

Appendix A

Test Information:

Serial No.:	2V3P-2	Test Date:	2024/12/18
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	20.6	Relative Humidity: (%)	35	ATM Pressure: (kPa)	102.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Minl-Clruits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/02/25	2025/02/24
Micro-Coax	Coaxial Cable	UFB205A	323308-015	2024/06/01	2025/05/31
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM488	2024/06/07	2025/06/06
All-sun	Multimeter	EM305A	8348897	2024/08/16	2025/08/15
R&S	Spectrum Analyzer	FSV40	101947	2024/09/05	2025/09/04
R&S	Wideband Radio Communication Tester	CMW500	144976	2024/09/05	2025/09/04
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2024/09/06	2025/09/05
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Frequency stability vs. temperature &Frequency stability vs. voltage Compliance

FCC Part 22H

WCDMA Band 5

Mode	Test Channel (MHz)	Frequency Error		Limit (ppm)	Verdict
		(Hz)	(ppm)		
R99_Middle_TN/VN	836.6	-1.0	-0.0012	±2.5	Pass
R99_Middle_T1/VN	836.6	0.3	0.0003	±2.5	Pass
R99_Middle_T2/VN	836.6	-0.3	-0.0003	±2.5	Pass
R99_Middle_T3/VN	836.6	-0.6	-0.0007	±2.5	Pass
R99_Middle_T4/VN	836.6	0.0	0.0000	±2.5	Pass
R99_Middle_T5/VN	836.6	0.1	0.0001	±2.5	Pass
R99_Middle_T6/VN	836.6	-0.4	-0.0005	±2.5	Pass
R99_Middle_T7/VN	836.6	0.2	0.0003	±2.5	Pass
R99_Middle_T8/VN	836.6	-0.4	-0.0005	±2.5	Pass
R99_Middle_TN/VH	836.6	-0.2	-0.0003	±2.5	Pass
R99_Middle_TN/VL	836.6	-0.1	-0.0002	±2.5	Pass

Note:

Frequency Error (ppm)=Frequency Error (MHz)/Test Channel(MHz)*10⁶
TN: 20°C; T1: -30°C; T2: -20°C; T3: -10°C; T4: 0°C; T5: 10°C; T6: 30°C; T7: 40°C; T8: 50°C.
VN: Normal Voltage; VL: Low Voltage; VH: High Voltage.

FCC Part 24E

WCDMA Band 2

Mode	Result (MHz)	Limit (MHz)	Verdict
R99_Low_TN/VN	1850.325	1850	Pass
R99_Low_T1/VN	1850.295	1850	Pass
R99_Low_T2/VN	1850.325	1850	Pass
R99_Low_T3/VN	1850.315	1850	Pass
R99_Low_T4/VN	1850.325	1850	Pass
R99_Low_T5/VN	1850.305	1850	Pass
R99_Low_T6/VN	1850.305	1850	Pass
R99_Low_T7/VN	1850.305	1850	Pass
R99_Low_T8/VN	1850.305	1850	Pass
R99_Low_TN/VH	1850.295	1850	Pass
R99_Low_TN/VL	1850.315	1850	Pass
R99_High_TN/VN	1909.685	1910	Pass
R99_High_T1/VN	1909.675	1910	Pass
R99_High_T2/VN	1909.655	1910	Pass
R99_High_T3/VN	1909.675	1910	Pass
R99_High_T4/VN	1909.685	1910	Pass
R99_High_T5/VN	1909.665	1910	Pass
R99_High_T6/VN	1909.665	1910	Pass
R99_High_T7/VN	1909.665	1910	Pass
R99_High_T8/VN	1909.695	1910	Pass
R99_High_TN/VH	1909.665	1910	Pass
R99_High_TN/VL	1909.675	1910	Pass

Note:
TN: 20°C; **T1:** -30°C; **T2:** -20°C; **T3:** -10°C; **T4:** 0°C; **T5:** 10°C; **T6:** 30°C; **T7:** 40°C; **T8:** 50°C.
VN: Normal Voltage; **VL:** Low Voltage; **VH:** High Voltage.

Occupied Bandwidth

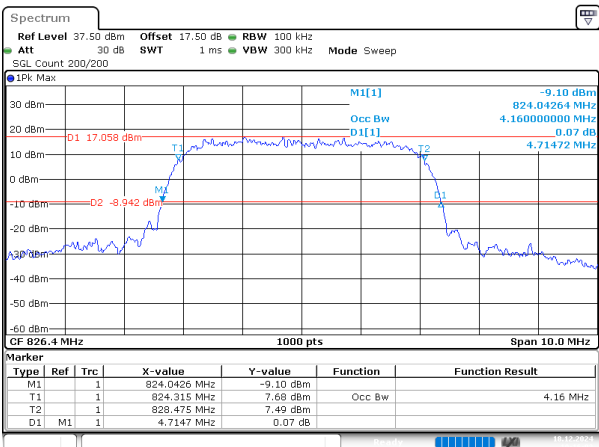
FCC Part 22H

WCDMA Band 5, Normal

Mode	99% OBW (MHz)	26dB BW (MHz)
R99_Low	4.160	4.715
R99_Middle	4.130	4.705
R99_High	4.130	4.715
HSDPA_Low_Subtest1	4.130	4.735
HSDPA_Middle_Subtest1	4.150	4.715
HSDPA_High_Subtest1	4.120	4.745
HSUPA_Low_Subtest1	4.160	4.725
HSUPA_Middle_Subtest1	4.110	4.865
HSUPA_High_Subtest1	4.100	4.705

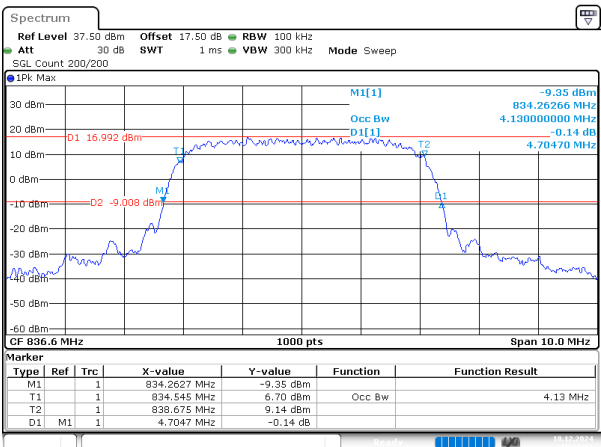
WCDMA Band 5, Normal

R99_Low



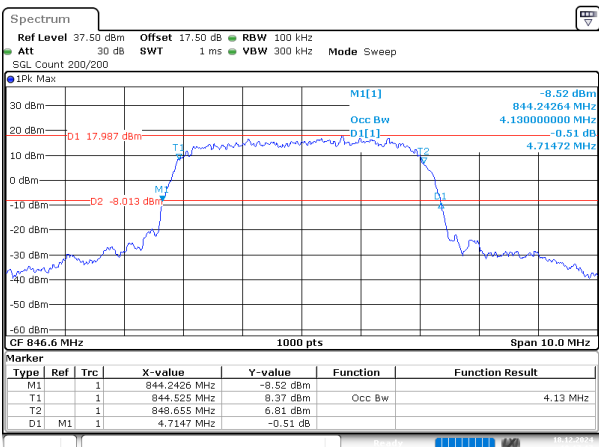
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R99_Middle



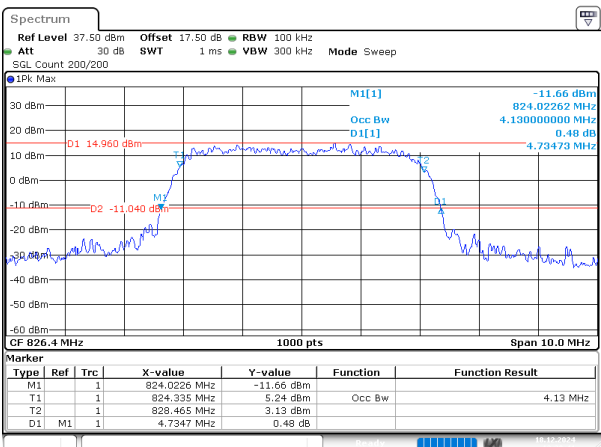
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R99_High



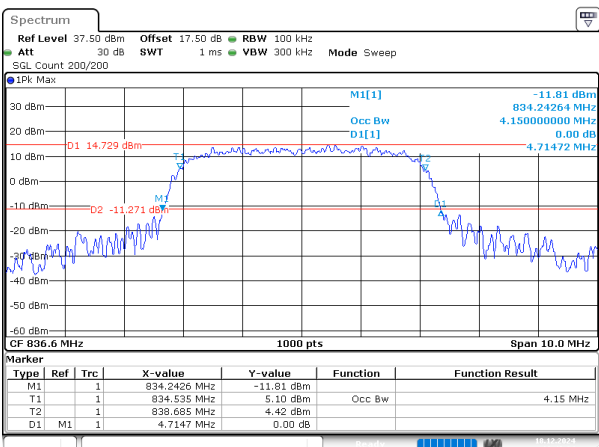
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HSDPA_Low_Subtest1



