Appendix A

Test Information:

Serial No.:	2QMM-4	**Test Date:**	2024/09/02~2024/09/03
Test Site:	RF	**Test Mode:**	Transmitting
Tester:	Loge Long	**Test Result:**	Pass

Environmental Conditions:

Temperature: (°C):	27.3~27.9	**Relative Humidity: (%)**	54~64	**ATM Pressure: (kPa)**	100.2~100.8

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101461	2023/11/27	2024/11/26
Micro-Coax	Coaxial Cable	UFB205A	323308-012	2024/01/02	2025/01/01
Minl-Clrcuits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/02/25	2025/02/24
R&S	Wideband Radio Communication Tester	CMW500	144976	2023/10/18	2024/10/17
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2023/10/18	2024/10/17
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A
All-sun	Multimeter	EM305A	8348897	2024/08/03	2025/08/02

** 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)	Result
		(Hz)	(ppm)		
GSM_Middle_TN/VN	836.6	16.3	0.020	±2.5	Pass
GSM_Middle_T1/VN	836.6	13.2	0.016	±2.5	Pass
GSM_Middle_T2/VN	836.6	12.4	0.015	±2.5	Pass
GSM_Middle_T3/VN	836.6	11.0	0.013	±2.5	Pass
GSM_Middle_T4/VN	836.6	8.7	0.010	±2.5	Pass
GSM_Middle_T5/VN	836.6	10.3	0.012	±2.5	Pass
GSM_Middle_T6/VN	836.6	13.5	0.016	±2.5	Pass
GSM_Middle_T7/VN	836.6	5.5	0.007	±2.5	Pass
GSM_Middle_T8/VN	836.6	9.1	0.011	±2.5	Pass
GSM_Middle_TN/VH	836.6	11.9	0.014	±2.5	Pass
GSM_Middle_TN/VL	836.6	11.4	0.014	±2.5	Pass

Note:

Frequency Error (ppm)=Frequency Error (MHz)/Test Channel(MHz)*10^6

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	Value (MHz)	Limit (MHz)	Result
GSM_Low_TN/VN	1850.080	1850	Pass
GSM_Low_T1/VN	1850.077	1850	Pass
GSM_Low_T2/VN	1850.077	1850	Pass
GSM_Low_T3/VN	1850.081	1850	Pass
GSM_Low_T4/VN	1850.080	1850	Pass
GSM_Low_T5/VN	1850.081	1850	Pass
GSM_Low_T6/VN	1850.080	1850	Pass
GSM_Low_T7/VN	1850.080	1850	Pass
GSM_Low_T8/VN	1850.080	1850	Pass
GSM_Low_TN/VH	1850.081	1850	Pass
GSM_Low_TN/VL	1850.080	1850	Pass
GSM_High_TN/VN	1909.923	1910	Pass
GSM_High_T1/VN	1909.924	1910	Pass
GSM_High_T2/VN	1909.927	1910	Pass
GSM_High_T3/VN	1909.923	1910	Pass
GSM_High_T4/VN	1909.923	1910	Pass
GSM_High_T5/VN	1909.926	1910	Pass
GSM_High_T6/VN	1909.924	1910	Pass
GSM_High_T7/VN	1909.925	1910	Pass
GSM_High_T8/VN	1909.926	1910	Pass
GSM_High_TN/VH	1909.926	1910	Pass
GSM_High_TN/VL	1909.925	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

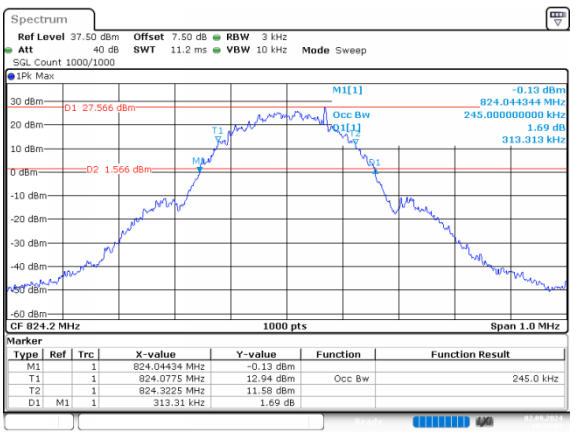
FCC Part 22H

GSM 850 , Normal

Mode	99% OBW (MHz)	EBW (MHz)
GSM_Low	0.245	0.313
GSM_Middle	0.245	0.310
GSM_High	0.246	0.311

