

Appendix A

Test Information:

Serial No.:	31XH-1	Test Date:	2025/05/09
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.3	Relative Humidity: (%)	68	ATM Pressure: (kPa)	100.8
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Micro-Coax	Coaxial Cable	UFB205A	323308-015	2024/06/01	2025/05/31
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM502	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
Minl-Clrucits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2025/02/25	2026/02/24
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

GSM 850

Mode	Test Channel (MHz)	Frequency Error		Limit (ppm)	Verdict
		(Hz)	(ppm)		
GSM_Middle_TN/VN	836.6	-26.0	-0.0310	±2.5	Pass
GSM_Middle_T1/VN	836.6	-25.1	-0.0300	±2.5	Pass
GSM_Middle_T2/VN	836.6	-18.6	-0.0222	±2.5	Pass
GSM_Middle_T3/VN	836.6	-23.0	-0.0275	±2.5	Pass
GSM_Middle_T4/VN	836.6	-18.5	-0.0221	±2.5	Pass
GSM_Middle_T5/VN	836.6	-17.6	-0.0210	±2.5	Pass
GSM_Middle_T6/VN	836.6	-21.8	-0.0260	±2.5	Pass
GSM_Middle_T7/VN	836.6	-25.0	-0.0299	±2.5	Pass
GSM_Middle_T8/VN	836.6	-21.0	-0.0251	±2.5	Pass
GSM_Middle_TN/VH	836.6	-21.0	-0.0251	±2.5	Pass
GSM_Middle_TN/VL	836.6	-25.3	-0.0302	±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

GSM 1900

Mode	Result (MHz)	Limit (MHz)	Verdict
GSM_Low_TN/VN	1850.080	1850	Pass
GSM_Low_T1/VN	1850.082	1850	Pass
GSM_Low_T2/VN	1850.080	1850	Pass
GSM_Low_T3/VN	1850.076	1850	Pass
GSM_Low_T4/VN	1850.080	1850	Pass
GSM_Low_T5/VN	1850.080	1850	Pass
GSM_Low_T6/VN	1850.081	1850	Pass
GSM_Low_T7/VN	1850.080	1850	Pass
GSM_Low_T8/VN	1850.080	1850	Pass
GSM_Low_TN/VH	1850.079	1850	Pass
GSM_Low_TN/VL	1850.079	1850	Pass
GSM_High_TN/VN	1909.925	1910	Pass
GSM_High_T1/VN	1909.925	1910	Pass
GSM_High_T2/VN	1909.924	1910	Pass
GSM_High_T3/VN	1909.926	1910	Pass
GSM_High_T4/VN	1909.926	1910	Pass
GSM_High_T5/VN	1909.924	1910	Pass
GSM_High_T6/VN	1909.925	1910	Pass
GSM_High_T7/VN	1909.921	1910	Pass
GSM_High_T8/VN	1909.925	1910	Pass
GSM_High_TN/VH	1909.928	1910	Pass
GSM_High_TN/VL	1909.920	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

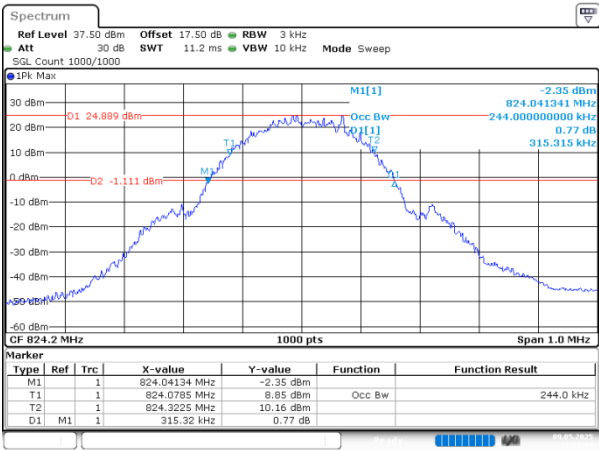
FCC Part 22H

GSM 850 , Normal

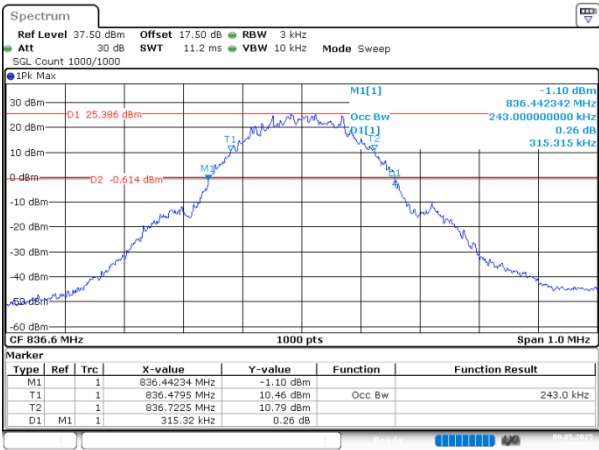
Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.244	0.315
GSM_Middle	0.243	0.315
GSM_High	0.242	0.314

