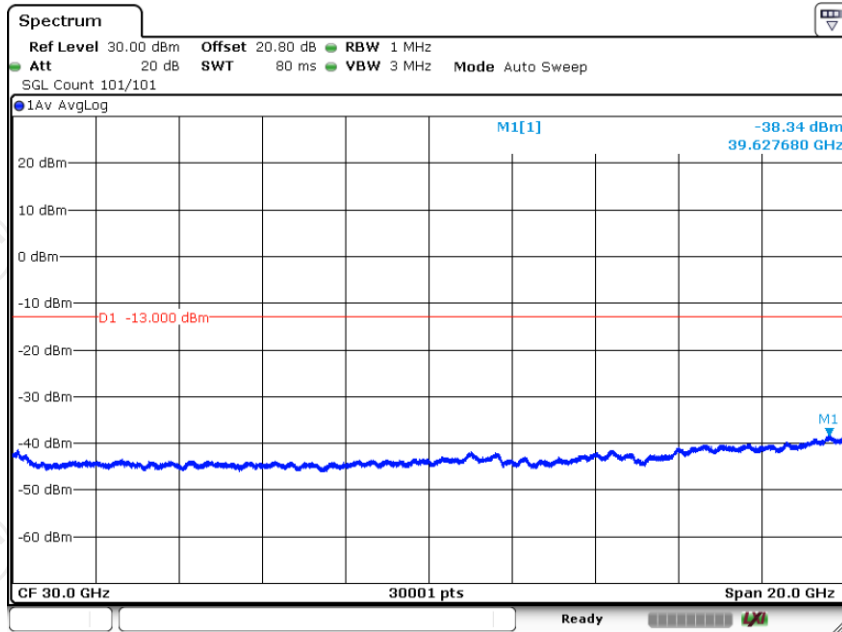
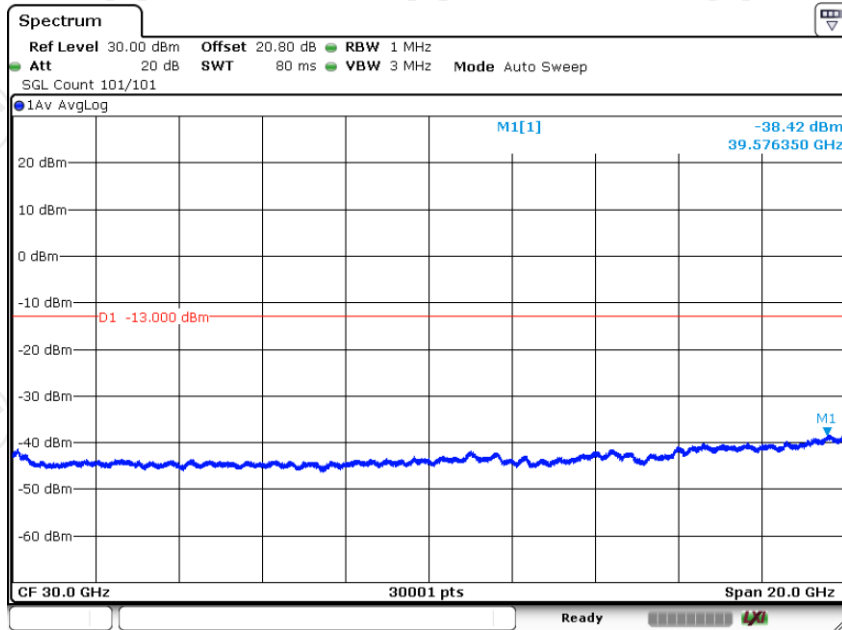


