

Appendix A

Test Information:

Serial No.:	2WMC-1	Test Date:	2025/02/05
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C):	20.9	Relative Humidity: (%)	43	ATM Pressure: (kPa)	101.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Minl-Clrcuits	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

IC RSS 132
GSM 850

Mode	Result (MHz)	Limit (MHz)	Verdict
GSM_Low_TN/VN	824.079	824	Pass
GSM_Low_T1/VN	824.078	824	Pass
GSM_Low_T2/VN	824.083	824	Pass
GSM_Low_T3/VN	824.081	824	Pass
GSM_Low_T4/VN	824.080	824	Pass
GSM_Low_T5/VN	824.082	824	Pass
GSM_Low_T6/VN	824.081	824	Pass
GSM_Low_T7/VN	824.078	824	Pass
GSM_Low_T8/VN	824.081	824	Pass
GSM_Low_TN/VH	824.080	824	Pass
GSM_Low_TN/VL	824.079	824	Pass
GSM_High_TN/VN	848.925	849	Pass
GSM_High_T1/VN	848.923	849	Pass
GSM_High_T2/VN	848.922	849	Pass
GSM_High_T3/VN	848.925	849	Pass
GSM_High_T4/VN	848.919	849	Pass
GSM_High_T5/VN	848.923	849	Pass
GSM_High_T6/VN	848.917	849	Pass
GSM_High_T7/VN	848.924	849	Pass
GSM_High_T8/VN	848.925	849	Pass
GSM_High_TN/VH	848.920	849	Pass
GSM_High_TN/VL	848.925	849	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.

FCC Part 22H
GSM 850

Mode	Test Channel (MHz)	Frequency Error		Limit (ppm)	Verdict
		(Hz)	(ppm)		
GSM_Middle_TN/VN	836.6	-12.4	-0.0148	±2.5	Pass
GSM_Middle_T1/VN	836.6	-21.6	-0.0259	±2.5	Pass
GSM_Middle_T2/VN	836.6	-11.8	-0.0141	±2.5	Pass
GSM_Middle_T3/VN	836.6	-12.1	-0.0145	±2.5	Pass
GSM_Middle_T4/VN	836.6	-13.1	-0.0156	±2.5	Pass
GSM_Middle_T5/VN	836.6	-16.5	-0.0198	±2.5	Pass
GSM_Middle_T6/VN	836.6	-10.8	-0.0129	±2.5	Pass
GSM_Middle_T7/VN	836.6	-21.1	-0.0252	±2.5	Pass
GSM_Middle_T8/VN	836.6	-21.9	-0.0262	±2.5	Pass
GSM_Middle_TN/VH	836.6	-13.8	-0.0165	±2.5	Pass
GSM_Middle_TN/VL	836.6	-14.3	-0.0171	±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&IC RSS 133

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	1850.079	1850	Pass
GSM_Low_T3/VN	1850.080	1850	Pass
GSM_Low_T4/VN	1850.080	1850	Pass
GSM_Low_T5/VN	1850.080	1850	Pass
GSM_Low_T6/VN	1850.079	1850	Pass
GSM_Low_T7/VN	1850.079	1850	Pass
GSM_Low_T8/VN	1850.081	1850	Pass
GSM_Low_TN/VH	1850.079	1850	Pass
GSM_Low_TN/VL	1850.080	1850	Pass
GSM_High_TN/VN	1909.921	1910	Pass
GSM_High_T1/VN	1909.927	1910	Pass
GSM_High_T2/VN	1909.920	1910	Pass
GSM_High_T3/VN	1909.920	1910	Pass
GSM_High_T4/VN	1909.922	1910	Pass
GSM_High_T5/VN	1909.921	1910	Pass
GSM_High_T6/VN	1909.924	1910	Pass
GSM_High_T7/VN	1909.920	1910	Pass
GSM_High_T8/VN	1909.925	1910	Pass
GSM_High_TN/VH	1909.924	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&IC RSS 132
GSM 850, Normal