GSM 850 , Normal

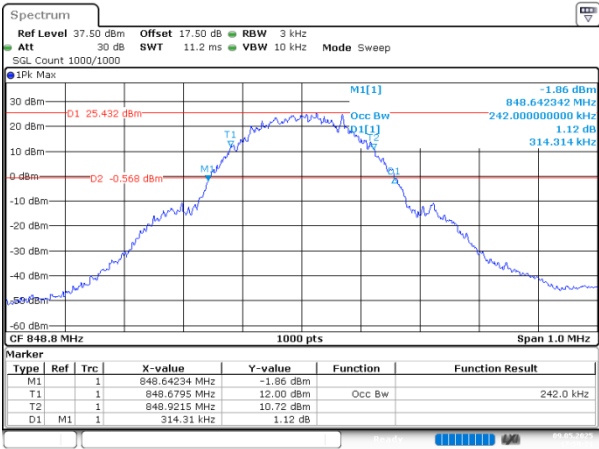
GSM_Low



GSM_Middle



GSM_High



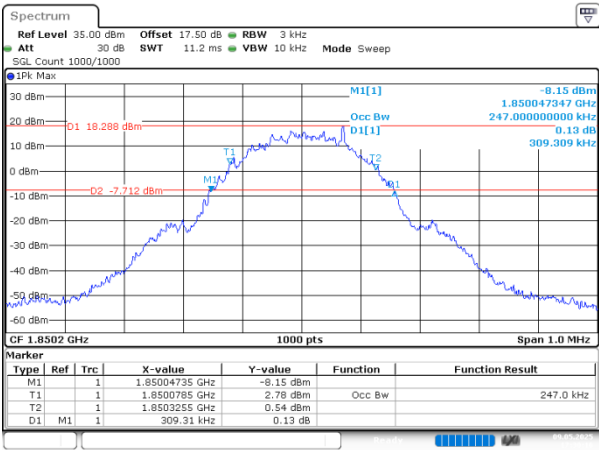
FCC Part 24E

GSM 1900 , Normal

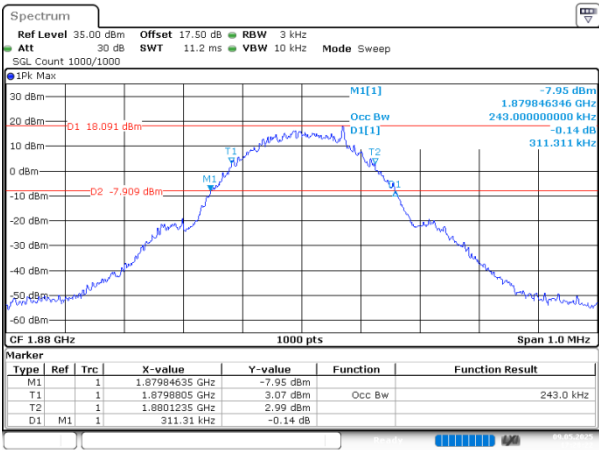
Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.247	0.309
GSM_Middle	0.243	0.311
GSM_High	0.241	0.313

GSM 1900 , Normal

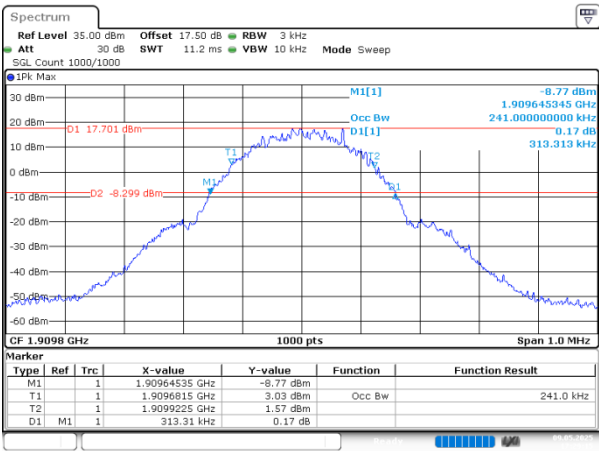
GSM_Low



GSM_Middle



GSM_High



RF Output Power

FCC Part 22H

GSM 850 , Normal

Mode	Average Conducted Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
GSM_Low	32.27	28.57	38.45	Pass
GSM_Middle	32.46	28.76	38.45	Pass
GSM_High	32.70	29.00	38.45	Pass