5G NR 100 MHz (20GHz-40GHz) Pre AGC



Date: 3.APR.2024 18:25:05

5G NR 100 MHz (20GHz-40GHz) AGC + 3 dB

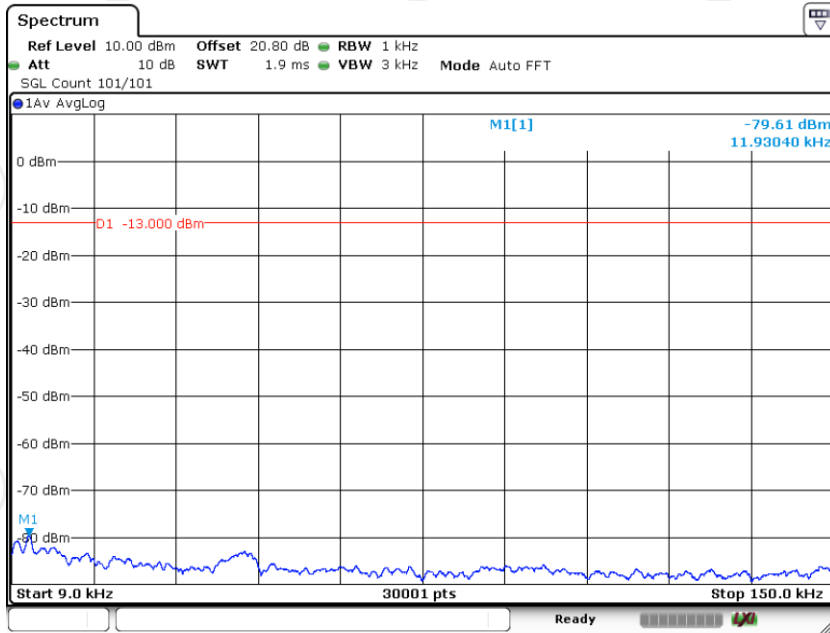


Date: 3.APR.2024 18:26:01

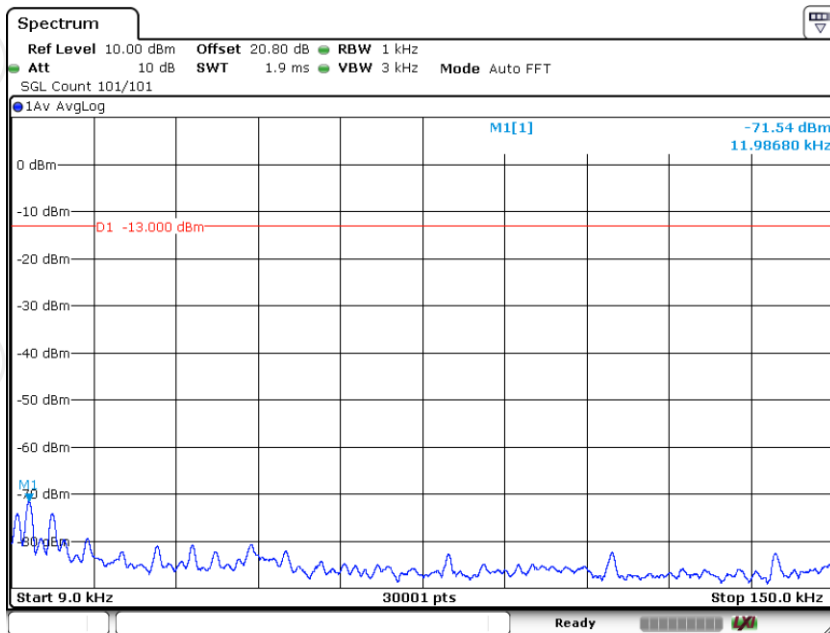
Path2 Sub-Band Mode Uplink

Lowest

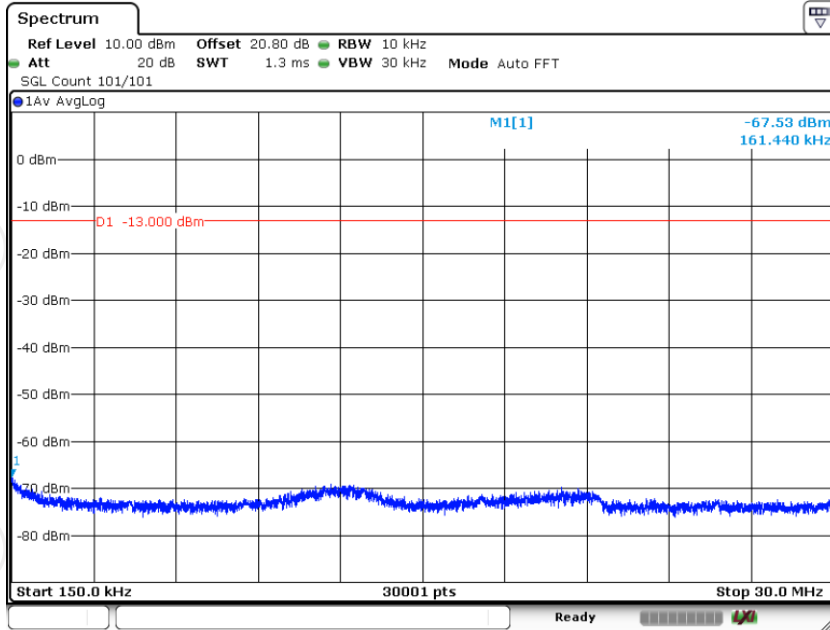
5G NR 100 MHz (9kHz-150kHz) Pre AGC



5G NR 100 MHz (9kHz-150kHz) Pre AGC + 3 dB

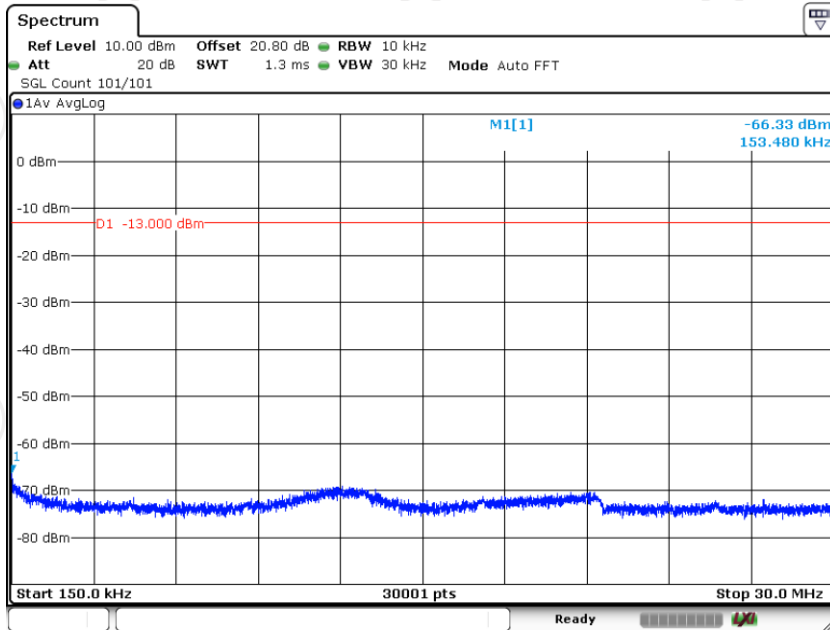


5G NR 100 MHz (150kHz-30MHz) Pre AGC



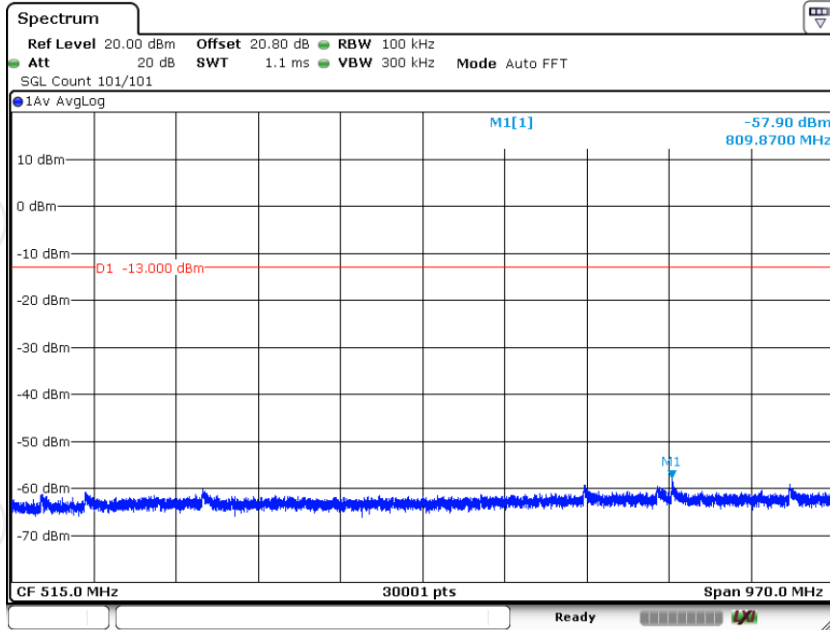
Date: 4.APR.2024 22:30:10

5G NR 100 MHz (150kHz-30MHz) Pre AGC + 3 dB



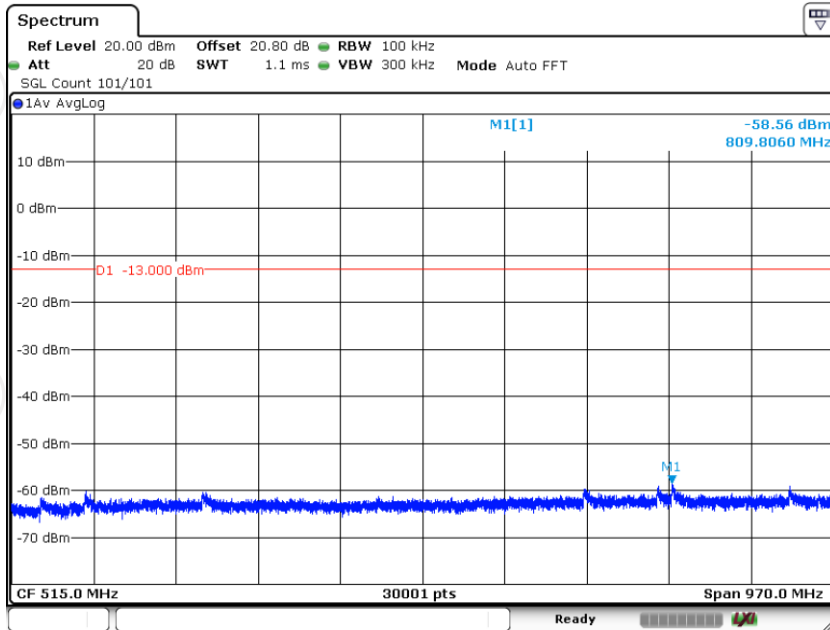
Date: 4.APR.2024 22:31:13

5G NR 100 MHz (30MHz-1GHz) Pre AGC



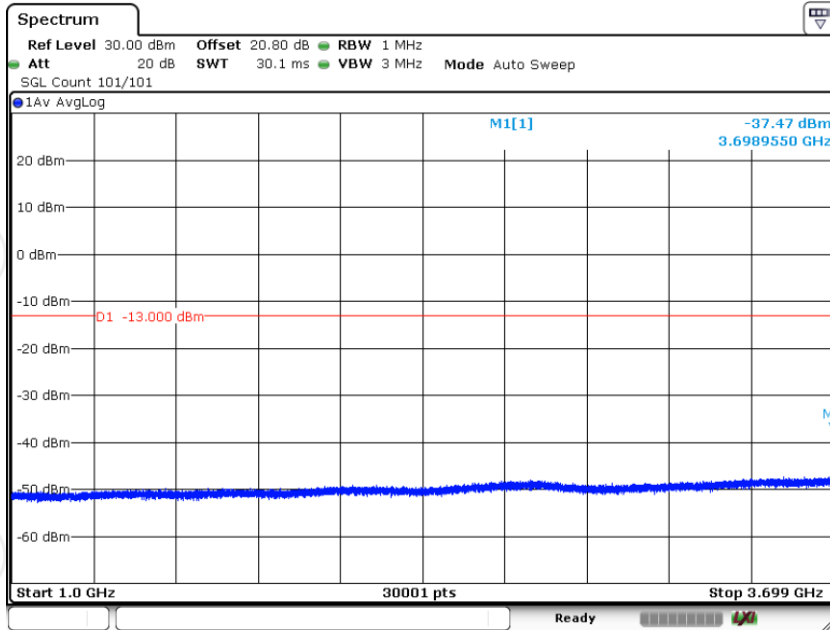
Date: 4.APR.2024 22:38:00

5G NR 100 MHz (30MHz-1GHz) AGC + 3 dB



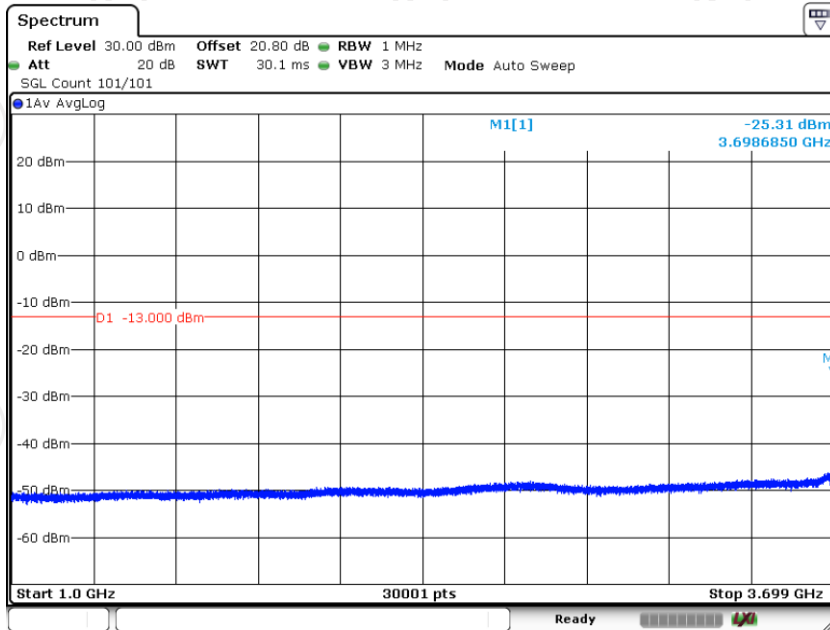
Date: 4.APR.2024 22:38:39

5G NR 100 MHz (1GHz-3699MHz) Pre AGC



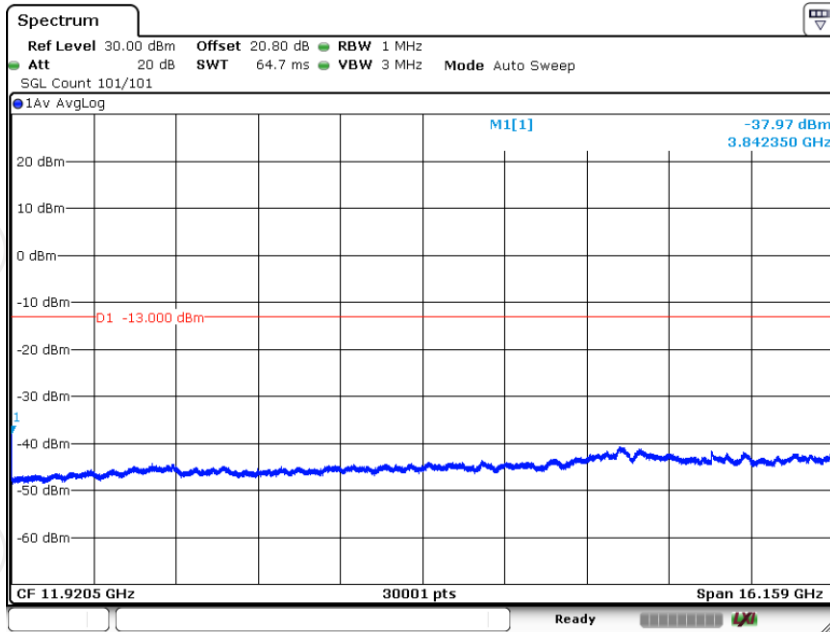
Date: 4.APR.2024 22:40:04

5G NR 100 MHz (1GHz-3699MHz) AGC + 3 dB



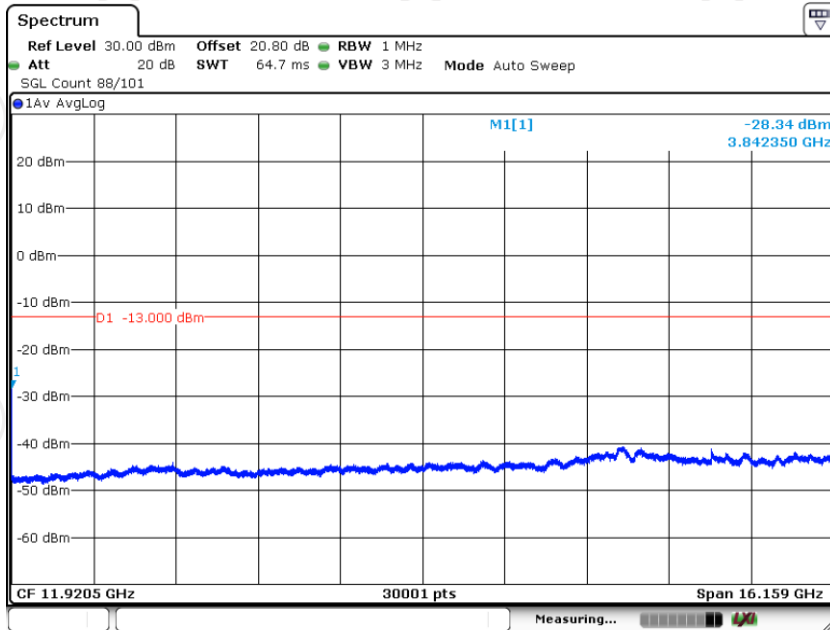
Date: 4.APR.2024 22:40:31

5G NR 100 MHz (3841MHz-20GHz) Pre AGC



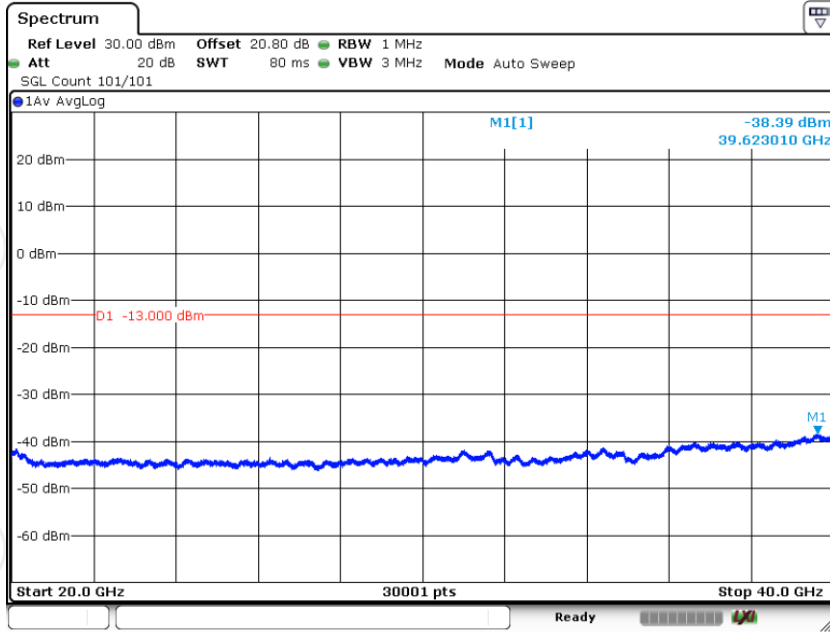
Date: 4.APR.2024 22:47:15

5G NR 100 MHz (3841MHz-20GHz) AGC + 3 dB



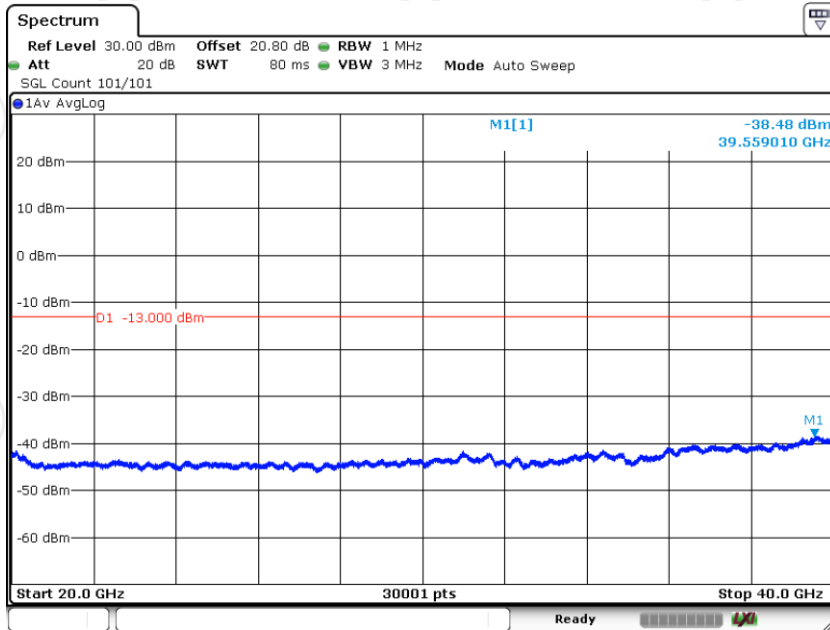
Date: 4.APR.2024 22:47:56

5G NR 100 MHz (20GHz-40GHz) Pre AGC



Date: 4.APR.2024 22:49:24

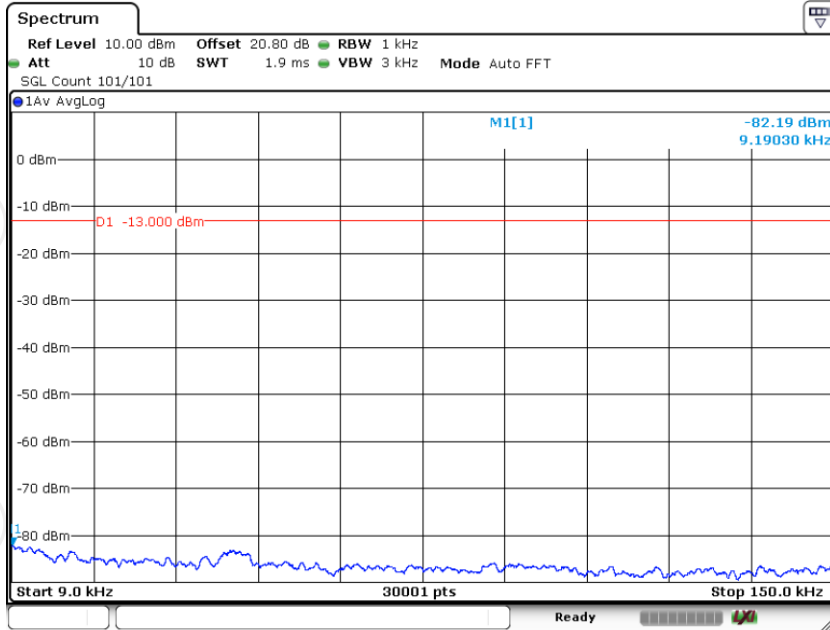
5G NR 100 MHz (20GHz-40GHz) AGC + 3 dB



Date: 4.APR.2024 22:50:31

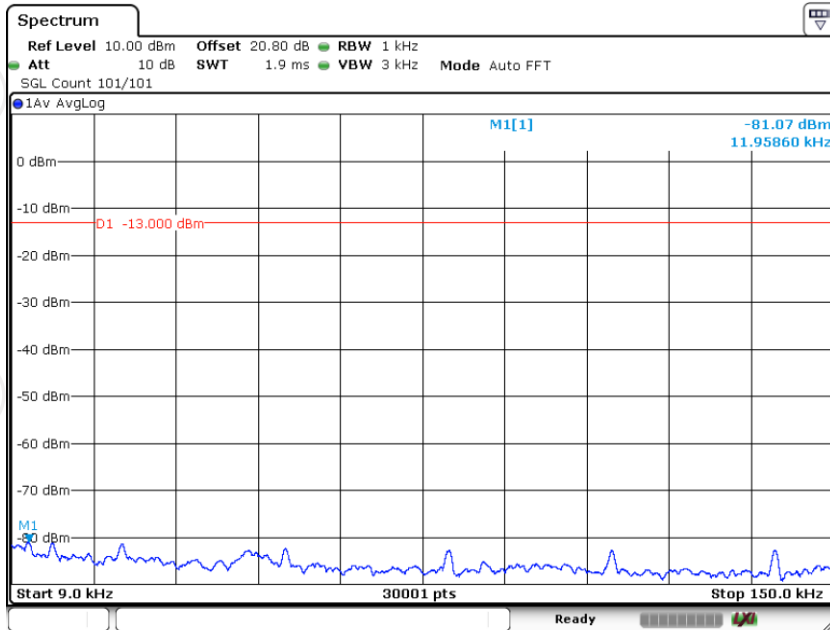
Middle

5G NR 100 MHz (9kHz-150kHz) Pre AGC



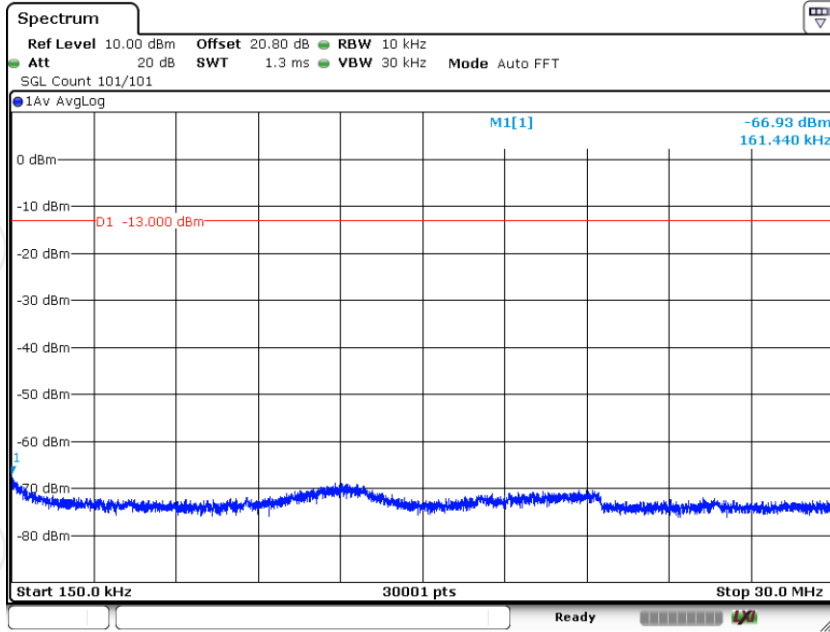
Date: 4.APR.2024 22:28:13

5G NR 100 MHz (9kHz-150kHz) Pre AGC + 3 dB



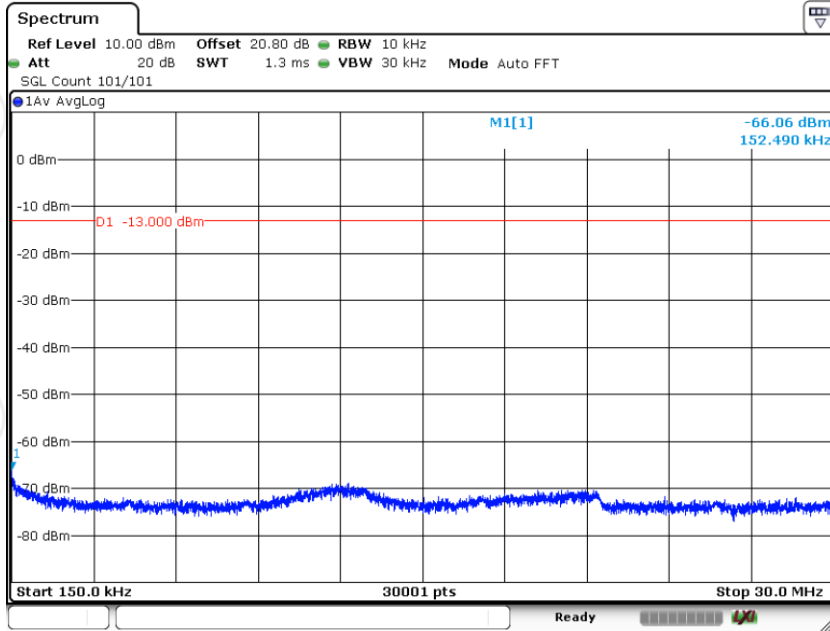
Date: 4.APR.2024 22:28:33

5G NR 100 MHz (150kHz-30MHz) Pre AGC



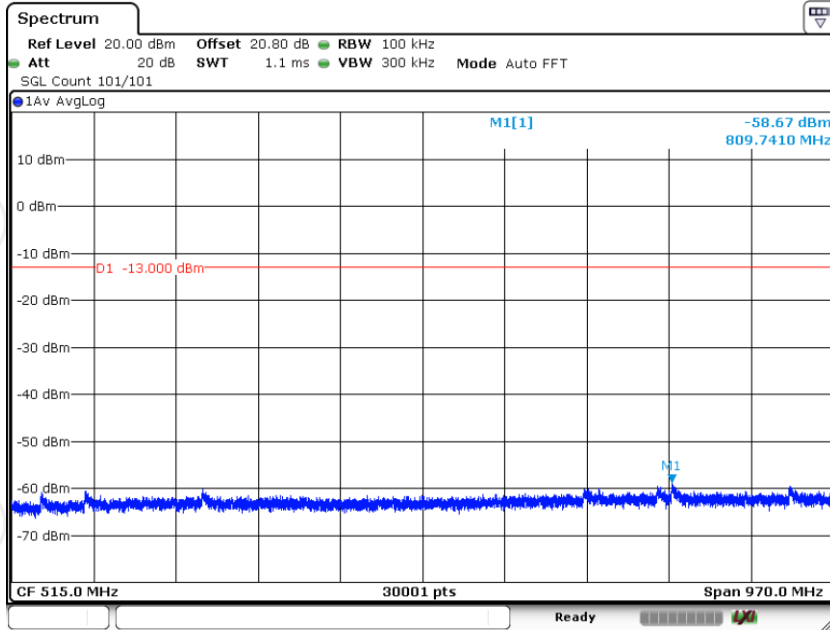
Date: 4.APR.2024 22:31:34

5G NR 100 MHz (150kHz-30MHz) Pre AGC + 3 dB

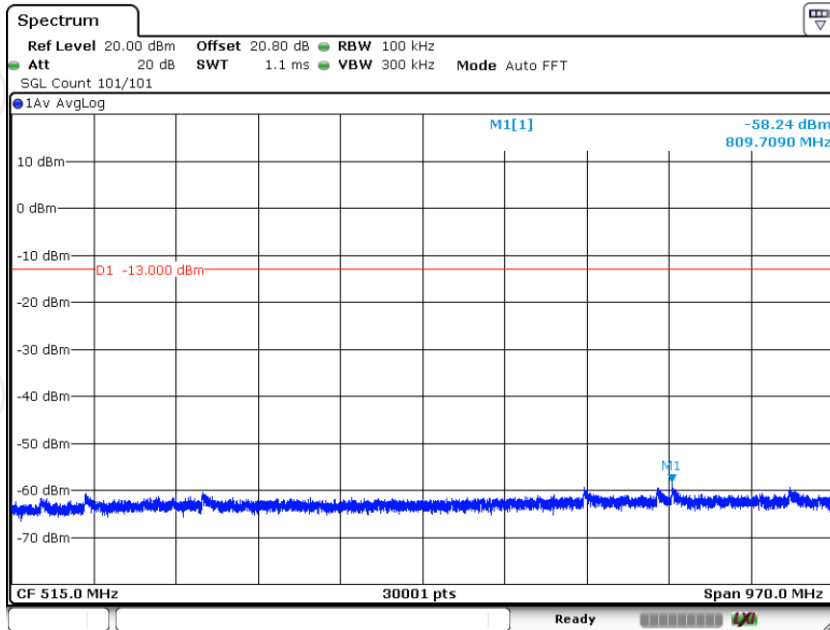


Date: 4.APR.2024 22:31:55

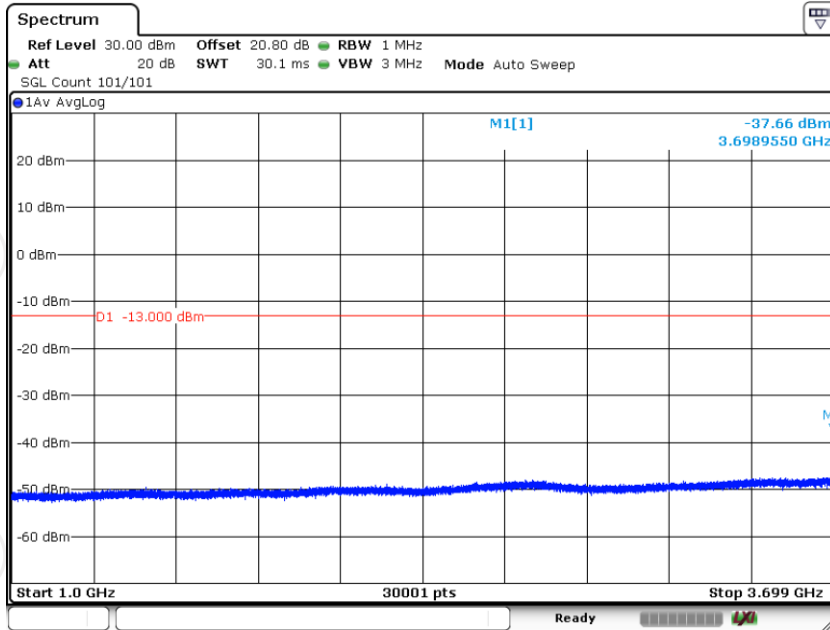