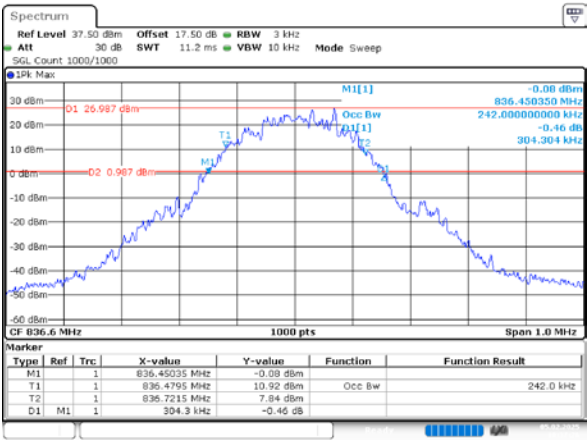
Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.244	0.305
GSM_Middle	0.242	0.304
GSM_High	0.244	0.313

GSM 850, Normal

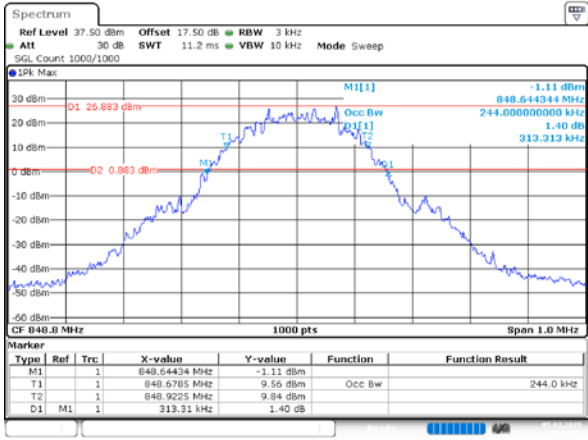
GSM_Low



GSM_Middle



GSM_High



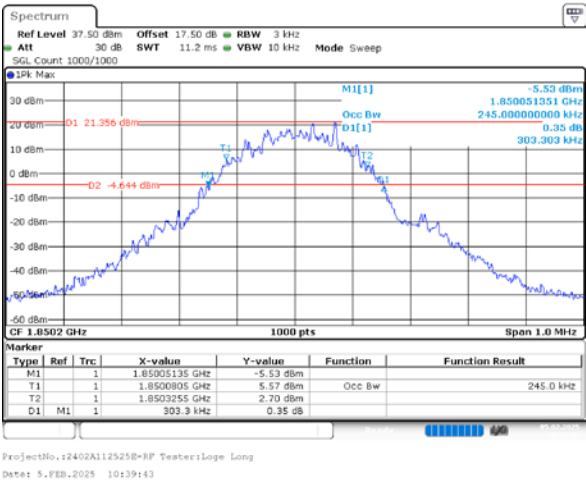
FCC Part 24E&IC RSS 133

GSM 1900, Normal

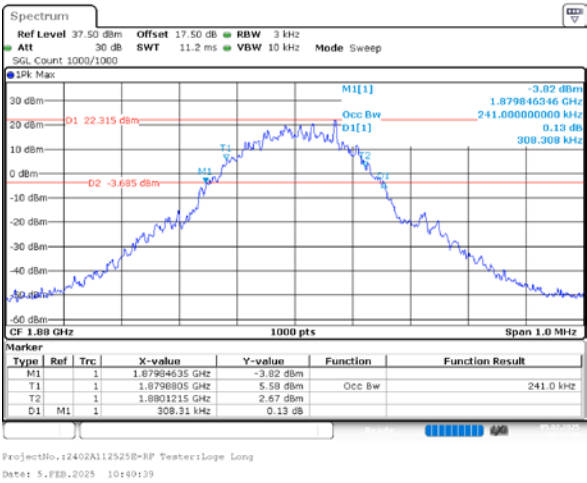
Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.245	0.303
GSM_Middle	0.241	0.308
GSM_High	0.244	0.301