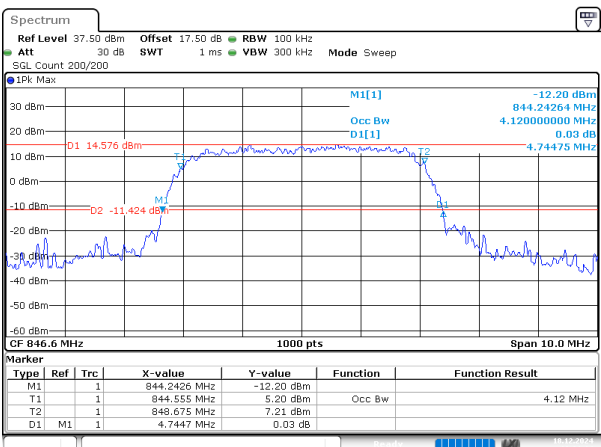
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HSDPA_Middle_Subtest1



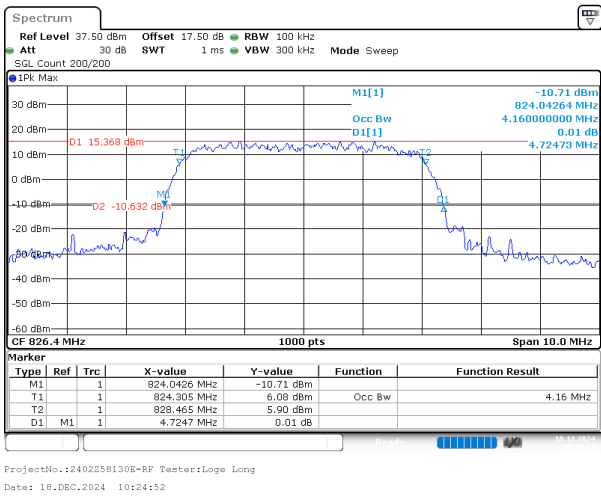
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HSDPA_High_Subtest1

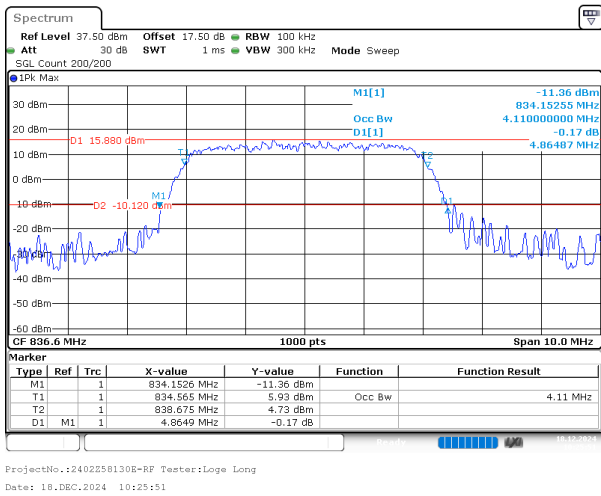


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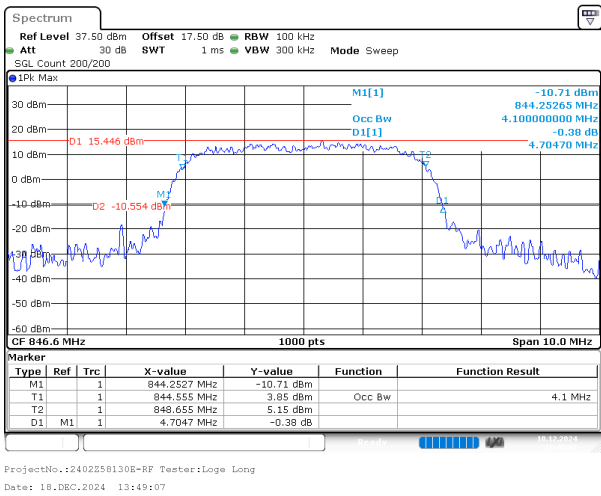
HSUPA_Low_Subtest1



HSUPA_Middle_Subtest1



HSUPA_High_Subtest1



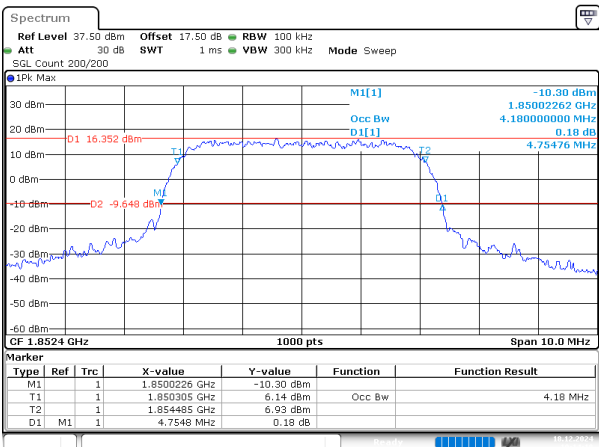
FCC Part 24E

WCDMA Band 2, Normal

Mode	99% OBW (MHz)	26dB BW (MHz)
R99_Low	4.180	4.755
R99_Middle	4.180	4.735
R99_High	4.160	4.725
HSDPA_Low_Subtest1	4.140	4.765
HSDPA_Middle_Subtest1	4.160	4.715
HSDPA_High_Subtest1	4.170	4.735
HSUPA_Low_Subtest1	4.140	4.745
HSUPA_Middle_Subtest1	4.200	4.745
HSUPA_High_Subtest1	4.170	4.735

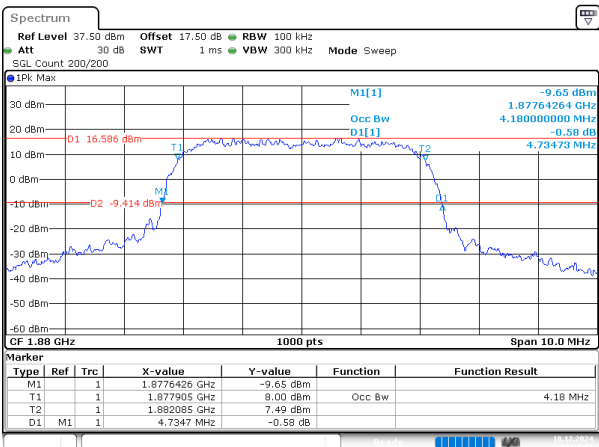
WCDMA Band 2, Normal

R99_Low



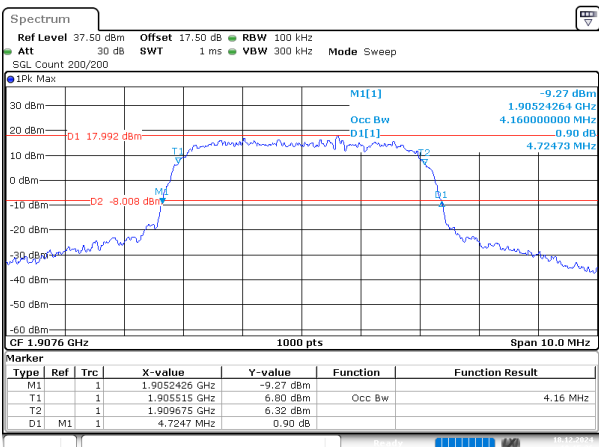
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R99_Middle



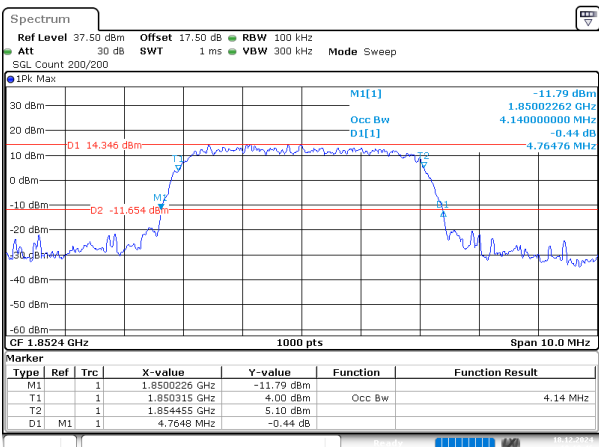
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R99_High



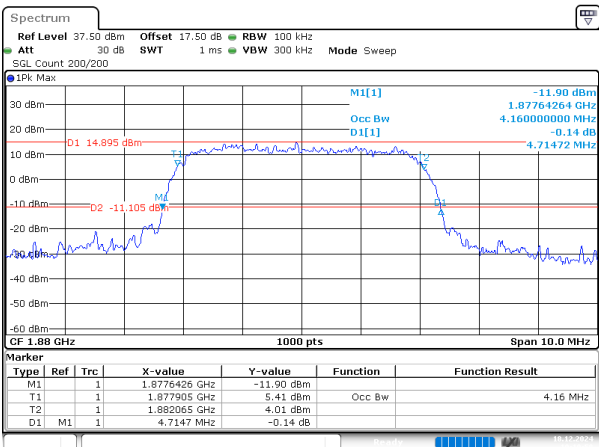
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HSDPA_Low_Subtest1