5G NR 100 MHz (30MHz-1GHz) Pre AGC



5G NR 100 MHz (30MHz-1GHz) AGC + 3 dB

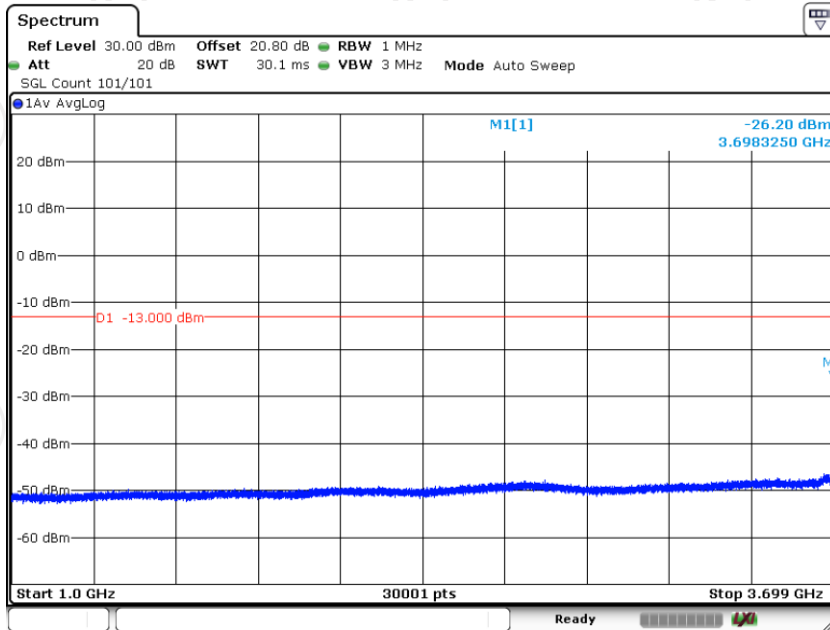


5G NR 100 MHz (1GHz-3699MHz) Pre AGC



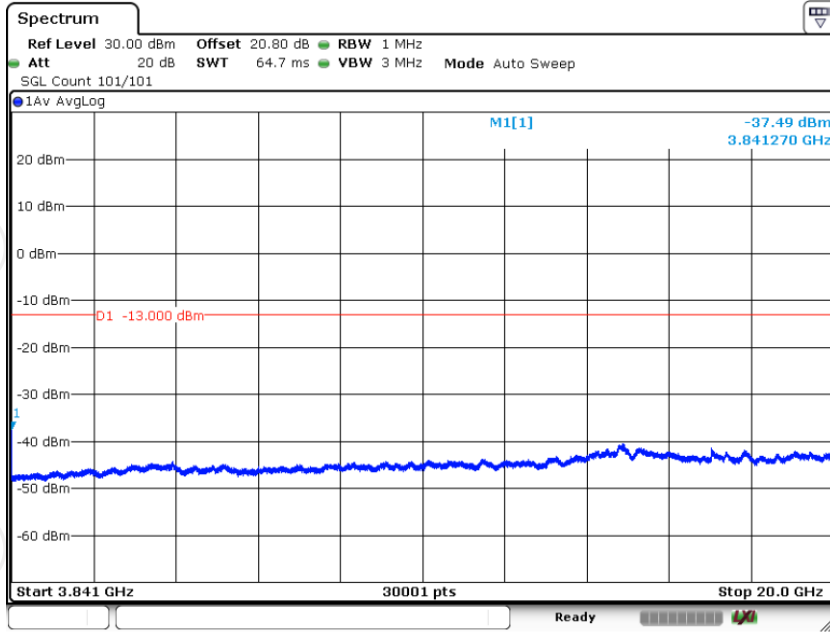
Date: 4.APR.2024 22:40:54

5G NR 100 MHz (1GHz-3699MHz) AGC + 3 dB



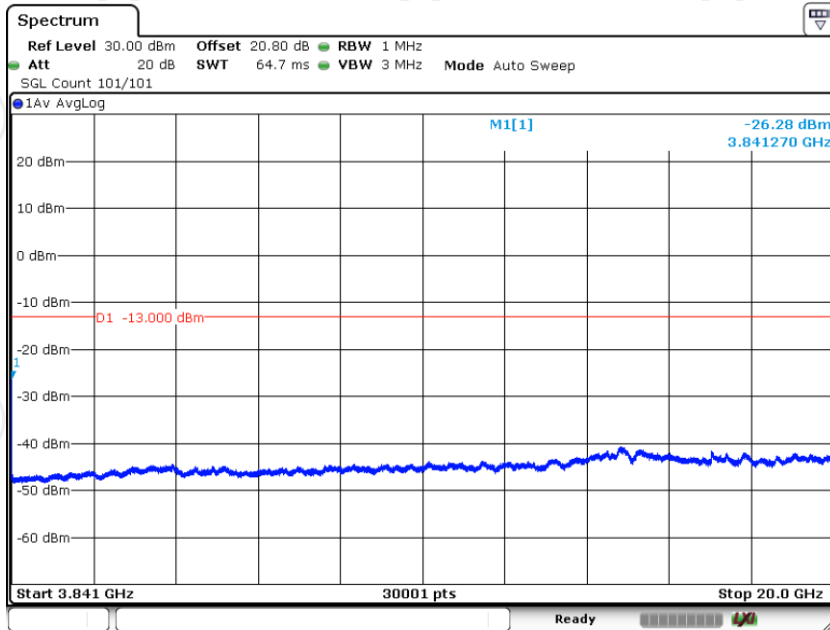
Date: 4.APR.2024 22:41:31

5G NR 100 MHz (3841MHz-20GHz) Pre AGC



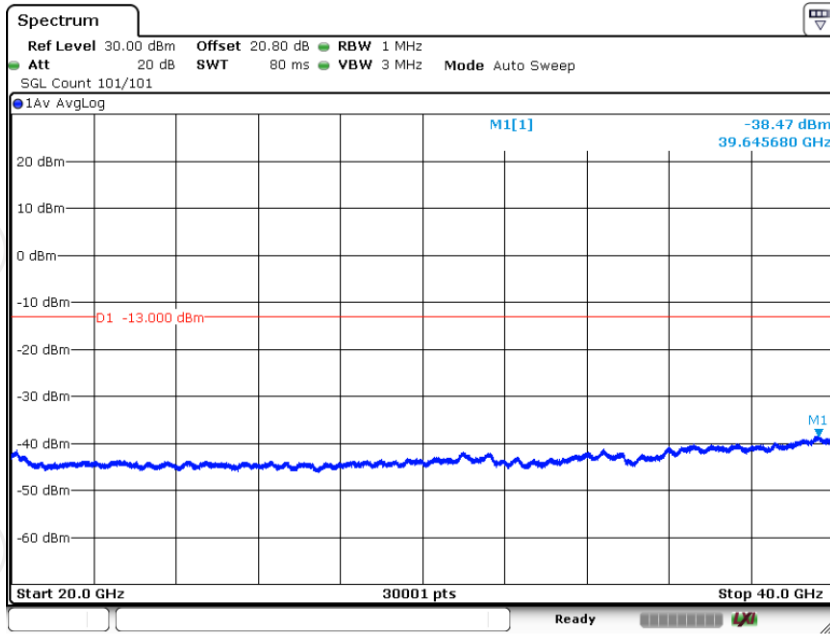
Date: 4.APR.2024 22:45:29

5G NR 100 MHz (3841MHz-20GHz) AGC + 3 dB



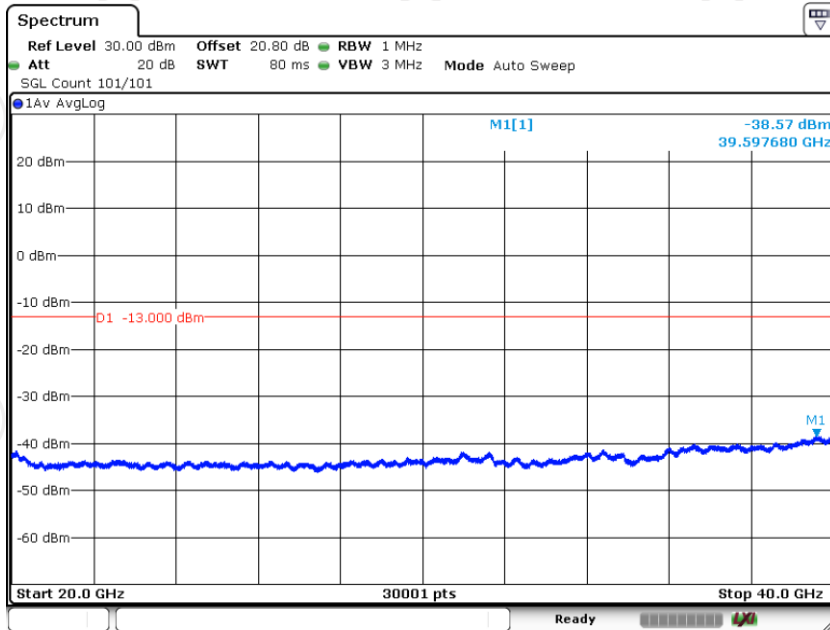
Date: 4.APR.2024 22:46:27

5G NR 100 MHz (20GHz-40GHz) Pre AGC



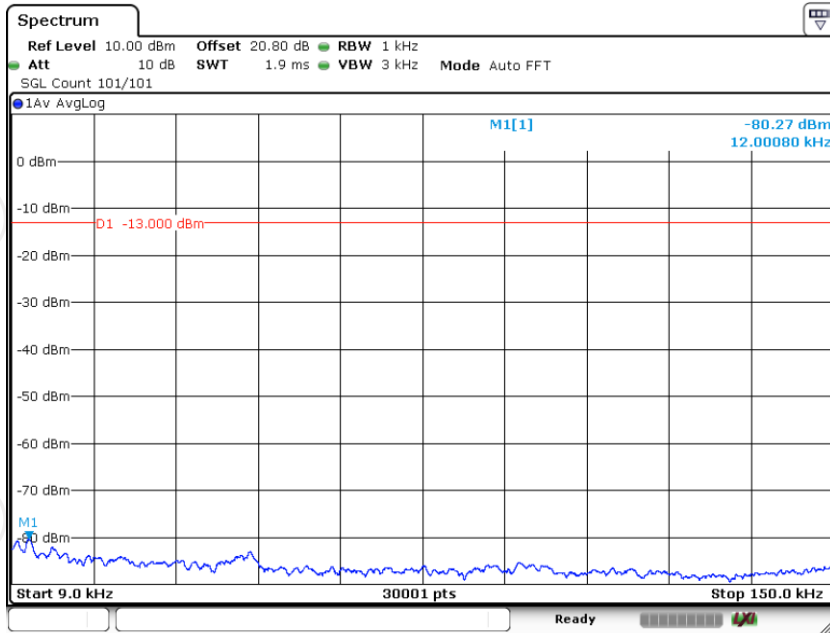
Date: 4.APR.2024 22:51:23

5G NR 100 MHz (20GHz-40GHz) AGC + 3 dB



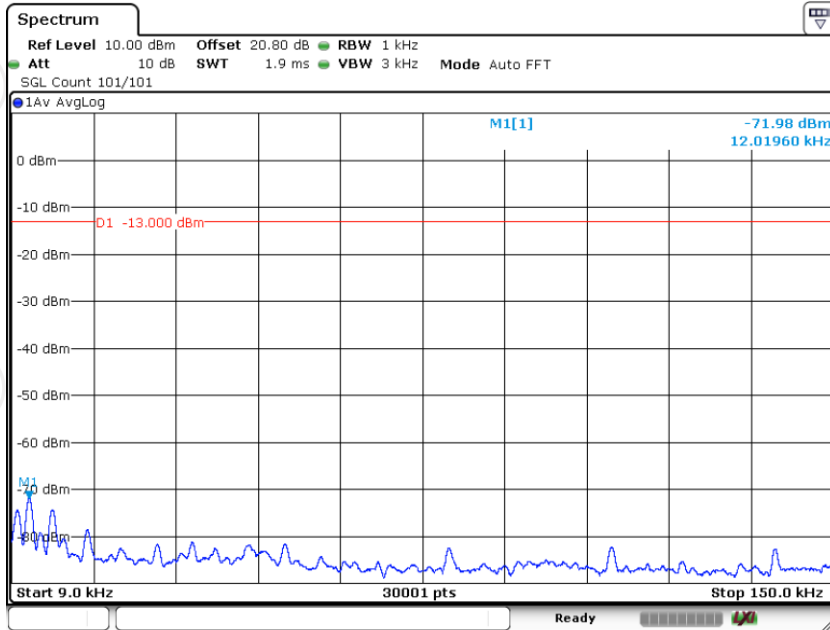
Date: 4.APR.2024 22:52:08

Highest
5G NR 100 MHz (9kHz-150kHz) Pre AGC



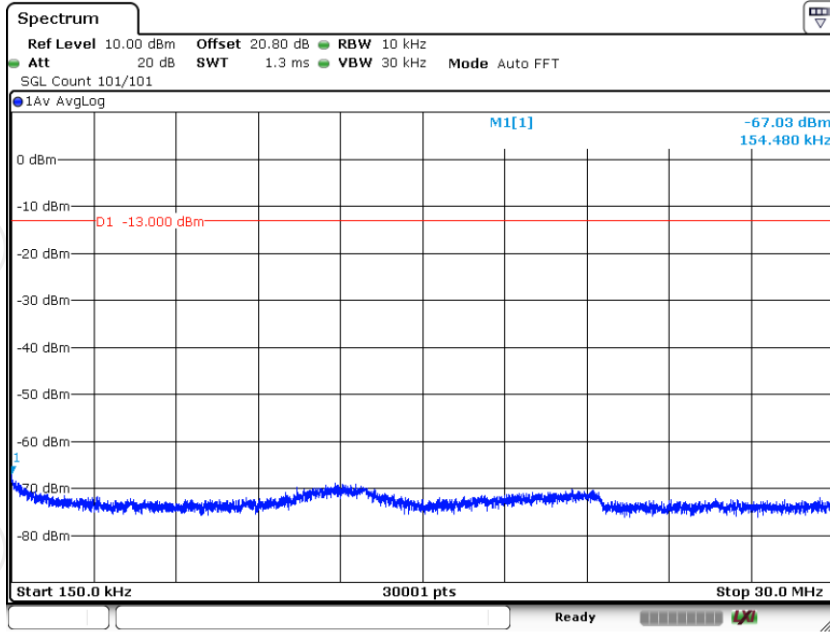
Date: 4.APR.2024 22:27:39

5G NR 100 MHz (9kHz-150kHz) Pre AGC + 3 dB



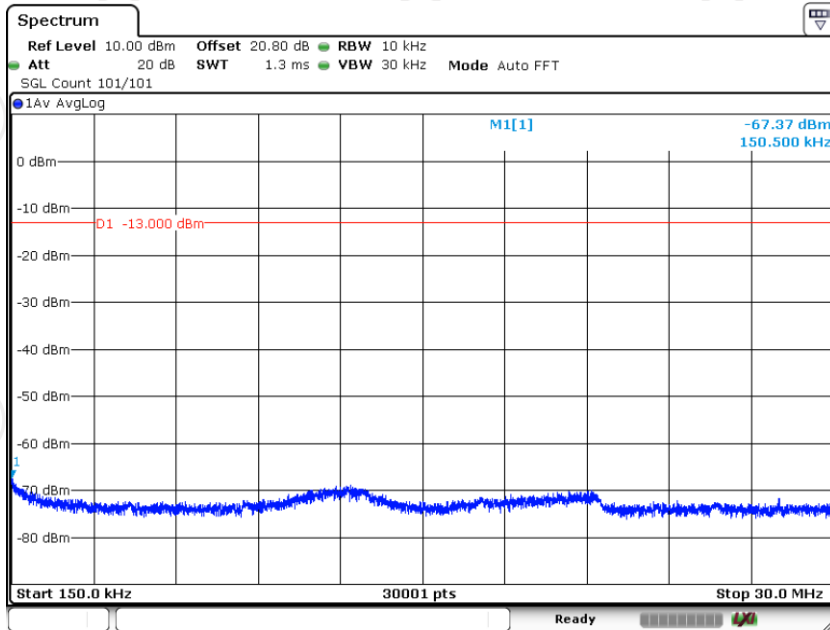
Date: 4.APR.2024 22:27:56

5G NR 100 MHz (150kHz-30MHz) Pre AGC



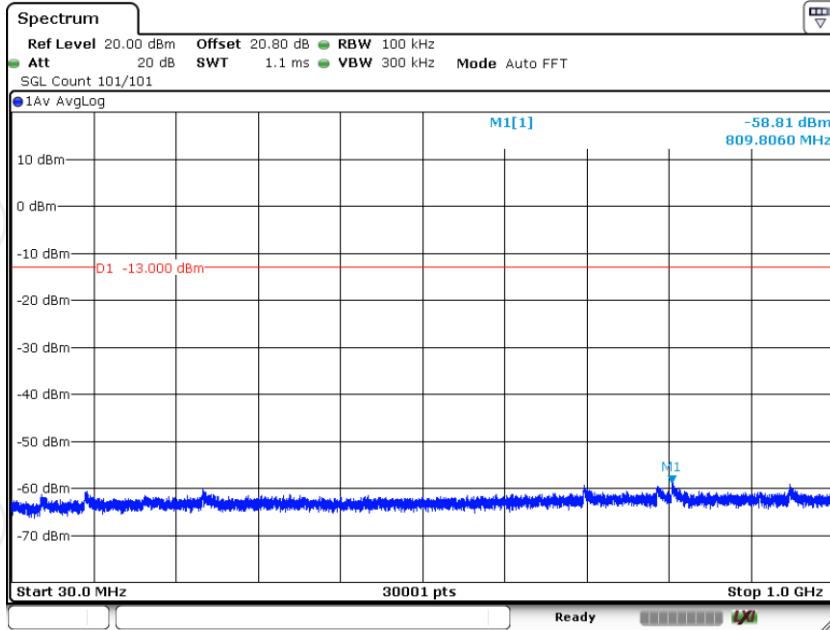
Date: 4.APR.2024 22:32:18

5G NR 100 MHz (150kHz-30MHz) Pre AGC + 3 dB



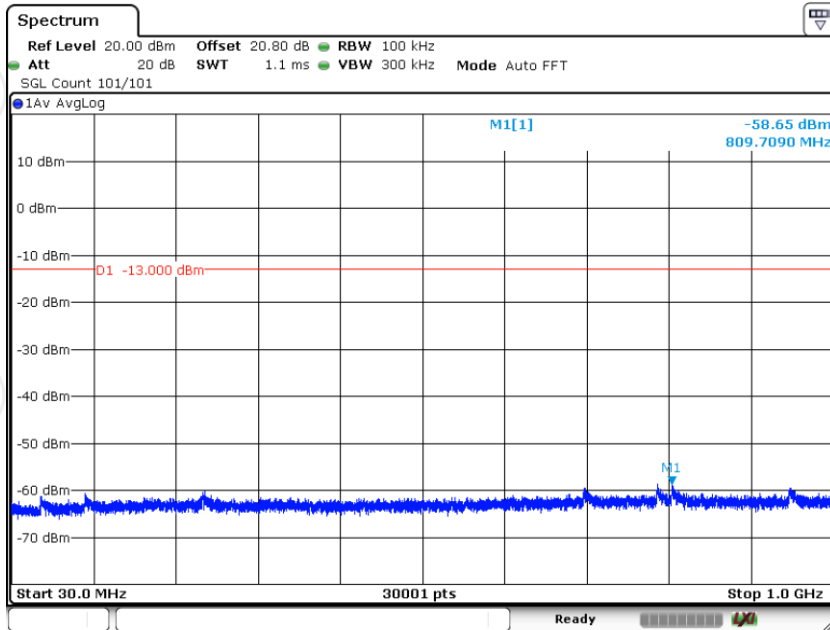
Date: 4.APR.2024 22:32:44

5G NR 100 MHz (30MHz-1GHz) Pre AGC



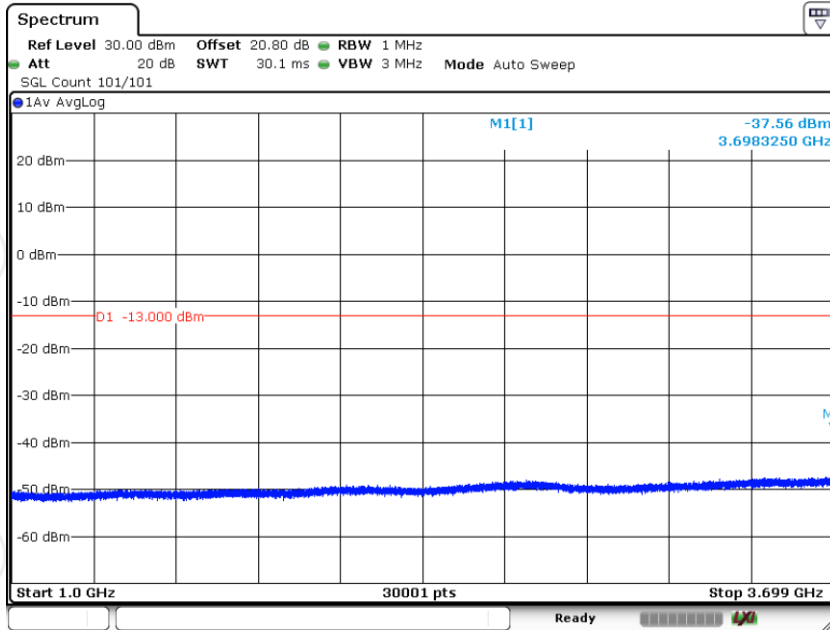
Date: 4.APR.2024 22:34:48

5G NR 100 MHz (30MHz-1GHz) AGC + 3 dB



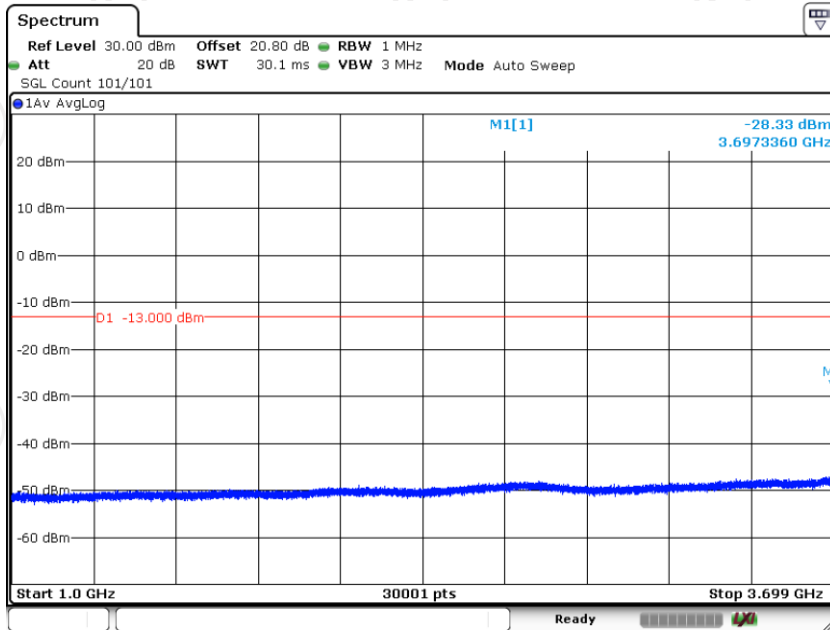
Date: 4.APR.2024 22:35:46

5G NR 100 MHz (1GHz-3699MHz) Pre AGC



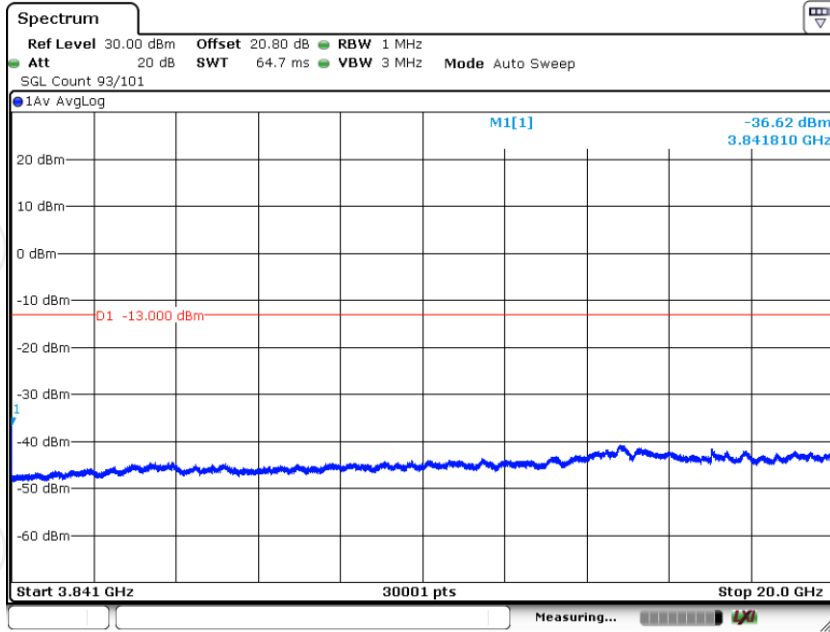
Date: 4.APR.2024 22:42:16

5G NR 100 MHz (1GHz-3699MHz) AGC + 3 dB



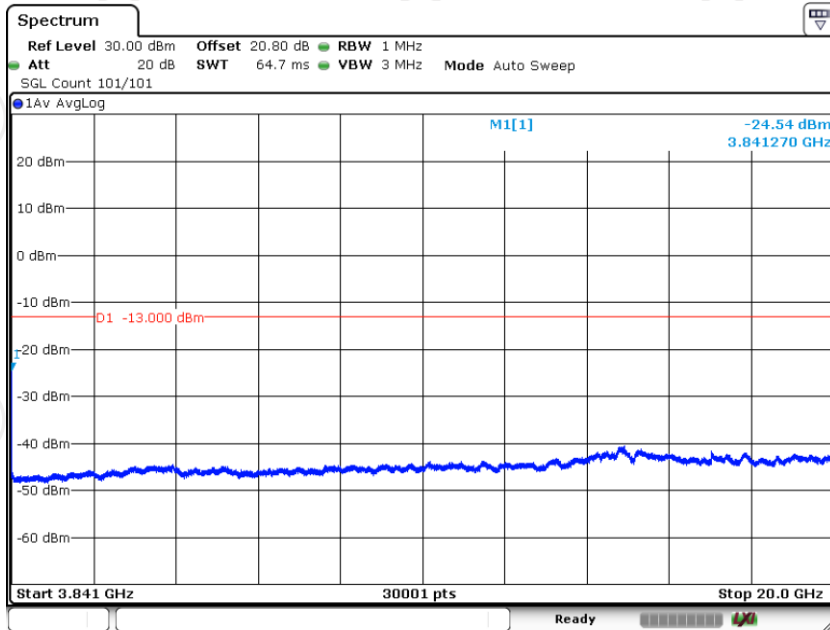
Date: 4.APR.2024 22:42:41

5G NR 100 MHz (3841MHz-20GHz) Pre AGC



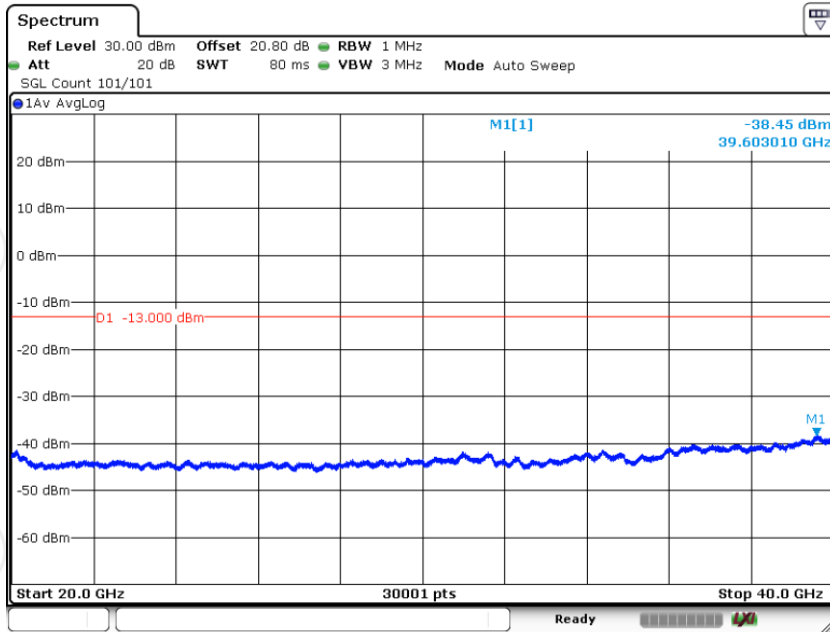
Date: 4.APR.2024 22:43:40

5G NR 100 MHz (3841MHz-20GHz) AGC + 3 dB



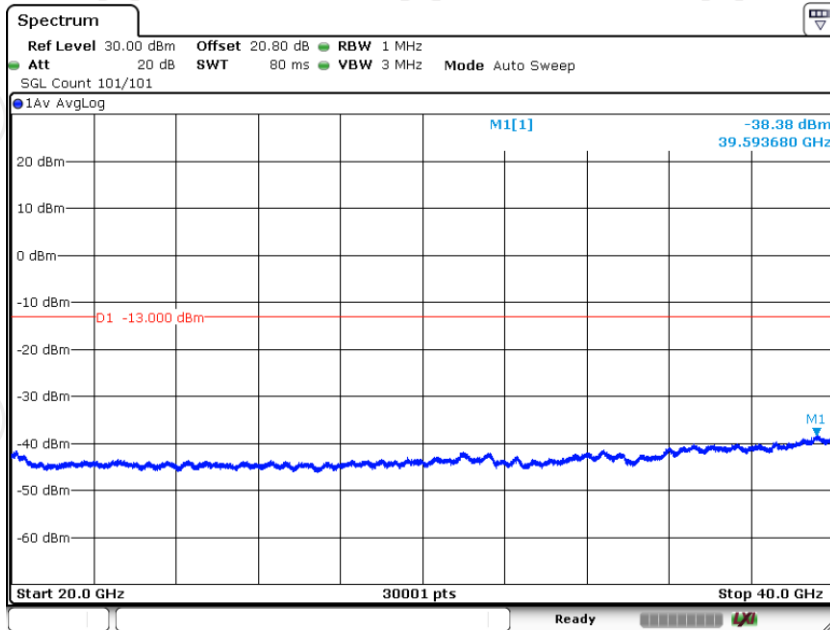
Date: 4.APR.2024 22:44:44

5G NR 100 MHz (20GHz-40GHz) Pre AGC



Date: 4.APR.2024 22:52:54

5G NR 100 MHz (20GHz-40GHz) AGC + 3 dB

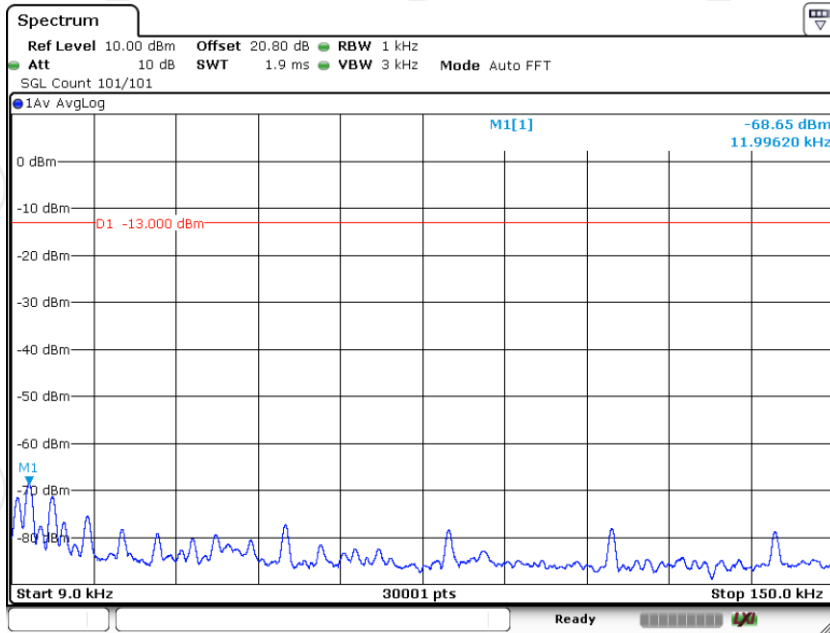