GSM 1900, Normal

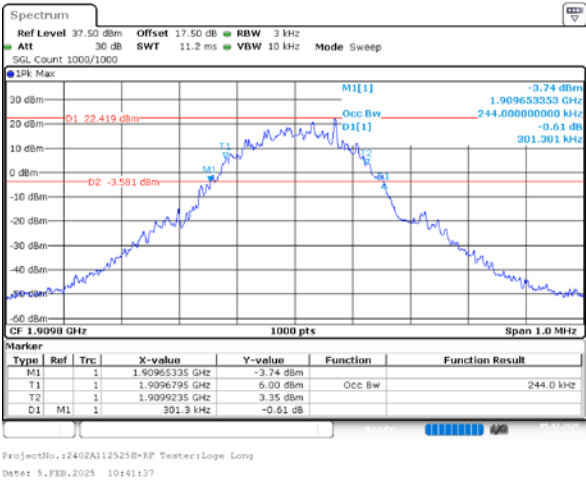
GSM_Low



GSM_Middle



GSM_High



RF Output Power

FCC Part 22H&IC RSS 132
GSM 850, Normal

Mode	Average Conducted Power (dBm)	ERP (dBm)	FCC Limit (dBm)	IC Limit (dBm)	Verdict
GSM_Low	34.10	31.05	38.45	34.77	Pass
GSM_Middle	34.08	31.03	38.45	34.77	Pass
GSM_High	34.07	31.02	38.45	34.77	Pass
GPRS_Low_Slot1	34.11	31.06	38.45	34.77	Pass
GPRS_Low_Slot2	32.20	29.15	38.45	34.77	Pass
GPRS_Low_Slot3	30.61	27.56	38.45	34.77	Pass
GPRS_Low_Slot4	28.65	25.60	38.45	34.77	Pass
GPRS_Middle_Slot1	34.07	31.02	38.45	34.77	Pass
GPRS_Middle_Slot2	32.18	29.13	38.45	34.77	Pass
GPRS_Middle_Slot3	30.52	27.47	38.45	34.77	Pass
GPRS_Middle_Slot4	28.56	25.51	38.45	34.77	Pass
GPRS_High_Slot1	34.04	30.99	38.45	34.77	Pass
GPRS_High_Slot2	32.11	29.06	38.45	34.77	Pass
GPRS_High_Slot3	30.51	27.46	38.45	34.77	Pass
GPRS_High_Slot4	28.54	25.49	38.45	34.77	Pass

Note:

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

G_T(dBd) = G_T(dBi) - 2.15

1.Ant Gain = -0.9dBi;

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

FCC Part 24E&IC RSS 133
GSM 1900, Normal

Mode	Average Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
GSM_Low	28.22	28.72	33	Pass
GSM_Middle	28.28	28.78	33	Pass
GSM_High	28.33	28.83	33	Pass
GPRS_Low_Slot1	28.24	28.74	33	Pass
GPRS_Low_Slot2	26.00	26.50	33	Pass
GPRS_Low_Slot3	24.40	24.90	33	Pass
GPRS_Low_Slot4	22.49	22.99	33	Pass
GPRS_Middle_Slot1	28.32	28.82	33	Pass
GPRS_Middle_Slot2	26.30	26.80	33	Pass
GPRS_Middle_Slot3	24.66	25.16	33	Pass
GPRS_Middle_Slot4	22.73	23.23	33	Pass
GPRS_High_Slot1	28.37	28.87	33	Pass
GPRS_High_Slot2	26.52	27.02	33	Pass
GPRS_High_Slot3	24.88	25.38	33	Pass
GPRS_High_Slot4	22.96	23.46	33	Pass

Note:

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

1.Ant Gain = 0.5dBi;

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

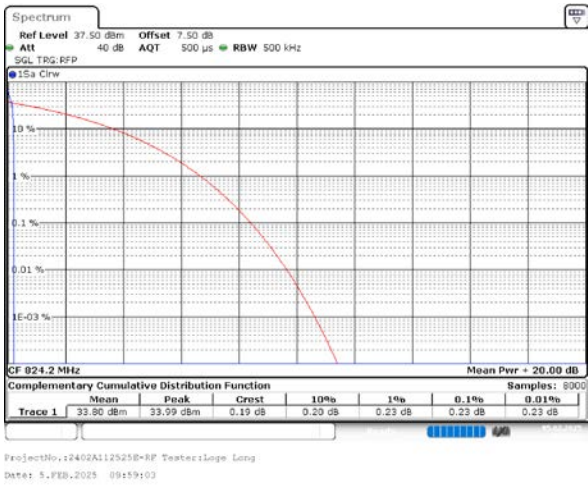
Peak-to-average Ratio(PAR)