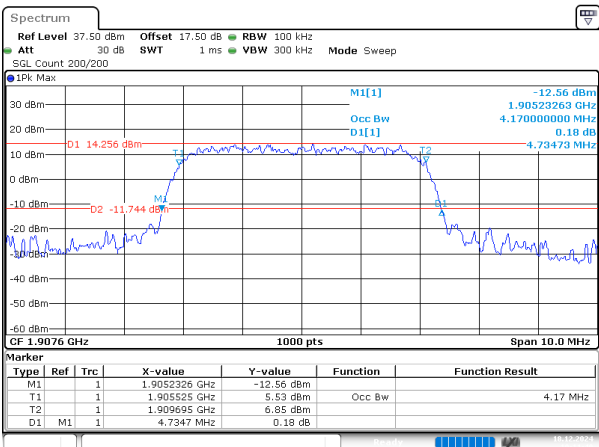
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HSDPA_Middle_Subtest1



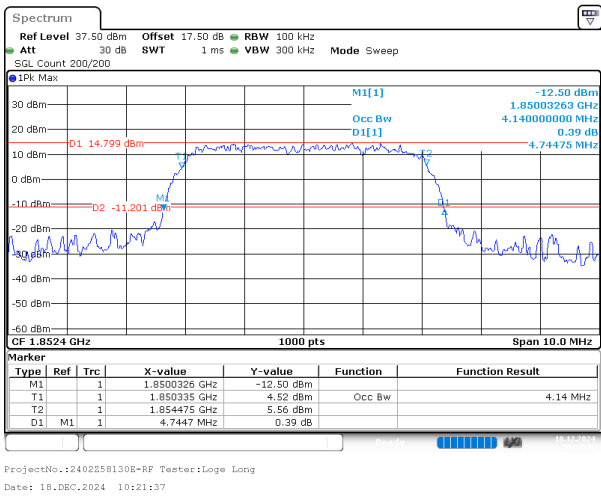
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HSDPA_High_Subtest1

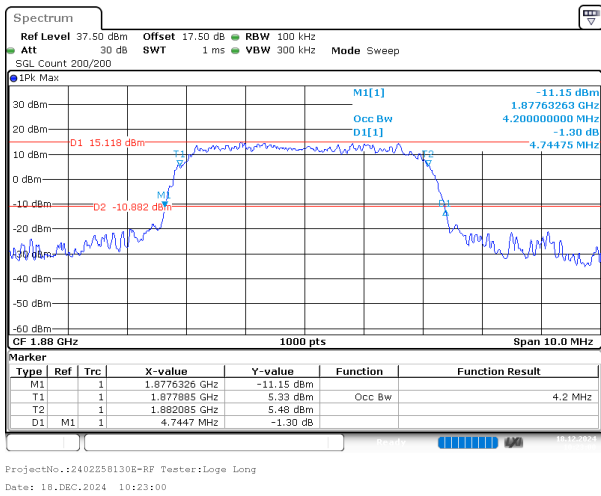


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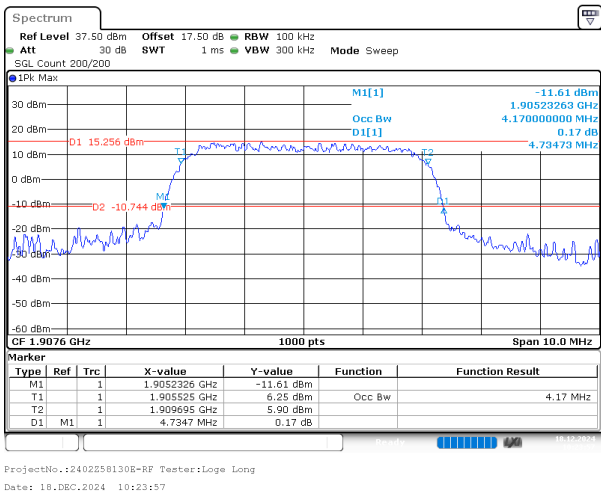
HSUPA_Low_Subtest1



HSUPA_Middle_Subtest1



HSUPA_High_Subtest1



RF Output Power**FCC Part 22H****WCDMA Band 5, Normal**

Mode	Conducted Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
R99_Low	22.64	20.69	38.45	Pass
R99_Middle	22.73	20.78	38.45	Pass
R99_High	22.78	20.83	38.45	Pass
HSDPA_Low_Subtest1	19.18	17.23	38.45	Pass
HSDPA_Low_Subtest2	19.06	17.11	38.45	Pass
HSDPA_Low_Subtest3	19.12	17.17	38.45	Pass
HSDPA_Low_Subtest4	19.04	17.09	38.45	Pass
HSDPA_Middle_Subtest1	19.15	17.20	38.45	Pass
HSDPA_Middle_Subtest2	19.34	17.39	38.45	Pass
HSDPA_Middle_Subtest3	19.30	17.35	38.45	Pass
HSDPA_Middle_Subtest4	19.17	17.22	38.45	Pass
HSDPA_High_Subtest1	19.37	17.42	38.45	Pass
HSDPA_High_Subtest2	19.33	17.38	38.45	Pass
HSDPA_High_Subtest3	19.27	17.32	38.45	Pass
HSDPA_High_Subtest4	19.27	17.32	38.45	Pass
HSUPA_Low_Subtest1	19.29	17.24	38.45	Pass
HSUPA_Low_Subtest2	19.31	17.36	38.45	Pass
HSUPA_Low_Subtest3	19.25	17.30	38.45	Pass
HSUPA_Low_Subtest4	19.25	17.20	38.45	Pass
HSUPA_Low_Subtest5	19.20	17.25	38.45	Pass
HSUPA_Middle_Subtest1	19.52	17.57	38.45	Pass
HSUPA_Middle_Subtest2	19.46	17.51	38.45	Pass
HSUPA_Middle_Subtest3	19.37	17.42	38.45	Pass
HSUPA_Middle_Subtest4	19.44	17.49	38.45	Pass
HSUPA_Middle_Subtest5	19.43	17.48	38.45	Pass
HSUPA_High_Subtest1	19.49	17.54	38.45	Pass
HSUPA_High_Subtest2	19.41	17.46	38.45	Pass
HSUPA_High_Subtest3	19.39	17.44	38.45	Pass
HSUPA_High_Subtest4	19.39	17.44	38.45	Pass
HSUPA_High_Subtest5	19.35	17.40	38.45	Pass

Mode	Conducted Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
HSPA+_Low_Subtest1	19.27	17.32	38.45	Pass
HSPA+_Middle_Subtest1	19.34	17.39	38.45	Pass
HSPA+_High_Subtest1	19.32	17.37	38.45	Pass
DC-HSDPA_Low_Subtest1	19.22	17.27	38.45	Pass
DC-HSDPA_Low_Subtest2	19.20	17.25	38.45	Pass
DC-HSDPA_Low_Subtest3	19.14	17.19	38.45	Pass
DC-HSDPA_Low_Subtest4	19.19	17.24	38.45	Pass
DC-HSDPA_Middle_Subtest1	19.32	17.37	38.45	Pass
DC-HSDPA_Middle_Subtest2	19.31	17.36	38.45	Pass
DC-HSDPA_Middle_Subtest3	19.33	17.38	38.45	Pass
DC-HSDPA_Middle_Subtest4	19.32	17.37	38.45	Pass
DC-HSDPA_High_Subtest1	19.36	17.41	38.45	Pass
DC-HSDPA_High_Subtest2	19.33	17.38	38.45	Pass
DC-HSDPA_High_Subtest3	19.35	17.40	38.45	Pass
DC-HSDPA_High_Subtest4	19.31	17.36	38.45	Pass

Note:

ERP = Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)

Antenna Gain(dBd) = Antenna Gain(dBi) - 2.15

1.Antenna Gain = 0.3dBi;

2.Cable Loss = 0.1dB.