Date: 4.APR.2024 22:53:43

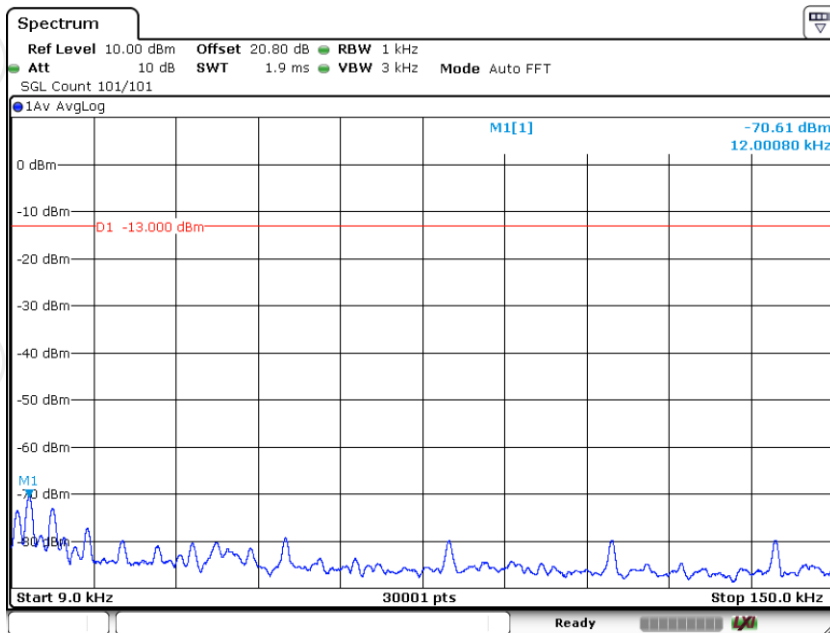
Path2 Sub-Band Mode Downlink

Lowest

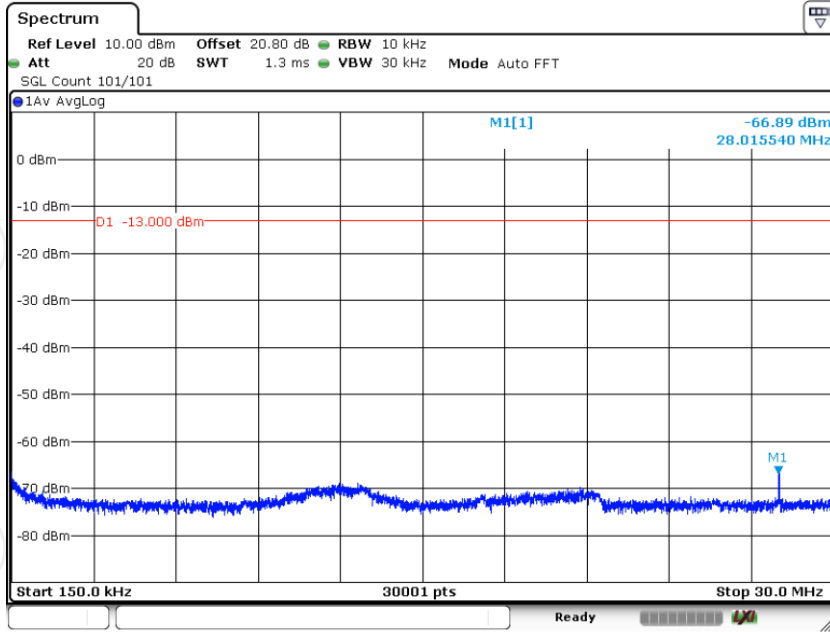
5G NR 100 MHz (9kHz-150kHz) Pre AGC



5G NR 100 MHz (9kHz-150kHz) Pre AGC + 3 dB

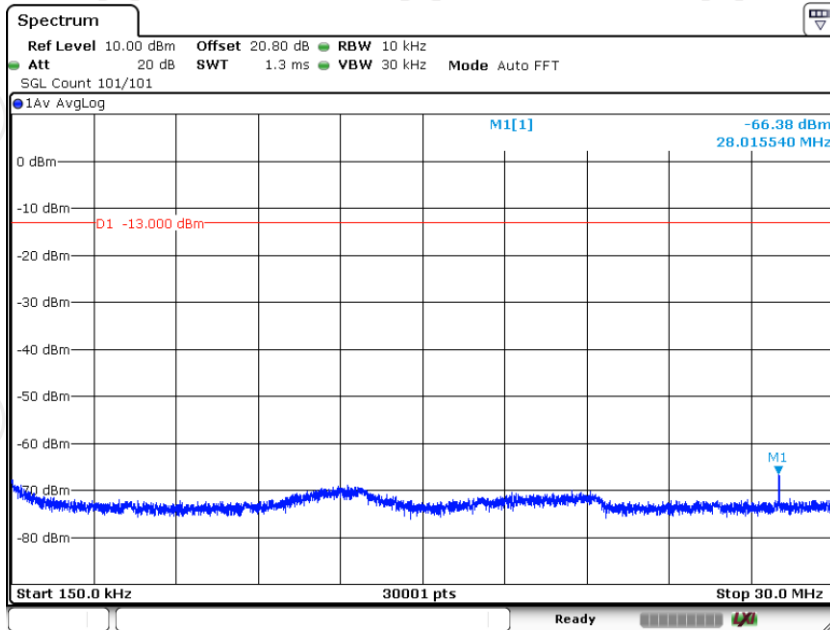


5G NR 100 MHz (150kHz-30MHz) Pre AGC



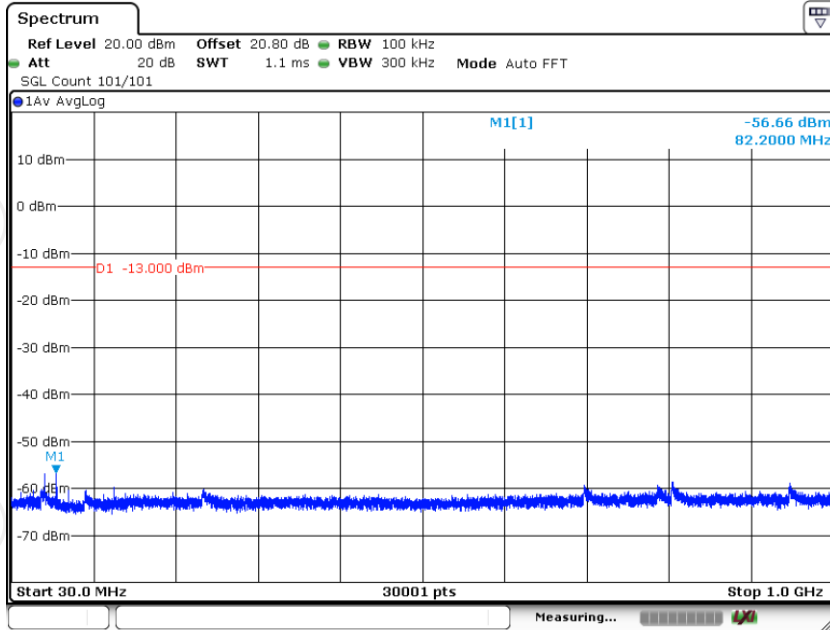
Date: 4.APR.2024 22:22:36

5G NR 100 MHz (150kHz-30MHz) Pre AGC + 3 dB



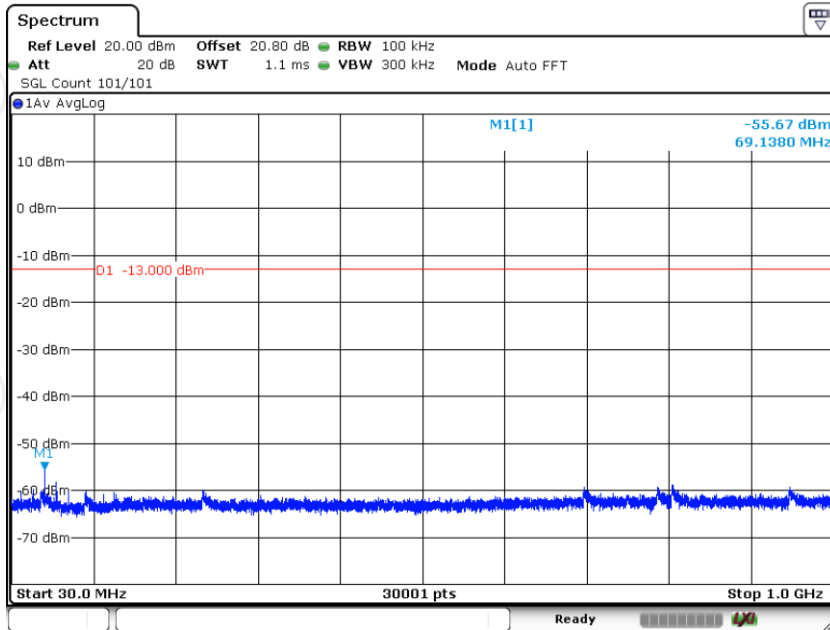
Date: 4.APR.2024 22:22:05

5G NR 100 MHz (30MHz-1GHz) Pre AGC



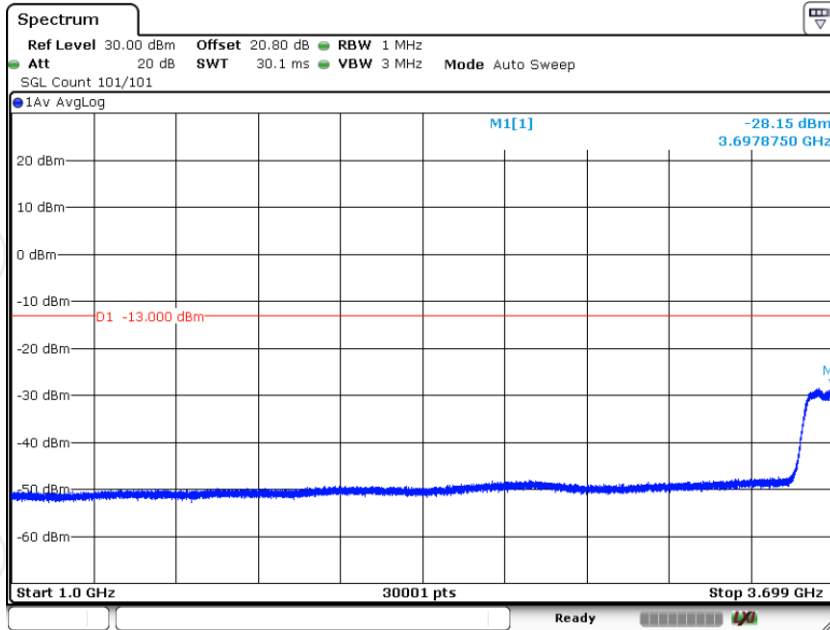
Date: 4.APR.2024 22:10:36

5G NR 100 MHz (30MHz-1GHz) AGC + 3 dB



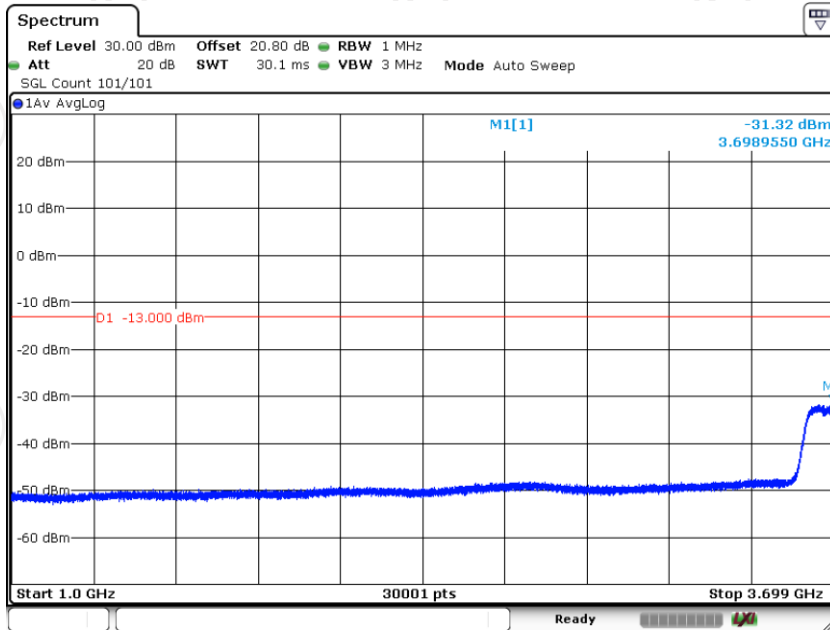
Date: 4.APR.2024 22:11:27

5G NR 100 MHz (1GHz-3699MHz) Pre AGC



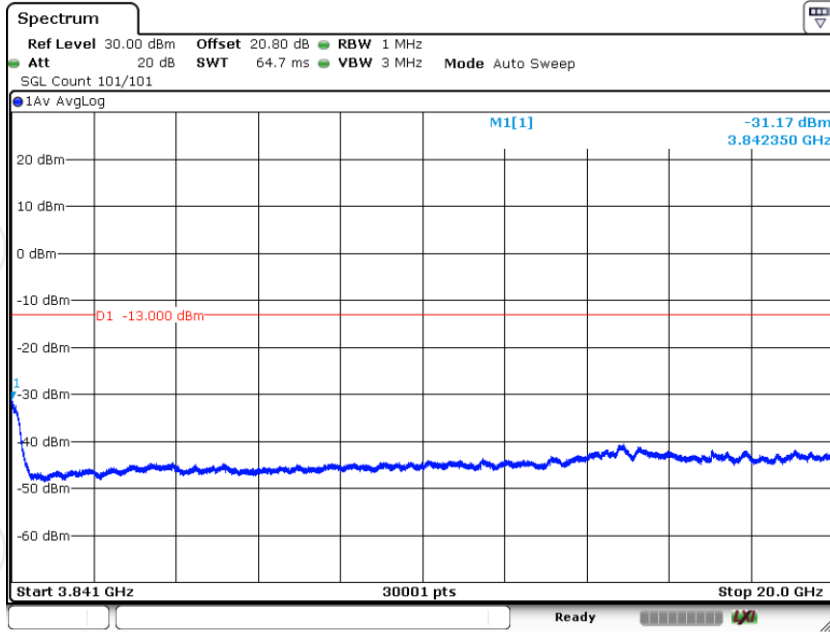
Date: 4.APR.2024 22:09:09

5G NR 100 MHz (1GHz-3699MHz) AGC + 3 dB



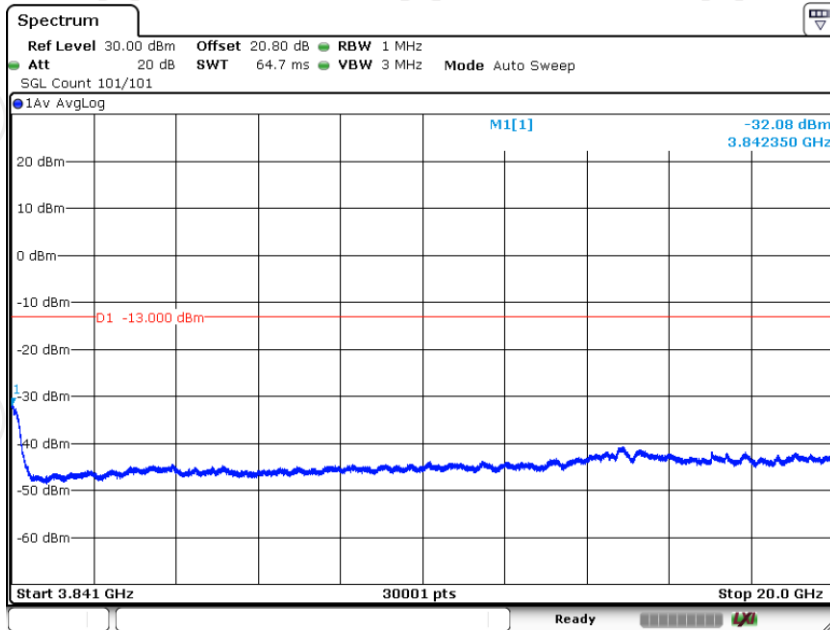
Date: 4.APR.2024 22:09:48

5G NR 100 MHz (3841MHz-20GHz) Pre AGC



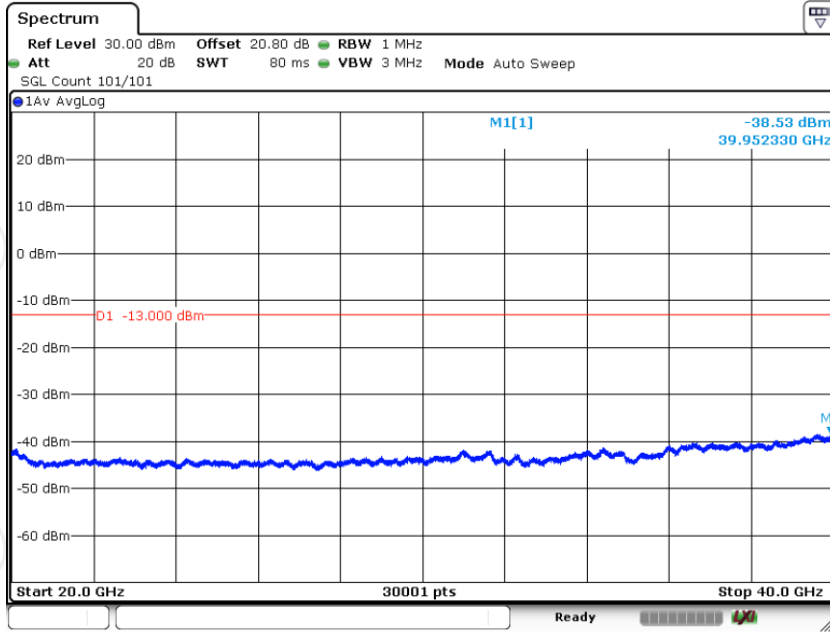
Date: 4.APR.2024 21:52:21

5G NR 100 MHz (3841MHz-20GHz) AGC + 3 dB



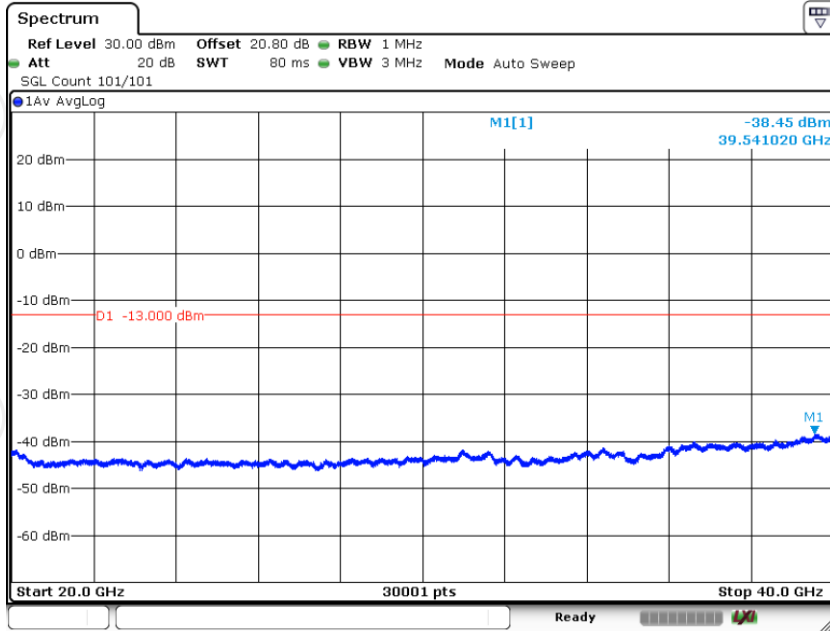
Date: 4.APR.2024 21:53:39

5G NR 100 MHz (20GHz-40GHz) Pre AGC



Date: 4.APR.2024 21:46:16

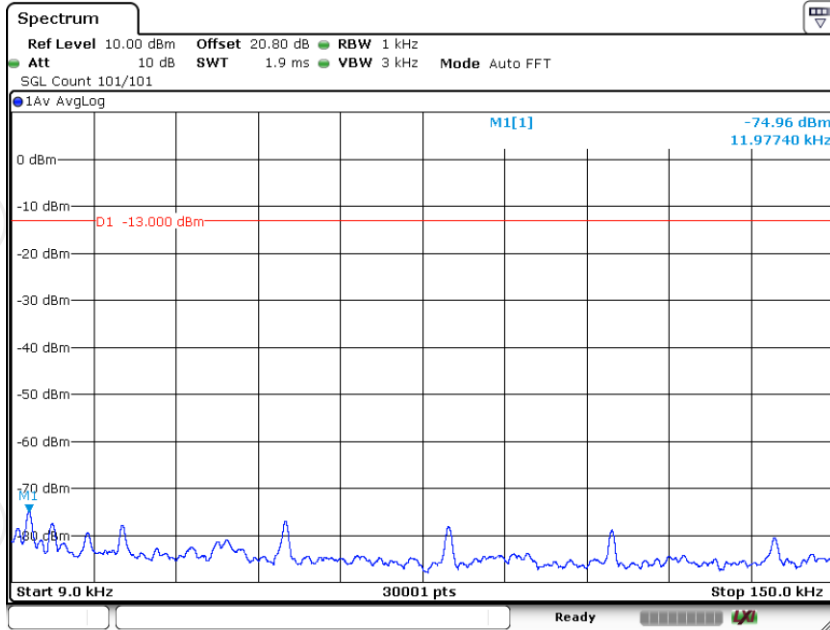
5G NR 100 MHz (20GHz-40GHz) AGC + 3 dB



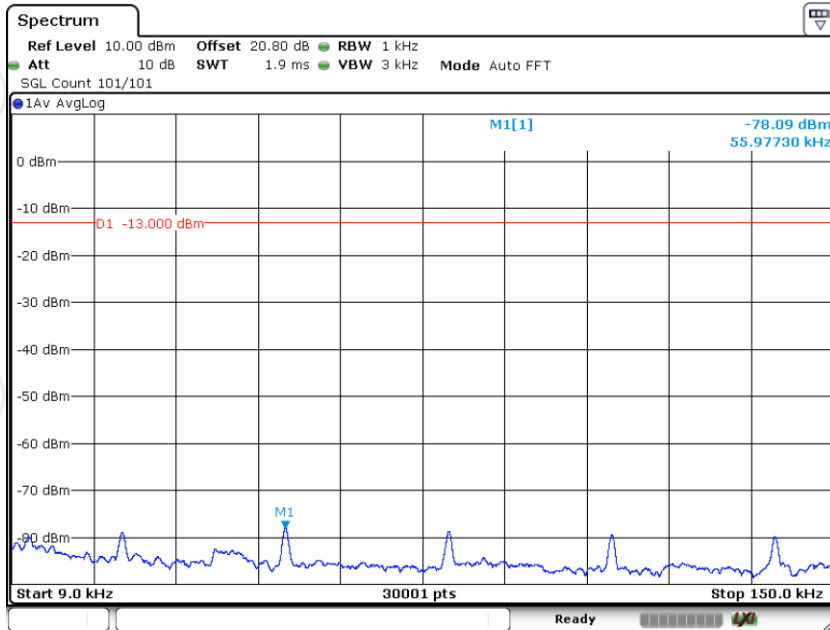
Date: 4.APR.2024 21:47:21

Middle

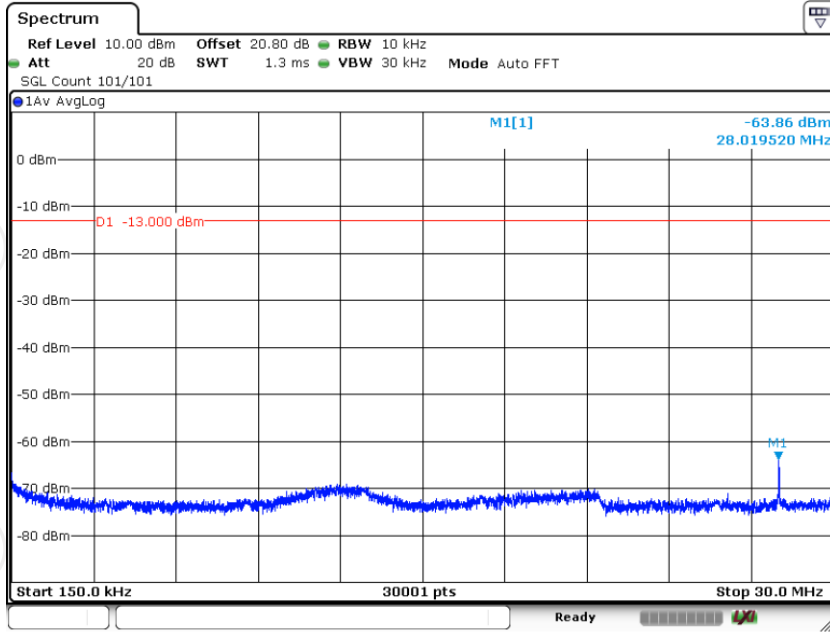
5G NR 100 MHz (9kHz-150kHz) Pre AGC



5G NR 100 MHz (9kHz-150kHz) Pre AGC + 3 dB

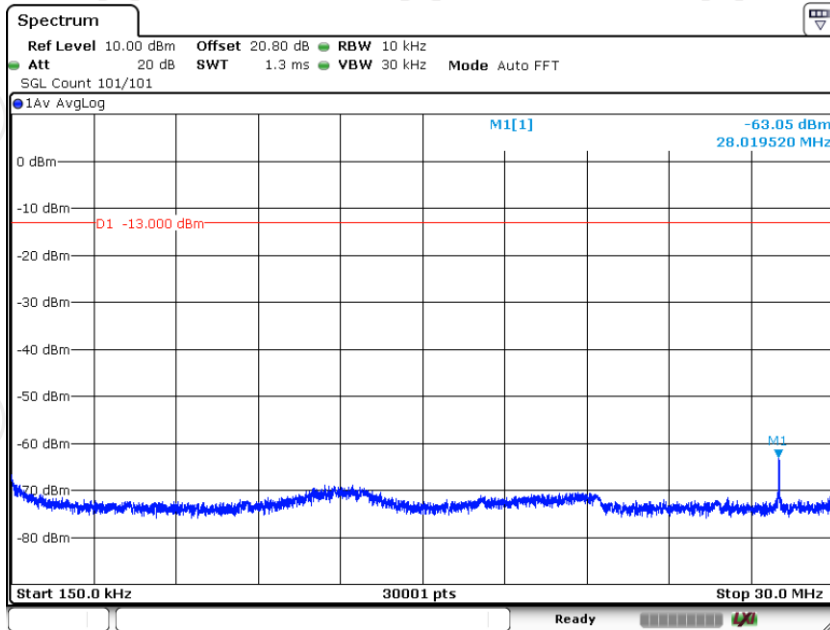


5G NR 100 MHz (150kHz-30MHz) Pre AGC



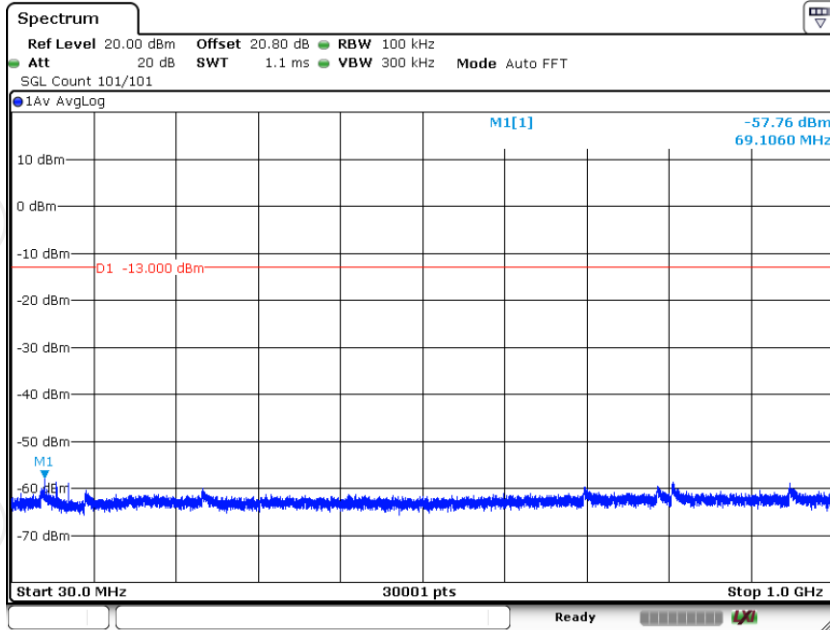
Date: 4.APR.2024 22:19:37

5G NR 100 MHz (150kHz-30MHz) Pre AGC + 3 dB



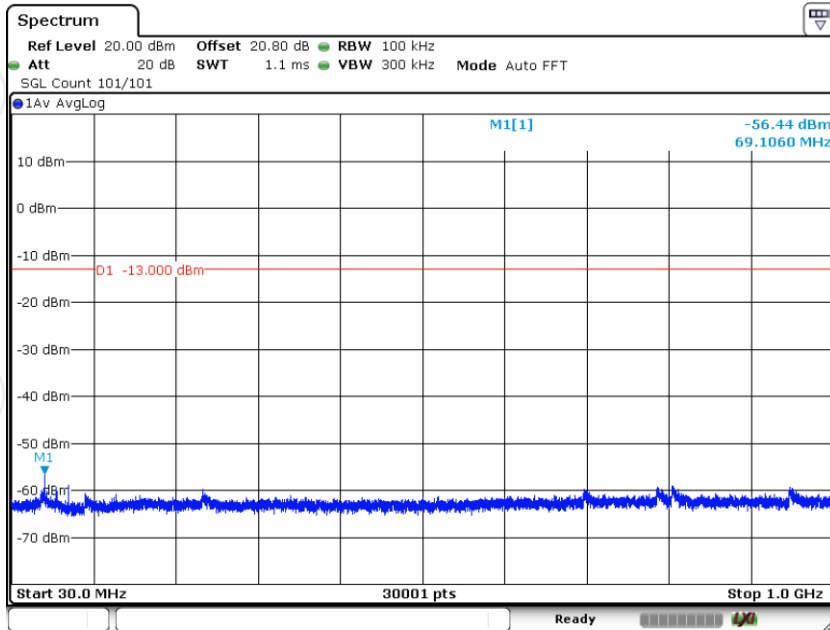
Date: 4.APR.2024 22:20:08

5G NR 100 MHz (30MHz-1GHz) Pre AGC



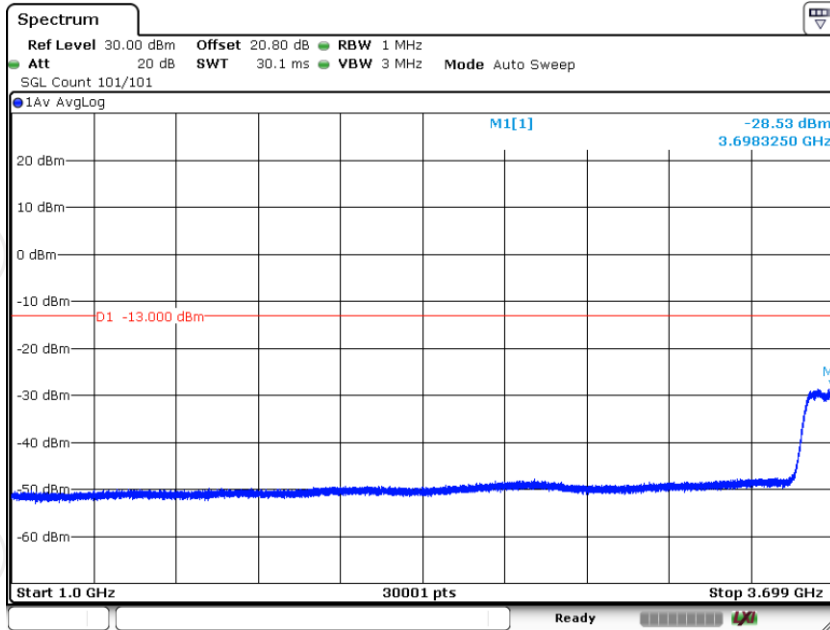
Date: 4.APR.2024 22:12:07

5G NR 100 MHz (30MHz-1GHz) AGC + 3 dB



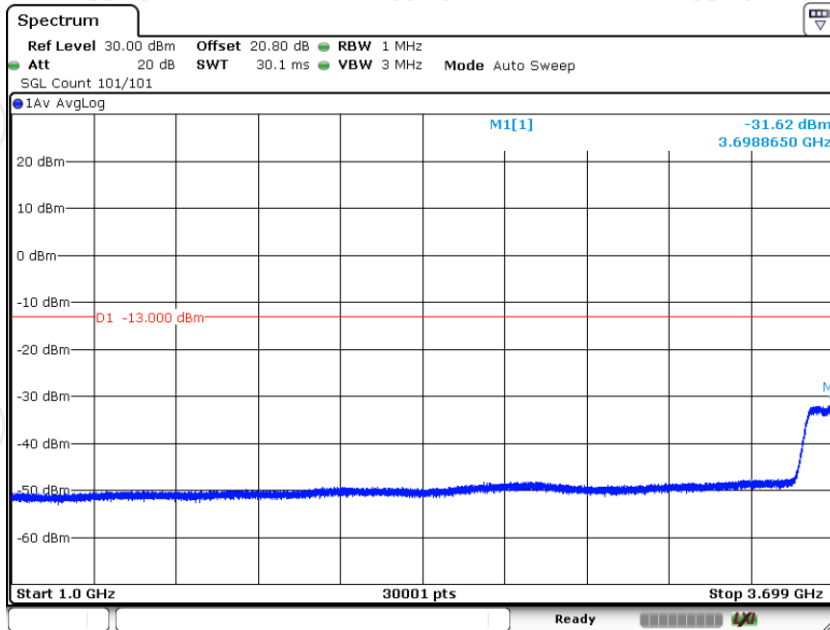
Date: 4.APR.2024 22:12:57