FCC Part 22H&IC RSS 132
GSM 850, Normal

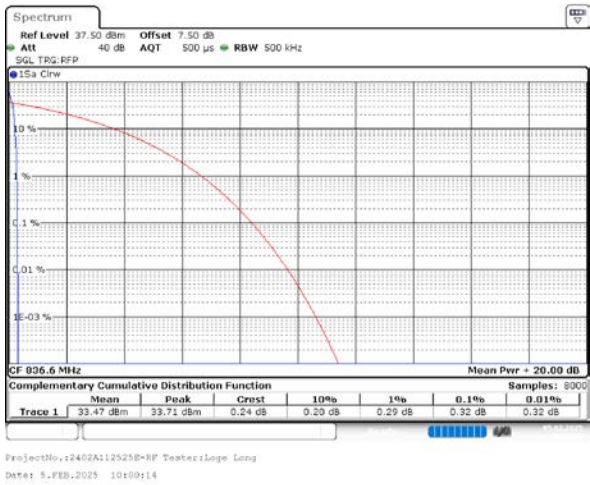
Mode	Result (dB)	Limit (dB)
GSM_Low	0.23	13
GSM_Middle	0.32	13
GSM_High	0.32	13

GSM 850, Normal

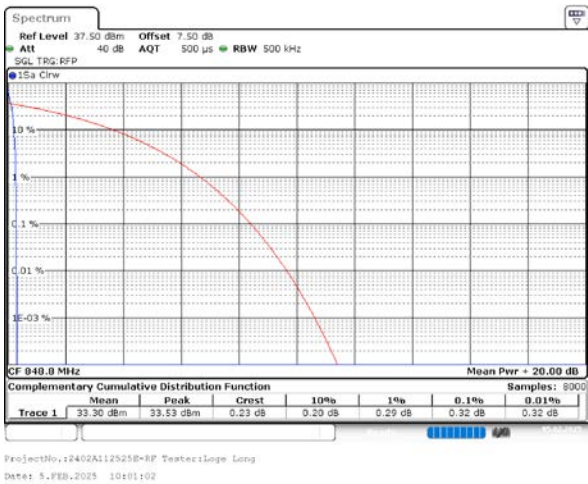
GSM_Low



GSM_Middle



GSM_High



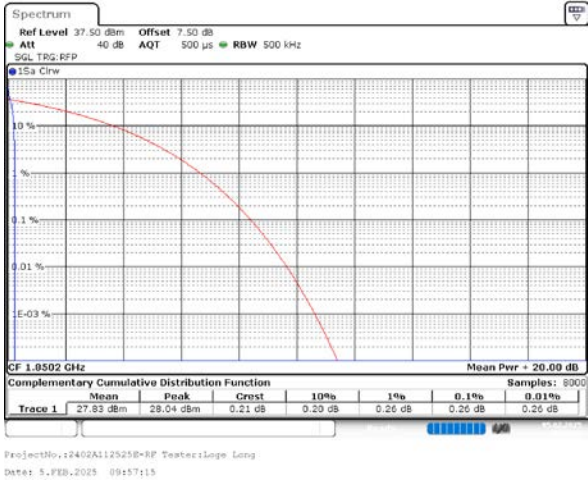
FCC Part 24E&IC RSS 133

GSM 1900, Normal

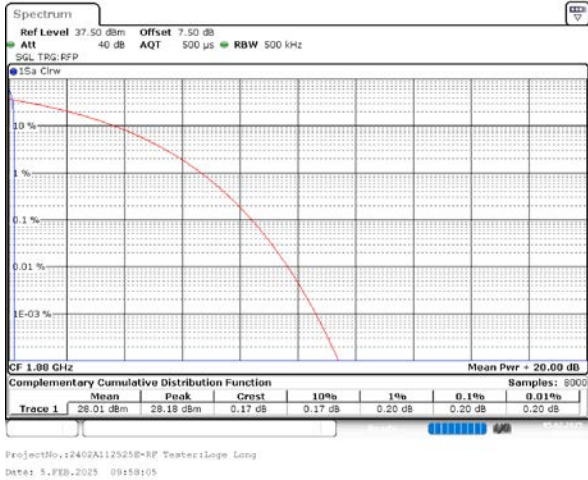
Mode	Result (dB)	Limit (dB)
GSM_Low	0.26	13
GSM_Middle	0.20	13
GSM_High	0.29	13