FCC Part 24E**WCDMA Band 2, Normal**

Mode	Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
R99_Low	22.81	23.31	33	Pass
R99_Middle	22.90	23.40	33	Pass
R99_High	22.81	23.31	33	Pass
HSDPA_Low_Subtest1	19.06	19.56	33	Pass
HSDPA_Low_Subtest2	19.15	19.65	33	Pass
HSDPA_Low_Subtest3	19.14	19.64	33	Pass
HSDPA_Low_Subtest4	18.87	19.57	33	Pass
HSDPA_Middle_Subtest1	19.24	19.74	33	Pass
HSDPA_Middle_Subtest2	19.14	19.64	33	Pass
HSDPA_Middle_Subtest3	19.20	19.70	33	Pass
HSDPA_Middle_Subtest4	19.07	19.57	33	Pass
HSDPA_High_Subtest1	19.22	19.72	33	Pass
HSDPA_High_Subtest2	19.23	19.73	33	Pass
HSDPA_High_Subtest3	19.25	19.75	33	Pass
HSDPA_High_Subtest4	19.25	19.75	33	Pass
HSUPA_Low_Subtest1	19.26	19.76	33	Pass
HSUPA_Low_Subtest2	19.25	19.75	33	Pass
HSUPA_Low_Subtest3	19.18	19.68	33	Pass
HSUPA_Low_Subtest4	19.26	19.76	33	Pass
HSUPA_Low_Subtest5	19.42	19.92	33	Pass
HSUPA_Middle_Subtest1	19.27	19.77	33	Pass
HSUPA_Middle_Subtest2	19.31	19.81	33	Pass
HSUPA_Middle_Subtest3	19.36	19.86	33	Pass
HSUPA_Middle_Subtest4	19.39	19.89	33	Pass
HSUPA_Middle_Subtest5	19.28	19.78	33	Pass
HSUPA_High_Subtest1	19.40	19.90	33	Pass
HSUPA_High_Subtest2	19.36	19.86	33	Pass
HSUPA_High_Subtest3	19.38	19.88	33	Pass
HSUPA_High_Subtest4	19.37	19.87	33	Pass
HSUPA_High_Subtest5	19.24	19.74	33	Pass

Mode	Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
HSPA+_Low_Subtest1	19.19	19.69	33	Pass
HSPA+_Middle_Subtest1	19.24	19.74	33	Pass
HSPA+_High_Subtest1	19.22	19.72	33	Pass
DC-HSDPA_Low_Subtest1	19.14	19.64	33	Pass
DC-HSDPA_Low_Subtest2	19.12	19.62	33	Pass
DC-HSDPA_Low_Subtest3	19.13	19.63	33	Pass
DC-HSDPA_Low_Subtest4	19.11	19.61	33	Pass
DC-HSDPA_Middle_Subtest1	19.24	19.74	33	Pass
DC-HSDPA_Middle_Subtest2	19.21	19.71	33	Pass
DC-HSDPA_Middle_Subtest3	19.23	19.73	33	Pass
DC-HSDPA_Middle_Subtest4	19.21	19.71	33	Pass
DC-HSDPA_High_Subtest1	19.23	19.73	33	Pass
DC-HSDPA_High_Subtest2	19.18	19.68	33	Pass
DC-HSDPA_High_Subtest3	19.22	19.72	33	Pass
DC-HSDPA_High_Subtest4	19.23	19.73	33	Pass

Note:

EIRP = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

1.Antenna Gain = 0.7dBi;

2.Cable Loss = 0.2dB.

Peak-to-average Ratio(PAR)

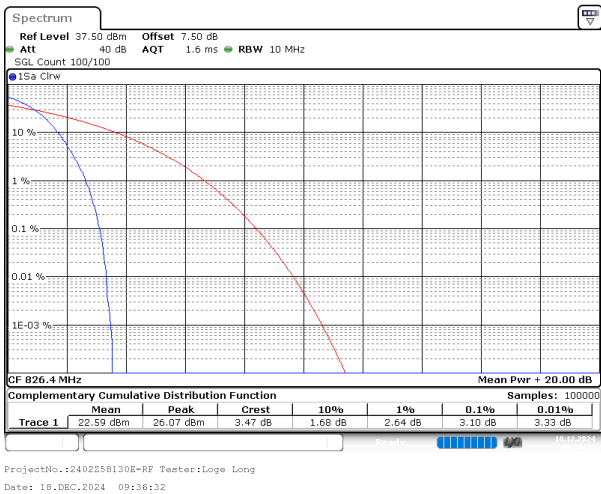
FCC Part 22H

WCDMA Band 5, Normal

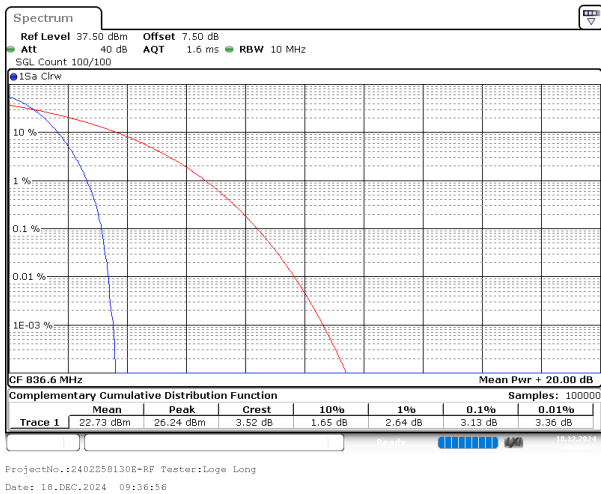
Mode	Result (dB)	Limit (dB)
R99_Low	3.10	13
R99_Middle	3.13	13
R99_High	3.22	13
HSDPA_Low_Subtest1	5.10	13
HSDPA_Middle_Subtest1	4.90	13
HSDPA_High_Subtest1	5.28	13
HSUPA_Low_Subtest1	6.46	13
HSUPA_Middle_Subtest1	6.84	13
HSUPA_High_Subtest1	6.93	13

WCDMA Band 5, Normal

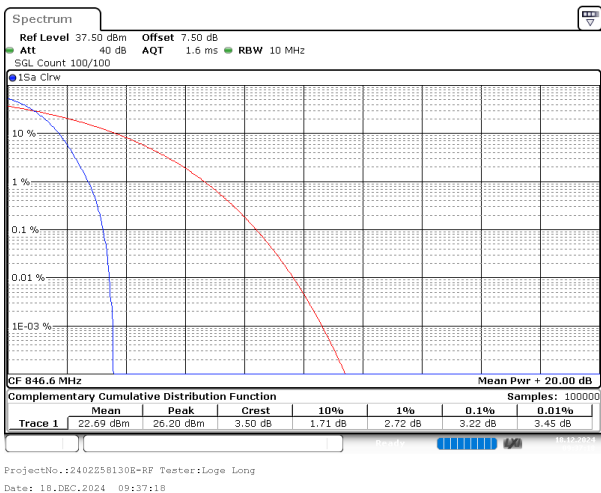
R99_Low



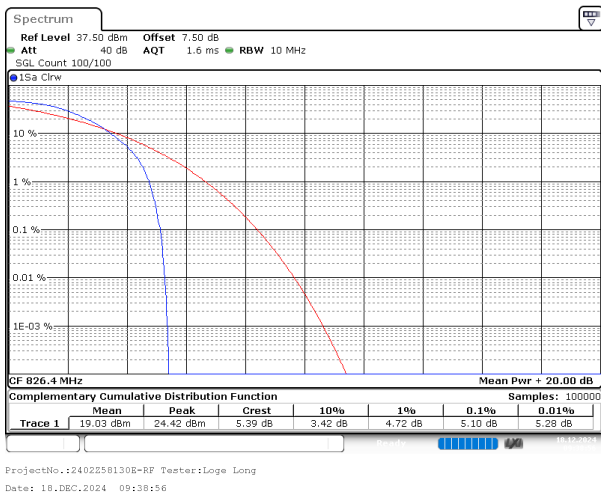
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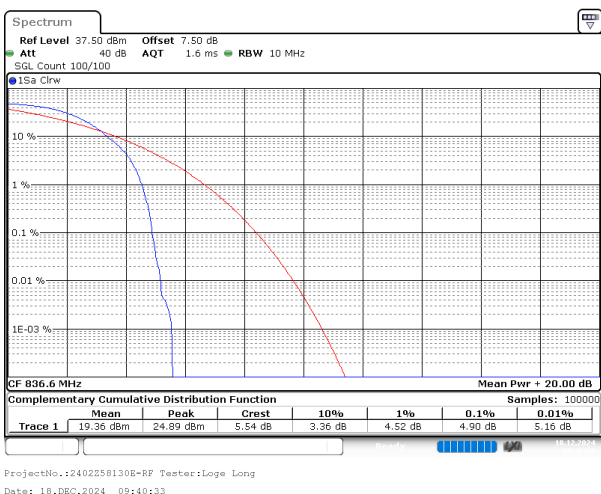
R99_High