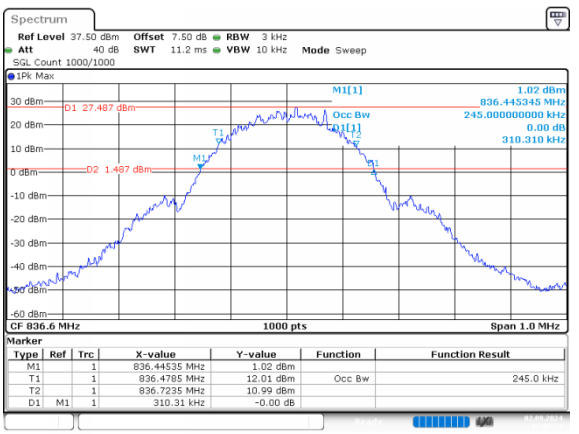
GSM 850 , Normal

GSM_Low 0.245MHz



ProjectNo.:2402W66736E-RF Tester:Loge Long
Date: 2.SEP.2024 10:58:08

GSM_Middle 0.245MHz



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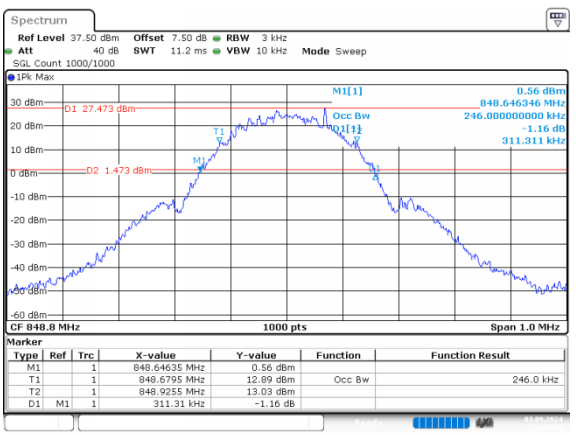
GSM_High 0.246MHz



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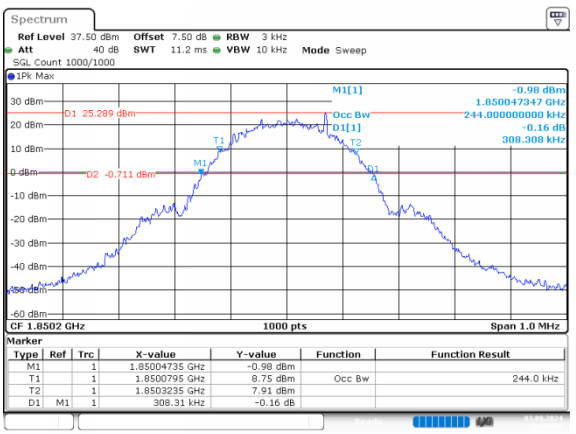
FCC Part 24E

GSM 1900 , Normal

Mode	99% OBW (MHz)	EBW (MHz)
GSM_Low	0.244	0.308
GSM_Middle	0.246	0.309
GSM_High	0.244	0.310