GSM 1900, Normal

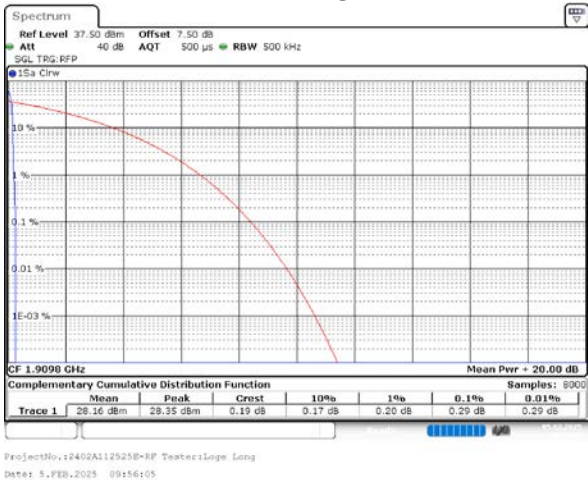
GSM_Low



GSM_Middle



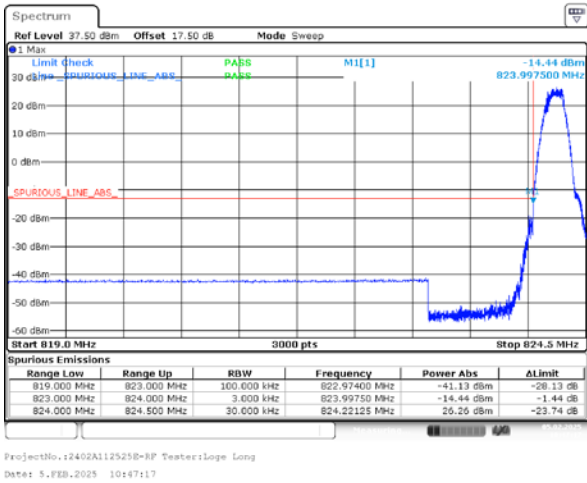
GSM_High



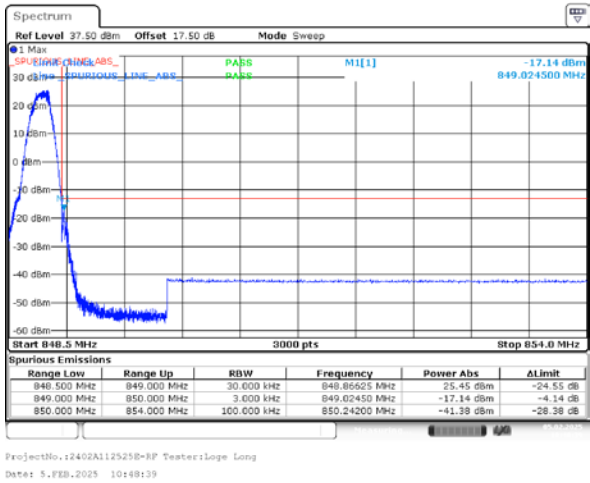
Out of band emission,Band Edge

FCC Part 22H&IC RSS 132
GSM 850, Normal