5G NR 100 MHz (1GHz-3699MHz) Pre AGC



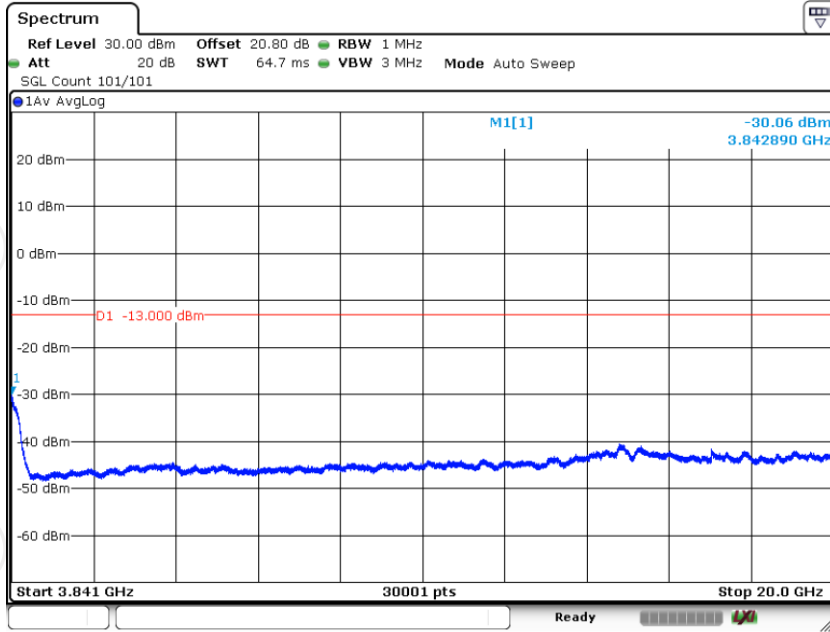
Date: 4.APR.2024 22:07:50

5G NR 100 MHz (1GHz-3699MHz) AGC + 3 dB



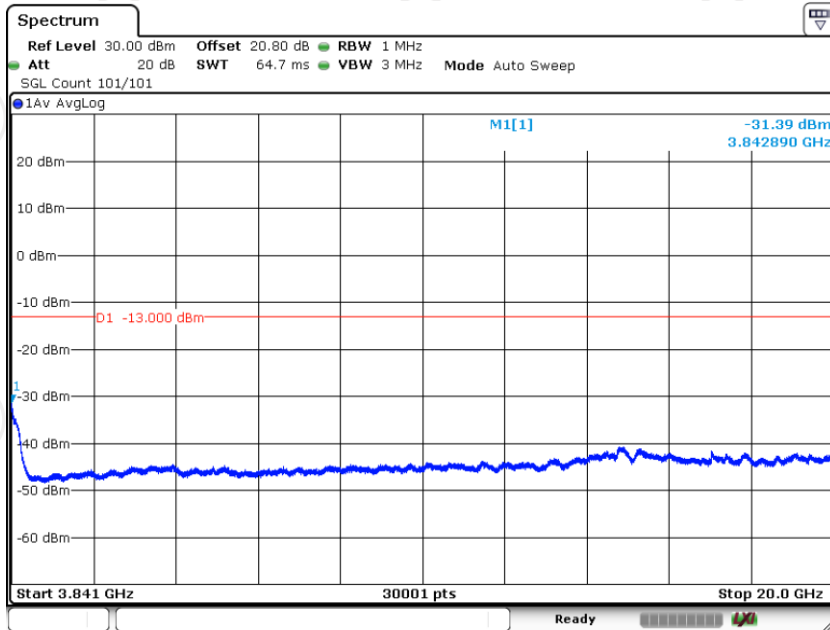
Date: 4.APR.2024 22:08:24

5G NR 100 MHz (3841MHz-20GHz) Pre AGC



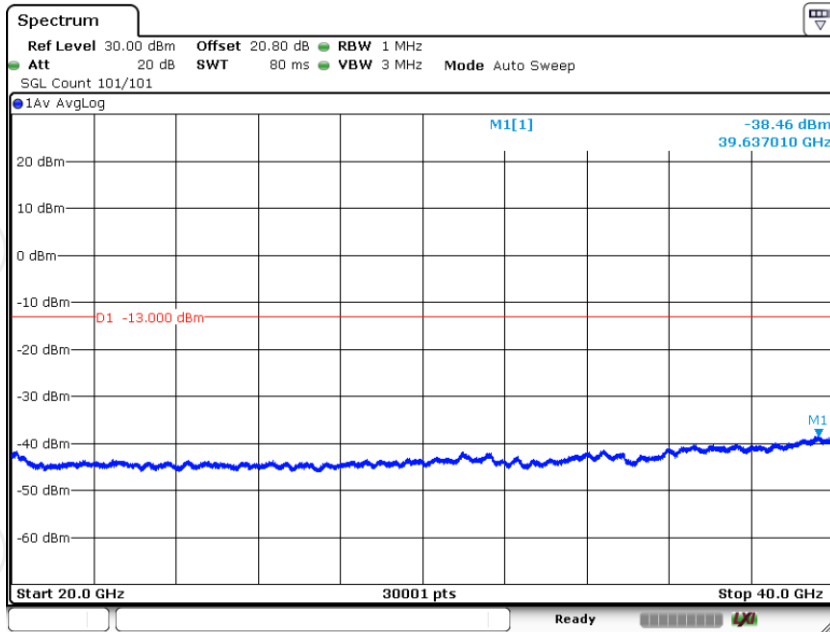
Date: 4.APR.2024 21:56:10

5G NR 100 MHz (3841MHz-20GHz) AGC + 3 dB



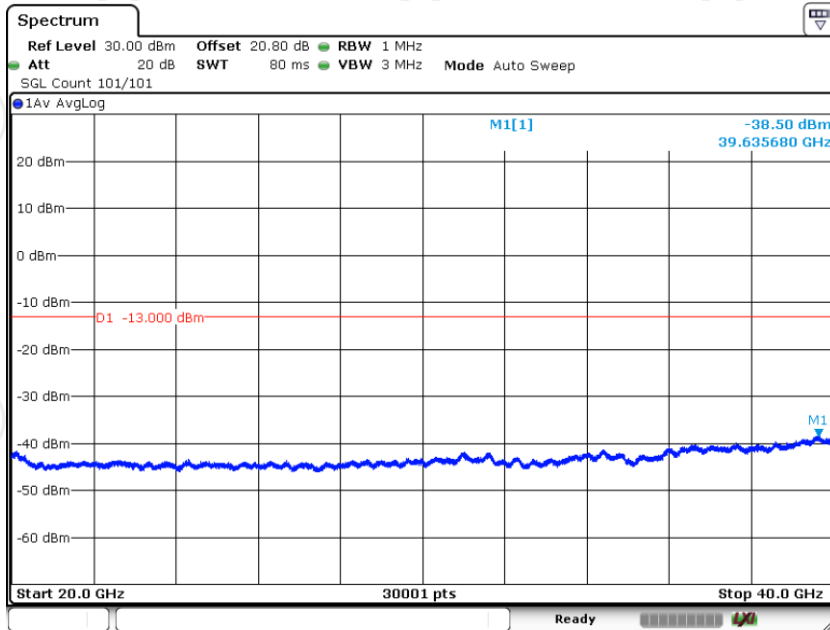
Date: 4.APR.2024 21:57:14

5G NR 100 MHz (20GHz-40GHz) Pre AGC



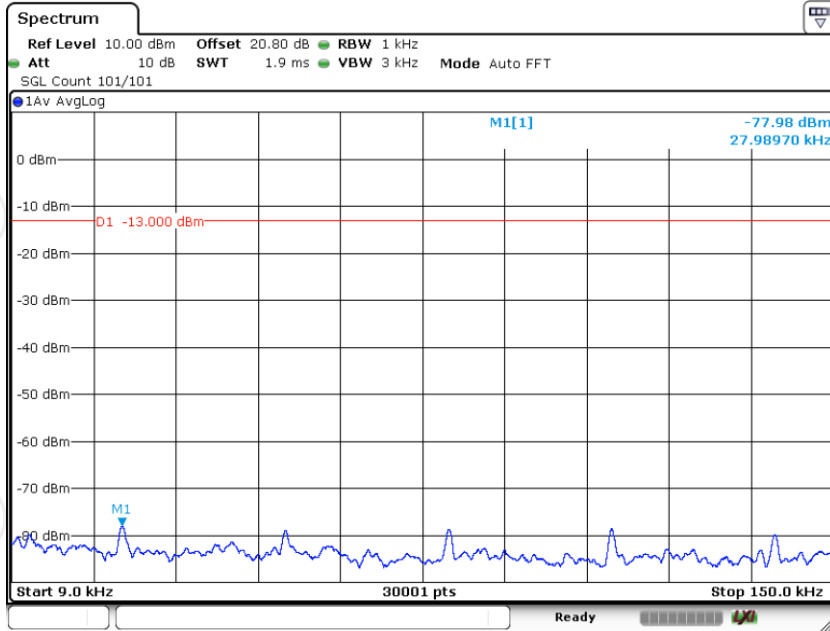
Date: 4.APR.2024 21:43:23

5G NR 100 MHz (20GHz-40GHz) AGC + 3 dB



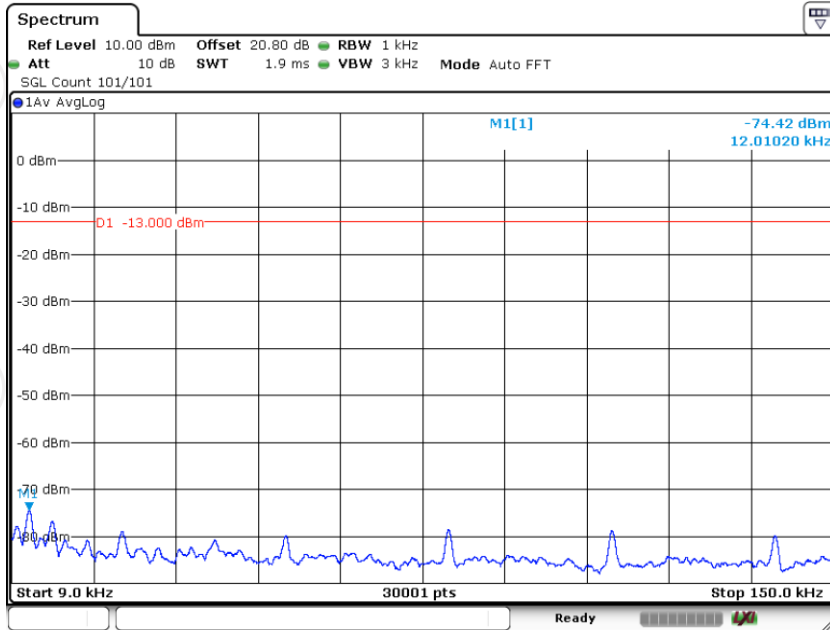
Date: 4.APR.2024 21:44:29

Highest
5G NR 100 MHz (9kHz-150kHz) Pre AGC



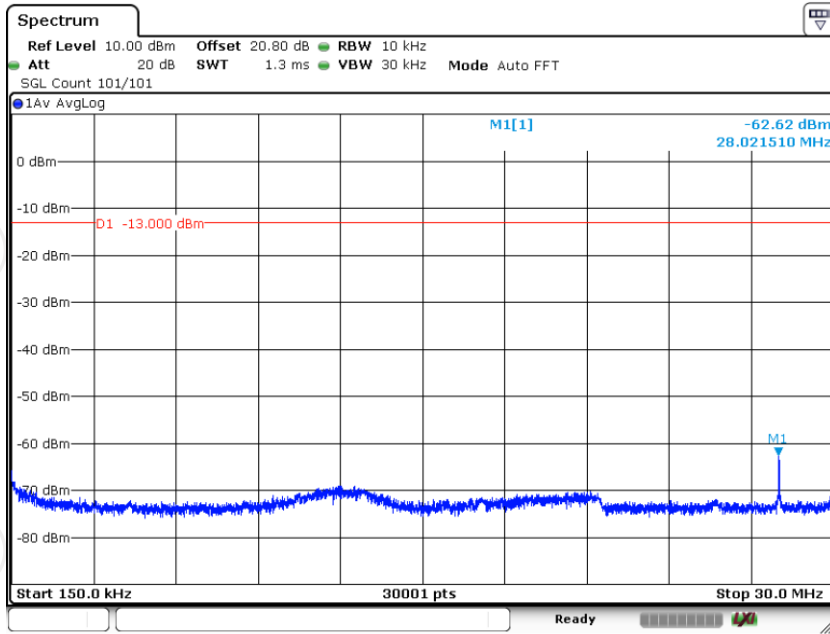
Date: 4.APR.2024 22:24:46

5G NR 100 MHz (9kHz-150kHz) Pre AGC + 3 dB



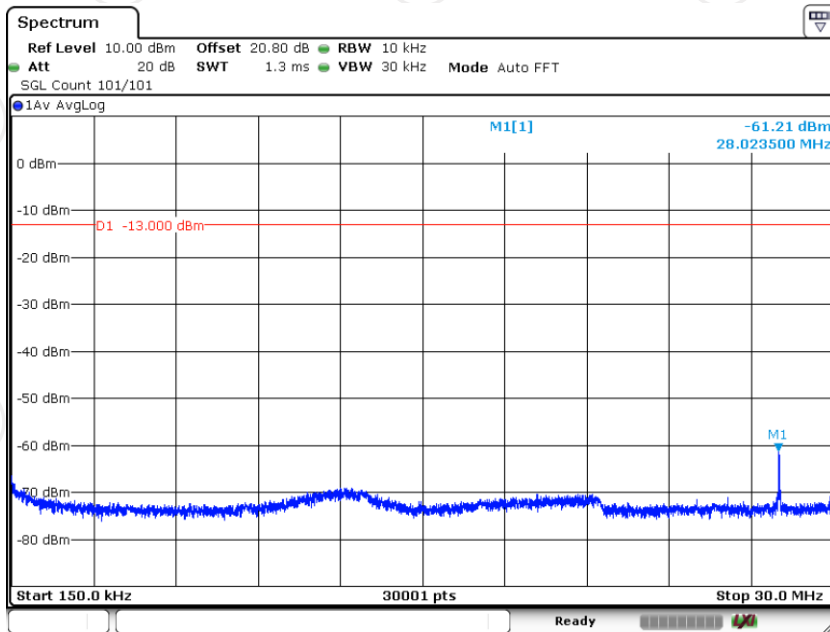
Date: 4.APR.2024 22:25:06

5G NR 100 MHz (150kHz-30MHz) Pre AGC



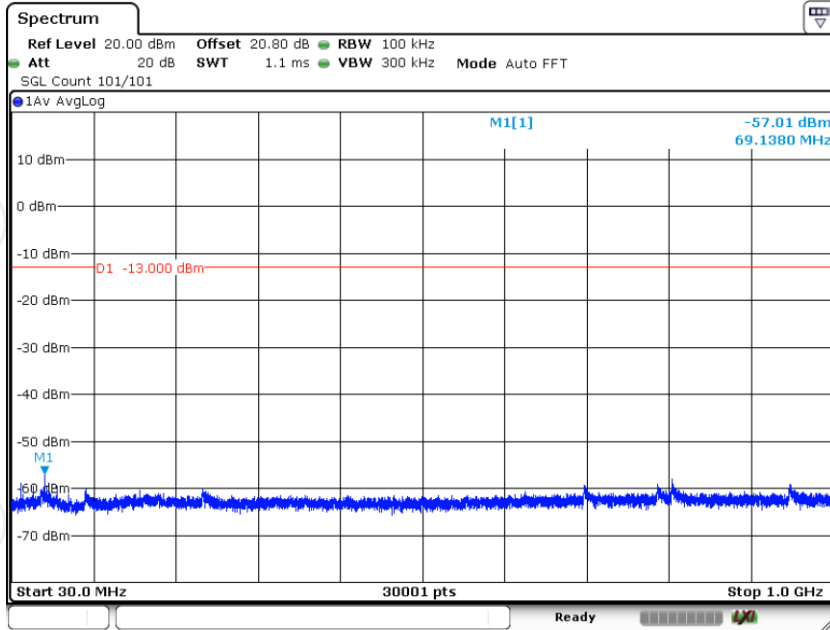
Date: 4.APR.2024 22:16:54

5G NR 100 MHz (150kHz-30MHz) Pre AGC + 3 dB



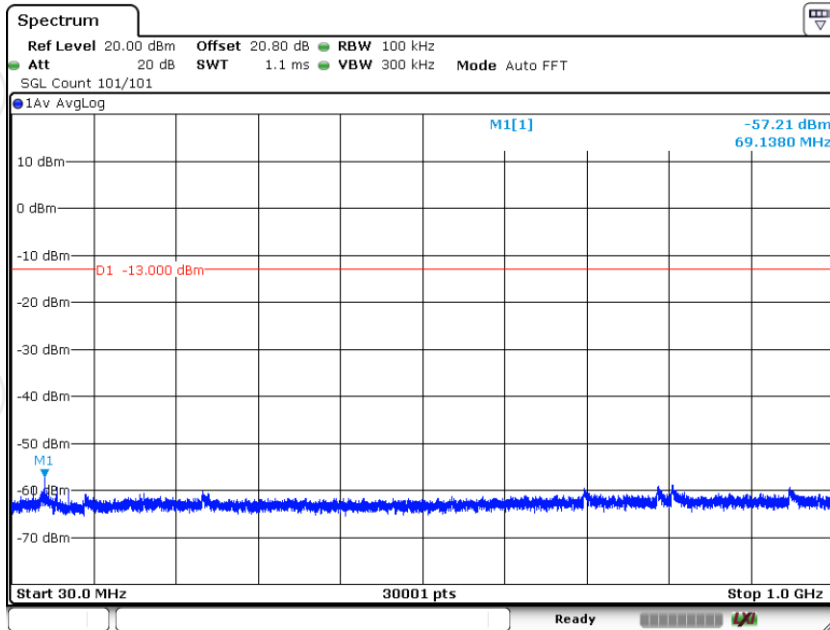
Date: 4.APR.2024 22:18:09

5G NR 100 MHz (30MHz-1GHz) Pre AGC



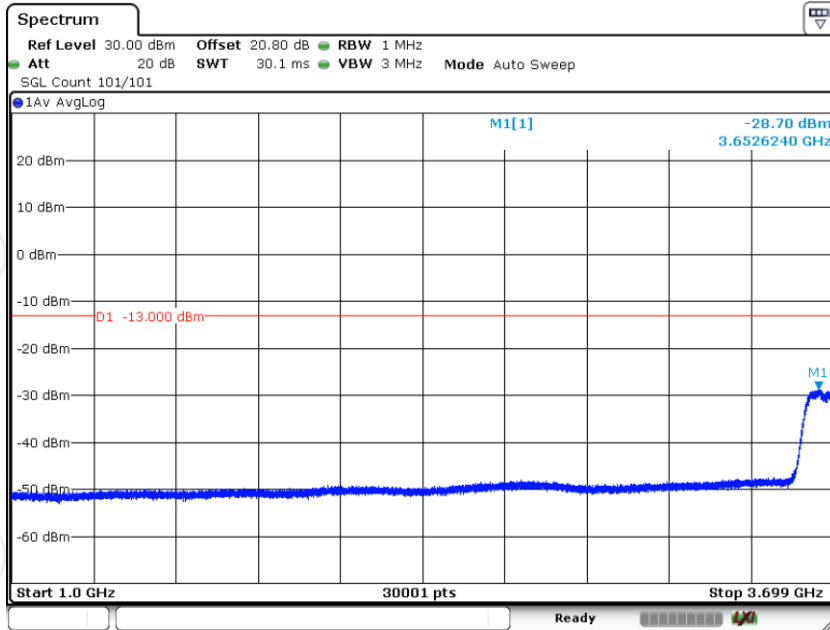
Date: 4.APR.2024 22:13:43

5G NR 100 MHz (30MHz-1GHz) AGC + 3 dB

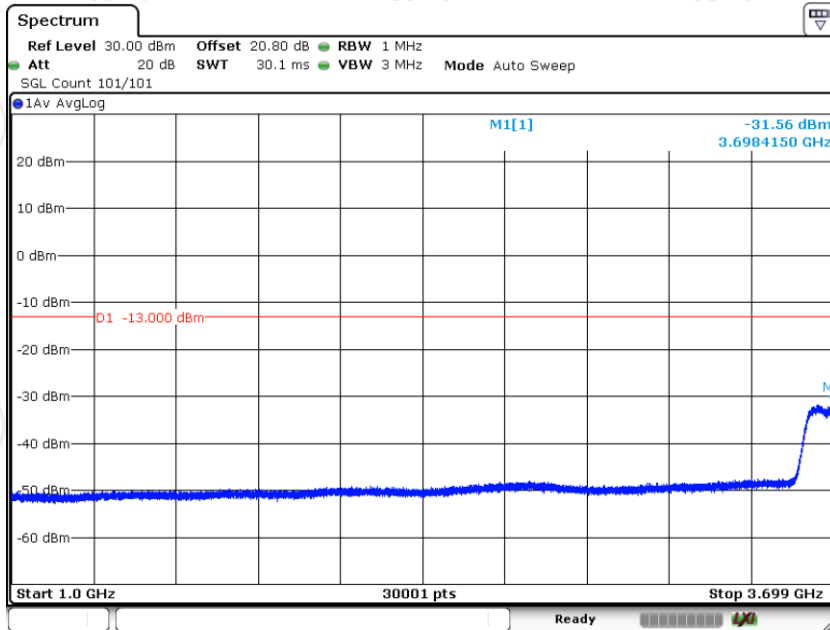


Date: 4.APR.2024 22:15:31

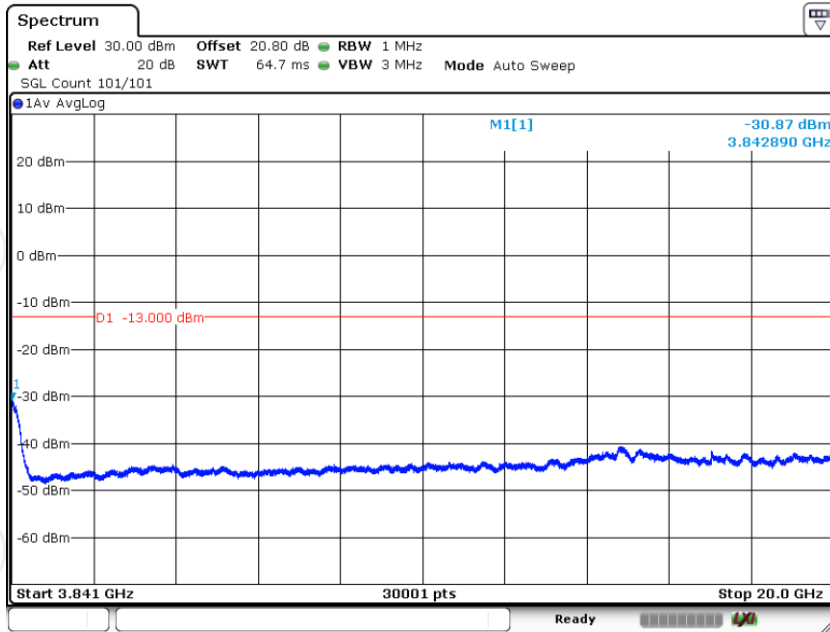
5G NR 100 MHz (1GHz-3699MHz) Pre AGC



5G NR 100 MHz (1GHz-3699MHz) AGC + 3 dB

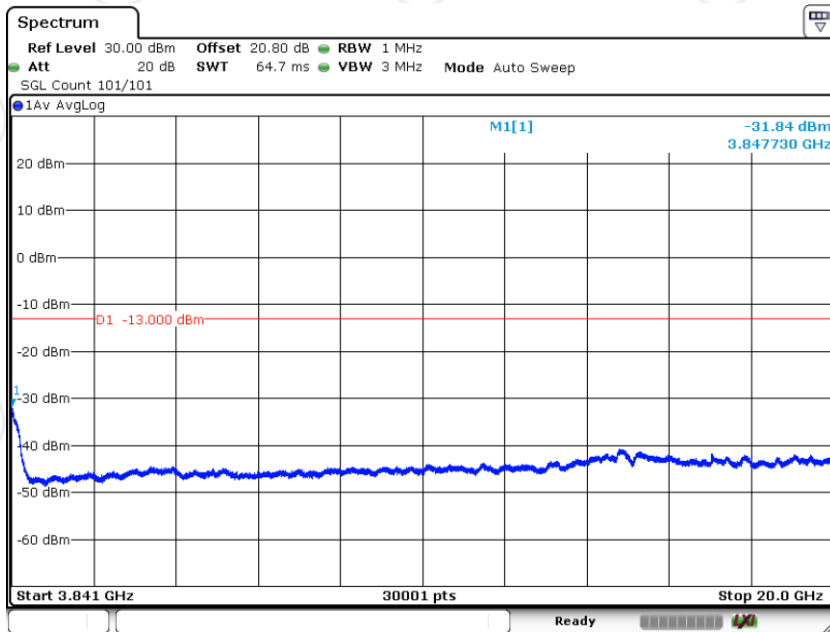


5G NR 100 MHz (3841MHz-20GHz) Pre AGC



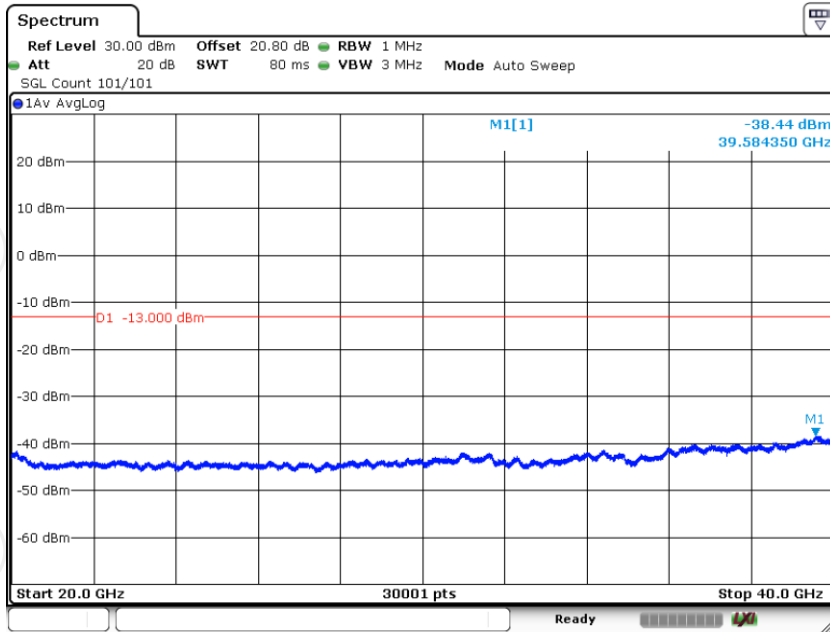
Date: 4.APR.2024 22:01:05

5G NR 100 MHz (3841MHz-20GHz) AGC + 3 dB



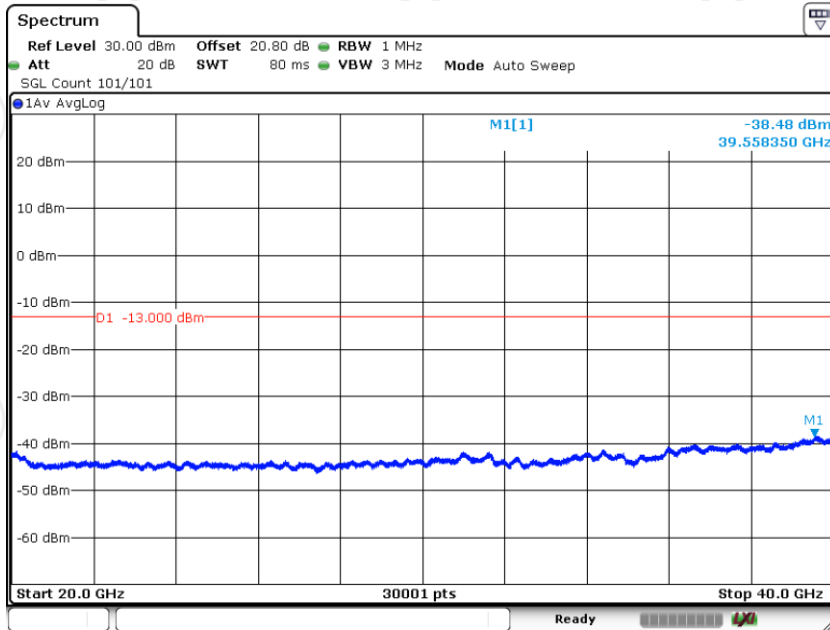
Date: 4.APR.2024 22:04:04

5G NR 100 MHz (20GHz-40GHz) Pre AGC



Date: 4.APR.2024 21:40:30

5G NR 100 MHz (20GHz-40GHz) AGC + 3 dB



Date: 4.APR.2024 21:41:46

Note: All signal type bandwidths have been tested, but the test data only show the worst case (5G NR 100 MHz) in this report.

5.7. Frequency Stability Measurement