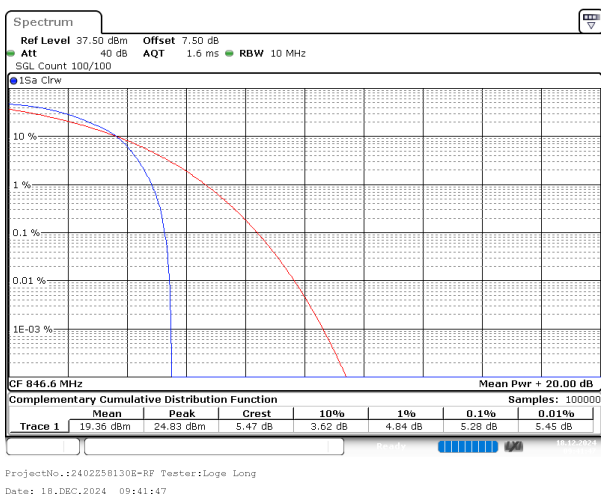
HSDPA_Low_Subtest1



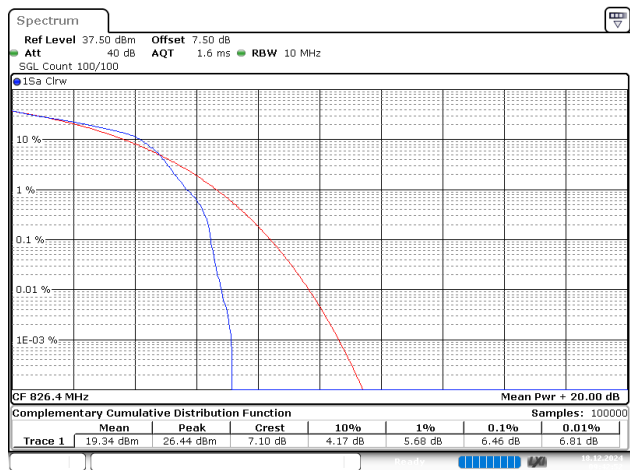
HSDPA_Middle_Subtest1



HSDPA_High_Subtest1

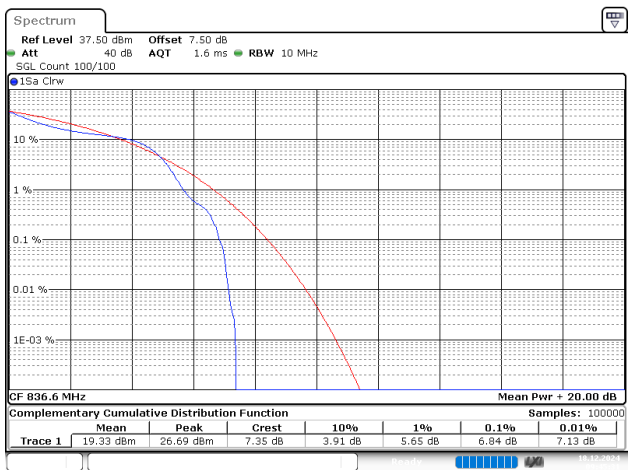


HSUPA_Low_Subtest1



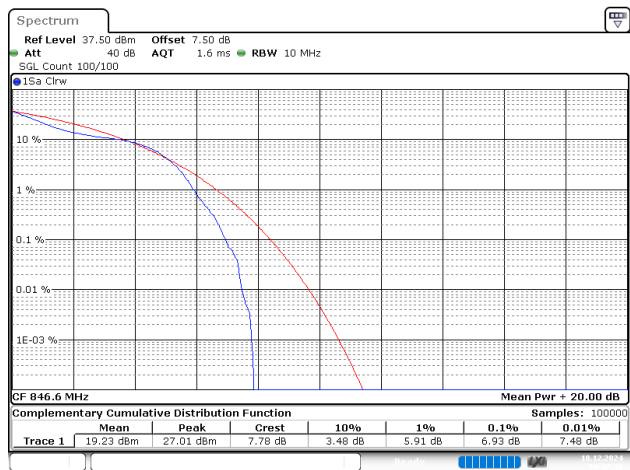
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Date: 18.DEC.2024 09:42:52

HSUPA_Middle_Subtest1



ProjectNo.:2402Z58130E-RF Tester:Loge Long
Date: 18.DEC.2024 09:45:31

HSUPA_High_Subtest1



ProjectNo.:2402Z58130E-RF Tester:Loge Long
Date: 18.DEC.2024 09:47:38

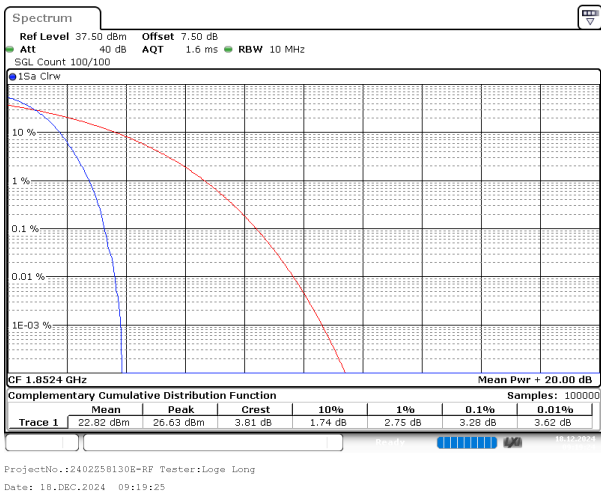
FCC Part 24E

WCDMA Band 2, Normal

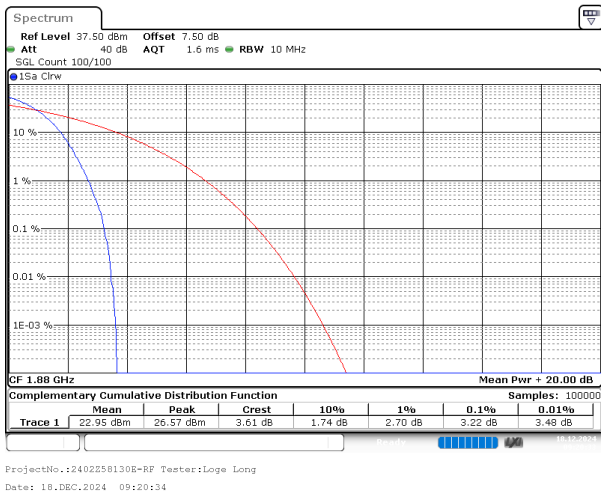
Mode	Result (dB)	Limit (dB)
R99_Low	3.28	13
R99_Middle	3.22	13
R99_High	3.13	13
HSDPA_Low_Subtest1	5.19	13
HSDPA_Middle_Subtest1	4.78	13
HSDPA_High_Subtest1	4.64	13
HSUPA_Low_Subtest1	6.38	13
HSUPA_Middle_Subtest1	6.23	13
HSUPA_High_Subtest1	6.38	13