GSM_Low

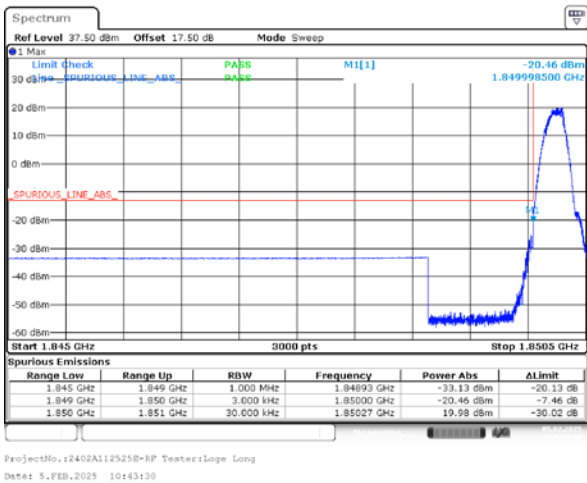


GSM_High

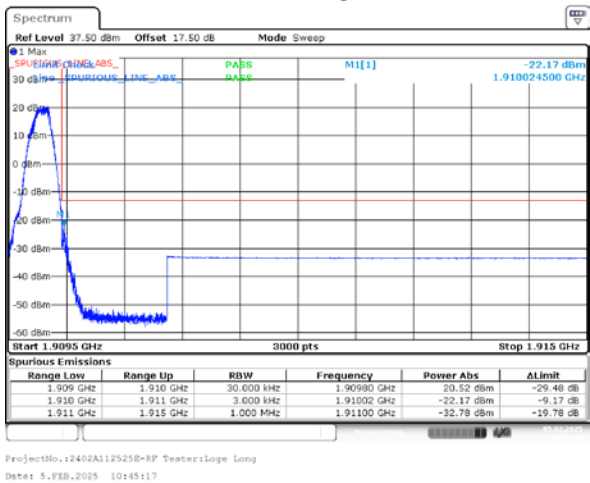


FCC Part 24E&IC RSS 133
GSM 1900, Normal

GSM_Low



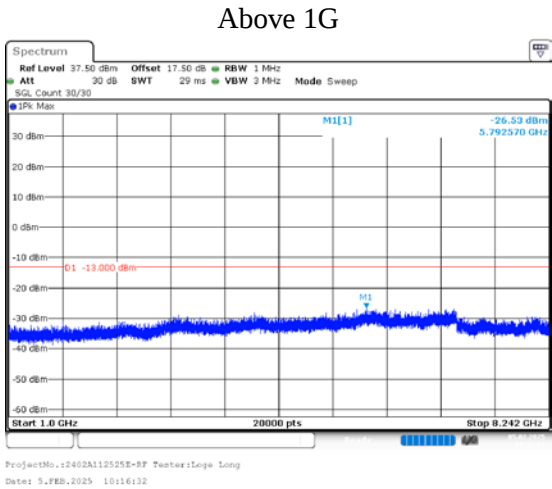
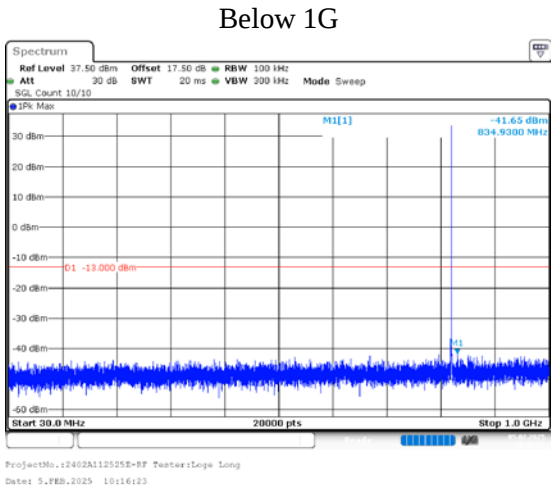
GSM_High