5.7.1. Test Specification

Test Requirement:	FCC Part 2.1055; FCC part 27.54
Test Method:	KDB 935210 D05 Indus Booster Basic Meas v01r04
Limit:	±2.5 ppm
Test setup:	<pre> graph LR SG[Signal Generator] --> EUT[EUT] EUT --> RA[RF Attenuator (if required)] RA --> SA[Spectrum Analyzer] </pre>
Test Procedure:	<p>Test Procedures for Temperature Variation</p> <p>a) The testing follows FCC KDB 971168 D01v03 Section 9.0.</p> <p>b) The EUT was set up in the thermal chamber and connected with the system simulator.</p> <p>c) With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.</p> <p>d) With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.</p> <p>Test Procedures for Voltage Variation</p> <p>a) The testing follows FCC KDB 971168 D01v03 Section 9.0.</p> <p>b) The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.</p> <p>c) The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.</p> <p>d) The variation in frequency was measured for the worst case.</p> <p>e) The worst case (worst bandwidth) for frequency stability reported in the Test Data.</p>
Test results:	PASS

5.7.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Signal Generator	Agilent	N5182B	MY53052214	Jun. 29, 2023	Jun. 28, 2024
Programable tempratuce and humidity chamber	JQ	JQ-2000	510101234	Jun. 29, 2023	Jun. 28, 2024

5.7.3. Test Data

Full-Band Mode

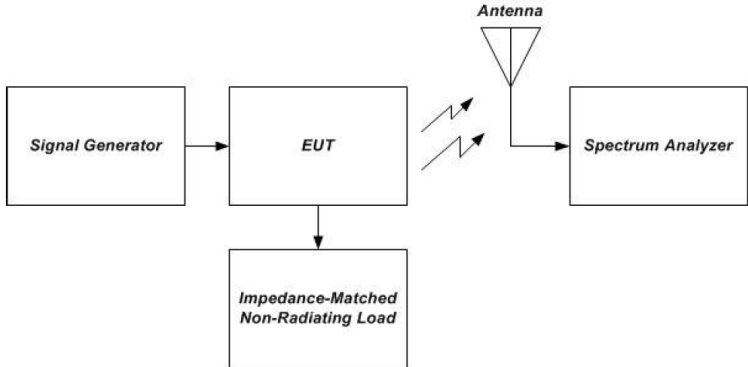
/	Frequency (MHz)	Voltage (%)	Temperature (°C)	Result (Hz)	Result (ppm)	Limit (ppm)	Verdict
Reference Frequency	3840.0002	100	NT	/	/	/	/
Test Frequency	3840.0002	100	-30	0	0	±2.5	PASS
	3840.0002	100	-20	0	0	±2.5	PASS
	3840.0002	100	-10	0	0	±2.5	PASS
	3840.0002	100	0	0	0	±2.5	PASS
	3840.0002	100	10	0	0	±2.5	PASS
	3840.0002	100	20	0	0	±2.5	PASS
	3840.0002	100	30	0	0	±2.5	PASS
	3840.0003	100	40	0.0001	0	±2.5	PASS
	3840.0002	100	50	0	0	±2.5	PASS
	3840.0003	85%	20	0.0001	0	±2.5	PASS
	3840.0002	100%	20	0	0	±2.5	PASS

Sub-Band Mode

/	Frequency (MHz)	Voltage (%)	Temperature (°C)	Result (Hz)	Result (ppm)	Limit (ppm)	Verdict