WCDMA Band 2, Normal

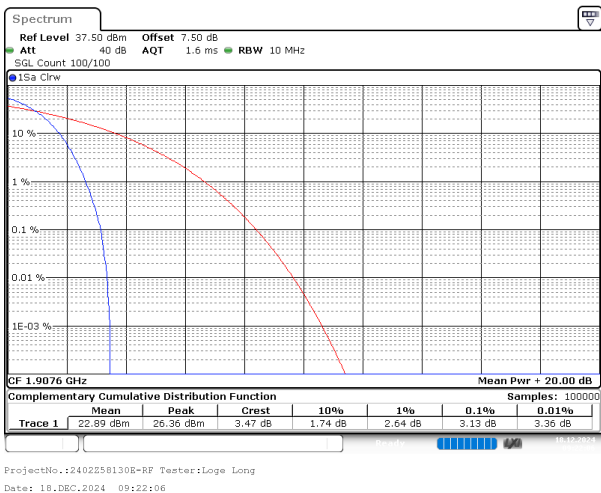
R99_Low



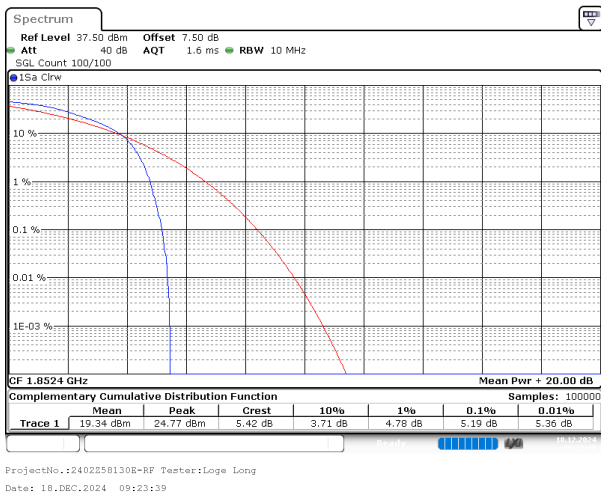
R99_Middle



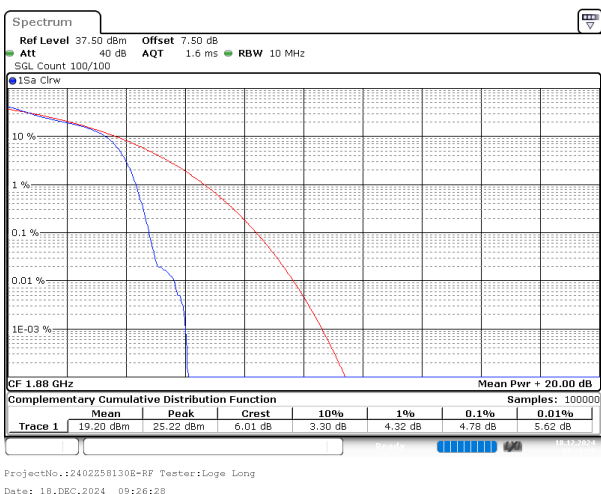
R99_High



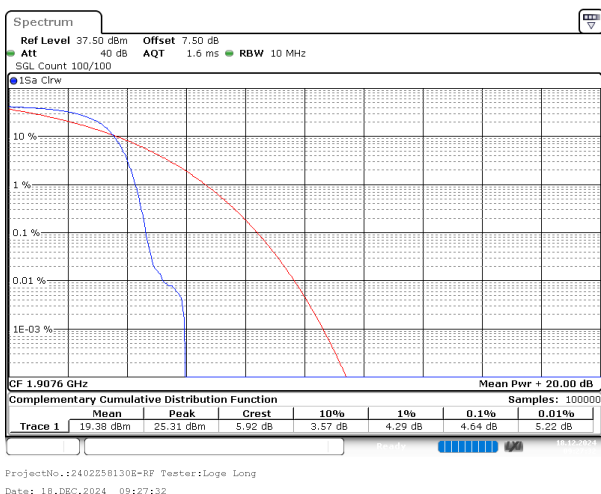
HSDPA_Low_Subtest1



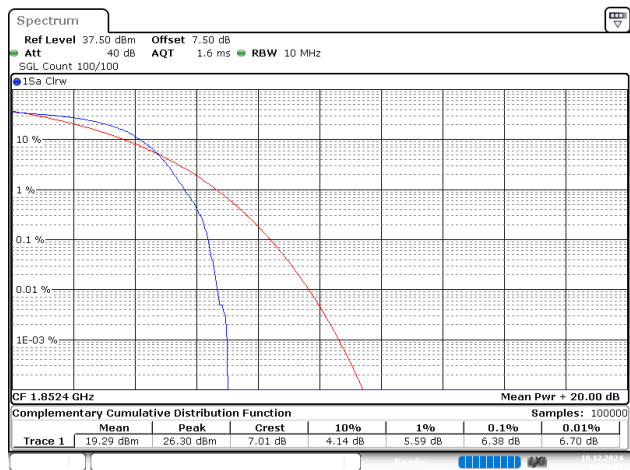
HSDPA_Middle_Subtest1



HSDPA_High_Subtest1

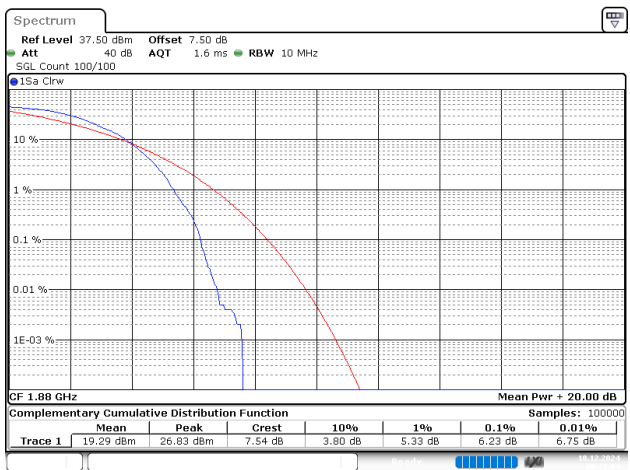


HSUPA_Low_Subtest1



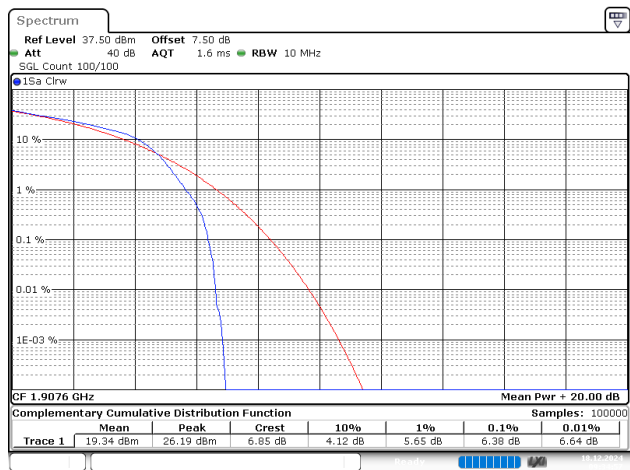
ProjectNo.:2402Z58130E-RF Tester:Loge Long
Date: 18.DEC.2024 09:29:05

HSUPA_Middle_Subtest1



ProjectNo.:2402Z58130E-RF Tester:Loge Long
Date: 18.DEC.2024 09:32:04

HSUPA_High_Subtest1



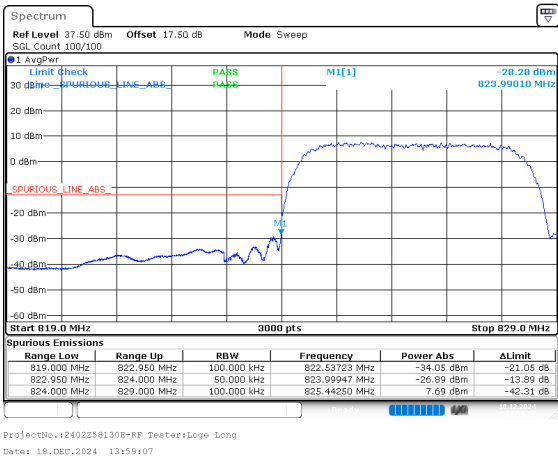
ProjectNo.:2402Z58130E-RF Tester:Loge Long
Date: 18.DEC.2024 09:34:57