GSM 1900 , Normal

GSM_Low 0.244MHz



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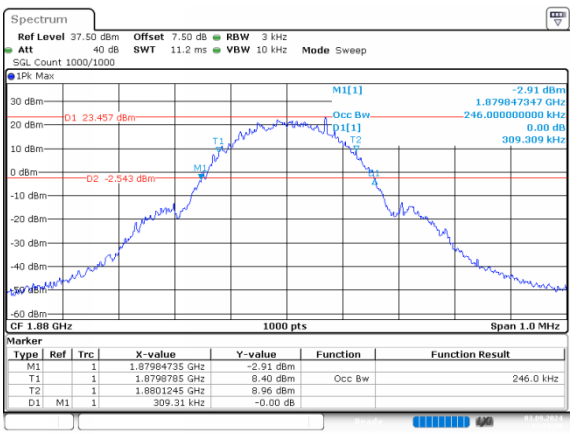
GSM_Middle 0.246MHz



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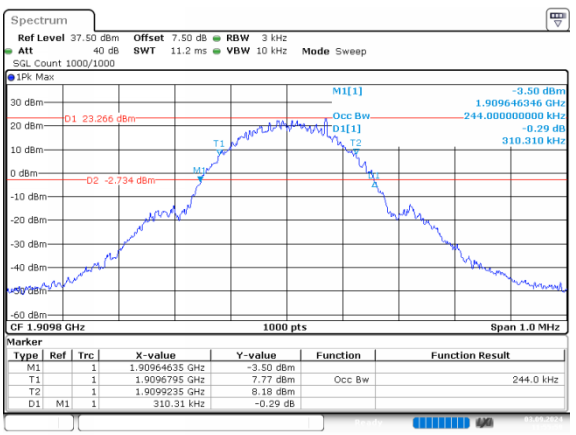
GSM_High 0.244MHz



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RF Output Power

FCC Part 22H

GSM 850 , Normal

Mode	Peak Conducted Power(dBm)	ERP (dBm)	Limit(dBm)	Result
GSM_Low	33.52	29.61	38.45	Pass
GSM_Middle	33.44	29.53	38.45	Pass
GSM_High	33.41	29.50	38.45	Pass
GPRS_Low_Solt1	33.23	29.32	38.45	Pass
GPRS_Low_Solt2	31.27	27.36	38.45	Pass
GPRS_Low_Solt3	29.41	25.50	38.45	Pass
GPRS_Low_Solt4	27.45	23.54	38.45	Pass
GPRS_Middle_Solt1	33.04	29.13	38.45	Pass
GPRS_Middle_Solt2	31.31	27.40	38.45	Pass
GPRS_Middle_Solt3	29.47	25.56	38.45	Pass
GPRS_Middle_Solt4	27.50	23.59	38.45	Pass
GPRS_High_Solt1	33.01	29.10	38.45	Pass
GPRS_High_Solt2	31.39	27.48	38.45	Pass
GPRS_High_Solt3	29.57	25.66	38.45	Pass
GPRS_High_Solt4	27.61	23.70	38.45	Pass

Note:

ERP = Peak Conducted Power(dBm) - L_C(dB) + G_T(dBd)

G_T(dBd) = G_T(dBi) - 2.15

1.Ant Gain = -1.76dBi;

2.C_L = signal attenuation in the connecting cable between the transmitter and antenna in 0dB

FCC Part 24E

GSM 1900 , Normal

Mode	Peak Conducted Power(dBm)	EIRP (dBm)	Limit(dBm)	Result
GSM_Low	30.74	29.05	33	Pass
GSM_Middle	30.30	28.61	33	Pass
GSM_High	30.38	28.69	33	Pass
GPRS_Low_Solt1	30.62	28.93	33	Pass
GPRS_Low_Solt2	28.60	26.91	33	Pass
GPRS_Low_Solt3	26.98	25.29	33	Pass
GPRS_Low_Solt4	24.88	23.19	33	Pass
GPRS_Middle_Solt1	30.29	28.60	33	Pass
GPRS_Middle_Solt2	28.20	26.51	33	Pass
GPRS_Middle_Solt3	26.54	24.85	33	Pass
GPRS_Middle_Solt4	24.33	22.64	33	Pass
GPRS_High_Solt1	30.36	28.67	33	Pass
GPRS_High_Solt2	27.77	26.08	33	Pass
GPRS_High_Solt3	26.15	24.46	33	Pass
GPRS_High_Solt4	23.85	22.16	33	Pass