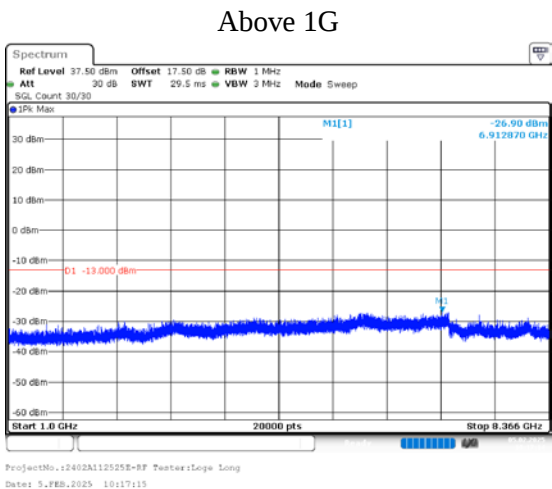
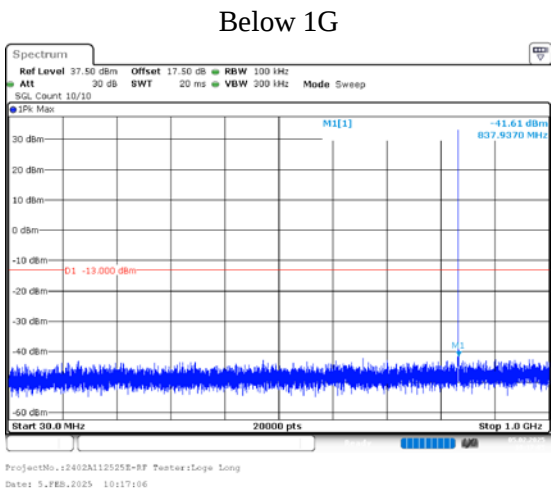
Spurious Emissions at Antenna Terminal

FCC Part 22H&IC RSS 132
GSM 850, Normal

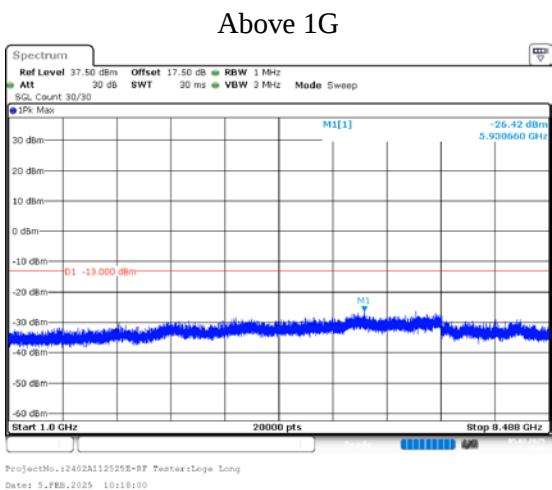
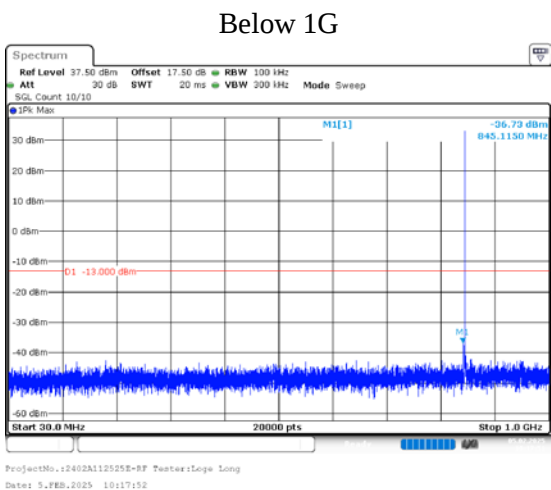
GSM_Low