Out of band emission,Band Edge

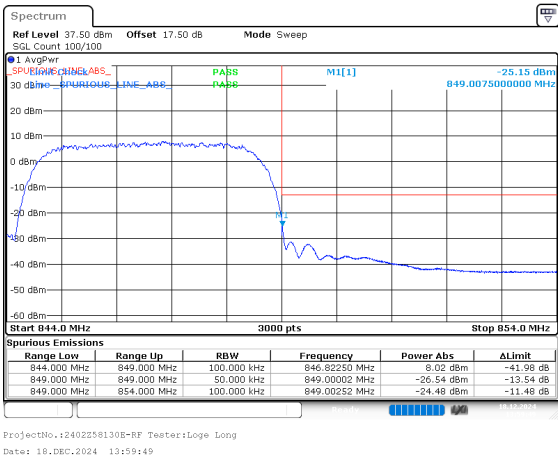
FCC Part 22H

WCDMA Band 5, Normal

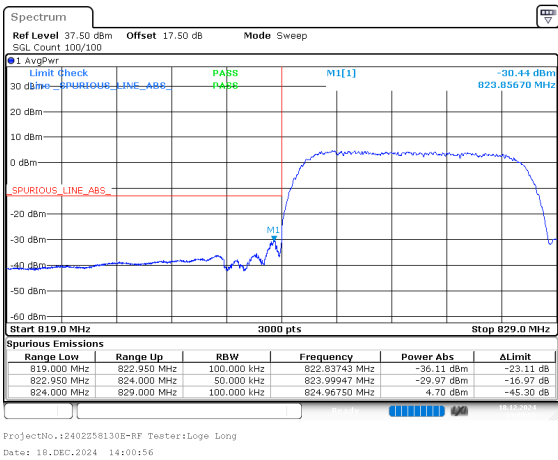
R99_Low



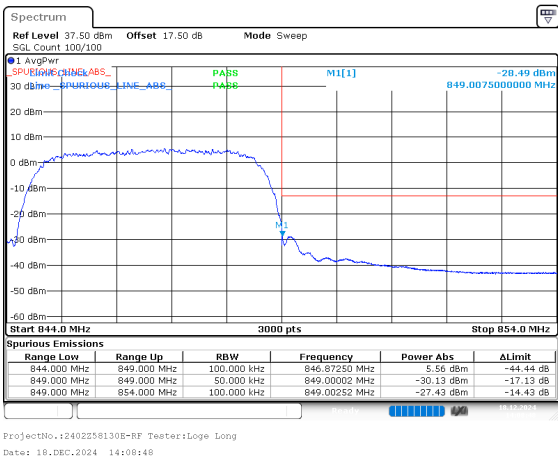
R99_High



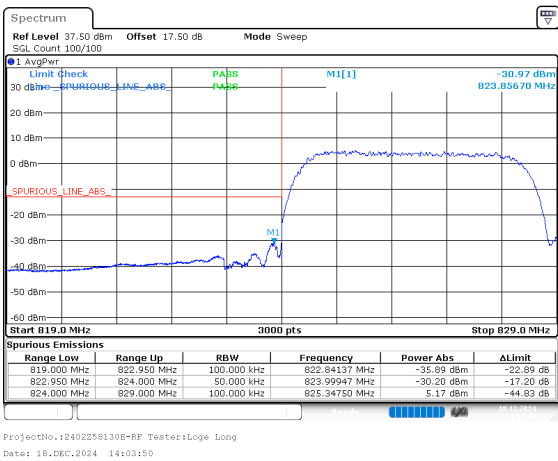
HSDPA_Low_Subtest1



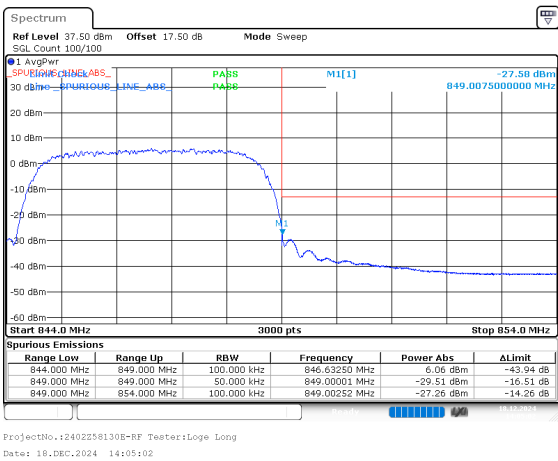
HSDPA_High_Subtest1



HSUPA_Low_Subtest1



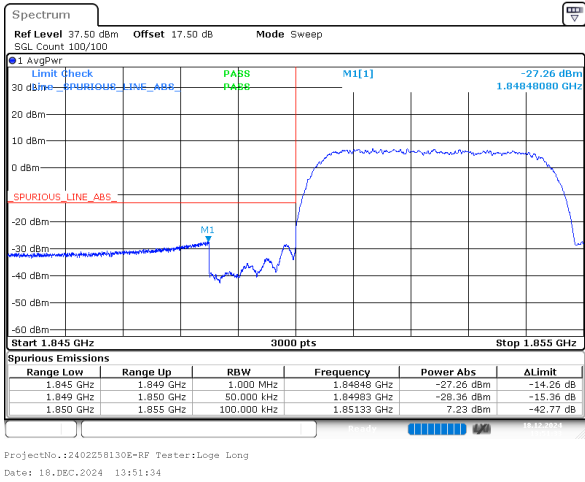
HSUPA_High_Subtest1



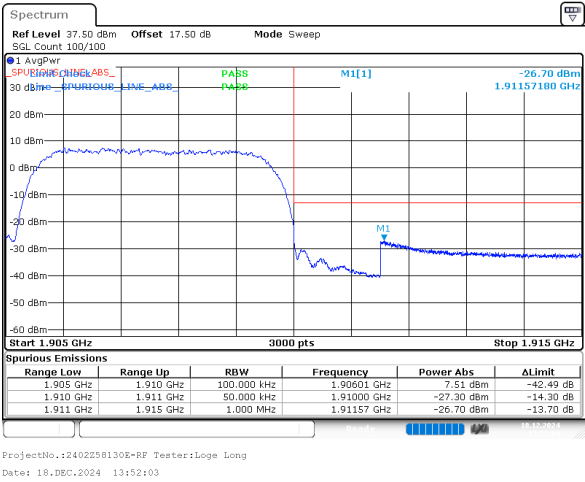
FCC Part 24E

WCDMA Band 2, Normal

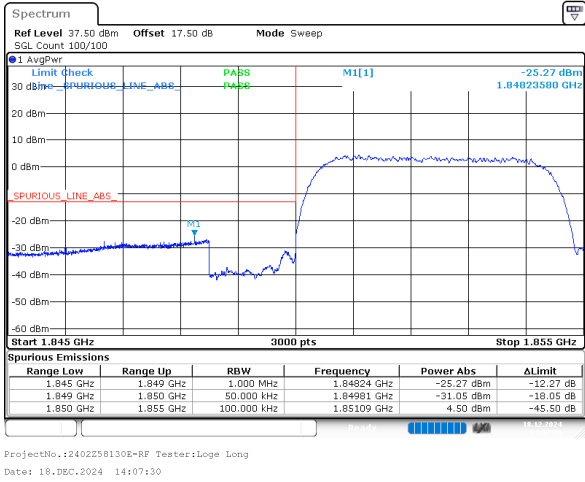
R99_Low



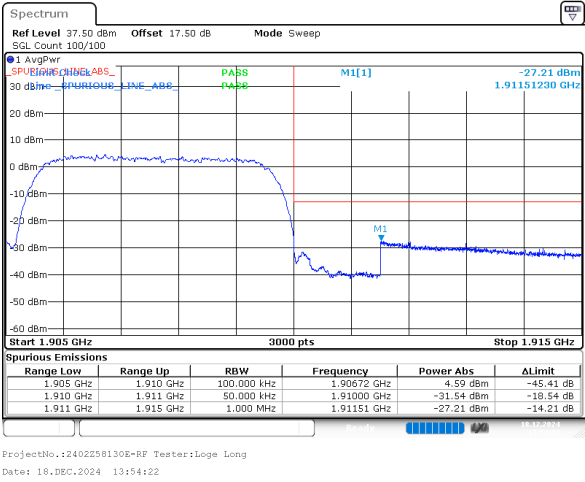
R99_High



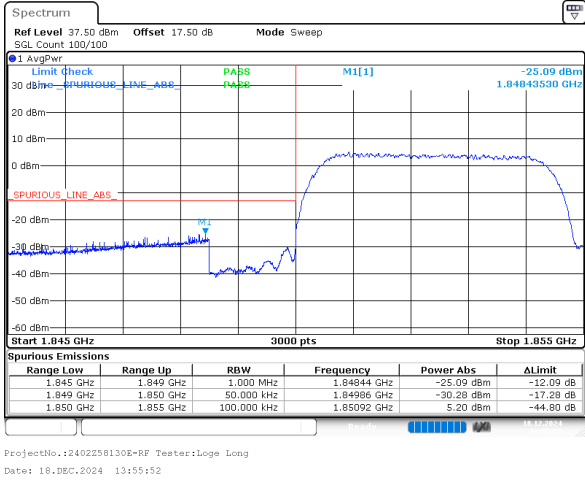
HSDPA_Low_Subtest1



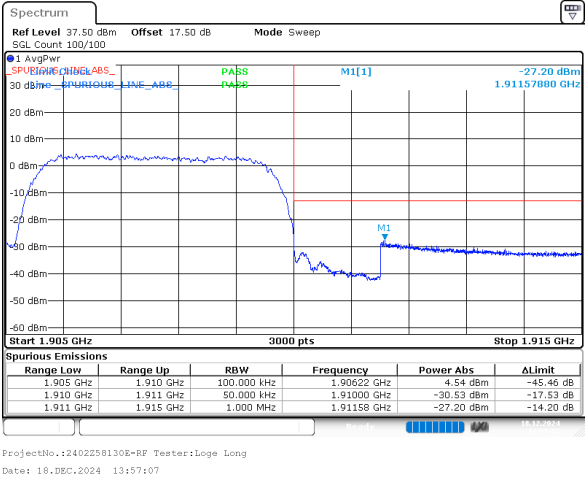
HSDPA_High_Subtest1



HSUPA_Low_Subtest1



HSUPA_High_Subtest1

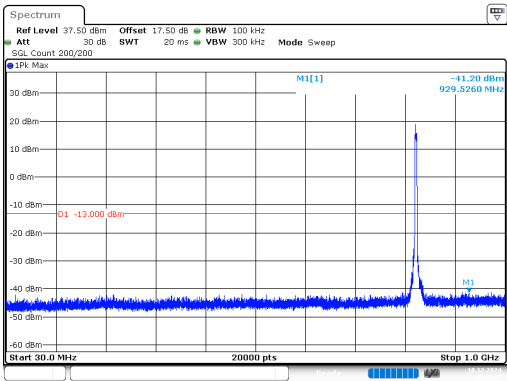


Spurious Emissions at Antenna Terminal

FCC Part 22H
WCDMA Band 5, Normal
Worst case

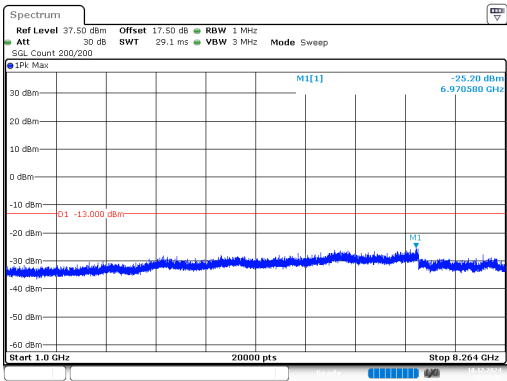