Note:

EIRP = Peak Conducted Power(dBm) - L_C(dB) + G_T(dBi)

1.Ant Gain = -1.69dBi;

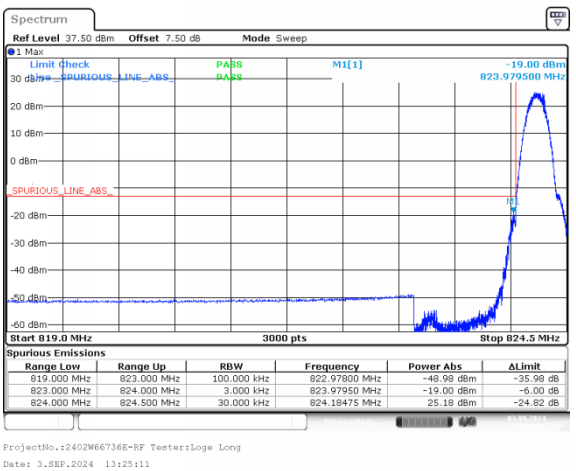
2.C_L = signal attenuation in the connecting cable between the transmitter and antenna in 0dB

Out of band emission,Band Edge

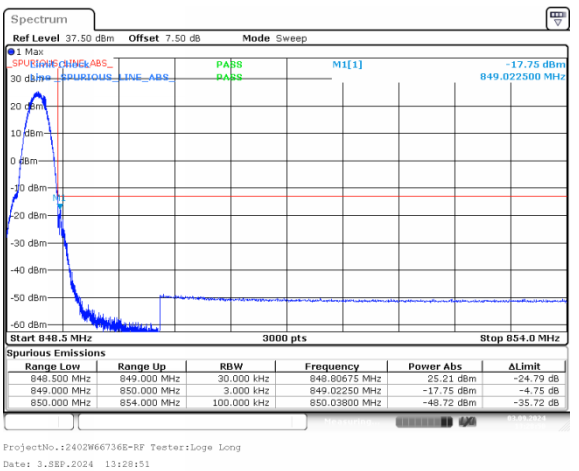
FCC Part 22H

GSM 850 , Normal

GSM_Low -19.00dBm



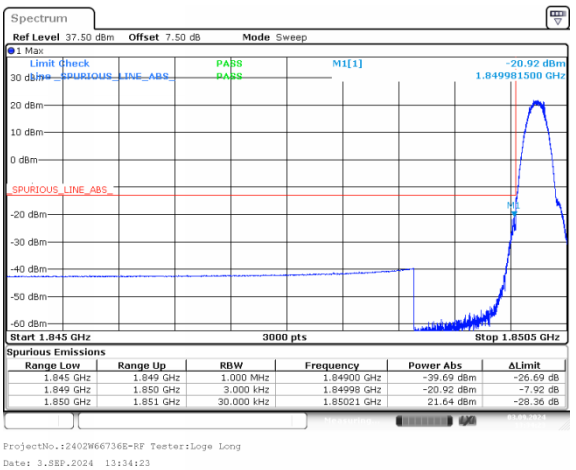
GSM_High -17.75dBm



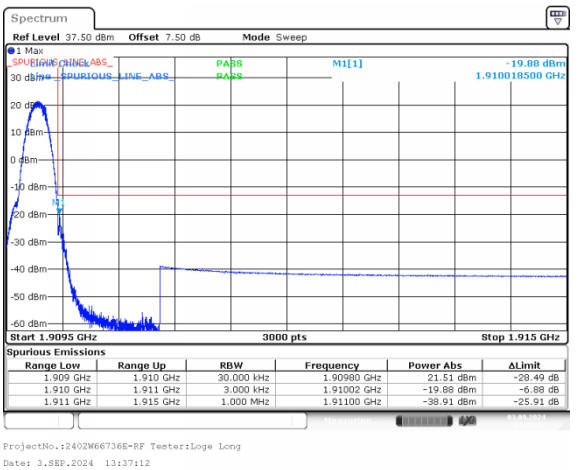
FCC Part 24E

GSM 1900 , Normal