Note:

$ERP = Average\ Peak\ Conducted\ Power(dBm) + Antenna\ Gain(dBd) - Cable\ Loss(dB)$

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

1.Antenna Gain = -1.55dBi;

2.Cable Loss = 0dB.

FCC Part 24E

GSM 1900 , Normal

Mode	Average Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
GSM_Low	24.05	24.40	33	Pass
GSM_Middle	24.25	24.60	33	Pass
GSM_High	24.76	25.11	33	Pass

Note:

$EIRP = \text{Average Peak Conducted Power(dBm)} + \text{Antenna Gain(dBi)} - \text{Cable Loss(dB)}$

1.Antenna Gain = 0.35dBi;

2.Cable Loss = 0dB.

Peak-to-average Ratio(PAR)

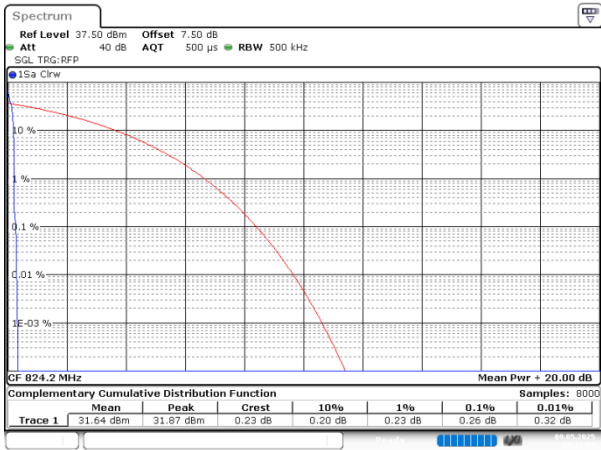
FCC Part 22H

GSM 850 , Normal

Mode	Result (dB)	Limit (dB)
GSM_Low	0.26	13
GSM_Middle	0.29	13
GSM_High	0.26	13

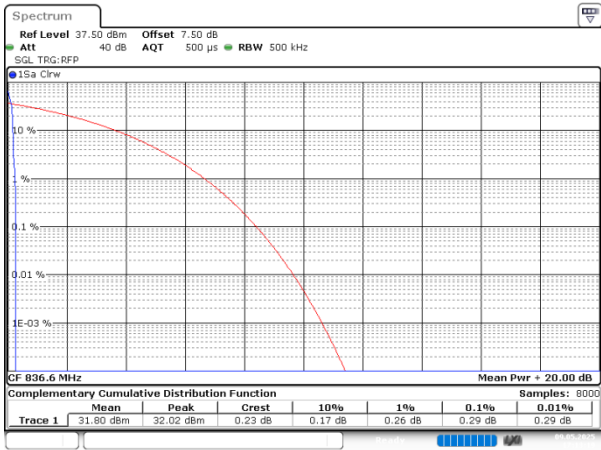
GSM 850 , Normal

GSM_Low



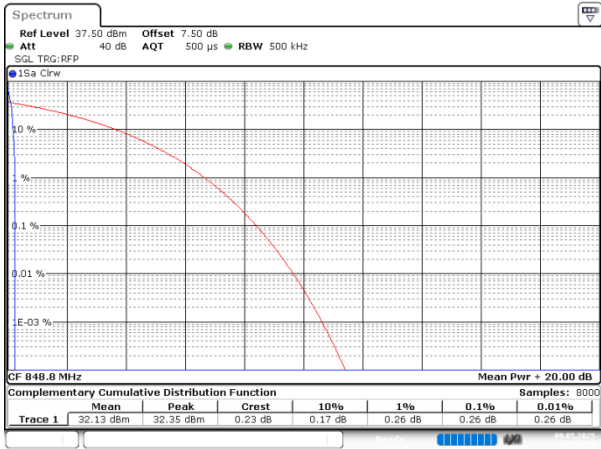
ProjectNo.:2502S32111E-RF Tester:Loge Long
Date: 9.MAY.2025 17:11:54