Reference Frequency	3770.0003	100	NT	/	/	/	/
Test Frequency	3770.0002	100	-30	-0.0001	0	±2.5	PASS
	3770.0002	100	-20	-0.0001	0	±2.5	PASS
	3770.0003	100	-10	0	0	±2.5	PASS
	3770.0002	100	0	-0.0001	0	±2.5	PASS
	3770.0002	100	10	-0.0001	0	±2.5	PASS
	3770.0002	100	20	-0.0001	0	±2.5	PASS
	3770.0002	100	30	-0.0001	0	±2.5	PASS
	3770.0002	100	40	-0.0001	0	±2.5	PASS
	3770.0002	100	50	-0.0001	0	±2.5	PASS
	3770.0002	85%	20	-0.0001	0	±2.5	PASS
	3770.0002	100%	20	-0.0001	0	±2.5	PASS

6. Radiation Spurious Emission

6.1.1. Test Specification

Test Requirement:	FCC Part2 Section 2.1053
Test Method:	KDB 935210 D05 Indus Booster Basic Meas v01r04
Limit:	-13dBm
Test setup:	 <p style="text-align: center;">Figure 10 – Radiated spurious emissions test and instrumentation setup</p>
Test Procedure:	<ol style="list-style-type: none"> a) Place the EUT on an OATS or semi-anechoic chamber turntable 3 m from the receiving antenna.15 b) Connect the EUT to the test equipment as shown in Figure 10 beginning with the uplink output (donor) port. c) Set the signal generator to produce a signal that specified in section 3.3 of this report with the frequency set to the center of the operational band under test, and the power level set at PIN as determined from measurement results per 3.2. d) Measure the radiated spurious emissions from the EUT from the lowest to the highest frequencies as specified in § 2.1057. Maximize the radiated emissions by using the procedures described in ANSI C63.26. e) Capture the peak emissions Test Plotss using a peak detector with Max-Hold for inclusion in the test report. Tabular data is acceptable in lieu of spectrum analyzer Test Plotss. f) Repeat c) through e) for all uplink and downlink operational bands.
Test results:	PASS

6.1.2. Test Instruments

Radiated Emission				
Name	Model No.	Manufacturer	Date of Cal.	Due Date
EMI Test Receiver	ESIB7	R&S	Jun. 30, 2023	Jun. 29, 2024
Spectrum Analyzer	FSQ40	R&S	Jun. 30, 2023	Jun. 29, 2024
Pre-amplifier	8447D	HP	Jun. 28, 2023	Jun. 27, 2024