GSM_Low -20.92dBm



GSM_High -19.88dBm



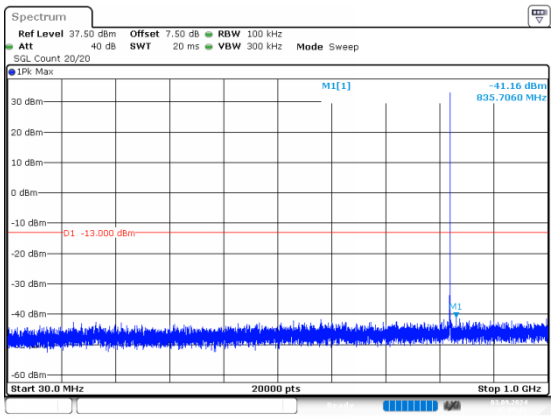
Spurious Emissions at Antenna Terminal

FCC Part 22H

GSM 850 , Normal

GSM_Low

Below 1G



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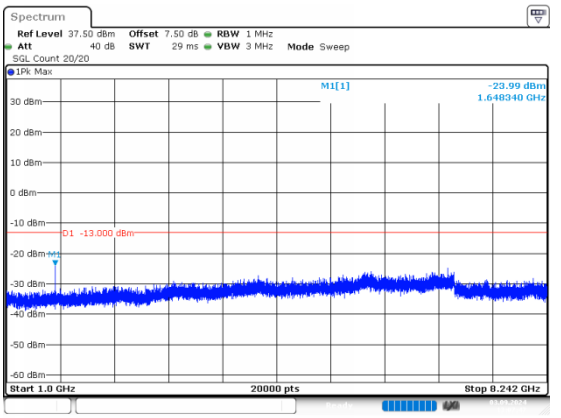

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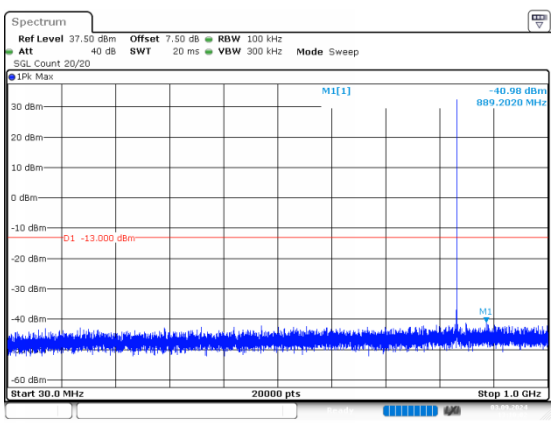
GSM_Middle

Below 1G



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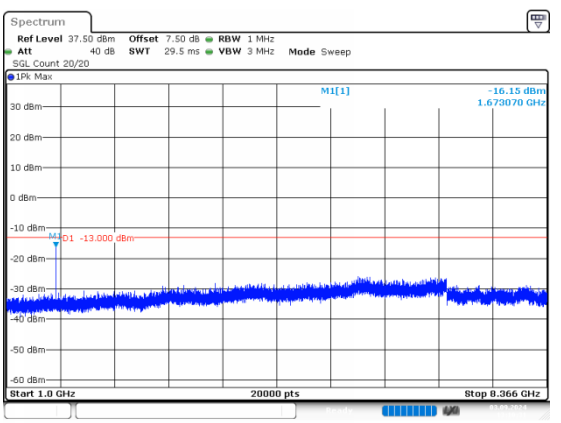