GSM_Middle



ProjectNo.:2502S32111E-RF Tester:Loge Long
Date: 9.MAY.2025 17:13:19

GSM_High



ProjectNo.:2502S32111E-RF Tester:Loge Long
Date: 9.MAY.2025 17:14:16

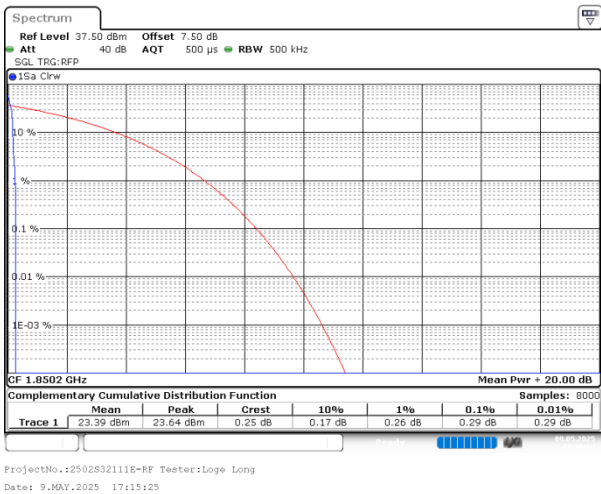
FCC Part 24E

GSM 1900 , Normal

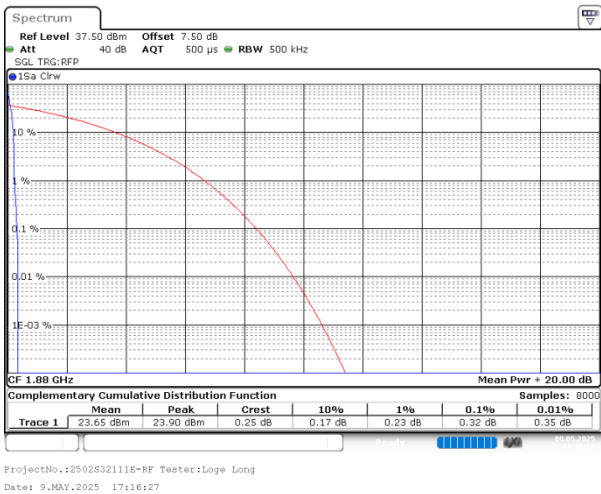
Mode	Result (dB)	Limit (dB)
GSM_Low	0.29	13
GSM_Middle	0.32	13
GSM_High	0.32	13