GSM_Middle



GSM_High

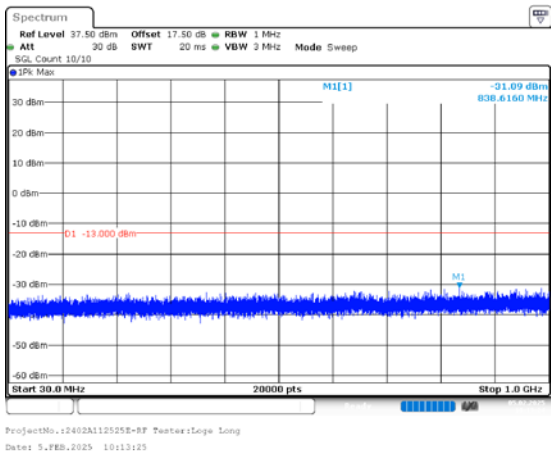


FCC Part 24E&IC RSS 133

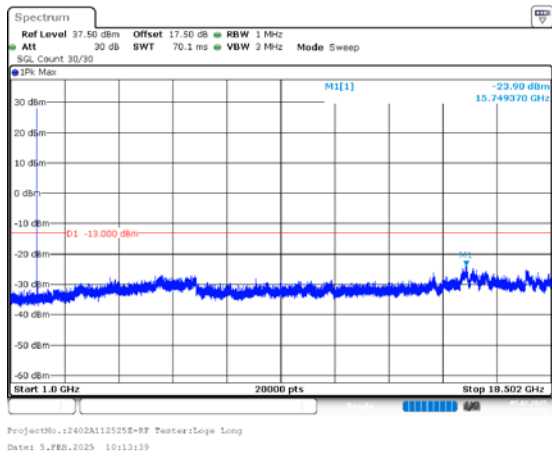
GSM 1900, Normal

GSM_Low

Below 1G

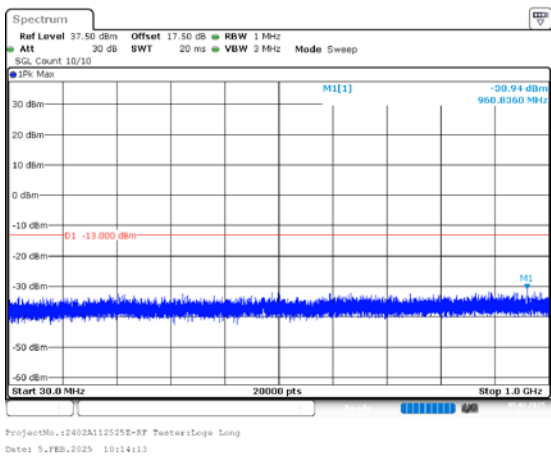


Above 1G

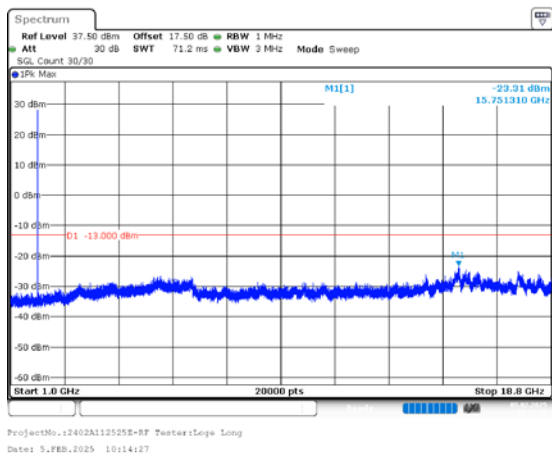


GSM_Middle

Below 1G

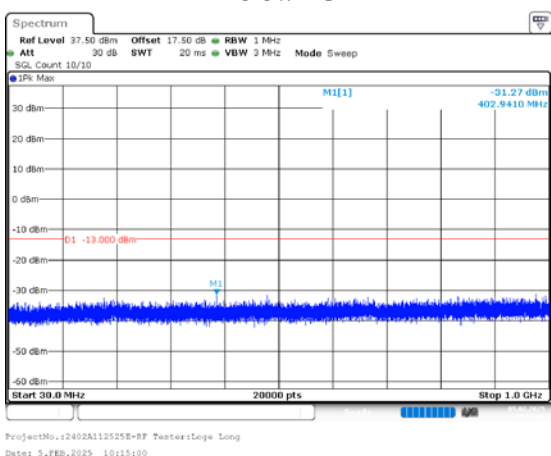


Above 1G

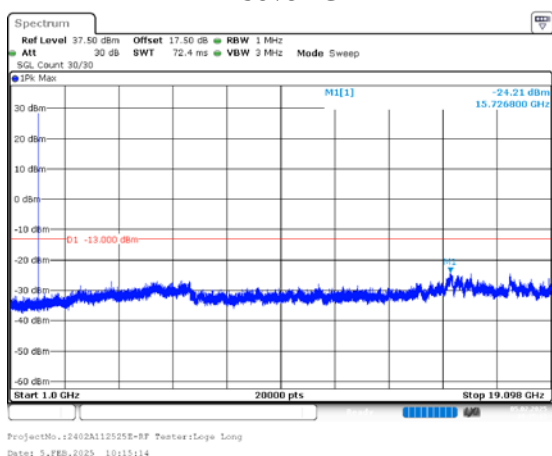


GSM_High

Below 1G



Above 1G



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