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GSM_High

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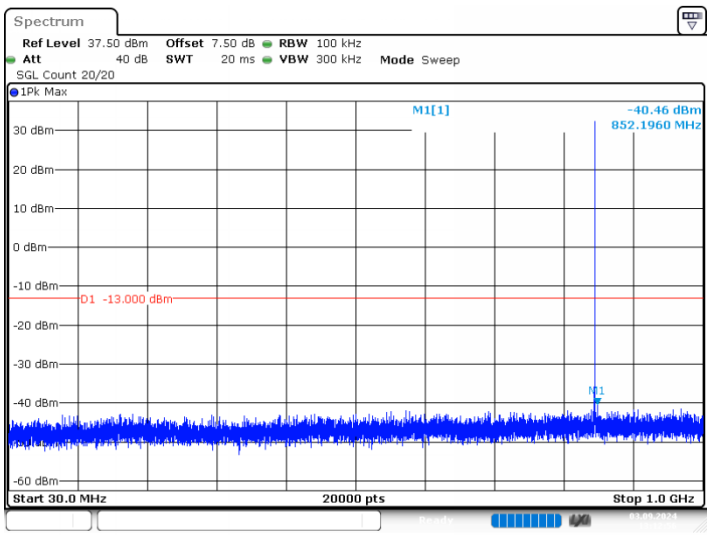

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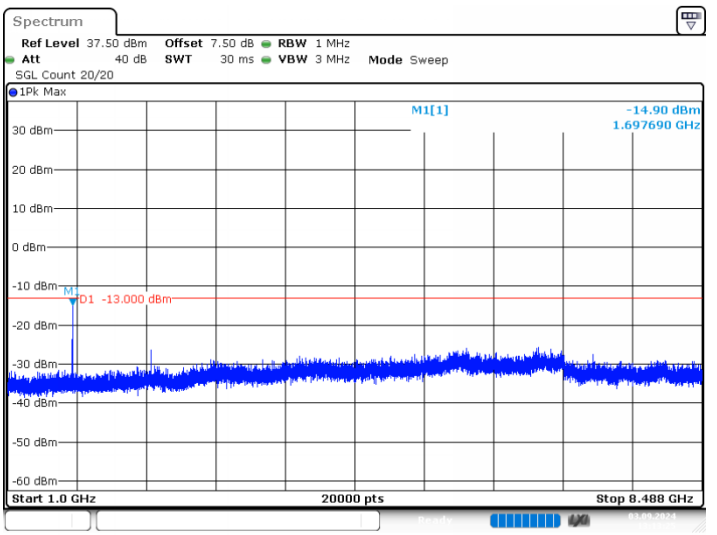

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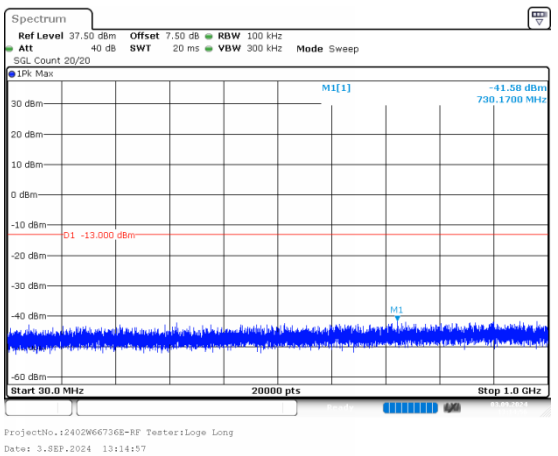
FCC Part 24E

GSM 1900 , Normal

GSM_Low

Below 1G



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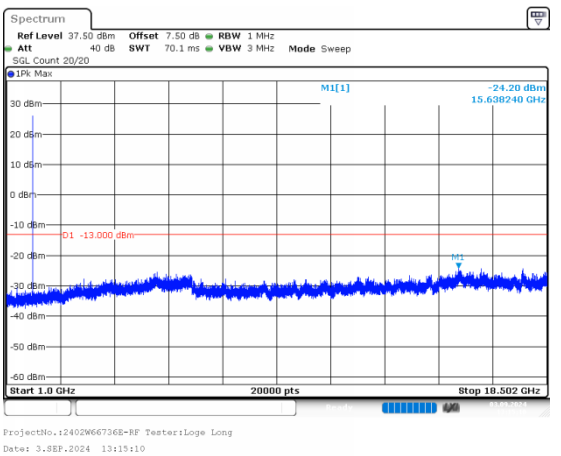