GSM 1900 , Normal

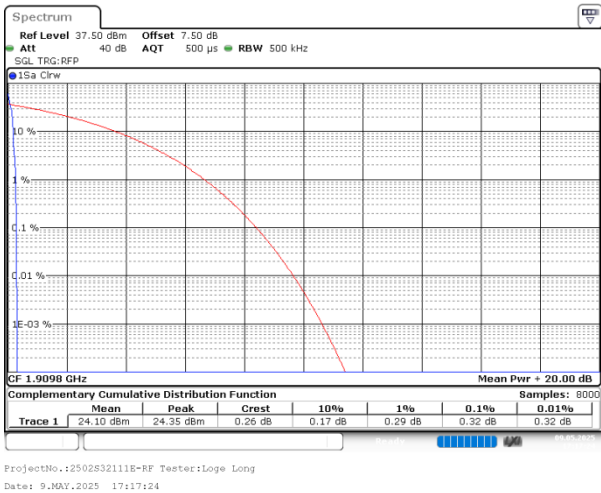
GSM_Low



GSM_Middle



GSM_High

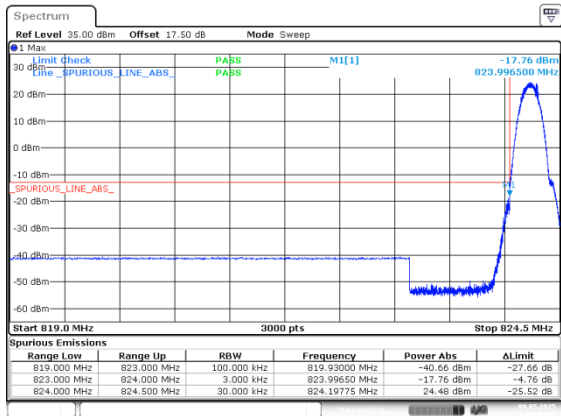


Out of band emission,Band Edge

FCC Part 22H

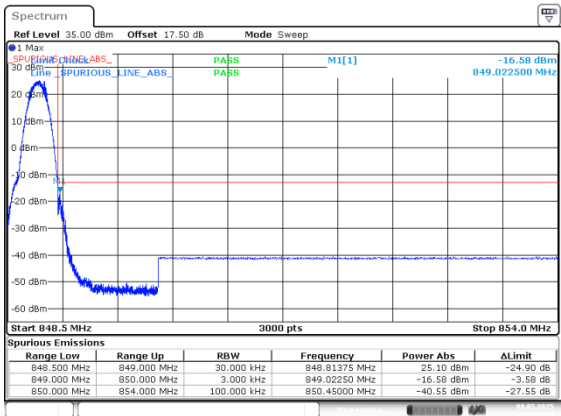
GSM 850 , Normal

GSM_Low



ProjectNo.:2502S32111E-RF Tester:Loge Long
Date: 9.MAY.2025 17:47:39

GSM_High

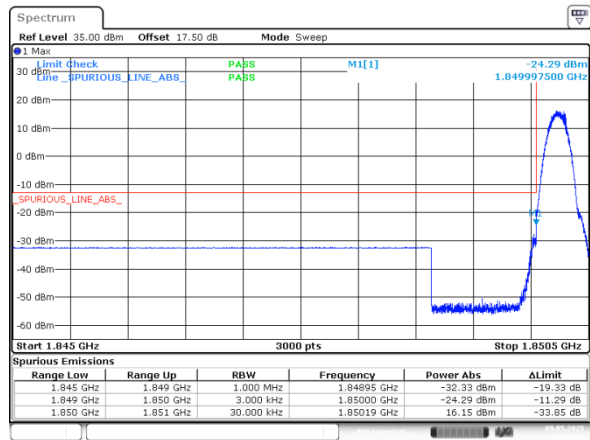


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Date: 9.MAY.2025 17:49:43

FCC Part 24E

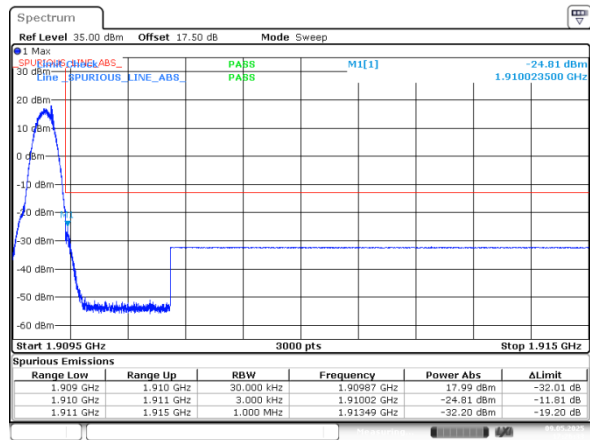
GSM 1900 , Normal

GSM_Low



ProjectNo.:2502S32111E-RF Tester:Loge Long
Date: 9.MAY.2025 17:24:14

GSM_High



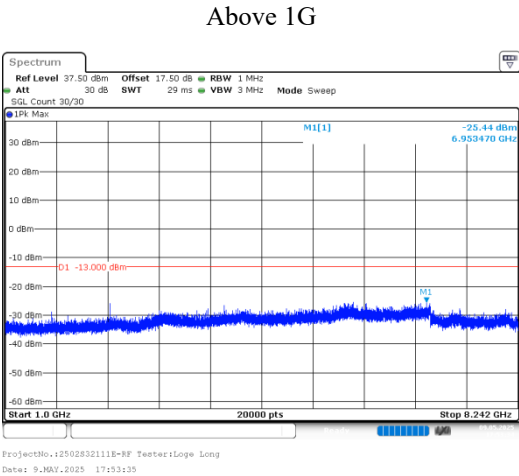
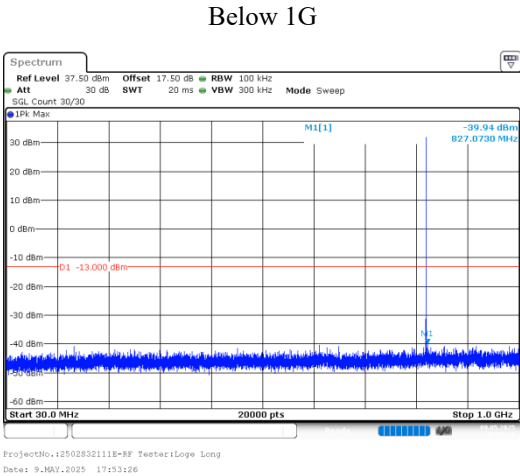
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Date: 9.MAY.2025 17:26:34