R99_Low

Below 1G



ProjectNo.:2402258130E-RF Tester:Loge Long
Date: 18.DEC.2024 15:27:12

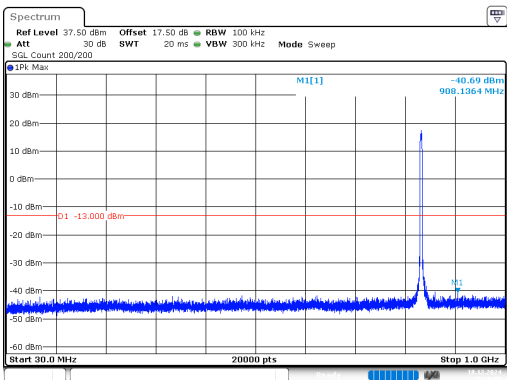
Above 1G



ProjectNo.:2402258130E-RF Tester:Loge Long
Date: 18.DEC.2024 15:27:38

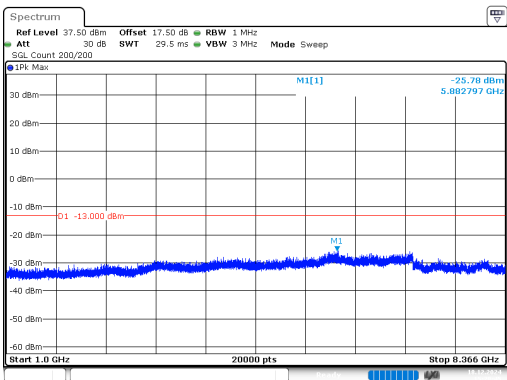
R99_Middle

Below 1G



ProjectNo.:2402258130E-RF Tester:Loge Long
Date: 18.DEC.2024 15:28:18

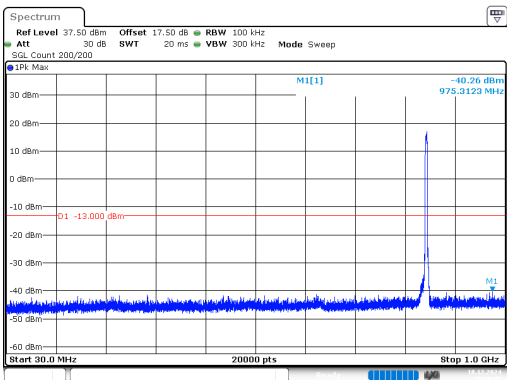
Above 1G



ProjectNo.:2402258130E-RF Tester:Loge Long
Date: 18.DEC.2024 15:28:45

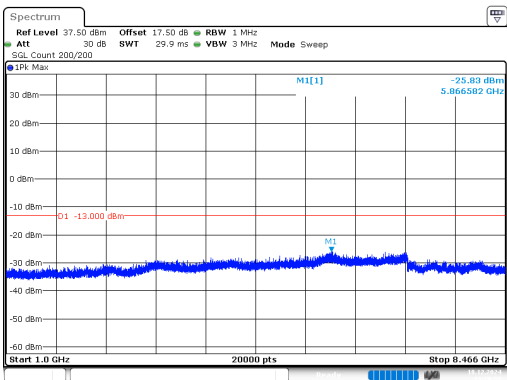
R99_High

Below 1G



ProjectNo.:2402258130E-RF Tester:Loge Long
Date: 18.DEC.2024 15:29:25

Above 1G



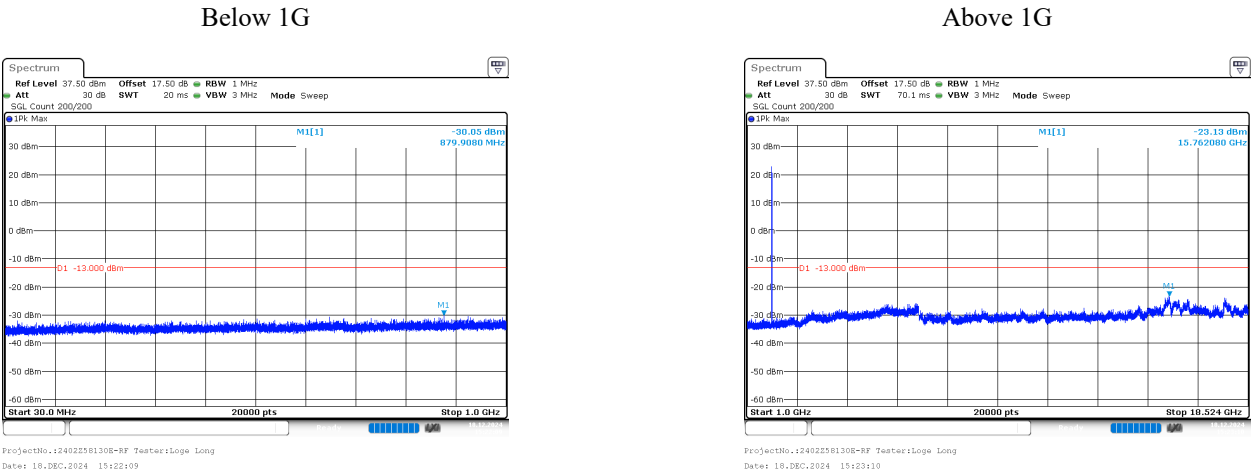
ProjectNo.:2402258130E-RF Tester:Loge Long
Date: 18.DEC.2024 15:29:52

FCC Part 24E

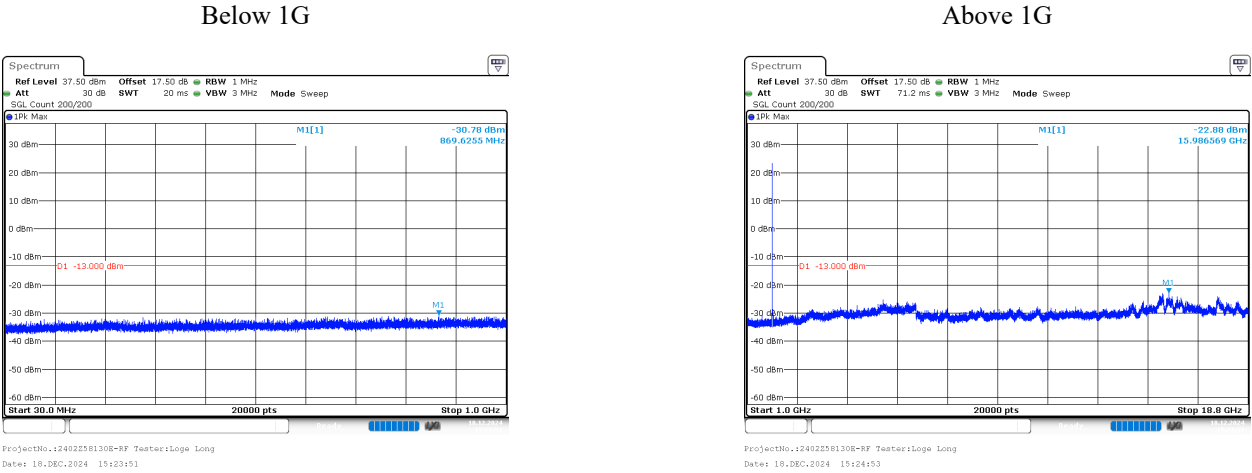
WCDMA Band 2, Normal

Worst case

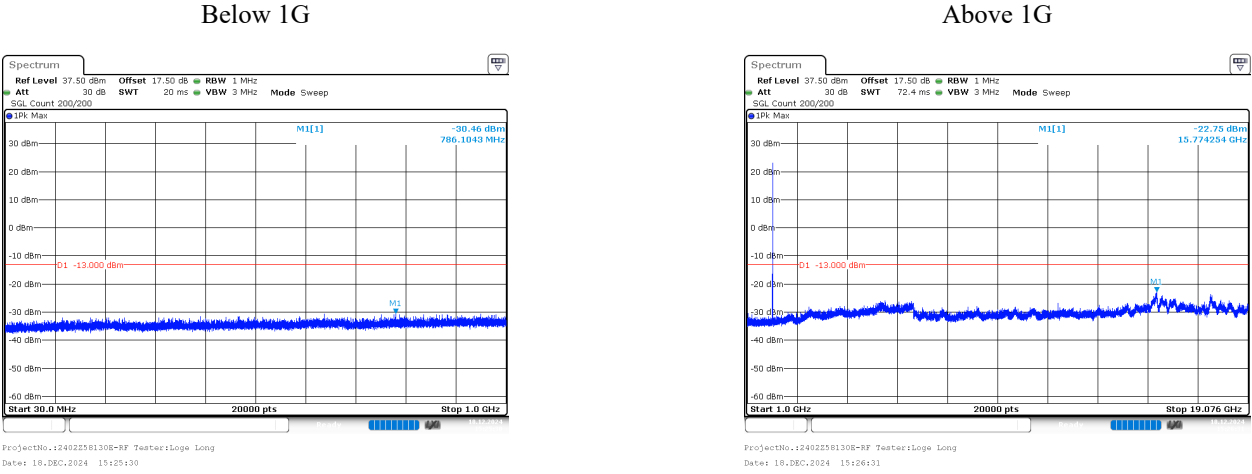
R99_Low



R99_Middle



R99_High



***** END *****