Pre-amplifier	LNPA_0118G-45	SKET	Feb. 01, 2024	Jan. 31, 2025
Pre-amplifier	LNPA_1840G-50	SKET	Feb. 01, 2024	Jan. 31, 2025
Broadband Antenna	VULB9163	Schwarzbeck	Jul. 02, 2023	Jul. 01, 2024
Horn Antenna	BBHA 9120D	Schwarzbeck	Jul. 02, 2023	Jul. 01, 2024
Horn Antenna	BBHA 9170	Schwarzbeck	Feb. 03, 2024	Feb. 02, 2025
Coaxial cable	RC-18G-N-M	SKET	Feb. 01, 2024	Jan. 31, 2025
Coaxial cable	RC_40G-K-M	SKET	Feb. 01, 2024	Jan. 31, 2025
Loop antenna	FMZB1519B	Schwarzbeck	Jul. 03, 2023	Jul. 02, 2024
Signal Generator	N5182B	Agilent	Jun. 29, 2023	Jun. 28, 2024

6.1.3. Test data

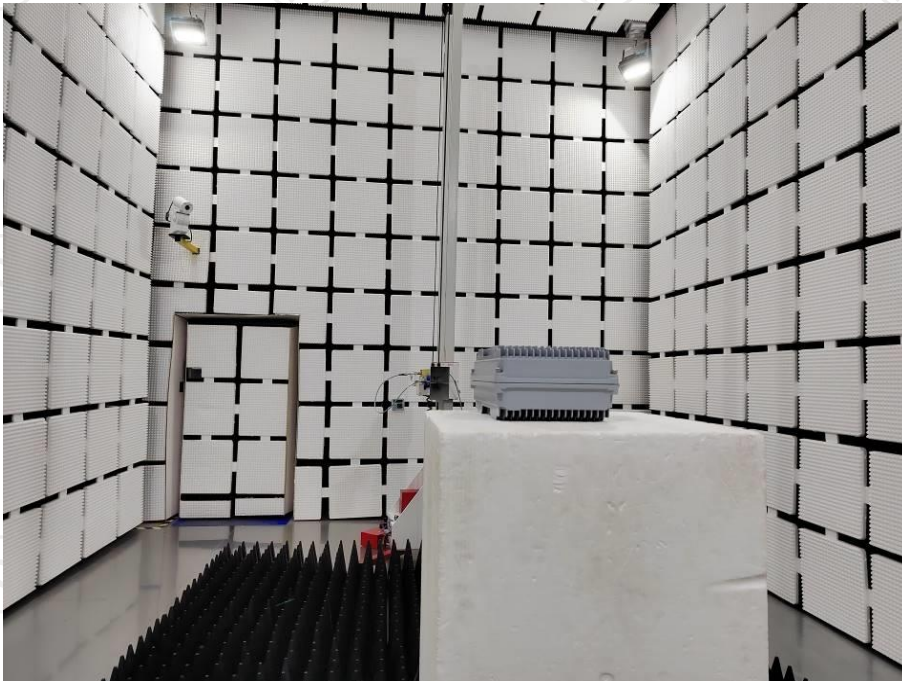
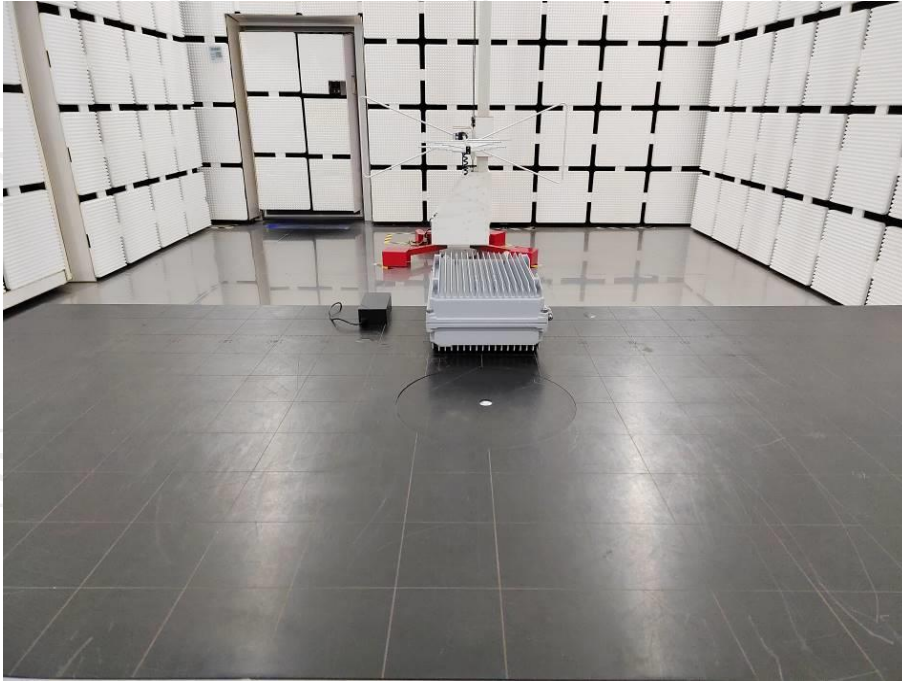
Frequency [MHz]	Antenna polarity [H/V]	Reading Level	Substitution factor	Measurement Level [dBm]	Limit [dBm]	Margin [dB]
Full Band Mode Uplink 5G NR 20MHz						
2613.87	H	-51.56	-2.27	-53.83	-13.00	-40.83
2610.47	V	-46.21	-2.29	-48.50		-35.50
13920.00	H	-67.81	17.62	-50.19		-37.19
14328.00	V	-69.40	17.83	-51.57		-38.57
Full Band Mode Downlink 5G NR 20MHz						
2812.20	H	-63.23	-1.14	-64.37	-13.00	-51.37
2517.53	V	-49.38	-2.71	-52.09		-39.09
11052.67	H	-68.61	16.07	-52.54		-39.54
13986.87	V	-70.75	19.12	-51.63		-38.63

Frequency [MHz]	Antenna polarity [H/V]	Reading Level	Substitution factor	Measurement Level [dBm]	Limit [dBm]	Margin [dB]
Sub-Band Mode Uplink 5G NR 20MHz						
2461.43	H	-62.14	-3.02	-65.16	-13.00	-52.16
2543.03	V	-51.31	-2.60	-53.91		-40.91
11137.40	H	-68.50	16.00	-52.50		-39.50
7540.47	V	-60.47	10.46	-50.01		-37.01
Sub-Band Mode Downlink 5G NR 20MHz						
3052.47	H	-63.56	-0.08	-63.64	-13.00	-50.64
2463.13	V	-54.84	-2.92	-57.76		-44.76
13952.87	H	-69.31	17.74	-51.57		-38.57
13953.43	V	-69.83	18.95	-50.88		-37.88

Note: All signal type bandwidths have been tested, but the test data only show the worst case (5G NR 20 MHz) in this report.

Appendix A: Photographs of Test Setup

Product: SureCall ULTRAWIDEBAND 5G C-BAND SIGNAL BOOSTER
Model: SC-5G-CB





Appendix B: Photographs of EUT

Refer to the Appendix

*******END OF REPORT*******