Spurious Emissions at Antenna Terminal

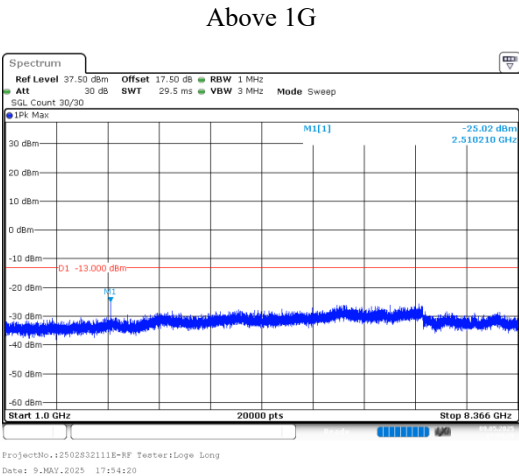
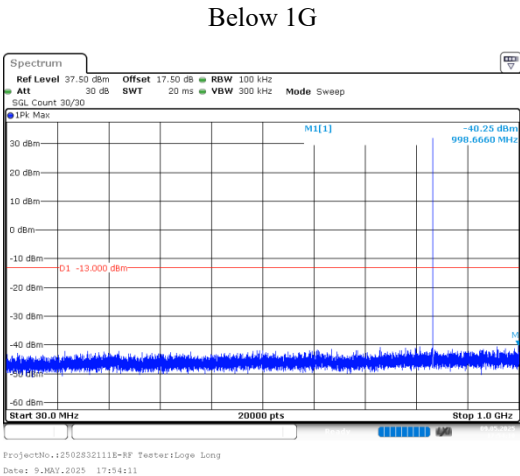
FCC Part 22H

GSM 850 , Normal

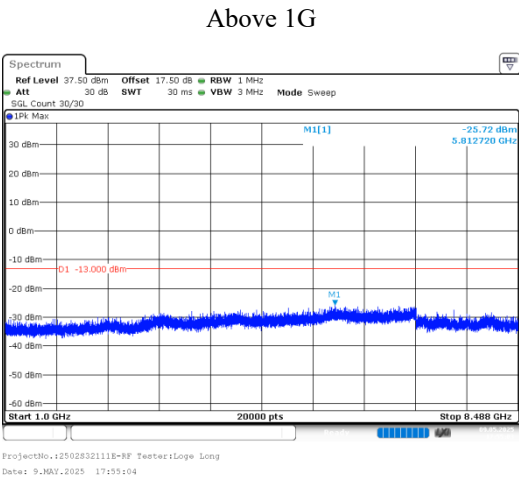
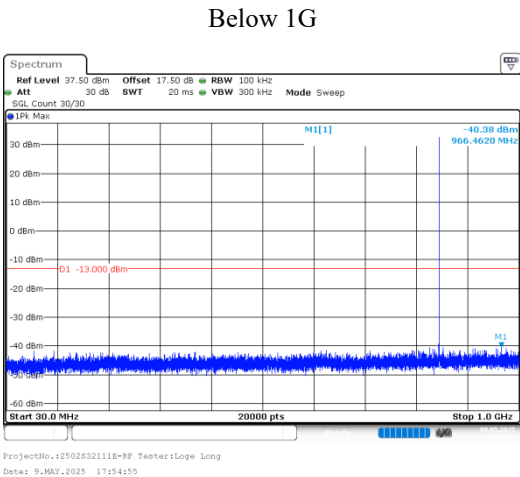
GSM_Low