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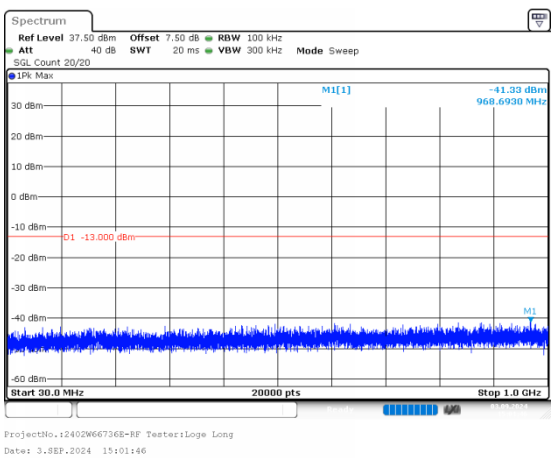
GSM_Middle

Below 1G



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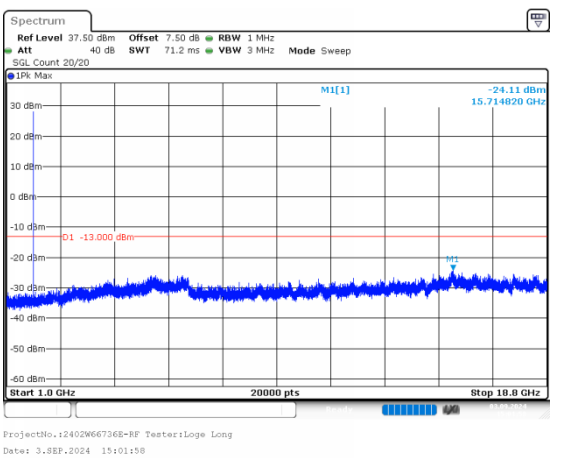

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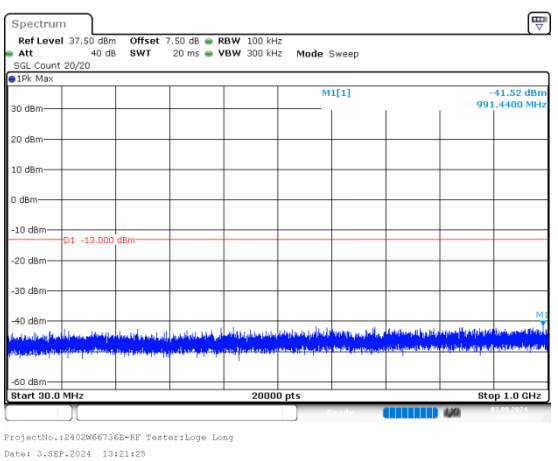
GSM_High

Below 1G



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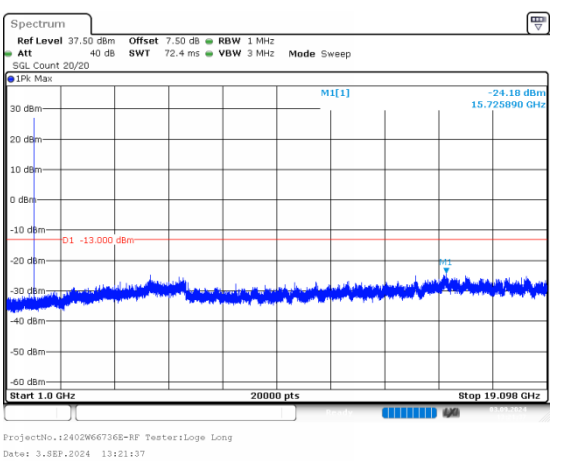

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