GSM_Middle



GSM_High

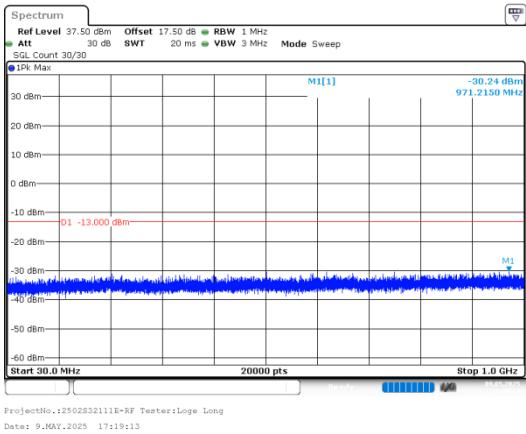


FCC Part 24E

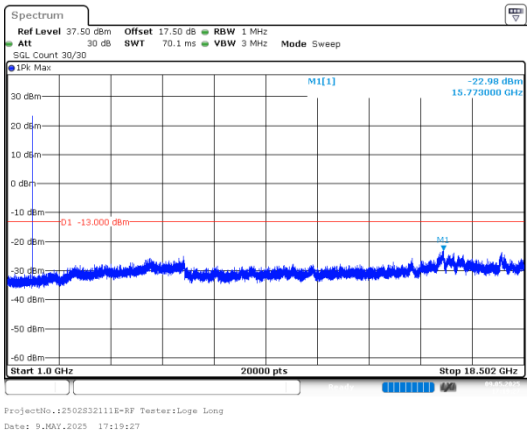
GSM 1900 , Normal

GSM_Low

Below 1G

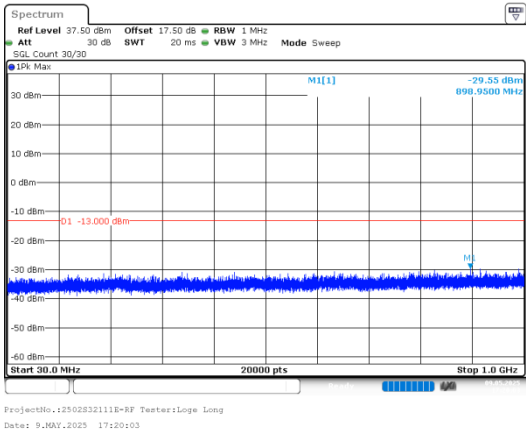


Above 1G

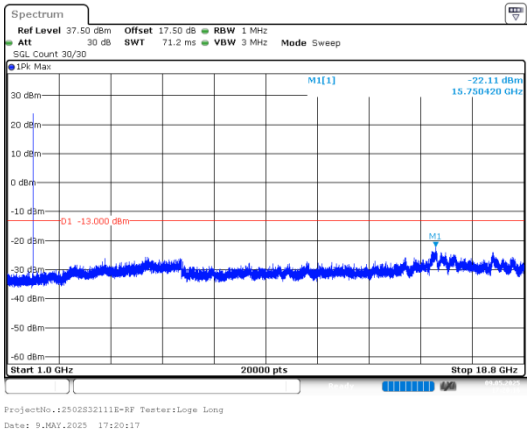


GSM_Middle

Below 1G

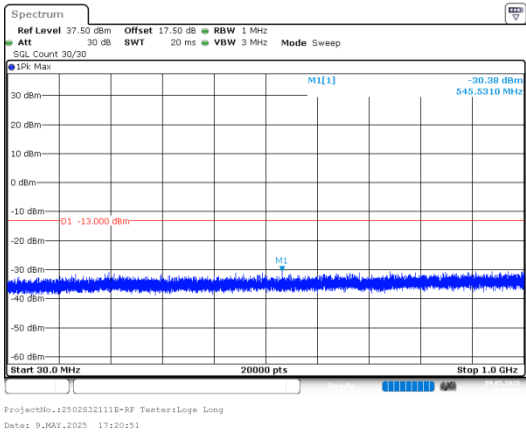


Above 1G

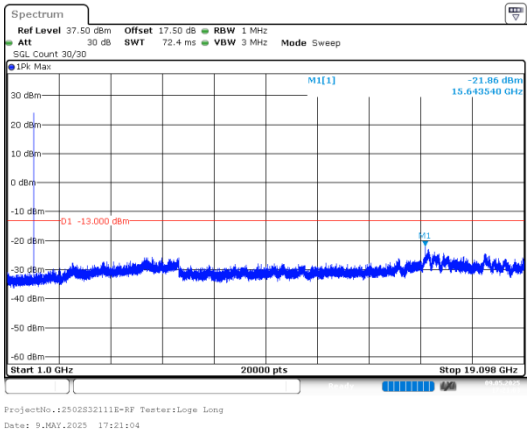


GSM_High

Below 1G



Above 1G



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